

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549**

**FORM 10-K**

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2018

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File Number 001-34791



**MagnaChip Semiconductor Corporation**

(Exact name of registrant as specified in its charter)

Delaware  
(State or Other Jurisdiction of  
Incorporation or Organization)

83-0406195  
(I.R.S. Employer  
Identification No.)

c/o MagnaChip Semiconductor S.A.

1, Allée Scheffer, L-2520

Luxembourg, Grand Duchy of Luxembourg

(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: (352) 45-62-62

Securities registered pursuant to Section 12(b) of the Act:

<u>Title of each class</u>	<u>Name of each exchange on which registered</u>
Common Stock, par value \$0.01 per share	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.  Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.  Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.  Yes  No

Indicate by check mark whether the registrant has submitted electronically, every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).  Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer	<input type="checkbox"/>	Accelerated Filer	<input checked="" type="checkbox"/>
Non-Accelerated Filer	<input type="checkbox"/>	Smaller Reporting Company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).  Yes  No

State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and asked price of such common equity, as of the last business day of the registrant's most recently completed second fiscal quarter. \$280,313,167.

As of February 15, 2019, the registrant had 34,091,378 shares of common stock outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the registrant's definitive proxy statement relating to its 2019 annual meeting of stockholders will be incorporated by reference into Part III of this Annual Report on Form 10-K or included by amendment to this report within 120 days after the end of the fiscal year to which this report relates.

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**MAGNACHIP SEMICONDUCTOR CORPORATION AND SUBSIDIARIES**  
**FORM 10-K FOR THE YEAR ENDED DECEMBER 31, 2018**  
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## PART I

### INDUSTRY AND MARKET DATA

We have made statements in this Annual Report on Form 10-K for the year ended December 31, 2018 (this “Report”) regarding our industry and our position in the industry based on our experience in the industry and our own views of market conditions, but we have not independently verified those statements. We do not have any obligation to announce or otherwise make publicly available updates or revisions to forecasts contained in these documents.

Statements made in this Report, unless the context otherwise requires, include the use of the terms “us,” “we,” “our,” the “Company” and “MagnaChip” to refer to MagnaChip Semiconductor Corporation and its consolidated subsidiaries. The term “Korea” refers to the Republic of Korea or South Korea.

### SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

We have made certain “forward-looking” statements in this Report within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and Section 27A of the Securities Act of 1933, as amended (the “Securities Act”), that involve risks and uncertainties. Forward-looking statements give our current expectations and projections relating to our financial condition, results of operations, plans, objectives, future performance and business. You can identify these statements by the fact that they do not relate strictly to historical or current facts. These statements may include words such as “anticipate,” “estimate,” “expect,” “project,” “intend,” “plan,” “believe” and other words and terms of similar meaning in connection with any discussion of the timing or nature of future operating or financial performance or other events. All statements other than statements of historical facts included in this Report that address activities, events or developments that we expect, believe or anticipate will or may occur in the future are forward-looking statements.

These forward-looking statements are largely based on our expectations and beliefs concerning future events, which reflect estimates and assumptions made by our management. These estimates and assumptions reflect our best judgment based on currently known market conditions and other factors relating to our operations and business environment, all of which are difficult to predict and many of which are beyond our control. Although we believe our estimates and assumptions to be reasonable, they are inherently uncertain and involve a number of risks and uncertainties that are beyond our control. In addition, management’s assumptions about future events may prove to be inaccurate. Management cautions all readers that the forward-looking statements contained in this Report are not guarantees of future performance, and we cannot assure any reader that those statements will be realized or the forward-looking events and circumstances will occur. Actual results may differ materially from those anticipated or implied in the forward-looking statements due to the factors listed in the “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business” sections and elsewhere in this Report.

All forward-looking statements speak only as of the date of this Report. We do not intend to publicly update or revise any forward-looking statements as a result of new information or future events or otherwise, except as required by law. These cautionary statements qualify all forward-looking statements attributable to us or persons acting on our behalf.

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“MagnaChip” is a registered trademark of us and our subsidiaries and “MagnaChip Everywhere” is our registered trademark and service mark. All other product, service and company names mentioned in this Report are the service marks or trademarks of their respective owners.

## **Item 1. Business**

### **General**

We are a designer and manufacturer of analog and mixed-signal semiconductor platform solutions for communications, Internet of Things (“IoT”) applications, consumer, industrial and automotive applications. We provide technology platforms for analog, mixed-signal, power, high voltage, non-volatile memory, and Radio Frequency (“RF”) applications. We have a proven record with about 40 years of operating history, a portfolio of approximately 3,000 registered patents and pending applications and extensive engineering and manufacturing process expertise. Our business is comprised of two operating segments: Foundry Services Group and Standard Products Group. Our Foundry Services Group provides specialty analog and mixed-signal foundry services mainly for fabless and Integrated Device Manufacturer (“IDM”) semiconductor companies that primarily serve communications, IoT, consumer, industrial and automotive applications. Our Standard Products Group is comprised of two business lines: Display Solutions and Power Solutions. Our Display Solutions products provide panel display solutions to major suppliers of large and small rigid and flexible panel displays, mobile, automotive applications and home appliances. Our Power Solutions products include discrete and integrated circuit solutions for power management in communications, consumer and industrial applications.

Our wide variety of analog and mixed-signal semiconductor products and manufacturing services combined with our mature technology platform allow us to address multiple high-growth end markets and to rapidly develop and introduce new products and services in response to market demands. Our design center and substantial manufacturing operations in Korea place us at the core of the global electronics device supply chain. We believe this enables us to quickly and efficiently respond to our customers’ needs and allows us to better serve and capture additional demands from existing and new customers.

We have a long history of supplying and collaborating on product and technology development with leading innovators in the consumer electronics market. As a result, we have been able to strengthen our technology platform and develop products and services that are in high demand by our customers and end consumers. We sold over 2,000 distinct products in each of the years ended December 31, 2018 and December 31, 2017, with a substantial portion of our revenues derived from a concentrated number of customers. Our largest Foundry Services Group customers include some of the leading semiconductor companies that design analog and mixed-signal products for communications, IoT, consumer, industrial and automotive applications.

Our business is largely driven by innovation in the consumer electronics markets and the growing adoption by consumers worldwide of electronic devices for use in their daily lives. The consumer electronics market is large and growing rapidly, largely due to consumers increasingly accessing a wide variety of rich media content, such as high definition audio and video, mobile devices, televisions and games on advanced consumer electronic devices. Electronics manufacturers are continuously implementing advanced technologies in new generations of electronic devices using analog and mixed-signal semiconductor components, such as display drivers that enable display of high resolution images, encoding and decoding devices that allow playback of high definition audio and video, and power management semiconductors that increase power efficiency, thereby improving heat dissipation and extending battery life.

For the year ended December 31, 2018, we generated net sales of \$750.9 million, net loss of \$3.9 million, Adjusted EBITDA of \$84.3 million and Adjusted Net Income of \$27.1 million. See “Item 6. Selected Financial Data” and “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” elsewhere in this Report for an explanation of our use of Adjusted EBITDA and Adjusted Net Income and a reconciliation to net income (loss) prepared in accordance with United States Generally Accepted Accounting Principles (“US GAAP”).

## **Our History**

Our business was named “MagnaChip Semiconductor” when it was acquired from SK hynix Inc., formerly known as Hynix Semiconductor, Inc. (“SK hynix”), in October 2004. We refer to this acquisition as the “Original Acquisition.”

On March 10, 2011, we completed our initial public offering. In connection with our initial public offering, we converted from a Delaware limited liability company to a Delaware corporation.

## **Our Products and Services**

Our Display Solutions line of products provides flat panel display solutions to major suppliers of large and small flat panel displays. These products include source and gate drivers and timing controllers that cover a wide range of flat panel displays used in high definition (HD), full high definition (FHD), ultra high definition (UHD), light emitting diode (LED), 3D and organic light emitting diodes (OLED) televisions and displays, notebooks and mobile communications and entertainment devices. Our Display Solutions line of products support the industry’s most advanced display technologies, such as OLEDs, and low temperature polysilicon thin film transistor (LTFS TFT), as well as high-volume display technologies such as amorphous silicon thin film transistors (a-Si TFTs). Our Display Solutions products represented 34.1%, 30.8% and 41.0% of our net sales for the fiscal years ended December 31, 2018, 2017 and 2016, respectively.

We expanded our business and market opportunity by establishing our Power Solutions product line in late 2007. We have introduced a number of power management semiconductor products, including discrete and integrated circuit solutions for power management in high-volume consumer applications. These products include metal oxide semiconductor field effect transistors (MOSFETs), insulated-gate bipolar transistors (IGBTs), AC-DC converters, DC-DC converters, LED drivers, switching regulators and linear regulators for a range of devices, including televisions, smartphones, mobile phones, desktop PCs, notebooks, tablet PCs, other consumer electronics, and industrial applications such as power suppliers, e-bike, photovoltaic inverter, LED lighting, motor drive and home appliances. Our Power Solutions products represented 22.5%, 22.0% and 19.1% of our net sales for the fiscal years ended December 31, 2018, 2017 and 2016, respectively.

Through our Foundry Services Group, we also offer foundry services to fabless analog and mixed-signal semiconductor companies and IDMs that require differentiated, specialty analog and mixed-signal process technologies. Our process technologies are optimized for analog and mixed-signal devices and include standard complementary metal-oxide semiconductor (CMOS), high voltage CMOS, ultra-low leakage high voltage CMOS and bipolar complementary double-diffused metal oxide semiconductor (BCDMOS) and electronically erasable programmable read only memory (EEPROM). Our Foundry Services Group customers use us to manufacture a wide range of products, including display drivers, LED drivers, audio encoding and decoding devices, microcontrollers, touch screen controllers, RF switches, park distance control sensors for automotive, electronic tag memories and power management semiconductors. Our Foundry Services Group business represented 43.3%, 47.1% and 39.8% of our net sales for the fiscal years ended December 31, 2018, 2017 and 2016, respectively.

We manufacture the majority of our products at our two fabrication facilities located in Korea. We have approximately 508 proprietary process flows we can utilize for our products and offer to our Foundry Services Group customers. Our manufacturing base serves both our display driver and power management businesses and Foundry Services Group customers, allowing us to optimize our asset utilization and leverage our investments across our product and service offerings. Analog and mixed-signal manufacturing facilities and processes are typically distinguished by design and process implementation expertise rather than the use of the most advanced equipment. These processes also tend to migrate more slowly to smaller geometries due to technological barriers and increased costs. For example, some of our products use high-voltage technology that requires larger geometries and that may not migrate to smaller geometries for several years, if at all. As a result, our manufacturing base and strategy do not require substantial investment in leading edge process equipment, allowing us to utilize our facilities and equipment over an extended period of time with moderate required capital investments.

## Market Opportunity

The semiconductor market is large and is expanding its applications. Growth in this market is being driven by consumers seeking to enjoy a wide variety of rich media content, such as high definition audio and video, mobile devices, televisions and games. Electronics device manufacturers recognize that the consumer entertainment experience plays a critical role in differentiating their products. To address and further stimulate consumer demand, electronics manufacturers have been driving rapid advances in the technology, functionality, form factor, cost, quality, reliability and power consumption of their products. Electronics manufacturers are continuously implementing advanced technologies in new generations of electronic devices using analog and mixed-signal semiconductor components, such as display drivers that enable display of high resolution images, encoding and decoding devices that allow playback of high definition audio and video, and power management semiconductors that increase power efficiency, thereby improving heat dissipation and extending battery life. These advanced generations of consumer devices are growing faster than the overall electronics device market.

The user experience delivered by a consumer electronic device is substantially driven by the quality of the display, audio and video processing capabilities and power efficiency of the device. Analog and mixed-signal semiconductors enable and enhance these capabilities. Examples of these analog and mixed-signal semiconductors include display drivers, timing controllers, audio encoding and decoding devices, or codecs, and interface circuits, as well as power management semiconductors such as voltage regulators, converters and switches.

## Requirements of Leading Electronic Devices Manufacturers

We believe our target customers view the following characteristics and capabilities as key differentiating factors among available analog and mixed-signal semiconductor suppliers and manufacturing service providers:

- **Broad Offering of Differentiated Products with Advanced System-Level Features and Functions.** Leading electronic devices manufacturers seek to differentiate their products by incorporating innovative semiconductor products that enable unique system-level functionality and enhance performance. These consumer electronics manufacturers seek to closely collaborate with semiconductor solutions providers that continuously develop new and advanced products, technologies, and manufacturing processes that enable state of the art features and functions, such as bright and thin displays, small form factor and energy efficiency.
- **Fast Time-to-Market with New Products.** As a result of rapid technological advancements and short product lifecycles, our target customers typically prefer suppliers who have a compelling pipeline of new products and capacity to leverage a substantial intellectual property and technology base to accelerate product design and manufacturing when needed.
- **Nimble, Stable and Reliable Manufacturing Services.** Fabless semiconductor providers who rely on external manufacturing services often face rapidly changing product cycles. If these fabless companies are unable to meet the demand for their products due to issues with their manufacturing services providers, their profitability and market share can be significantly impacted. As a result, they prefer foundry service providers that can increase production quickly and meet demand consistently through periods of constrained industry capacity. Furthermore, many fabless semiconductor providers serving the consumer electronics and industrial sectors need specialty analog and mixed-signal manufacturing capabilities to address their product performance and cost requirements.
- **Ability to Deliver Cost Competitive Solutions.** Electronics manufacturers are under constant pressure to deliver cost-competitive solutions. To accomplish this objective, they need strategic semiconductor suppliers that have the ability to provide system-level solutions, highly integrated products and a broad product offering at a range of price points and have the design and manufacturing infrastructure and logistical support to deliver cost competitive products.
- **Focus on Delivering Highly Energy-Efficient Products.** Consumers increasingly seek longer run-time, environmentally friendly and energy-efficient consumer electronic products. In addition, there is increasing

regulatory focus on reducing energy consumption of consumer electronic products. As a result of global focus on more environmentally friendly products, our customers are seeking analog and mixed-signal semiconductor suppliers that have the technological expertise to deliver solutions that satisfy these ever increasing regulatory and consumer power efficiency demands.

### **Our Competitive Strengths**

Designing and manufacturing analog and mixed-signal semiconductors capable of meeting the evolving functionality requirements for electronics devices are challenging. In order to grow and succeed in the industry, we believe semiconductor suppliers must have a broad, advanced intellectual property portfolio, product design expertise, comprehensive product offerings and specialized manufacturing process technologies and capabilities. Our competitive strengths enable us to offer our customers solutions to solve their key challenges. We believe our strengths include:

- **Advanced Analog and Mixed-Signal Semiconductor Technology and Intellectual Property Platform.** We believe we have one of the broadest and deepest analog and mixed-signal semiconductor technology platforms in the industry. Our long operating history, large patent portfolio, extensive engineering and manufacturing process expertise and wide selection of analog and mixed-signal intellectual property libraries allow us to leverage our technology and develop new products across multiple end markets. Our product development efforts are supported by a team of 419 engineers as of the date of this Report. Our platform allows us to develop and introduce new products quickly as well as to integrate numerous functions into a single product. For example, we were one of the first companies to introduce a commercial OLED display driver for mobile phones.
- **Established Relationships and Close Collaboration with Leading Global Electronics Companies.** We have a long history of supplying and collaborating on product and technology development with leading innovators in the consumer electronics market. Our close customer relationships have been built based on many years of close collaborative product development which provides us with deep system level knowledge and key insights into our customers' needs. As a result, we are able to continuously strengthen our technology platform in areas of strategic interest for our customers and focus on those products and services that our customers and end consumers demand the most.
- **Longstanding Presence in Asia and Proximity to Global Electronics Devices Supply Chain.** Our presence in Asia facilitates close contact with our customers and fast response to their needs, and enhances our visibility into new product opportunities, markets and technology trends. Our design center and substantial manufacturing operations in Korea place us close to many of our largest customers and to the core of the global electronics devices supply chain. We have active applications, engineering, product design and customer support resources, as well as senior management and marketing resources, in geographic locations close to our customers. This allows us to strengthen our relationship with customers through better service, faster turnaround time and improved product design collaboration. We believe this also helps our customers to deliver products faster than their competitors and to solve problems more efficiently than would be possible with other suppliers.
- **Broad Portfolio of Product and Service Offerings Targeting Large, High-Growth Markets.** We continue to develop a wide variety of analog and mixed-signal semiconductor solutions for multiple high-growth electronics device end markets. We believe our expanding product and service offerings allow us to provide additional products to new and existing customers and to cross-sell our products and services to our established customers. For example, we have leveraged our technology expertise and customer relationships to develop and grow power management solutions to customers. Our power management solutions enable our customers to increase system stability and improve heat dissipation and energy use, resulting in improved system efficiency and system cost savings for our customers, as well as environmental benefits. We have been able to sell these new products to our existing customers as well as expand our customer base.

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- **Distinctive Analog and Mixed-Signal Process Technology Expertise and Manufacturing Capabilities.** We have developed specialty analog and mixed-signal manufacturing processes such as high voltage CMOS, power and embedded memory. These processes enable us to flexibly ramp mass production of display, power and mixed-signal products, and shorten the duration from design to delivery of highly integrated, high-performance analog and mixed-signal semiconductors.
- **Highly Efficient Manufacturing Capabilities.** Our manufacturing strategy is focused on optimizing our asset utilization across our display driver and power management products as well as our foundry services, which enables us to maintain the price competitiveness of our products and services through our low-cost operating structure and improve our operational efficiency. We believe the location of our primary manufacturing and research and development facilities in Asia and the relatively low need for ongoing capital expenditures provide us with a number of cost advantages. We offer specialty analog process technologies that do not require substantial investment in leading edge, smaller geometry process equipment. We are able to utilize our manufacturing base over an extended period of time and thereby minimize our capital expenditure requirements.

### Our Strategy

Our objective is to grow our business, cash flow and profitability and to continue strengthening our position in the semiconductor industry as a leading provider of analog and mixed-signal semiconductor products and services for high-volume markets. Our business strategy emphasizes the following key elements:

- **Leverage Our Advanced Analog and Mixed-Signal Technology Platform to Innovate and Deliver New Products and Services.** We intend to continue to utilize our extensive patent and technology portfolio, analog and mixed-signal design and manufacturing expertise and specific end-market applications and system-level design expertise to deliver products with high levels of performance by utilizing our systems expertise and leveraging our deep knowledge of our customers' needs.
- **Increase Business with Existing Customers.** We have a global customer base consisting of leading consumer electronics OEMs that sell into multiple end markets. We intend to continue to strengthen our relationships with our customers by collaborating on critical design and product development in order to improve our design-win rates. We seek to increase our customer penetration by more closely aligning our product roadmap with those of our key customers and take advantage of our broad product portfolio, our deep knowledge of customer needs and existing relationships to sell more existing and new products. For example, two of our largest display driver customers have display modules in production using our power management products. These power management semiconductor products have been purchased and evaluated via their key subcontractors for LCD backlight units and LCD integrated power supplies.
- **Broaden Our Customer Base.** We expect to continue to expand our global design centers, local application engineering support and sales presence, particularly in China, Hong Kong, Taiwan and Macau, or collectively, Greater China, and other high-growth geographies, to penetrate new accounts. In addition, we intend to introduce new products and variations of existing products to address a broader customer base. In order to broaden our market penetration, we are complementing our direct customer relationships and sales with an improved base of distributors, especially to aid the growth of our power management business.
- **Drive Execution Excellence.** We intend to improve our execution through a number of management initiatives, new processes for product development, customer service and personnel development. We expect these ongoing initiatives will contribute to improvement of our new product development and customer service as well as enhance our commitment to a culture of quick action and execution by our workforce. In addition, we have focused on improving our manufacturing efficiency during the past several years.
- **Optimize Asset Utilization, Return on Capital Investments and Cash Flow Generation.** We intend to keep our capital expenditures relatively low by maintaining our focus on specialty process technologies that do not require substantial investment in frequent upgrades to the latest manufacturing equipment. By utilizing

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our manufacturing facilities for our Display Solutions and Power Solutions products and our Foundry Services Group customers, we seek to maximize return on our capital investments and our cash flow generation.

### **Our Technology**

We continuously strengthen our advanced analog and mixed-signal semiconductor technology platform by developing innovative technologies and integrated circuit building blocks that enhance the functionality of electronics devices through brighter, thinner displays, enhanced image quality, smaller form factor and longer battery life. We seek to further build our technology platform through proprietary processes and selective licensing and acquisition of complementary technologies, as well as disciplined process improvements in our manufacturing operations. Our goal is to leverage our experience and development initiatives across multiple end markets and utilize our understanding of system-level issues our customers face to introduce new technologies that enable our customers to develop more advanced, higher performance products.

Our display technology portfolio includes building blocks for display drivers and timing controllers, processor and interface technologies, as well as sophisticated production techniques, such as chip-on-glass (COG) and chip-on-film (COF) for rigid, flexible bezel-less, edge type, and trench type OLED displays. Our advanced display drivers incorporate LTPS TFT and OLED panel technologies that enable the highest resolution displays. Furthermore, we are developing a broad intellectual property portfolio to improve the power efficiency of displays, including the development of our contents-based automatic brightness control (CABC), automatic current limit (ACL) and optical compensation technology for OLED displays.

We have a long history of specialized process technology development and have a number of distinctive process implementations. We have approximately 508 process flows we can utilize for our products and offer to our Foundry Services Group customers. Our process technologies include standard CMOS, high voltage CMOS, ultra-low leakage high voltage CMOS, low noise CMOS with embedded bipolar-CMOS-DMOS(BCD) and BCDMOS and radio frequency silicon on insulator (RFSOI). Our manufacturing processes incorporate embedded memory solutions, such as static random access memory (SRAM), one-time programmable (OTP) memory, multiple-time programmable (MTP) memory, electrical fuse, and EEPROM. More broadly, we focus extensively on processes that reduce die size across all of the products we manufacture, in order to deliver cost-effective solutions to our customers.

Expertise in ultra-high voltage (UHV), high voltage and deep trench BCDMOS process technologies, low power analog and mixed-signal design capabilities and packaging know-how are key requirements in the power management market. We are currently leveraging our capabilities in these areas with products such as AC-DC converters, DC-DC converters, LED drivers, linear regulators and analog switches, power MOSFETs and IGBTs. We believe our system-level understanding of applications such as LCD televisions and smartphones will allow us to more quickly develop and customize power management solutions for our customers in these markets.

### **Products and Services by Business Line**

Our broad portfolio of products and services addresses multiple high-growth, consumer-focused end markets. A key component of our product strategy is to supply multiple related product and service offerings to each of the end markets that we serve.

### **Foundry Services**

We provide specialty analog and mixed-signal foundry services to fabless semiconductor companies and IDMs that serve communications, IoT, consumer, industrial and automotive applications. We manufacture wafers based on our customers' product designs. We do not market these products directly to end customers but rather supply manufactured wafers and products to our customers to market to their end customers. We offer

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approximately 508 process flows to our Foundry Services Group customers. We also often partner with key customers to jointly develop or customize specialized processes that enable our customers to improve their products and allow us to develop unique manufacturing expertise.

Our Foundry Services Group targets customers who require differentiated, specialty analog and mixed-signal process technologies such as high voltage CMOS, non-volatile memory and power. We refer to our approach of delivering specialized services to our customers as our application-specific technology strategy. We differentiate ourselves through the depth of our intellectual property portfolio, ability to customize process technology to meet the customers' requirements effectively, long history in this business and reputation for excellence.

Our Foundry Services Group customers vary from small fabless companies to large IDMs who serve communications, IoT, consumer, industrial and automotive applications.

### **Process Technology Overview**

- **Mixed-Signal.** Mixed-signal process technology is used in devices that require conversion of light and sound into electrical signals for processing and display. Our mixed-signal processes include advanced technologies such as low-noise process using triple gate, which allows die size reduction at any given performance level.
- **Power.** Power process technology, such as BCD, includes high-voltage capabilities as well as the ability to integrate functionalities, such as self-regulation, internal protection and other intelligent features. Unique process features, such as deep trench isolation, are suited for chip shrink and device performance enhancement.
- **High Voltage CMOS.** High-voltage CMOS process technology facilitates the use of high-voltage levels in conjunction with smaller transistor sizes. This process technology includes several variations, such as bipolar processes, which use transistors with qualities well suited for amplifying and switching applications, mixed-mode processes, which incorporate denser, more power efficient FETs, and thick metal processes.
- **Non-Volatile Memory.** Non-volatile memory (NVM), process technology enables the integration of non-volatile memory cells that allow retention of the stored information even when power is removed from the circuit. This type of memory is typically used for long-term persistent storage.

The table below sets forth the key process technologies in Foundry Services Group that we currently offer to customers:

<u>Process</u>	<u>Technology</u>	<u>Device</u>	<u>Application</u>
Mixed-Signal	<ul style="list-style-type: none"><li>• 0.13-0.5<math>\mu</math>m</li><li>• Low noise</li><li>• Ultra low power</li><li>• Triple gate</li><li>• RF SOI</li><li>• 0.13<math>\mu</math>m Slim*</li><li>• 0.18<math>\mu</math>m Slim</li></ul>	<ul style="list-style-type: none"><li>• Analog to digital converter</li><li>• Digital to analog converter</li><li>• Audio codec</li><li>• Chipset</li><li>• RF switch</li><li>• Digital tunable capacitor</li><li>• Fingerprint sensor</li></ul>	<ul style="list-style-type: none"><li>• Smartphones</li><li>• Tablet PCs</li><li>• Notebooks</li><li>• PC peripherals</li><li>• DVD players</li><li>• LCD TVs</li></ul>

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Process	Technology	Device	Application
Power	<ul style="list-style-type: none"> <li>• 0.13*-0.35µm</li> <li>• BCD 40V-120V*</li> <li>• Deep trench isolation</li> <li>• MOSFET</li> <li>• Ultra high voltage</li> <li>• Thick metal</li> <li>• Slim BCD 100V*</li> <li>• Simplified UHV</li> </ul>	<ul style="list-style-type: none"> <li>• Power management</li> <li>• LED driver</li> <li>• High power audio amp</li> <li>• Power Over Ethernet</li> <li>• DC/DC converter</li> <li>• USB type-C</li> <li>• Wireless power charger</li> </ul>	<ul style="list-style-type: none"> <li>• Smartphones</li> <li>• Tablet PCs</li> <li>• Notebooks</li> <li>• LCD TVs</li> <li>• LED lighting</li> <li>• LCD monitors</li> <li>• Automotive</li> </ul>
High-Voltage CMOS	<ul style="list-style-type: none"> <li>• 0.11-0.35µm</li> <li>• 18V-45V</li> <li>• Bipolar</li> </ul>	<ul style="list-style-type: none"> <li>• Display driver</li> <li>• CSTN driver</li> </ul>	<ul style="list-style-type: none"> <li>• Smartphones</li> <li>• Tablet PCs</li> <li>• LCD TVs</li> <li>• Desktop PCs</li> <li>• LCD monitors</li> </ul>
NVM	<ul style="list-style-type: none"> <li>• 0.11*-0.35µm</li> <li>• EEPROM, Ultra low leakage</li> <li>• Slim flash, Ultra low leakage</li> <li>• eFlash</li> <li>• OTP</li> <li>• MTP</li> </ul>	<ul style="list-style-type: none"> <li>• Microcontroller</li> <li>• Touch screen controller</li> <li>• Electronic tag memory</li> <li>• Hearing aid controller</li> <li>• Fingerprint sensor</li> <li>• Auto Focus IC</li> </ul>	<ul style="list-style-type: none"> <li>• Smartphones</li> <li>• Tablet PCs</li> <li>• Industrial applications</li> <li>• Medical equipment</li> <li>• Automotive</li> </ul>

\* In customer qualification stage

### Display Solutions

**Display Driver Characteristics.** Display drivers deliver defined analog voltages and currents that activate pixels to exhibit images on displays. The following key characteristics determine display driver performance and end-market application:

- **Resolution and Number of Channels.** Resolution determines the level of detail displayed within an image and is defined by the number of pixels per line multiplied by the number of lines on a display. For large displays, higher resolution typically requires more display drivers for each panel. Display drivers that have a greater number of channels, however, generally require fewer display drivers for each panel and command a higher selling price per unit. Mobile displays, conversely, are typically single chip solutions designed to deliver a specific resolution. We cover resolutions ranging from VGA (640 x 480) to UHD (3840 x 2160).
- **Color Depth.** Color depth is the number of colors that can be displayed on a panel. For example, for TFT-LCD panels, 262 thousand colors are supported by 6-bit source drivers; 16 million colors are supported by 8-bit source drivers; and 1 billion colors are supported by 10-bit source drivers.
- **Operational Voltage.** Display drivers are characterized by input and output voltages. Source drivers typically operate at input voltages from 1.62 to 3.6 volts and output voltages between 9 and 18 volts. Gate drivers typically operate at input voltages from 1.62 to 3.6 volts and output voltages from 30 to 45 volts. Lower input voltage results in lower power consumption and electromagnetic interference (EMI).
- **Gamma Curve.** The relationship between the light passing through a pixel and the voltage applied to the pixel by the source driver is referred to as the gamma curve. The gamma curve of the source driver can correct some imperfections in picture quality in a process generally known as gamma correction. Some advanced display drivers feature up to three independent gamma curves to facilitate this correction.
- **Driver Interface.** Driver interface refers to the connection between the timing controller and the display drivers. Display drivers increasingly require higher bandwidth interface technology to address the larger data transfer rate necessary for higher definition images. The principal types of interface technologies are embedded

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clock point to point interface (EPI), advanced intra panel interface (AIPI), mini-low voltage differential signaling (m-LVDS), unified standard interface for notebook and monitor (USI-GF), unified standard interface (USI), unified standard interface for TV (USI-T) and mobile industry processor interface (MIPI).

- **Package Type.** The assembly of display drivers typically uses COF and COG package types.

**Large Display Solutions.** We provide display solutions for a wide range of flat panel display sizes used in LCD televisions, including ultra-high definition televisions, or UHD TVs, FHD TVs, HD TVs, LED TVs, 3D TVs, OLED TVs, LCD monitors, notebooks, tablet PCs, public information displays and automotive.

Our large display solutions include source and gate drivers and timing controllers with a variety of interfaces, voltages, frequencies and packages to meet customers' needs. These products include advanced technologies such as high channel count, with products in mass production to provide up to 1,542 channels. Our large display solutions are designed to allow customers to cost-effectively meet the increasing demand for high resolution displays. We focus extensively on reducing the die size of our large display drivers and other solutions products to reduce costs without having to migrate to smaller geometries. For example, we have implemented several solutions to reduce die size in large display drivers, such as optimizing design schemes and design rules and applying specific technologies that we have developed internally. We have recently introduced a number of new large display drivers with reduced die size.

The table below sets forth the features of our products, both in mass production and in customer qualification, which is the final stage of product development, for large-sized displays:

<b>Product</b>	<b>Key Features</b>	<b>Applications</b>
TFT-LCD Source Drivers	<ul style="list-style-type: none"> <li>• 480 to 1,542 output channels</li> <li>• 6-bit (262 thousand colors), 8-bit (16 million colors), 10-bit (1 billion colors)</li> <li>• Output voltage ranging from 9V to 18V</li> <li>• Low power consumption and low EMI</li> <li>• COF package types</li> <li>• EPI, m-LVDS, AIPI, USI interface technologies</li> </ul>	<ul style="list-style-type: none"> <li>• UHD/HD/LED/3D TVs</li> <li>• Notebooks</li> <li>• LCD/LED monitors</li> <li>• Automotive</li> </ul>
TFT-LCD Gate Drivers	<ul style="list-style-type: none"> <li>• 272 to 960 output channels</li> <li>• Output voltage ranging from 30V to 45V</li> <li>• COF and COG package types</li> </ul>	<ul style="list-style-type: none"> <li>• Tablet PCs</li> <li>• HD/LED/3D TVs</li> <li>• Notebooks</li> <li>• Automotive</li> </ul>
Timing Controllers	<ul style="list-style-type: none"> <li>• Wide range of resolutions</li> <li>• EPI, m-LVDS, MIPI, USI-T interface technologies</li> <li>• Input voltage ranging from 1.6V to 3.6V</li> </ul>	<ul style="list-style-type: none"> <li>• Tablet PCs</li> <li>• Public information display</li> </ul>
OLED Source Drivers	<ul style="list-style-type: none"> <li>• 960 output channels</li> <li>• 10 bit (1 billion colors)</li> <li>• Output voltage: 18V</li> <li>• COF package type</li> <li>• EPI interface technology</li> </ul>	<ul style="list-style-type: none"> <li>• OLED TVs</li> </ul>

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**Mobile Display Solutions.** Our mobile display solutions incorporate the industry’s most advanced display technologies, such as OLED and LTPS, as well as high-volume technologies such as a-Si TFT. Our mobile display products offer specialized capabilities, including high speed serial interfaces, such as mobile display digital interface (MDDI), MIPI, reduced swing differential signaling interface (RSDS) and logic-based OTP memory. We focus extensively on reducing the die size of our mobile display drivers and other solutions products to reduce costs without having to migrate to smaller geometries. For example, we have implemented several solutions to reduce die size in mobile display drivers, such as optimizing design schemes and design rules and applying specific technologies that we have developed internally. Further, we are building a distinctive intellectual property portfolio that allows us to provide features that reduce power consumption, such as CABC and ACL. This intellectual property portfolio will also support our power management product development initiatives, as we leverage our system level understanding of power efficiency. Our OLED driver ICs can support various configurations such as high resolution from FHD+(2,240x1,080) to QHD+(3,120x1,440), wide aspect ratio from 16:9 to 21:9 and flexible bezel-less, edge type, and trench type OLED displays.

The following table summarizes the features of our products, both in mass production and in customer qualification, which is the final stage of product development, for mobile displays:

<u>Product</u>	<u>Key Features</u>	<u>Applications</u>
OLED	<ul style="list-style-type: none"><li>• Resolutions of HD720, WXGA, FHD, FHD+, QHD and QHD+</li><li>• Aspect ratio from 16:9 to 21:9</li><li>• Color depth of 16 million</li><li>• MIPI, eRVDS interface</li><li>• Logic-based OTP</li><li>• ABC, ACL</li></ul>	<ul style="list-style-type: none"><li>• Smartphones</li><li>• Game consoles</li><li>• Digital still cameras</li><li>• Tablet PCs</li><li>• Virtual reality headsets</li></ul>
LTPS	<ul style="list-style-type: none"><li>• Resolutions of VGA, WSVGA, WVGA and DVGA</li><li>• Color depth of 16 million</li><li>• MDDI, MIPI interface</li><li>• Logic-based OTP</li><li>• Separated gamma control</li></ul>	<ul style="list-style-type: none"><li>• Smartphones</li><li>• Digital still cameras</li></ul>
a-Si TFT	<ul style="list-style-type: none"><li>• Resolutions of WQVGA and HVGA</li><li>• Color depth of 16 million</li><li>• RSDS, MDDI, MIPI interface</li><li>• CABC</li><li>• Separated gamma control</li></ul>	<ul style="list-style-type: none"><li>• Mobile phones</li><li>• Digital still cameras</li><li>• Automotive</li></ul>

## **Power Solutions**

We develop, manufacture and market power management solutions for a wide range of end-market customers. The products include MOSFETs, IGBTs, AC-DC converters, DC-DC converters, LED drivers, regulators, for a range of devices, including LCD, LED, and UHD televisions, digital signage, smartphones, mobile phones, desktop PCs, notebooks, tablet PCs, other consumer electronics, consumer appliances and industrial applications such as power suppliers, e-bikes, photovoltaic inverters, LED lighting and motor drives.

- **MOSFETs.** Our MOSFETs include low-voltage to mid-voltage, Trench MOSFETs, 12V to 150V, high-voltage Planar MOSFETs, 200V through 700V, and super junction MOSFETs, 500V through 900V. MOSFETs are used in applications to switch, shape or transfer electricity under varying power requirements. The key application segments are smartphones, mobile phones, LCD, LED, and UHD televisions, desktop PCs, notebooks, tablet PCs, servers, lighting and power supplies for consumer electronics and industrial equipment. MOSFETs allow electronics manufacturers to achieve specific design

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goals of high efficiency and low standby power consumption. For example, computing solutions focus on delivering efficient controllers and MOSFETs for power management in VCORE, DDR and chipsets for audio, video and graphics processing systems.

- **IGBTs.** Our IGBTs include 650V to 1200V field stop trench IGBTs. IGBTs are used in high power industrial applications, such as UPSs, power supplies, motor drives, solar inverters, welding machines and consumer appliances.
- **AC-DC Converters and DC-DC Converters.** We offer AC-DC and DC-DC converters targeting mobile applications and high power applications like LCD, LED, and UHD televisions, notebooks, smartphones, mobile phones, set-top boxes and display modules. We expect our AC-DC and DC-DC converters will meet customer's green power requirements by featuring wide input voltage ranges, high efficiency and small size.
- **LED Drivers.** LED backlighting drivers serve the fast-growing LCD and LED panel backlighting market for LCD and LED televisions, LCD monitors, digital signage, notebooks, smartphones and tablet PCs. Our products are designed to provide high efficiency and wide input voltage range, as well as pulse width modulation (PWM) dimming for accurate white LED dimming control. LED lighting drivers have a wide input voltage range applicable to incandescent bulb and fluorescent lamp replacement.
- **Regulators.** We also provide analog regulators for mobile and consumer applications. Our products are designed for high efficiency and low power consumption in mobile applications.
- **SSD PMIC.** We also provide solid state drive power management integrated circuit (SSD PMIC) for the computing segment. Our product is designed for high frequency switching, high efficiency and pulse frequency modulation (PFM) function to reduce power consumption in low load converters.

Our power management solutions enable customers to increase system stability and improve heat dissipation and energy use, resulting in cost savings for our customers and consumers, as well as environmental benefits. Our in-house process technology capabilities and eight-inch wafer production lines increase efficiency and contribute to the competitiveness of our products.

The following table summarizes the features of our products, both in mass production and in customer qualification, which is the final stage of product development:

<u>Product</u>	<u>Key Features</u>	<u>Applications</u>
Low-Mid Voltage MOSFET	<ul style="list-style-type: none"> <li>• Voltage options of 12V-150V</li> <li>• Advanced Trench MOSFET Process</li> <li>• High cell density</li> <li>• Advanced packages to enable reduction of PCB mounting area</li> </ul>	<ul style="list-style-type: none"> <li>• Smartphones and mobile phones</li> <li>• Tablet PCs, Notebooks</li> <li>• Desktop PCs, Servers</li> <li>• LCD/LED/UHD TVs</li> <li>• Industrial applications</li> <li>• Cryptocurrency miner</li> </ul>
High Voltage MOSFET	<ul style="list-style-type: none"> <li>• Voltage options of 200V-700V</li> <li>• R2FET (rapid recovery) option to shorten reverse diode recovery time</li> <li>• Zenor FET option for MOSFET protection for abnormal input</li> <li>• Advanced Planar MOSFET Process</li> <li>• Advanced packages to enable reduction of PCB mounting area</li> </ul>	<ul style="list-style-type: none"> <li>• Adaptors for tablet PC/mobile phone/smartphone</li> <li>• Power supplies</li> <li>• Lighting (ballast, HID, LED)</li> <li>• Industrial applications</li> <li>• LCD/LED/UHD TVs</li> </ul>

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<b>Product</b>	<b>Key Features</b>	<b>Applications</b>
Super Junction MOSFET	<ul style="list-style-type: none"><li>• Voltage options of 500V-900V</li><li>• Low <math>R_{DS(ON)}</math></li><li>• Epi stack process</li></ul>	<ul style="list-style-type: none"><li>• LCD/LED/UHD TVs</li><li>• Lightings applications (ballast, HID, LED)</li><li>• Smartphones</li><li>• Power supplies</li><li>• Servers</li><li>• Industrial applications</li></ul>
IGBTs	<ul style="list-style-type: none"><li>• Voltage options of 650V/1200V</li><li>• Field Stop Trench IGBT</li><li>• Current options from 15A to 60A</li></ul>	<ul style="list-style-type: none"><li>• Industrial applications</li><li>• Consumer appliances</li></ul>
AC-DC Converter	<ul style="list-style-type: none"><li>• Wide control range for high power application (&gt;150W)</li><li>• Advanced BCDMOS process</li><li>• High Precision Voltage Reference</li><li>• Very low startup current consumption</li></ul>	<ul style="list-style-type: none"><li>• LCD/LED/UHD TVs</li><li>• Power supplies</li></ul>
DC-DC Converters	<ul style="list-style-type: none"><li>• High efficiency, wide input voltage range</li><li>• Advanced BCDMOS process</li><li>• Fast load and line regulation</li><li>• Accurate output voltage</li><li>• OCP, SCP and thermal protections</li></ul>	<ul style="list-style-type: none"><li>• LCD/LED/UHD TVs</li><li>• Smartphones</li><li>• Mobile phones</li><li>• Notebooks</li><li>• Set-top boxes</li></ul>
LED Backlighting Drivers	<ul style="list-style-type: none"><li>• High efficiency, wide input voltage range</li><li>• Advanced BCDMOS process</li><li>• OCP, SCP, OVP and UVLO protections</li><li>• Accurate LED current control and multi-channel matching</li><li>• Programmable current limit, boost up frequency</li></ul>	<ul style="list-style-type: none"><li>• Tablet PCs</li><li>• Notebooks</li><li>• Smartphones</li><li>• LED/UHD TVs</li><li>• LED monitors</li></ul>
Digital Controlled LED Driver	<ul style="list-style-type: none"><li>• Multi-channel constant current control</li><li>• 12Bit gray scale with SPI</li></ul>	<ul style="list-style-type: none"><li>• Digital signage</li></ul>
LED Lighting Drivers	<ul style="list-style-type: none"><li>• High efficiency, wide input voltage range</li><li>• Simple solutions with external components fully integrated</li><li>• Advanced high voltage BCDMOS process</li><li>• Accurate LED current control and high power factor and low THB</li></ul>	<ul style="list-style-type: none"><li>• AC and DC LED lighting</li></ul>

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<u>Product</u>	<u>Key Features</u>	<u>Applications</u>
Regulators	<ul style="list-style-type: none"><li>• Single and multi-regulators</li><li>• Low Noise Output regulators</li><li>• Wide range of input voltage and various output current</li><li>• CMOS and BCDMOS processes</li></ul>	<ul style="list-style-type: none"><li>• Smartphones and Mobile phones</li><li>• Notebooks</li></ul>
SSD PMIC	<ul style="list-style-type: none"><li>• High current buck</li><li>• PFM function</li><li>• High frequency switching</li><li>• High efficiency</li><li>• High integration technology</li><li>• Small QFN package</li></ul>	<ul style="list-style-type: none"><li>• Computing</li></ul>

### **Sales and Marketing**

We focus our sales and marketing strategy on continuing to grow and leverage our existing relationships with leading consumer electronics OEMs, while expanding into industrial and automotive end markets. For Foundry Services Group, we focus on analog and mixed-signal semiconductor companies who see the benefit of our innovative technology and cost structure. We believe our close collaboration with customers allows us to align our product and process technology development with our customers' existing and future needs. Because our customers often service multiple end markets, our product sales teams are organized by customers within the major geographies. We believe this facilitates the sale of products that address multiple end-market applications to each of our customers. Our Foundry Services Group sales teams focus on marketing our services to analog and mixed-signal semiconductor companies that require specialty manufacturing processes.

We sell our products through a direct sales force and a network of authorized agents and distributors. We have strategically located our sales and technical support offices near our customers. Our direct sales force consists primarily of representatives co-located with our design center in Korea, as well as our local sales and support offices in the US, Japan, Greater China and Europe. We have a network of agents and distributors in Korea, the US, Japan, Greater China and Europe. For the years ended December 31, 2018, 2017 and 2016, we derived 77%, 75% and 77% of net sales through our direct sales force, respectively, and 23%, 25% and 23% of net sales through our network of authorized agents and distributors, respectively.

### **Customers**

We sell our Display Solutions and Power Solutions products to consumer, computing and industrial electronics OEMs, original design manufacturers and electronics manufacturing services companies, as well as subsystem designers. We sell our foundry services to analog and mixed-signal semiconductor companies. For the years ended December 31, 2018, 2017 and 2016, our ten largest customers accounted for 61%, 57% and 64% of our net sales, respectively. For the year ended December 31, 2018, sales to Samsung Display Corporation represented 19.3% of our net sales and 56.6% of our Display Solutions division's net sales, and LG Display represented 13.3% of our net sales and 38.9% of our Display Solutions division's net sales. For the year ended December 31, 2017, sales to LG Display represented 15.6% of our net sales and 50.6% of our Display Solutions division's net sales. For the year ended December 31, 2016, sales to Samsung Display Corporation represented 23.5% of our net sales and 57.3% of our Display Solutions division's net sales, and sales to LG Display represented 11.4% of our net sales and 27.9% of our Display Solutions division's net sales. For the year ended December 31, 2018, we recorded revenues of \$37.5 million from customers in the US and \$713.4 million from all foreign countries, of which 39.6% was from Korea, 14.0% from Taiwan, 4.5% from the United Kingdom and 35.5% from Greater China. For the year ended December 31, 2017, we recorded revenues of \$35.1 million from customers in the US and \$644.6 million from all foreign countries, of which 43.4% was from Korea, 18.2% from Taiwan, 3.7% from the United Kingdom and 24.9% from Greater China. For the year ended December 31, 2016, we recorded revenues of \$33.2 million from

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customers in the US and \$654.8 million from all foreign countries, of which 33.5% was from Korea, 16.5% from Taiwan, 5.0% from the United Kingdom and 37.3% from Greater China.

### **Intellectual Property**

As of December 31, 2018, our portfolio of intellectual property assets included approximately 2,678 registered patents and 307 pending patent applications. Approximately 1,948 and 137 of our patents and pending applications, respectively, are novel in that they are not a foreign counterpart of an existing patent or patent application. Because we file patents in multiple jurisdictions, we additionally have approximately 730 registered patents and 170 pending applications that relate to identical technical claims in our base patent portfolio. Our patents expire at various times approximately over the next 19 years. While these patents are in the aggregate important to our competitive position, we do not believe that any single registered or pending patent is material to us.

We have entered into exclusive and non-exclusive licenses and development agreements with third parties relating to the use of intellectual property of the third parties in our products and design processes, including licenses related to embedded memory technology, design tools, process simulation tools, circuit designs and processor cores. Some of these licenses, including our agreements with Silicon Works Co., Ltd. and ARM Limited, are material to our business and may be terminated by the licensors prior to the expiration of these licenses should we fail to cure any breach under such licenses. Our license with Silicon Works Co., Ltd. relates to our large display drivers, and our license from ARM Limited primarily relates to product lines in our Foundry Services Group business. The loss of either license could have a material adverse impact on our results of operations. Additionally, in connection with the Original Acquisition, SK hynix retained a perpetual license to use the intellectual property that we acquired from SK hynix in the Original Acquisition. Under this license, SK hynix and its subsidiaries are free to develop products that may incorporate or embody intellectual property developed by us prior to October 2004.

### **Competition**

We operate in highly competitive markets characterized by rapid technological change and continually advancing customer requirements. Although no one company competes with us in all of our product lines, we face significant competition in each of our market segments. Our competitors include other independent and captive manufacturers and designers of analog and mixed-signal integrated circuits, including display driver and power management semiconductor devices, as well as companies providing specialty manufacturing services.

We compete based on design experience, manufacturing capabilities, the ability to service customer needs from the design phase through the shipping of a completed product, length of design cycle and quality of technical support and sales personnel. Our ability to compete successfully will depend on internal and external variables, both within and outside of our control. These variables include the timeliness with which we can develop new products and technologies, product performance and quality, manufacturing yields, capacity availability, customer service, pricing, industry trends and general economic trends.

### **Employees**

Our worldwide workforce consisted of 2,515 employees (full- and part-time) as of December 31, 2018, of which 346 were involved in sales, marketing, general and administrative, 419 in research and development (including 194 with advanced degrees), 103 in quality, reliability and assurance and 1,647 in manufacturing (comprised of 256 in engineering and 1,391 in operations). As of December 31, 2018, our workforce consisted of 2,515 employees, of which 1,479 employees, or approximately 59% of our workforce, were represented by the MagnaChip Semiconductor Labor Union.

### **Environmental**

We are subject to a variety of environmental, health and safety laws and regulations in each of the jurisdictions in which we operate, governing, among other things, air emissions, wastewater discharges, the

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generation, use, handling, storage and disposal of, and exposure to, hazardous substances (including asbestos) and waste, soil and groundwater contamination and employee health and safety. These laws and regulations are complex, change frequently and have tended to become more stringent over time. Since 2015, our Korean subsidiary has been subject to a new set of greenhouse gas emissions regulation, the Korean Emissions Trading Scheme, or K-ETS, under the Act on Allocation and Trading of Greenhouse Gas Emission Allowances. Under K-ETS, our Korean subsidiary was allocated a certain amount of emissions allowance in accordance with the National Allocation Plan prepared by the Korean government and is required to meet its allocated target by either reducing the emission or purchasing the allowances from other participants in the emission trading market. Another example is the newly reinforced regulations on chemicals under Chemicals Control Act and K-REACH, which came into effect on January 1, 2015. Under these laws, our Korean subsidiary is required to comply with various requirements to report, evaluate, manage and ensure the safe usage of the chemicals used in its facilities. There can be no assurance that we have been or will be in compliance with all of these laws and regulations, or that we will not incur material costs or liabilities in connection with these laws and regulations in the future. The adoption of new environmental, health and safety laws and the failure to comply with new or existing laws or issues relating to hazardous substances could subject us to material liability (including substantial fines or penalties), impose the need for additional capital equipment or other process requirements upon us, curtail our operations or restrict our ability to expand operations.

### **Raw Materials**

We use processes that require specialized raw materials that are generally available from a limited number of suppliers. We continue to attempt to qualify additional suppliers for our raw materials. The Securities and Exchange Commission (the “SEC”), as mandated by the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, adopted new disclosure regulations for public companies that manufacture products containing certain minerals that are mined from the Democratic Republic of Congo and adjoining countries. These “conflict minerals” are commonly found in metals used in the manufacture of semiconductors. The implementation of these new requirements could adversely affect the sourcing, availability and pricing of metals used in the manufacture of our products. See “Item 1A. Risk Factors—Risks Related to Our Business—Compliance with new regulations regarding the use of “conflict minerals” could limit the supply and increase the cost of certain raw materials used in manufacturing our products.”

### **Available Information**

Our principal executive offices are located at: c/o MagnaChip Semiconductor S.A., 1, Allée Scheffer, L-2520 Luxembourg, Grand Duchy of Luxembourg, and our telephone number is (352) 45-62-62. Our website address is [www.magnachip.com](http://www.magnachip.com). Our annual, quarterly and current reports on Forms 10-K, 10-Q or 8-K, respectively, and all amendments thereto filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, can be accessed, free of charge, at our website as soon as practicable after such reports are filed with the SEC. In addition, our Corporate Governance Guidelines, Code of Business Conduct and Ethics, Clawback Policy, Audit Committee Charter, Compensation Committee Charter, Nominating and Governance Committee Charter and Risk Committee Charter are available on our website. Information contained on our website does not constitute, and shall not be deemed to constitute, part of this Report and shall not be deemed to be incorporated by reference into this Report. In addition, the SEC maintains an internet site, [www.sec.gov](http://www.sec.gov), from which you can access our annual, quarterly and current reports on Form 10-K, 10-Q and 8-K, respectively, and all amendments to these materials after such reports and amendments are filed with the SEC. You may also request a copy of these filings, at no cost, by writing or telephoning us at the following address or phone number: c/o MagnaChip Semiconductor, Inc., 60 South Market Street, Suite 750, San Jose, CA 95113, Attention: General Counsel and Secretary; the telephone number at that address is (408) 625-5999.

## Executive Officers of the Company

The following table sets forth certain information regarding our current executive officers:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Young-Joon (YJ) Kim	54	Chief Executive Officer and Director
Jonathan Kim	44	Chief Financial Officer, Executive Vice President and Chief Accounting Officer
Theodore Kim	49	Chief Compliance Officer, Executive Vice President, General Counsel and Secretary
Woung Moo Lee	56	Executive Vice President and General Manager, Standard Products Group

**Young-Joon (YJ) Kim, Chief Executive Officer and Director.** Mr. YJ Kim became our Chief Executive Officer in May 2015 and has also served as a director on our Board since that time. Mr. Kim joined our company in May 2013 and served as our Executive Vice President and General Manager, Display Solutions Division. He was promoted to Interim Chief Executive Officer in May 2014. He also served as the acting General Manager of our Foundry Services Group from May to November 2015. Prior to joining our company, Mr. Kim held a variety of senior management roles at several global semiconductor firms in a career spanning nearly 30 years. His past roles include marketing, engineering, product development and strategic planning, and his product expertise includes microprocessors, network processors, FLASH, EPROM, analog, mixed-signal, sensors, workstations and servers. Immediately before joining our company, Mr. Kim served as Vice President, Infrastructure Processor Division, and General Manager of the OCTEON Multi-Core Processor Group of Cavium, Inc., where he worked from 2006 to 2013. Prior to Cavium, Mr. Kim served as Core Team Lead and General Manager of the Tolapai Program at Intel Corporation from 2004 to 2006. In 1998, Mr. Kim co-founded API Networks, a joint venture between Samsung and Compaq, where he served as the head of product management, worldwide sales and business development for Alpha processors. Prior to API Networks, Mr. Kim served as Director of Marketing at Samsung Semiconductor, Inc. from 1996 to 1998. Mr. Kim began his career as a product engineer at Intel Corporation. Mr. Kim holds B.S. and M. Eng. degrees in Electrical Engineering from Cornell University. Our Board has concluded that Mr. YJ Kim is a valuable member of the Board based on his understanding of our company's products and technology as our Chief Executive Officer and his deep knowledge of the semiconductor industry.

**Jonathan Kim (J. Kim), Chief Financial Officer, Executive Vice President and Chief Accounting Officer.** Mr. Jonathan Kim was appointed Chief Financial Officer and Executive Vice President in May 2015, after serving as our Interim Chief Financial Officer, Chief Accounting Officer and Senior Vice President since March 2014. Prior to joining MagnaChip, Mr. Kim served since July 2010 as the Chief Financial Officer of StartForce, Inc., a VC backed desktop virtualization company, which was acquired in February 2011 by ZeroDesktop, Inc., a leading developer of next-generation desktop virtualization and cloud computing solutions. Mr. Kim continued to serve as the Chief Financial Officer at ZeroDesktop through March 2014. Mr. Kim also served as a principal at a Silicon Valley based investment and advisory firm where he led investments in startup companies in the US and Korea. Mr. Kim began his career in public accounting and held various positions with Deloitte for nearly 10 years, serving Global Fortune 500 and US multinational publicly traded clients in the Technology, Media & Telecommunication sectors. Mr. Kim holds a B.A. degree in Business Administration from the Foster School of Business at the University of Washington and is a Certified Public Accountant.

**Theodore Kim (T. Kim), Chief Compliance Officer, Executive Vice President, General Counsel and Secretary.** Mr. T. Kim became our Chief Compliance Officer and Executive Vice President in May 2015, and became our General Counsel and Secretary in November 2013. Mr. T. Kim previously served as our Senior Vice President from November 2013 to May 2015. Prior to joining our company, Mr. T. Kim served as Head Lawyer, Global Business Development at Samsung Fire & Marine Insurance from October 2012 to October 2013. Mr. T. Kim was employed by Gibson, Dunn & Crutcher LLP, a law firm, from October 2005 to July 2012,

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serving most recently as Of Counsel. Prior to that, he served as Foreign Legal Consultant at Kim & Chang, a law firm in Korea, from 2001 to 2005, and prior to that, he worked as an associate attorney at Morrison & Foerster LLP, a law firm, from 1997 to 2001. Mr. Kim holds a B.A. degree in Economics and a B.S. degree in Mechanical Engineering from the University of California, Irvine, and a J.D. degree from the University of California, Los Angeles, School of Law.

**Woung Moo Lee, Executive Vice President and General Manager, Standard Products Group.** Mr. Woung Moo Lee became our Executive Vice President and General Manager, Standard Products Group in November 2015. He previously served as our Senior Vice President, Korea Sales from 2013. Prior to joining our company, he was one of the founding executives and served as Vice President, Global Strategy and Marketing, Samsung LED Co., Ltd. from 2009 to 2011. In 1984, Mr. Lee began his career as a memory semiconductor design engineer and served as Vice President of Memory Strategy & Marketing Team at Samsung Electronics Co., Ltd. until 2009. Mr. Lee received the “Proud Samsung Employee Award” in 2005 and holds a B.S. degree in Electronic Engineering from Inha University.

### **Item 1A. Risk Factors**

*You should carefully consider the risk factors set forth below as well as the other information contained in this Report. Any of the following risks could materially and adversely affect our business, financial condition or results of operations. As a result, the price of our common stock could decline and you could lose all or part of your investment in our common stock. Additional risks and uncertainties not currently known to us or those currently viewed by us to be immaterial may also materially and adversely affect our business, financial condition or results of operations.*

#### **Risks Related to Our Business**

***We operate in the highly cyclical semiconductor industry, which is subject to significant downturns that may negatively impact our results of operations.***

The semiconductor industry is highly cyclical and is characterized by constant and rapid technological change and price erosion, evolving technical standards, short product life cycles (for semiconductors and for the end-user products in which they are used) and wide fluctuations in product supply and demand. From time to time, these and other factors, together with changes in general economic conditions, cause significant upturns and downturns in the industry in general and in our business in particular. Periods of industry downturns have been characterized by diminished demand for end-user products, high inventory levels, underutilization of manufacturing capacity, changes in revenue mix and accelerated erosion of average selling prices. We have experienced these conditions in our business in the past and may experience renewed, and possibly more severe and prolonged, downturns in the future as a result of such cyclical changes. This may reduce our results of operations.

We base our planned operating expenses in part on our expectations of future revenue, and a significant portion of our expenses is relatively fixed in the short term. If revenue for a particular quarter is lower than we expect, we likely will be unable to proportionately reduce our operating expenses for that quarter, which would harm our operating results for that quarter.

***Our restructuring activities and dispositions of assets and businesses could result in lost business and other costs that could have a material adverse effect on our results of operations.***

From time to time, we may choose to sell assets, restructure business operations, shut down manufacturing lines or otherwise dispose of assets and businesses as part of management’s strategies to better align our product offerings with market demands and our customers’ needs. In connection with these activities, we face risks that we will disrupt service to our customers, lose business and incur significant costs related to such activities. These

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risks include potential damage to our reputation and customer relationships if we are unable to effectively transition such customer relationships to other production lines or products or if we cannot effectively manage our supplier and vendor relationships during such activities. In addition, we may also face claims or costs associated with transitioning or eliminating certain employee positions and modifying or terminating vendor relationships in connection with those exit activities.

***If we fail to develop new products and process technologies or enhance our existing products and services in order to react to rapid technological change and market demands, our business will suffer.***

Our industry is subject to constant and rapid technological change and product obsolescence as customers and competitors create new and innovative products and technologies. Products or technologies developed by other companies may render our products or technologies obsolete or noncompetitive, and we may not be able to access advanced process technologies, including smaller geometries, or to license or otherwise obtain essential intellectual property required by our customers.

We must develop new products and services and enhance our existing products and services to meet rapidly evolving customer requirements. We design products for customers that continually require higher performance and functionality at lower costs. We must, therefore, continue to enhance the performance and functionality of our products. The development process for these advancements is lengthy and requires us to accurately anticipate technological changes and market trends. Developing and enhancing these products is uncertain and can be time-consuming, costly and complex. If we do not continue to develop and maintain process technologies that are in demand by our Foundry Services Group customers, we may be unable to maintain existing customers or attract new customers.

Customer and market requirements can change during the development process. There is a risk that these developments and enhancements will be late, fail to meet customer or market specifications or not be competitive with products or services from our competitors that offer comparable or superior performance and functionality. Any new products, such as our expanding line of power management solutions, or product or service enhancements, may not be accepted in new or existing markets. Our business will suffer if we fail to develop and introduce new products and services or product and service enhancements on a timely and cost-effective basis.

***We manufacture our products based on our estimates of customer demand, and if our estimates are incorrect, our financial results could be negatively impacted.***

We make significant decisions, including determining the levels of business that we will seek and accept, production schedules, component procurement commitments, personnel needs and other resource requirements, based on our estimates of customer demand and expected demand for and success of their products. The short-term nature of commitments by many of our customers and the possibility of rapid changes in demand for their products reduces our ability to estimate accurately future customer demand for our products. On occasion, customers may require rapid increases in supply, which can challenge our production resources and reduce margins. We may not have sufficient capacity at any given time to meet our customers' increased demand for our products. Conversely, downturns in the semiconductor industry have caused and may in the future cause our customers to reduce significantly the amount of products they order from us. Because many of our costs and operating expenses are relatively fixed, a reduction in customer demand would decrease our results of operations, including our gross profit.

***Our customers may cancel their orders, reduce quantities or delay production, which would adversely affect our margins and results of operations.***

We generally do not obtain firm, long-term purchase commitments from our customers. Customers may cancel their orders, reduce quantities or delay production for a number of reasons. Cancellations, reductions or delays by a significant customer or by a group of customers, which we have experienced as a result of periodic

downturns in the semiconductor industry, or failure to achieve design-wins, have affected and may continue to affect our results of operations adversely. These risks are exacerbated because many of our products are customized, which hampers our ability to sell excess inventory to the general market. We may incur charges resulting from the write-off of obsolete inventory. In addition, while we do not obtain long-term purchase commitments, we generally agree to the pricing of a particular product over a set period of time. If we underestimate our costs when determining pricing, our margins and results of operations would be adversely affected.

***We depend on high utilization of our manufacturing capacity, a reduction of which could have a material adverse effect on our business, financial condition and the results of our operations.***

An important factor in our success is the extent to which we are able to utilize the available capacity in our fabrication facilities. As many of our costs are fixed, a reduction in capacity utilization, as well as changes in other factors, such as reduced yield or unfavorable product mix, could reduce our profit margins and adversely affect our operating results. A number of factors and circumstances may reduce utilization rates, including periods of industry overcapacity, low levels of customer orders, operating inefficiencies, strategic evaluations and decisions by the Board related to the Company's overall business, divisions and business lines, mechanical failures and disruption of operations due to expansion or relocation of operations, power interruptions and fire, flood or other natural disasters or calamities. The potential delays and costs resulting from these factors and circumstances could have a material adverse effect on our business, financial condition and results of operations.

***A significant portion of our sales comes from a relatively limited number of customers, the loss of which would adversely affect our financial results.***

Historically, we have relied on a limited number of customers for a substantial portion of our total revenue. If we were to lose key customers or if customers cease to place orders for our high-volume products or services, our financial results would be adversely affected. For the years ended December 31, 2018, 2017 and 2016, our ten largest customers accounted for 61%, 57% and 64% of our net sales, respectively. For the year ended December 31, 2018, sales to Samsung Display Corporation represented 19.3% of the Company's net sales and 56.6% of our Display Solutions division's net sales, and sales to LG Display represented 13.3% of the Company's net sales and 38.9% of our Display Solutions division's net sales. For the year ended December 31, 2017, sales to LG Display represented 15.6% of the Company's net sales and 50.6% of our Display Solutions division's net sales. For the year ended December 31, 2016, sales to Samsung Display Corporation represented 23.5% of the Company's net sales and 57.3% of our Display Solutions division's net sales, and sales to LG Display represented 11.4% of the Company's net sales and 27.9% of our Display Solutions division's net sales. Significant reductions in sales to any of these customers, especially our few largest customers, the loss of other major customers or a general curtailment in orders for our high-volume products or services within a short period of time would adversely affect our business.

***The average selling prices of our semiconductor products have at times declined rapidly and will likely do so in the future, which could harm our revenue and gross profit.***

The semiconductor products we develop and sell are subject to rapid declines in average selling prices. From time to time, we have had to reduce our prices significantly to meet customer requirements, and we may be required to reduce our prices in the future. This would cause our gross profit to decrease. Our financial results will suffer if we are unable to offset any reductions in our average selling prices by increasing our sales volumes, reducing our costs or developing new or enhanced products on a timely basis with higher selling prices or gross profit.

***Our industry is highly competitive, and our ability to compete could be negatively impacted by a variety of factors.***

The semiconductor industry is highly competitive and includes hundreds of companies, a number of which have achieved substantial market share within both our product categories and end markets. Current and

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prospective customers for our products and services evaluate our capabilities against the merits of our competitors. Some of our competitors are well established as independent companies and have substantially greater market share and manufacturing, financial, research and development and marketing resources than we do. We also compete with emerging companies that are attempting to sell their products in certain of our end markets and with the internal semiconductor design and manufacturing capabilities of many of our significant customers. We expect to experience continuing competitive pressures in our markets from existing competitors and new entrants.

Any consolidation among our competitors could enhance their product offerings and financial resources, further enhancing their competitive position. Our ability to compete will depend on a number of factors, including the following:

- our ability to offer cost-effective and high quality products and services on a timely basis using our technologies;
- our ability to accurately identify and respond to emerging technological trends and demand for product features and performance characteristics;
- our ability to continue to rapidly introduce new products that are accepted by the market;
- our ability to adopt or adapt to emerging industry standards;
- the number and nature of our competitors and competitiveness of their products and services in a given market;
- entrance of new competitors into our markets;
- our ability to enter the highly competitive power management market; and
- our ability to continue to offer in demand foundry services at competitive prices.

Many of these factors are outside of our control. In the future, our competitors may replace us as a supplier to our existing or potential customers, and our customers may satisfy more of their requirements internally. As a result, we may experience declining revenues and results of operations.

### ***Changes in demand for consumer electronics in our end markets can impact our results of operations.***

Demand for our products will depend in part on the demand for various consumer electronics products, in particular, mobile phones and multimedia devices, digital televisions, flat panel displays, mobile PCs and digital cameras, which in turn depends on general economic conditions and other factors beyond our control. If our customers fail to introduce new products that employ our products or component parts, demand for our products will suffer. To the extent that we cannot offset periods of reduced demand that may occur in these markets through greater penetration of these markets or reduction in our production and costs, our sales and gross profit may decline, which would negatively impact our business, financial condition and results of operations.

### ***If we fail to achieve design-wins for our semiconductor products, we may lose the opportunity for sales to customers for a significant period of time and be unable to recoup our investments in our products.***

We expend considerable resources on winning competitive selection processes, known as design-wins, to develop semiconductor products for use in our customers' products. These selection processes are typically lengthy and can require us to incur significant design and development expenditures. We may not win the competitive selection process and may never generate any revenue despite incurring significant design and development expenditures. Once a customer designs a semiconductor into a product, that customer is likely to continue to use the same semiconductor or enhanced versions of that semiconductor from the same supplier across a number of similar and successor products for a lengthy period of time due to the significant costs associated with qualifying a new supplier and potentially redesigning the product to incorporate a different

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semiconductor. If we fail to achieve initial design-wins in a customer's qualification process, we may lose the opportunity for significant sales to that customer for a number of products and for a lengthy period of time. This may cause us to be unable to recoup our investments in our semiconductor products, which would harm our business.

***We have lengthy and expensive design-to-mass production and manufacturing process development cycles that may cause us to incur significant expenses without realizing meaningful sales, the occurrence of which would harm our business.***

The cycle time from the design stage to mass production for some of our products is long and requires the investment of significant resources with many potential customers without any guarantee of sales. Our design-to-mass production cycle typically begins with a three-to-twelve month semiconductor development stage and test period followed by a three-to-twelve month end-product qualification period by our customers. The fairly lengthy front end of our sales cycle creates a risk that we may incur significant expenses but may be unable to realize meaningful sales. Moreover, prior to mass production, customers may decide to cancel their products or change production specifications, resulting in sudden changes in our product specifications, increasing our production time and costs. Failure to meet such specifications may also delay the launch of our products or result in lost sales.

In addition, we collaborate and jointly develop certain process technologies and manufacturing process flows customized for certain of our Foundry Services Groups customers. To the extent that our Foundry Services Group customers fail to achieve market acceptance for their products, we may be unable to recoup our engineering resources commitment and our investment in process technology development, which would harm our business.

***Research and development investments may not yield profitable and commercially viable product and service offerings and thus will not necessarily result in increases in revenues for us.***

We invest significant resources in our research and development. Our research and development efforts, however, may not yield commercially viable products or enhance our services offerings. During each stage of research and development, there is a substantial risk that we will have to abandon a potential product or service offering that is no longer marketable and in which we have invested significant resources. In the event we are able to develop viable new products or service offerings, a significant amount of time will have elapsed between our investment in the necessary research and development effort and the receipt of any related revenues.

***We face numerous challenges relating to executing our growth strategy, and if we are unable to execute our growth strategy effectively, our business and financial results could be materially and adversely affected.***

Our growth strategy is to leverage our advanced analog and mixed-signal technology platform, continue to innovate and deliver new products and services, increase business with existing customers, broaden our customer base, aggressively grow our power business, drive execution excellence and focus on specialty process technologies. If we are unable to execute our growth strategy effectively, we may not be able to take advantage of market opportunities, execute our business plan or respond to competitive pressures. Moreover, if our allocation of resources does not correspond with future demand for particular products, we could miss market opportunities and our business and financial results could be materially and adversely affected.

***We are subject to risks associated with currency fluctuations, and changes in the exchange rates of applicable currencies could impact our results of operations.***

Historically, a portion of our revenues and greater than the majority of our operating expenses and costs of sales have been denominated in non-U.S. currencies, principally the Korean won, and we expect that this will remain true in the future. Because we report our results of operations in US dollars, changes in the exchange rate

between the Korean won and the US dollar could materially impact our reported results of operations and distort period to period comparisons. In particular, because of the difference in the amount of our consolidated revenues and expenses that are in US dollars relative to Korean won, a depreciation in the US dollar relative to the Korean won could result in a material increase in reported costs relative to revenues, and therefore could cause our profit margins and operating income to appear to decline materially, particularly relative to prior periods. The converse is true if the US dollar were to appreciate relative to the Korean won. For example, foreign currency fluctuations had an unfavorable impact on our reported profit margins and operating income from operations for the fiscal year ended December 31, 2018 due to a relative stronger Korean won during the period. Moreover, our foreign currency gain or loss would be affected by changes in the exchange rate between the Korean won and the US dollar as a substantial portion of non-cash translation gain or loss is associated with the intercompany long-term loans to our Korean subsidiary, which is denominated in US dollars. As of December 31, 2018, the outstanding intercompany loan balance including accrued interests between our Korean subsidiary and our Dutch subsidiary was \$666.6 million. Our Dutch subsidiary uses the US dollar as their functional currency. As a result of foreign currency fluctuations, it could be more difficult to detect underlying trends in our business and results of operations. In addition, to the extent that fluctuations in currency exchange rates cause our results of operations to differ from our expectations or the expectations of our investors, the trading price of our common stock or the price of the Exchangeable Notes or the 2021 Notes (each as defined below) could be adversely affected.

From time to time, we may engage in exchange rate hedging activities in an effort to mitigate the impact of exchange rate fluctuations. Our Korean subsidiary enters into foreign currency forward and zero cost collar contracts in order to mitigate a portion of the impact of US dollar-Korean won exchange rate fluctuations on our operating results. These foreign currency forward and zero cost collar contracts typically require us to sell specified notional amounts in US dollars and provide us the option to sell specified notional amounts in US dollars during successive months to our counterparty in exchange for Korean won at specified exchange rates. Obligations under these foreign currency forward and zero cost collar contracts must be cash collateralized if our exposure exceeds certain specified thresholds. These forward and zero cost collar contracts may be terminated by the counterparty in a number of circumstances, including if our total cash and cash equivalents is less than \$30 million at the end of a fiscal quarter. We cannot assure that any hedging technique we implement will be effective. If our hedging activities are not effective, changes in currency exchange rates may have a more significant impact on our results of operations. See “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations—Factors Affecting our Results of Operations” for further details.

***The loss of our key employees would materially adversely affect our business, and we may not be able to attract or retain the technical or management employees necessary to compete in our industry.***

Our key executives have substantial experience and have made significant contributions to our business, and our continued success is dependent upon the retention of our key management executives. The loss of such key personnel would have a material adverse effect on our business. In addition, our future success depends on our ability to attract and retain skilled technical and managerial personnel. We do not know whether we will be able to retain all of these employees as we continue to pursue our business strategy. The loss of the services of key employees, especially our key design and technical personnel, or our inability to retain, attract and motivate qualified design and technical personnel, could have a material adverse effect on our business, financial condition and results of operations. This could hinder our research and product development programs or otherwise have a material adverse effect on our business.

***If we encounter future labor problems, we may fail to deliver our products and services in a timely manner, which would adversely affect our revenues and profitability.***

As of December 31, 2018, 1,479 employees, or approximately 59% of our employees, were represented by the MagnaChip Semiconductor Labor Union. We can offer no assurance that any issues with the labor union and other employees will be resolved favorably for us in the future, that we will not experience work stoppages or other labor problems in future years or that we will not incur significant expenses related to such issues.

***We may incur costs to engage in future business combinations or strategic investments, and we may not realize the anticipated benefits of those transactions.***

As part of our business strategy, we may seek to enter into business combinations, investments, joint ventures and other strategic alliances with other companies in order to maintain and grow revenue and market presence as well as to provide us with access to technology, products and services. Any such transaction would be accompanied by risks that may harm our business, such as difficulties in assimilating the operations, personnel and products of an acquired business or in realizing the projected benefits, disruption of our ongoing business, potential increases in our indebtedness and contingent liabilities and charges if the acquired company or assets are later determined to be worth less than the amount paid for them in an earlier original acquisition. In addition, our indebtedness may restrict us from making acquisitions that we may otherwise wish to pursue.

***The failure to achieve acceptable manufacturing yields could adversely affect our business.***

The manufacture of semiconductors involves highly complex processes that require precision, a highly regulated and sterile environment and specialized equipment. Defects or other difficulties in the manufacturing process can prevent us from achieving acceptable yields in the manufacturing of our products or those of our Foundry Services Group customers, which could lead to higher costs, a loss of customers or delay in market acceptance of our products. Slight impurities or defects in the photomasks used to print circuits on a wafer or other factors can cause significant difficulties, particularly in connection with the production of a new product, the adoption of a new manufacturing process or any expansion of our manufacturing capacity and related transitions. We may also experience manufacturing problems in achieving acceptable yields as a result of, among other things, transferring production to other facilities, upgrading or expanding existing facilities or changing our process technologies. Yields below our target levels can negatively impact our gross profit and may cause us to eliminate underperforming products.

***We rely on a number of independent subcontractors and the failure of any of these independent subcontractors to perform as required could adversely affect our operating results.***

A substantial portion of our net sales are derived from semiconductor devices assembled in packages or on film. The packaging and testing of semiconductors require technical skill and specialized equipment. For the portion of packaging and testing that we outsource, we use subcontractors located in Korea, China, and Taiwan. We rely on these subcontractors to package and test our devices with acceptable quality and yield levels. We could be adversely affected by political disorders, labor disruptions and natural disasters where our subcontractors are located. If our semiconductor packagers and test service providers experience problems in packaging and testing our semiconductor devices, experience prolonged quality or yield problems or decrease the capacity available to us, our operating results could be adversely affected.

***We cooperate with independent foundries to produce certain advanced technology Display Solutions products, and the failure of such independent foundries to satisfy our demand could materially disrupt our business.***

We use independent foundry services for certain of our OLED Display Solutions products that require more advanced technology than is available in our fabrication facilities. Silicon wafer production at these facilities is allocated solely by our vendors and beyond our direct control. Therefore, any disruption in wafer supply from these vendors could have a material impact on our revenue and results of operations.

***We depend on successful parts and materials procurement for our manufacturing processes, and a shortage or increase in the price of these materials could interrupt our operations and result in a decline of revenues and results of operations.***

We procure materials and electronic and mechanical components from international sources and original equipment manufacturers. We use a wide range of parts and materials in the production of our semiconductors, including silicon, processing chemicals, processing gases, precious metals and electronic and mechanical

components, some of which, such as silicon wafers, are specialized raw materials that are generally only available from a limited number of suppliers. If demand increases or supply decreases for any reason, the costs of our raw materials could significantly increase. For example, worldwide supplies of silicon wafers, an important raw material for the semiconductors we manufacture, were constrained in recent years due to an increased demand for silicon. We from time to time may enter into multi-year agreements, which specify future quantities and pricing of materials to be supplied by the vendors of these materials; however, this option may not be available to us and we cannot assure that supply increases will match demand increases. If we cannot obtain adequate materials in a timely manner or on favorable terms for the manufacture of our products, revenues and results of operations will decline.

***Compliance with regulations regarding the use of “conflict minerals” could limit the supply and increase the cost of certain raw materials used in manufacturing our products.***

The SEC, as mandated by the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, adopted disclosure regulations for public companies that manufacture products containing certain minerals that are mined from the Democratic Republic of Congo and adjoining countries and procedures pertaining to a manufacturer’s efforts regarding the source of such minerals. These “conflict minerals” are commonly found in metals used in the manufacture of semiconductors. Manufacturers are also required to disclose their efforts to prevent the sourcing of such minerals and metals produced from them. The implementation of these requirements could adversely affect the sourcing, availability and pricing of metals used in the manufacture of our products. We may also incur additional costs to comply with the disclosure requirements, including costs related to determining the source of any of the relevant minerals used in our products. We may also face difficulties in satisfying customers who may require that our products be certified as free of “conflict materials,” which could harm our relationships with these customers and lead to a loss of revenue.

***We face warranty claims, product return, litigation and liability risks and the risk of negative publicity if our products fail.***

Our semiconductors are incorporated into a number of end products, and our business is exposed to product return, warranty and product liability risk and the risk of negative publicity if our products fail. Although we maintain insurance for product liability claims, the amount and scope of our insurance may not be adequate to cover a product liability claim that is asserted against us. In addition, product liability insurance could become more expensive and difficult to maintain and, in the future, may not be available on commercially reasonable terms, or at all.

In addition, we are exposed to the product liability risk and the risk of negative publicity affecting our customers. Our sales may decline if any of our customers are sued on a product liability claim. We also may suffer a decline in sales from the negative publicity associated with such a lawsuit or with adverse public perceptions in general regarding our customers’ products. Further, if our products are delivered with impurities or defects, we could incur additional development, repair or replacement costs, and our credibility and the market’s acceptance of our products could be harmed.

***We could suffer adverse tax and other financial consequences as a result of changes in, or differences in the interpretation of, applicable tax laws, including the recently enacted tax reform legislation in the United States.***

Our company’s organizational structure was created in part based on certain interpretations and conclusions regarding various tax laws, including withholding tax and other tax laws of applicable jurisdictions. Our interpretations and conclusions regarding tax laws, however, are not binding on any taxing authority and, if these interpretations and conclusions are incorrect, if our business were to be operated in a way that rendered us ineligible for tax exemptions or caused us to become subject to incremental tax, or if the authorities were to change, modify or have a different interpretation of the relevant tax laws, we could suffer adverse tax and other

financial consequences, and the anticipated benefits of our organizational structure could be materially impaired. Our company's organizational structure and other tax positions are subject to review by tax authorities in the local and other jurisdictions where we operate our business.

On December 22, 2017, H.R. 1, originally known as the Tax Cuts and Jobs Act in the US, was enacted (the "Tax Reform"). The Tax Reform reduces the US federal statutory rate to 21.0% from 35.0% effective January 1, 2018. The Tax Reform contains several key provisions that affect our assessment of deferred taxes, which include the remeasurement of deferred taxes, recognition of liabilities for taxes on mandatory deemed repatriation and certain other foreign income, and reassessment of the realizability of deferred tax assets.

As of December 31, 2017, we remeasured our deferred tax assets and liabilities at the reduced rate of 21.0%, assessed the realizability of remeasured deferred tax assets and reduced our net deferred tax assets by \$13.4 million in 2017. During 2018, we analyzed the mandatory deemed repatriation tax and concluded that we have no tax liability on previously untaxed accumulated earnings and profits of our foreign subsidiaries. We also reviewed the other components of the Tax Reform and based on our evaluation, no material impact was recorded to our consolidated financial statements for the year ended December 31, 2018.

***Recent changes in international trade policy and the imposition and threats of international tariffs, including tariffs applied to goods traded between the United States and China, could materially and adversely affect our business and results of operations.***

Since the beginning of 2018, there have been increasing public threats and, in some cases, legislative or executive action, from US and foreign leaders regarding instituting tariffs against foreign imports of certain materials. More specifically, since March of 2018, the US and China have applied tariffs to certain of each other's exports. The institution of trade tariffs globally, and between the US and China specifically, may negatively impact China's overall economic condition, which could negatively affect demand for our products in China and materially and adversely affect our business and results of operations of our customers serving the China markets. Furthermore, imposition of tariffs could increase costs of the end-user products we supply or those manufactured by our Foundry Services Group that we may not be able to pass on to our customers, which could in turn cause a decrease in the sales of our products and services and materially and adversely affect our business and results of operations.

***Our ability to compete successfully and achieve future growth will depend, in part, on our ability to protect our intellectual property, proprietary technology and know-how, as well as our ability to operate without infringing the proprietary rights of others.***

We attempt to protect our intellectual property rights, both in the US and in foreign countries, through a combination of patent, trademark, copyright, mask works and trade secret laws, as well as licensing agreements and third-party nondisclosure and assignment agreements. Because of the differences in foreign trademark, patent and other laws concerning proprietary rights, our intellectual property rights may not receive the same degree of protection in foreign countries as they would in the US. In particular, the validity, enforceability and scope of protection of intellectual property in China, where we derive a significant portion of our net sales, and certain other countries where we derive net sales, are uncertain and still evolving and historically have not protected, and may not protect in the future, intellectual property rights to the same extent as do the laws and enforcement procedures in the US. Our failure to obtain or maintain adequate protection of our intellectual property rights for any reason could have a material adverse effect on our business, results of operations and financial condition.

We seek to protect our proprietary technologies and know-how through the use of patents, trade secrets, confidentiality agreements and other security measures. The process of seeking patent protection takes a long time and is expensive. There can be no assurance that patents will issue from pending or future applications or that, if patents issue, they will not be challenged, invalidated or circumvented, or that the rights granted under the patents will provide us with meaningful protection or any commercial advantage. Many of our patents are subject

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to cross licenses, several of which are with our competitors. Some of our technologies are not covered by any patent or patent application. The confidentiality agreements on which we rely to protect these technologies may be breached and may not be adequate to protect our proprietary technologies. Further, it is possible that others will independently develop the same or similar technologies, even without access to our proprietary technologies.

We rely on our trademarks, trade names, and brand names to distinguish our products from the products of our competitors, and have registered or applied to register many of these trademarks. We cannot assure you that our trademark applications will be approved. Third parties may also oppose our trademark applications, or otherwise challenge our use of the trademarks. In the event that our trademarks are successfully challenged, we could be forced to rebrand our products, which could result in loss of brand recognition, and could require us to devote resources advertising and marketing new brands. Further, we cannot assure you that competitors will not infringe our trademarks, or that we will have adequate resources to enforce our trademarks.

Our ability to compete successfully depends on our ability to operate without infringing the proprietary rights of others. We have no means of knowing what patent applications have been filed in the US until they are published. In addition, the semiconductor industry is characterized by frequent litigation regarding patent and other intellectual property rights. We may need to file lawsuits to enforce our patents or intellectual property rights, and we may need to defend against claimed infringement of the rights of others. Any litigation could result in substantial costs to us and divert our resources, and we cannot assure you that we will prevail. Any claims of intellectual property infringement or misappropriation against use, even those without merit, could require us to:

- pay substantial damages or indemnify customers or licensees for damages they may suffer if the products they purchase from us or the technology they license from us violate the intellectual property rights of others;
- stop our manufacture, use, sale or importation of the accused products;
- redesign, reengineer or rebrand our products, if feasible;
- expend significant resources to develop or acquire non-infringing technologies;
- discontinue processes; or
- obtain licenses to a third party's intellectual property.

There can be no assurance that we would be successful in such development or acquisition or that such licenses would be available under reasonable terms, or at all.

We license certain intellectual property from third parties. The termination of key third-party licenses relating to the use of intellectual property in our products and our design processes, such as our agreements with Silicon Works Co., Ltd. and ARM Limited, would materially and adversely affect our business.

***Our expenses could increase if SK hynix were unwilling or unable to provide certain services related to our shared facilities with SK hynix, and if SK hynix were to become insolvent, we could lose certain of our leases.***

We are party to a land lease and easement agreement with SK hynix pursuant to which we lease the land for our facilities in Cheongju, Korea. If this agreement were terminated for any reason, including the insolvency of SK hynix, we would have to renegotiate new lease terms with SK hynix or the new owner of the land. We cannot assure that we will be able to negotiate new lease terms on favorable terms or at all. Because we share certain facilities with SK hynix, several services that are essential to our business are provided to us by or through SK hynix under our general service supply agreement with SK hynix. These services include electricity, bulk gases and de-ionized water, campus facilities and housing, wastewater and sewage management, environmental safety and certain utilities and infrastructure support services. If any of our agreements with SK hynix were terminated or if SK hynix were unwilling or unable to fulfill its obligations to us under the terms of these agreements, we would have to procure these services on our own and as a result may experience an increase in our expenses.

***We are subject to many environmental laws and regulations that could affect our operations or result in significant expenses.***

We are subject to a variety of environmental, health and safety laws and regulations in each of the jurisdictions in which we operate, governing, among other things, air emissions, wastewater discharges, the generation, use, handling, storage and disposal of, and exposure to, hazardous substances (including asbestos) and wastes, soil and groundwater contamination and employee health and safety. These laws and regulations are complex, change frequently and have tended to become more stringent over time. Among them is the Act on Remediation and Compensation for Damages arising from Environmental Contamination which came into effect in Korea on January 1, 2016 and provides for strict liability of business entities in violation of the act and alleviates the burden of proof for the damaged party. As a result, we have increased potential exposure to liability for environmental contaminations that might have existed in the past or would arise in the future. There can be no assurance that we have been, or will be, in compliance with all such laws and regulations or that we will not incur material costs or liabilities in connection with these laws and regulations in the future. The adoption of new environmental, health and safety laws, the failure to comply with new or existing laws, or issues relating to hazardous substances could subject us to material liability (including substantial fines or penalties), impose the need for additional capital equipment or other process requirements upon us, curtail our operations or restrict our ability to expand operations.

***Our Korean subsidiary has been designated as a regulated business under Korean environmental law, and such designation could have an adverse effect on our financial position and results of operations.***

Since 2015, our Korean subsidiary has been subject to K-ETS, a new set of greenhouse gas emissions regulation, under the Act on Allocation and Trading of Greenhouse Gas Emission Allowances. Under K-ETS, our Korean subsidiary was allocated a certain amount of emissions allowance in accordance with the National Allocation Plan prepared by the Korean government, and is required to meet its allocated target by either reducing the emission or purchasing the allowances from other participants in the emission trading market. Reduction of our emissions or energy consumption may result in additional and potentially costly compliance or remediation expenses, including potentially the installation of equipment and changes in the type of materials we use in manufacturing, as well as cost of procuring emission allowances to cover the excess emissions, which could adversely affect our financial position and results of operations. During the first implementation period from 2015 to 2017, we did not exceed the allocated emission amount. We are in the second implementation period that covers from 2018 to 2020. We will continue to monitor our compliance with the emissions allowance for the referred 3-year period on a cumulative basis as well as for an individual year basis. As of December 31, 2018, we had a sufficient emissions allowance and, accordingly, no liability was recorded. In addition, from time to time, if we assess that we have excess allowances, we may sell such excess allowances to manufacturers in the emission market in Korea.

***We may need additional capital in the future, and such capital may not be available on acceptable terms or at all, which would have a material adverse effect on our business, financial condition and results of operations.***

We may require more capital in the future from equity or debt financings to fund operating expenses, such as research and development costs, finance investments in equipment and infrastructure, acquire complementary businesses and technologies, and respond to competitive pressures and potential strategic opportunities. If we raise additional funds through further issuances of equity or other securities convertible into equity, our existing stockholders could suffer significant dilution, and any new shares we issue could have rights, preferences or privileges senior to those of the holders of our common stock. There can be no assurance that any additional equity or debt financing would be available to us, or if available, that such financing would be on favorable terms to us. Accordingly, if we are unable to obtain additional capital or our business does not generate sufficient cash flows from operating activities to fund our working capital needs and planned capital expenditures, and our cash reserves are depleted, we may need to take various actions, such as down-sizing and/or eliminating certain operations, which could include additional exit costs, reducing or delaying capital expenditures, selling assets, or

other restructuring actions. There can be no assurance that we would be successful in taking such actions and, in any event, such actions may result in a material adverse effect on our business and results of operations. In addition, our indebtedness limits our ability to incur additional indebtedness under certain circumstances.

***Our business depends on international customers, suppliers and operations in Asia, and as a result we are subject to regulatory, operational, financial and political risks, which could adversely affect our financial results.***

We rely on, and expect to continue to rely on, suppliers, subcontractors and operations located primarily in Asia. As a result, we face risks inherent in international operations, such as unexpected changes in regulatory requirements, tariffs and other market barriers, political, social and economic instability, adverse tax consequences, war, civil disturbances and acts of terrorism, difficulties in accounts receivable collection, extended payment terms and differing labor standards, enforcement of contractual obligations and protection of intellectual property. These risks may lead to increased costs or decreased revenue growth, or both.

***Tensions with North Korea could have an adverse effect on us and the market value of our shares.***

Relations between South Korea and North Korea have been tense throughout Korea's modern history. The level of tension between the two Koreas has fluctuated and may increase abruptly as a result of current and future events. In particular, in recent years, there have been heightened security concerns stemming from North Korea's nuclear weapon and long-range missile programs and increased uncertainty regarding North Korea's actions and possible responses from the international community.

North Korea's economy also faces severe challenges, and any adverse economic developments may further aggravate social and political tensions within North Korea.

Although we do not derive any revenue from, nor sell any products in, North Korea, any future increase in tensions between South Korea and North Korea that may occur, for example, if North Korea experiences a leadership crisis, high-level contacts between South Korea and North Korea break down, or military hostilities occur, could have a material adverse effect on the South Korean economy and on our business, financial condition, results of operations and the market value of our common stock.

***We may be subject to disruptions, breaches or cyber-attacks of our secured networks and information technology systems that could damage our reputation, harm our business, expose us to liability and materially adversely affect our results of operations.***

In the ordinary course of our business, we collect and store sensitive data, including IP and other proprietary information about our business and that of our customers, suppliers and business partners. Secure maintenance, processing and transmission of this information is critical to our operations and business strategy. We may be subject to disruptions, breaches or cyber-attacks of our secured networks and information technology systems caused by illegal hacking, criminal fraud or impersonation, computer viruses, acts of vandalism or terrorism or employee error, and our security measures or those of any third party service providers we use may not detect or prevent such security breaches. We may incur significant costs to eliminate or alleviate cybersecurity breaches and vulnerabilities, which could be significant, and our efforts to protect against such breaches or vulnerabilities may not be successful and could result in system interruptions that may materially impede our sales, manufacturing, distribution, finance or other critical functions. Any such compromise of our information security could also result in the unauthorized publication of our confidential business or proprietary information or that of other parties with which we do business, an interruption in our operations, the unauthorized transfer of cash or other assets, the unauthorized release of customer or employee data or a violation of privacy or other laws in the jurisdictions in which we operate. Any of the foregoing could irreparably damage our reputation and business and/or expose us to material monetary liability, which could have a material adverse effect on our results of operations.

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***You may not be able to bring an action or enforce any judgment obtained in United States courts, or bring an action in any other jurisdiction, against us or our subsidiaries or our directors, officers or independent auditors that are organized or residing in jurisdictions other than the United States.***

Most of our subsidiaries are organized or incorporated outside of the US and some of our directors and executive officers as well as our independent auditors are organized or reside outside of the US. Most of our and our subsidiaries' assets are located outside of the US and in particular, in Korea. Accordingly, any judgment obtained in the US against us or our subsidiaries may not be collectible in the US. As a result, it may not be possible for you to effect service of process within the US upon these persons or to enforce against them or us court judgments obtained in the US that are predicated upon the civil liability provisions of the federal securities laws of the US or of the securities laws of any state of the US. In particular, there is doubt as to the enforceability in Korea or any other jurisdictions outside the US, either in original actions or in actions for enforcement of judgments of US courts, of civil liabilities predicated on the federal securities laws of the US or the securities laws of any state of the US.

***Our level of indebtedness is substantial, and we may not be able to generate sufficient cash to service all of our indebtedness and may be forced to take other actions to satisfy our obligations under our indebtedness, which may not be successful. A decline in the ratings of our existing or future indebtedness may make the terms of any new indebtedness we choose to incur more costly.***

As of December 31, 2018, our total indebtedness was \$303.6 million, which represents the principal amount outstanding under our 6.625% Senior Notes due 2021 ("2021 Notes") and 5.0% Exchangeable Senior Notes due 2021 ("Exchangeable Notes"), excluding \$5.6 million of unamortized discount and debt issuance costs. We are permitted under the indentures governing our outstanding Exchangeable Notes and 2021 Notes to incur additional debt under certain conditions, including additional secured debt. If new debt were to be incurred in the future, the related risks that we now face could intensify. Our substantial debt could have important consequences, including:

- resulting in an event of default if we fail to satisfy our obligations under our outstanding debt or fail to comply with the financial or other restrictive covenants contained in the indentures governing our outstanding Exchangeable Notes and 2021 Notes or agreements governing our other indebtedness, which event of default could result in all of our debt becoming immediately due and payable and could permit our lenders to foreclose on the assets securing any such debt;
- increasing our vulnerability to general economic and industry conditions;
- requiring a substantial portion of our cash flow from operations to be dedicated to the payment of principal and interest on our indebtedness, therefore reducing our ability to use our cash flow to fund our operations, capital expenditures and future business opportunities;
- limiting our ability to obtain additional financing for working capital, capital expenditures, debt service requirements, acquisitions and general corporate or other purposes;
- limiting our ability to adjust to changing market conditions and placing us at a competitive disadvantage compared to our competitors who have less debt; and
- negatively affecting our ability to fund a change of control offer.

Our ability to make scheduled payments on or to refinance our debt obligations depends on our financial condition and operating performance, which is subject to prevailing economic and competitive conditions and to certain financial, business and other factors beyond our control. We cannot assure that we will generate a level of cash flows from operating activities sufficient to permit us to pay the principal, premium, if any, and interest on our indebtedness.

The credit ratings assigned to our debt reflect each rating agency's opinion of our ability to make payments on the debt obligations when such payments are due. A rating may be subject to revision or withdrawal at any

time by the assigning rating agency. We may experience downgrades in our debt ratings in the future. Any lowering of our debt ratings would adversely impact our ability to raise additional debt financing and increase the cost of any such financing that is obtained. In the event any ratings downgrades are significant, we may choose not to incur new debt or refinance existing debt if we are unable to incur or refinance such debt at favorable interest rates or on favorable terms.

If our cash flows and capital resources are insufficient to fund our debt service obligations or if we are unable to refinance existing indebtedness on favorable terms, we may be forced to reduce or delay capital expenditures, sell assets, seek additional capital or restructure or refinance our indebtedness. These alternative measures may not be successful and thus render us unable to meet our scheduled debt service obligations. In the absence of such operating results and resources, we could face substantial liquidity problems and might be required to dispose of material assets or operations to meet our debt service and other obligations. The indentures governing our outstanding Exchangeable Notes and 2021 Notes restrict our ability to dispose of assets and use the proceeds from the disposition. We may not be able to consummate those dispositions or be able to obtain the proceeds which we could realize from them and these proceeds may not be adequate to meet any debt service obligations then due.

***We are a holding company and will depend on the business of our subsidiaries to satisfy our obligations under our outstanding Exchangeable Notes and 2021 Notes and other obligations.***

We are a holding company with no independent operations of our own. Our subsidiaries conduct substantially all of the operations necessary to fund payments on our outstanding Exchangeable Notes and 2021 Notes, other debt and any other obligations. Our ability to make payments on our outstanding Exchangeable Notes and 2021 Notes and our other obligations will depend on our subsidiaries' cash flow and their payment of funds to us. Our subsidiaries' ability to make payments to us will depend on:

- their earnings;
- covenants contained in our debt agreements (including the indentures governing our outstanding Exchangeable Notes and 2021 Notes) and the debt agreements of our subsidiaries;
- covenants contained in other agreements to which we or our subsidiaries are or may become subject;
- business and tax considerations; and
- applicable law, including any restrictions under Korean law that may be imposed on MagnaChip Korea that would restrict its ability to make payments on intercompany loans from MagnaChip Semiconductor B.V.

We cannot assure that the operating results of our subsidiaries at any given time will be sufficient to make distributions or other payments to us or that any distributions or payments will be adequate to pay principal and interest, and any other payments, on our outstanding Exchangeable Notes and 2021 Notes, other debt or any other obligations when due, and the failure to make such payments could have a material adverse effect on our business, financial condition and results of operations.

***Restrictions on MagnaChip Korea's ability to make payments on its intercompany loans from MagnaChip Semiconductor B.V., or on its ability to pay dividends in excess of statutory limitations, could hinder our ability to make payments on our outstanding Exchangeable Notes and 2021 Notes.***

We anticipate that payments under our outstanding Exchangeable Notes and 2021 Notes will be funded in part by MagnaChip Korea's repayment of its existing loans from MagnaChip Semiconductor B.V., with MagnaChip Semiconductor B.V. using such repayments in turn to repay the loans owed to MagnaChip Semiconductor S.A., which will repay loans owed to us. Under the Korean Foreign Exchange Transaction Act, the minister of the Ministry of Strategy and Finance is authorized to temporarily suspend payments in foreign currencies in the event of natural calamities, wars, conflicts of arms, grave and sudden changes in domestic or

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foreign economic conditions, or other similar situations. In addition, under the Korean Commercial Code, a Korean company is permitted to make a dividend payment in accordance with the provisions in its articles of incorporation out of retained earnings (as determined in accordance with the Korean Commercial Code and the generally accepted accounting principles in Korea), but no more than twice a year. If MagnaChip Korea is prevented from making payments under its intercompany loans due to restrictions on payments of foreign currency or if it has an insufficient amount of retained earnings under the Korean Commercial Code to make dividend payments to MagnaChip Semiconductor B.V., we and MagnaChip Semiconductor S.A. may not have sufficient funds to make payments on the notes or our outstanding Exchangeable Notes and 2021 Notes.

***The indentures governing our outstanding Exchangeable Notes and 2021 Notes contain, and our future debt agreements will likely contain, covenants that significantly restrict our operations.***

The indentures governing our outstanding Exchangeable Notes and 2021 Notes contain, and our future debt agreements will likely contain, numerous covenants imposing financial and operating restrictions on our business. These restrictions may affect our ability to operate our business, may limit our ability to take advantage of potential business opportunities as they arise and may adversely affect the conduct of our current business, including by restricting our ability to finance future operations and capital needs and by limiting our ability to engage in other business activities. These covenants will place restrictions on our ability and the ability of our operating subsidiaries to, among other things:

- pay dividends, redeem shares or make other distributions with respect to equity interests, make payments with respect to subordinated indebtedness or other restricted payments;
- incur debt or issue preferred stock;
- create liens;
- make certain investments;
- consolidate, merge or dispose of all or substantially all of our assets, taken as a whole;
- sell or otherwise transfer or dispose of assets, including equity interests of our subsidiaries;
- enter into sale-leaseback transactions;
- enter into transactions with our affiliates; and
- designate our subsidiaries as unrestricted subsidiaries.

In addition, our future debt agreements will likely contain financial ratios and other financial conditions tests. Our ability to meet those financial ratios and tests could be affected by events beyond our control, and we cannot assure that we will meet those ratios and tests. A breach of any of these covenants could result in a default under such debt agreements. Upon the occurrence of an event of default under such debt agreements, our lenders under such agreements could elect to declare all amounts outstanding under such debt agreements to be immediately due and payable and terminate all commitments to extend further credit.

***We may not have the ability to raise the funds necessary to repurchase the Exchangeable Notes upon a fundamental change, and our future debt may contain limitations on our ability to repurchase the Exchangeable Notes.***

Holders of the Exchangeable Notes have the right to require us to repurchase their notes upon the occurrence of a fundamental change at a fundamental change repurchase price equal to 100% of the principal amount of the Exchangeable Notes to be repurchased, plus accrued and unpaid interest, if any. However, we may not have enough available cash or be able to obtain financing at the time we are required to make repurchases of Exchangeable Notes surrendered therefor. In addition, our ability to repurchase the Exchangeable Notes may be limited by law, by regulatory authority or by agreements governing our future indebtedness. Our failure to

repurchase Exchangeable Notes at a time when the repurchase is required by the indenture would constitute a default under the indenture. A default under the indenture or the fundamental change itself could also lead to a default under agreements governing our future indebtedness. If the repayment of our then-existing indebtedness were to be accelerated after any applicable notice or grace periods, we may not have sufficient funds to repay the indebtedness and repurchase the Exchangeable Notes.

***A fundamental change may adversely affect us.***

A fundamental change could have a negative effect on us and the trading price of the common stock and Exchangeable Notes. Furthermore, the fundamental change provisions, including the provisions requiring the increase in the exchange rate for exchanges in connection with a fundamental change prior to the maturity date, may in certain circumstances make it more difficult or discourage a takeover of our company and the removal of incumbent management.

***Servicing our debt requires a significant amount of cash, and we may not have sufficient cash flow from our business to pay our substantial debt.***

Our ability to make scheduled payments of the principal of, to pay interest on or to refinance our indebtedness depends on our future performance, which is subject to economic, financial, competitive and other factors beyond our control. Our business may not continue to generate cash flow from operations in the future sufficient to service our debt and make necessary capital expenditures. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets, restructuring debt or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to refinance our indebtedness will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations.

***We have a history of losses and may not achieve or sustain profitability in the future.***

From the time we began operations as a separate entity in 2004 until we emerged from our 2009 reorganization proceedings under Chapter 11 of the US Bankruptcy Code, which we refer to as our “reorganization proceedings,” we generated significant net losses and did not generate a profit for a full fiscal year. In addition, since 2013 until 2016, we again had substantial net losses despite some improvements made in 2016. We may increase spending to support increased research and development and sales and marketing efforts. These expenditures may not result in increased revenue or an increase in the number of customers immediately or at all. Because many of our expenses are fixed in the short term, or are incurred in advance of anticipated sales, we may not be able to decrease our expenses in a timely manner to offset any shortfall of sales. If we cannot maintain profitability, the value of the enterprise may decline.

***Despite our current debt levels, we may still incur substantially more debt or take other actions which would intensify the risks discussed above.***

Despite our current consolidated debt levels, we and our subsidiaries, may be able to incur substantial additional debt in the future, some of which may be secured debt, subject to the restrictions contained in our debt instruments. We will not be restricted under the terms of the indenture governing the notes from incurring additional debt, securing existing or future debt, recapitalizing our debt or taking a number of other actions that are not limited by the terms of the indenture governing the notes that could have the effect of diminishing our ability to make payments on the notes when due.

***We may need to incur impairment, restructuring and other restructuring related charges, which could materially affect our results of operations and financial condition.***

During industry downturns and for other reasons, we may need to record impairment, restructuring or other restructuring related charges. From November 9, 2009, the date we emerged from Chapter 11 reorganization proceedings, through December 31, 2016, we recognized aggregate restructuring and impairment charges of \$24.1 million, which consisted of \$21.2 million of impairment charges and \$2.9 million of restructuring charges. Although we recognized a net restructuring and other gain of \$17.0 million and \$6.5 million for the years ended December 31, 2017 and 2016, respectively, we also recorded early termination charges of \$13.4 million and \$4.2 million for the same periods in connection with our workforce reduction efforts. In the future, we may need to record additional impairment charges or to further restructure our business or incur additional restructuring charges, any of which could have a material adverse effect on our results of operations or financial condition.

***We are subject to litigation risks, which may be costly to defend and the outcome of which is uncertain.***

All industries, including the semiconductor industry, are subject to legal claims, with and without merit, that may be particularly costly and which may divert the attention of our management and our resources in general. We are involved in a variety of legal matters, most of which we consider routine matters that arise in the normal course of business. These routine matters typically fall into broad categories such as those involving customers, employment and labor and intellectual property. Even if the final outcome of these legal claims does not have a material adverse effect on our financial position, results of operations or cash flows, defense and settlement costs can be substantial. Due to the inherent uncertainty of the litigation process, the resolution of any particular legal claim or proceeding could have a material effect on our business, financial condition, results of operations or cash flows.

***The price of our common stock may be volatile and you may lose all or a part of your investment.***

The trading price of our common stock might be subject to wide fluctuations. Factors, some of which are beyond our control, that could affect the trading price of our common stock may include:

- actual or anticipated variations in our results of operations from quarter to quarter or year to year;
- announcements by us or our competitors of significant agreements, technological innovations or strategic alliances;
- changes in recommendations or estimates by any securities analysts who follow our securities;
- addition or loss of significant customers;
- recruitment or departure of key personnel;
- changes in economic performance or market valuations of competing companies in our industry;
- price and volume fluctuations in the overall stock market;
- market conditions in our industry, end markets and the economy as a whole;
- subsequent sales of stock and other financings; and
- litigation, legislation, regulation or technological developments that adversely affect our business.

In the past, following periods of volatility in the market price of a public company's securities, securities class action litigation often has been instituted against the public company. Regardless of its outcome, this type of litigation could result in substantial costs to us and a likely diversion of our management's attention. You may not receive a positive return on your investment when you sell your shares, and you could lose some or the entire amount of your investment.

***Significant ownership of our common stock by certain stockholders could adversely affect our other stockholders.***

The concentration of ownership of our common stock by certain stockholders may limit the ability of other stockholders to influence corporate matters and, as a result, we may take actions that our public stockholders do not view as beneficial. For example, our concentration of ownership could have the effect of delaying or preventing a change in control or otherwise discouraging a potential acquirer from attempting to obtain control of us, which in turn could cause the market price of our common stock to decline or prevent our stockholders from realizing a premium over the market price for their shares of our common stock.

Under our certificate of incorporation, our non-employee directors and non-employee holders of five percent or more of our outstanding common stock do not have a duty to refrain from engaging in a corporate opportunity in the same or similar activities or lines of business as those engaged in by us, our subsidiaries and other related parties. Also, we have renounced any interest or expectancy in such business opportunities even if the opportunity is one that we might reasonably have pursued or had the ability or desire to pursue if granted an opportunity to do so.

***Provisions in our charter documents and Delaware Law may make it difficult for a third party to acquire us and could depress the price of our common stock.***

Provisions in our certificate of incorporation and bylaws may have the effect of delaying or preventing a change of control or changes in our management. Among other things, our certificate of incorporation and bylaws:

- authorize our Board of Directors to issue, without stockholder approval, preferred stock with such terms as the Board of Directors may determine;
- prohibit action by written consent of our stockholders;
- prohibit any person other than our Board of Directors, the chairman of our Board of Directors, our Chief Executive Officer or holders of at least 25% of the voting power of all then outstanding shares of capital stock of the corporation entitled to vote generally in the election of directors to call a special meeting of our stockholders; and
- specify advance notice requirements for stockholder proposals and director nominations.

In addition, we are subject to the provisions of Section 203 of the Delaware General Corporation Law (the “DGCL”), regulating corporate takeovers and which has an anti-takeover effect with respect to transactions not approved in advance by our Board of Directors, including discouraging takeover attempts that might result in a premium over the market price for shares of our common stock. In general, those provisions prohibit a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date that the stockholder became an interested stockholder, unless:

- the transaction is approved by the board of directors before the date the interested stockholder attained that status;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced; or
- on or after such date, the business combination is approved by the board of directors and authorized at a meeting of stockholders, and not by written consent, by at least two-thirds of the outstanding voting stock that is not owned by the interested stockholder.

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In general, DGCL Section 203 defines a business combination to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, DGCL Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by any such entity or person.

A Delaware corporation may opt out of this provision by express provision in its original certificate of incorporation or by amendment to its certificate of incorporation or bylaws approved by its stockholders. However, we have not opted out of, and do not currently intend to opt out of, this provision.

***We do not intend to pay dividends for the foreseeable future, and therefore, investors should rely on sales of their common stock as the only way to realize any future gains on their investments.***

We do not intend to pay any cash dividends in the foreseeable future. The payment of cash dividends on common stock is restricted under the terms of the indentures for our outstanding Exchangeable Notes and 2021 Notes. Any determination to pay dividends in the future will be at the discretion of our Board of Directors. Accordingly, investors must rely on sales of their common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investments.

### **Item 1B. Unresolved Staff Comments**

Not applicable.

### **Item 2. Properties**

Our manufacturing operations consist of two fabrication facilities located in Korea in Cheongju and Gumi. Our facilities have a combined capacity of approximately 113,000 eight-inch equivalent wafers per month. We manufacture wafers utilizing geometries ranging from 0.11 to 0.50 microns. The Cheongju facilities have two main buildings totaling 121,672 square meters devoted to manufacturing and development. The Gumi facility has one main building with 41,022 square meters devoted to manufacturing, testing and packaging.

In addition to our fabrication facilities, we lease facilities in Seoul, Korea, and San Jose, California. Each of these facilities includes administration, sales and marketing and research and development functions. We lease sales and marketing offices through our subsidiaries in several other countries.

The ownership of our wafer manufacturing assets is an important component of our business strategy. Maintaining manufacturing control enables us to develop proprietary, differentiated products and results in higher production yields, as well as shortened design and production cycles. We believe our facilities are suitable and adequate for the conduct of our business for the foreseeable future and that we have sufficient production capacity to service our business as currently contemplated without significant capital investment.

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A substantial majority of our assembly, test and packaging services for our Display Solutions business and all of such services for our Power Solutions business are outsourced with the balance handled in-house. Our independent providers of these services are located in Korea, China, and Taiwan. The relative cost of outsourced services, as compared to in-house services, depends upon many factors specific to each product and circumstance. However, we generally incur higher costs for outsourced services, which can result in lower margins.

Although we own our manufacturing facilities, we are party to a land lease and easement agreement with SK hynix pursuant to which we lease the land for our facilities in Cheongju, Korea from SK hynix for an indefinite term. Because we share certain facilities with SK hynix, several services that are essential to our business are provided to us by or through SK hynix under our general service supply agreement with SK hynix. These services include electricity, bulk gases and de-ionized water, campus facilities and housing, wastewater and sewage management, environmental safety and certain utilities and infrastructure support services. The services agreement continues for an indefinite term subject to each party having a right to terminate in the event of an uncured breach by the other party.

### **Item 3. Legal Proceedings**

We are involved in a variety of legal matters, most of which we consider routine matters that arise in the normal course of business. These routine matters typically fall into broad categories such as those involving customers, employment and labor and intellectual property. Intellectual property litigation and infringement claims, in particular, could cause us to incur significant expenses or prevent us from selling our products. We are currently not involved in any legal proceedings that we believe would have a material adverse effect on our business, financial condition or results of operations.

See also “Item 1A. Risk Factors” and “Item 8. Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements—Note 18” in this Report for additional information.

### **Item 4. Mine Safety Disclosures**

Not applicable.

**PART II**

**Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities**

**Market Information**

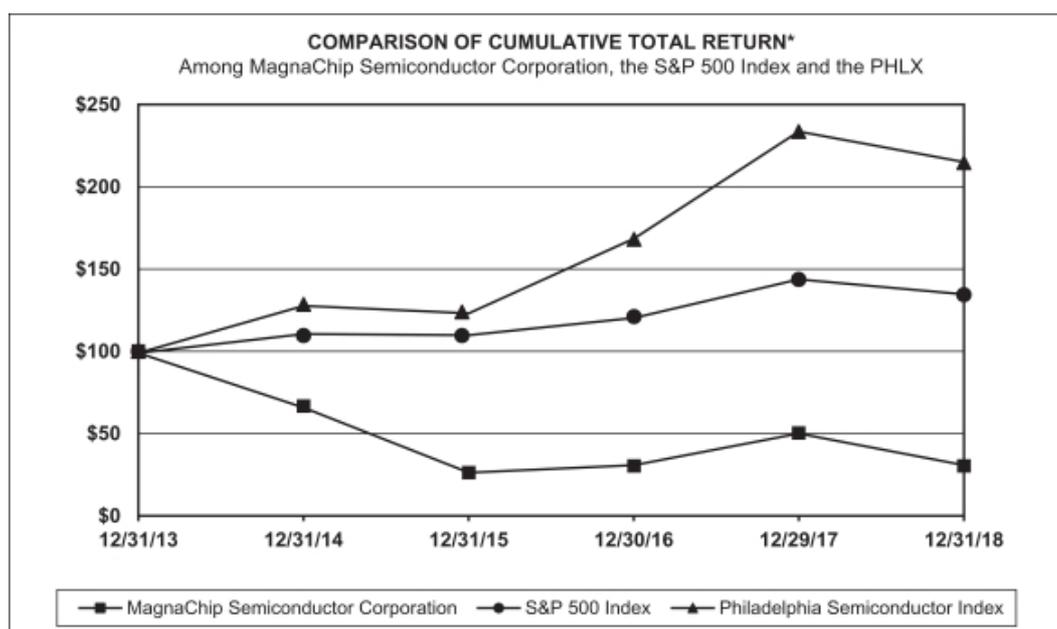
Our common stock is listed on the New York Stock Exchange under the symbol “MX.”

**Stock Performance Graph**

The graph and table below compare the cumulative total stockholder return of our common shares with the cumulative total return of the S&P 500 Index and the Philadelphia Semiconductor Index (PHLX) from December 31, 2013 (the last trading day before the beginning of our fifth preceding fiscal year) through December 31, 2018. The graph assumes that \$100 was invested on December 31, 2013 in our common shares and in each index and that any dividends were reinvested. No cash dividends have been declared on our common shares during the five-year period ended December 31, 2018.

**Comparison of Cumulative Total Return\***

Among MagnaChip Semiconductor Corporation, the S&P 500 Index and the PHLX



\* The stock performance included in this graph is not necessarily indicative of future stock performance.

**Total Return to Stockholders (Including Reinvestment of Dividends)**

**Indexed Returns**

Company/Index	Base Period					
	12/31/2013	12/31/2014	12/31/2015	12/30/2016	12/29/2017	12/31/2018
<b>MagnaChip Semiconductor Corporation</b>	100	66.62	27.13	31.79	51.03	31.85
<b>S&amp;P 500 Index</b>	100	111.39	110.58	121.13	144.65	135.63
<b>Philadelphia Semiconductor Index</b>	100	128.38	124.01	169.42	234.20	215.91

**Holders**

The approximate number of record holders of our outstanding common stock as of February 15, 2019 was 71. This number does not include beneficial owners for whom shares are held by nominees in street name.

**Dividends**

We do not intend to pay any cash dividends on our common stock in the foreseeable future. We anticipate that we will retain all of our future earnings for use in the development of our business and for general corporate purposes. Any determination to pay dividends in the future will be at the discretion of our Board of Directors.

**Issuer Purchases of Equity Securities**

On October 7, 2011, our Board of Directors adopted a stock repurchase program whereby we were authorized, subject to prevailing market conditions and other factors, to repurchase up to \$35.0 million of our outstanding common stock. Our Board of Directors extended and increased the program by an additional \$25.0 million in August 2012, for a maximum aggregate repurchase amount under the original program of up to \$60.0 million. On July 30, 2013, we announced that our Board of Directors approved a new stock repurchase program under which we are authorized to repurchase up to \$100.0 million of our common stock. The new stock repurchase program was effective August 5, 2013 through December 15, 2014, and replaced the original stock repurchase program. The stock repurchase program did not require that we purchase a minimum amount of shares of our common stock and may be commenced, suspended, resumed or terminated at any time without notice. The timing and extent of any repurchases were dependent upon prevailing market conditions, the trading price of the Company’s common stock and other factors, and subject to contractual restrictions and restrictions under applicable law and regulations. As of December 31, 2013, we had repurchased 6,578,765 shares of our common stock in the open market under these programs at an aggregate cost of \$90.9 million. In March 2014, our Board of Directors suspended the stock repurchase program indefinitely pending the completion of the independent investigation commenced by our Audit Committee in January 2014, and the stock repurchase program expired by its terms on December 15, 2014. Accordingly, we did not repurchase any shares under the stock repurchase program during the period from 2014 to 2016.

In January 2017, in connection with the offering of our Exchangeable Notes, our Board of Directors adopted a stock repurchase program, under which we were permitted to repurchase up to \$15.0 million of our outstanding common stock, of which \$11.4 million was used at the time of the offering. In December 2018 and January 2019, we repurchased an aggregate of 560,192 shares of our common stock in the open market under the program at an aggregate cost of \$3.6 million. This represents the remaining portion of the stock repurchase program that was authorized by our Board of Directors at the time of the offering of our Exchangeable Notes in January 2017. The following table details our repurchases of our outstanding common stock from October 1, 2018 through December 31, 2018:

	<u>Total Number of Shares Purchased</u>	<u>Average Price Paid per Share</u>	<u>Total Number of Shares Purchased as Part of Publicly Announced Program(1)</u>	<u>Approximate dollar value of shares that may yet be purchased under the Program</u>
October 1, 2018—October 31, 2018	—	—	—	\$ 3,598,930.60
November 1, 2018—November 30, 2018	—	—	—	\$ 3,598,930.60
December 1, 2018—December 31, 2018	198,204	\$ 6.32	198,204	\$ 2,346,499.46
<b>Total:</b>	198,204		198,204	

- (1) On January 10, 2017, we announced that our Board of Directors had authorized a stock repurchase program covering the repurchase of up to \$15.0 million of shares of our outstanding common stock in open market, privately negotiated or other transactions. The stock repurchase program does not have an expiration date and can be discontinued, suspended, resumed or terminated at any time by our Board of Directors without notice. Whether we make any repurchases will depend on many factors, including but not limited to our business and financial performance, the business and market conditions at the time, including the price of our shares, and other factors that management considers relevant.

**Item 6. Selected Financial Data**

The following tables set forth selected historical consolidated financial data of MagnaChip Semiconductor Corporation on or as of the dates and for the periods indicated. The selected historical consolidated financial data presented below should be read together with “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements contained in “Item 8. Financial Statements and Supplementary Data,” including the notes to those consolidated financial statements, appearing elsewhere in this Report.

We have derived the selected consolidated financial data as of December 31, 2018 and 2017 and for the years ended December 31, 2018, 2017 and 2016 from the audited consolidated financial statements of the Company included in this Report. We have derived the selected consolidated financial data as of December 31, 2016, 2015 and 2014 and for the years ended December 31, 2015 and 2014 from the historical consolidated financial statements of MagnaChip Semiconductor Corporation not included in this Report. The historical financial data of MagnaChip Semiconductor Corporation for any period are not necessarily indicative of the results to be expected in any future period.

	Year Ended December 31, 2018(1)	Year Ended December 31, 2017(1)	Year Ended December 31, 2016(1)(2)	Year Ended December 31, 2015(1)	Year Ended December 31, 2014(1)
(In millions, except per share data)					
<b>Statements of Operations Data:</b>					
Net sales	\$ 750.9	\$ 679.7	\$ 688.0	\$ 633.7	\$ 698.2
Cost of sales	552.8	491.8	531.7	498.8	545.4
Gross profit	198.1	187.9	156.2	134.9	152.9
Selling, general and administrative expenses	72.6	81.8	83.5	94.4	127.0
Research and development expenses	78.0	70.5	72.2	83.4	92.8
Restructuring, impairment and other charges (gain), net	—	(17.0)	(6.5)	—	10.3
Early termination charges	—	13.4	4.2	—	—
Operating income (loss) from continuing operations	47.4	39.2	2.7	(42.9)	(77.1)
Interest expense	(22.3)	(21.6)	(16.2)	(16.3)	(16.8)
Foreign currency gain (loss), net	(24.4)	65.5	(15.4)	(42.5)	(24.7)
Loss on early extinguishment of long-term borrowings, net	(0.2)	—	—	—	—
Others, net	0.3	2.9	3.0	1.8	2.9
	(46.7)	46.9	(28.6)	(57.0)	(38.6)
Income (loss) from operations before income taxes	0.7	86.1	(25.9)	(100.0)	(115.7)
Income tax expenses (benefits)	4.6	1.2	3.7	(15.1)	1.5
Net income (loss)	<u>\$ (3.9)</u>	<u>\$ 84.9</u>	<u>\$ (29.6)</u>	<u>\$ (84.9)</u>	<u>\$ (117.2)</u>
Per share data:					
Earnings (loss) per share					
Basic	\$ (0.11)	\$ 2.50	\$ (0.85)	\$ (2.47)	\$ (3.44)
Diluted	\$ (0.11)	\$ 2.02	\$ (0.85)	\$ (2.47)	\$ (3.44)
Weighted average number of shares					
Basic	34.470	33.943	34.834	34.381	34.056
Diluted	34.470	44.755	34.834	34.381	34.056

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	Year Ended December 31, 2018(1)	Year Ended December 31, 2017(1)	Year Ended December 31, 2016(1)(2)	Year Ended December 31, 2015(1)	Year Ended December 31, 2014(1)
(In millions, except per share data)					
<b>Balance Sheet Data (at period end):</b>					
Cash and cash equivalents	\$ 132.4	\$ 128.6	\$ 83.4	\$ 90.9	\$ 102.4
Total assets(3)	583.2	558.8	442.0	474.1	523.4
Total indebtedness(3)(4)	303.6	303.4	221.1	220.4	219.7
Stockholders' equity (deficit)	(17.3)	(39.6)	(72.1)	(62.3)	(18.5)
<b>Supplemental Data:</b>					
Adjusted EBITDA(5)	\$ 84.3	\$ 78.7	\$ 40.7	\$ 0.8	\$ 8.5
Adjusted Net Income (Loss)(6)	\$ 27.1	\$ 28.9	\$ (4.5)	\$ (26.7)	\$ (38.1)

- (1) The FASB issued the new revenue recognition standard through several Accounting Standards Updates that superseded the legacy revenue recognition requirements. The new revenue recognition standard became effective on January 1, 2018. As we adopted the new revenue standard using the modified retrospective method, which allowed the recognition of the cumulative effect of initially applying the new revenue standard as an adjustment to our equity as of January 1, 2018. The comparative prior period amounts were not restated and continued to be reported under the accounting standards in effect for such periods. For further description of the adoption of the new revenue standard, see "Item 8. Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements—Note 1—Business, Basis of Presentation and Summary of Significant Accounting Policies—Recently Adopted Accounting Pronouncements" in this Report.
- (2) Certain charges related to the closure of our 6-inch fab and headcount reduction, previously included in selling, general and administrative expenses in the consolidated statements of operations for the year ended December 31, 2016, have been reclassified to restructuring, impairment and other charges (gain), net and early termination charges, respectively, to conform to the presentation for the year ended December 31, 2017.
- (3) In April 2015, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update No. 2015-03, "Interest—Imputation of Interest", which requires that debt issuance costs are presented in the balance sheet as a direct deduction from the carrying amount of debt liability, consistent with debt discounts or premiums. We adopted ASU 2015-03 in 2016 and reclassified all prior periods presented in the table above. As of December 31, 2015 and December 31, 2014, \$3.8 million and \$4.3 million of debt issuance costs were reclassified from total assets to a reduction of total indebtedness. The adoption of ASU 2015-03 did not impact our consolidated statements of operations.
- (4) Total indebtedness represents long-term borrowings.
- (5) We define Adjusted EBITDA for the periods indicated as EBITDA (as defined below), adjusted to exclude (i) restructuring and other gain, net, (ii) early termination charges, (iii) equity-based compensation expense, (iv) foreign currency loss (gain), net, (v) derivative valuation loss (gain), net, (vi) restatement related expenses (gain), (vii) secondary offering expense, (viii) loss on early extinguishment of long-term borrowings, net and (ix) other indemnification costs and reimbursement. EBITDA for the periods indicated is defined as net income (loss) before interest expense, net, income tax expenses (benefits) and depreciation and amortization. This is a non-US GAAP financial measure and is discussed under "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Explanation and Reconciliation of Non-US GAAP measures—Adjusted EBITDA and Adjusted Net Income (Loss)."
- (6) We define Adjusted Net Income (Loss) for the periods indicated as net income (loss), adjusted to exclude (i) restructuring and other gain, net, (ii) early termination charges, (iii) equity-based compensation expense, (iv) foreign currency loss (gain), net, (v) derivative valuation loss (gain), net, (vi) restatement related expenses (gain), (vii) secondary offering expense, (viii) loss on early extinguishment of long-term borrowings, net and (ix) other indemnification costs and reimbursement. This is a non-US GAAP financial measure and is discussed under "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Explanation and Reconciliation of Non-US GAAP measures—Adjusted EBITDA and Adjusted Net Income (Loss)."

## **Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations**

*The following discussion and analysis should be read in conjunction with the audited consolidated financial statements and unaudited consolidated interim financial statements, together in each case with the related notes, included elsewhere in this Report. This discussion and analysis contains, in addition to historical information, forward-looking statements that include risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of certain factors, including those set forth under the heading “Risk Factors” and elsewhere in this Report.*

### **Overview**

We are a designer and manufacturer of analog and mixed-signal semiconductor platform solutions for communications, IoT, consumer, industrial and automotive applications. We provide technology platforms for analog, mixed-signal, power, high voltage, non-volatile memory, and RF applications. We have a proven record with about 40 years of operating history, a portfolio of approximately 3,000 registered patents and pending applications and extensive engineering and manufacturing process expertise.

Our Foundry Services Group provides specialty analog and mixed-signal foundry services mainly for fabless and IDM semiconductor companies that primarily serve communications, IoT, consumer, industrial and automotive applications. Our Standard Products Group includes our Display Solutions and Power Solutions business lines. Our Display Solutions products provide flat panel display solutions to major suppliers of large and small rigid and flexible panel displays, and mobile, automotive applications and home appliances. Our Power Solutions products include discrete and integrated circuit solutions for power management in communications, consumer, computing and industrial applications.

Our wide variety of analog and mixed-signal semiconductor products and manufacturing services combined with our mature technology platform allow us to address multiple high-growth end markets and to rapidly develop and introduce new products and services in response to market demands. Our design center and substantial manufacturing operations in Korea place us at the core of the global electronics device supply chain. We believe this enables us to quickly and efficiently respond to our customers’ needs and allows us to better serve and capture additional demand from existing and new customers.

To maintain and increase our profitability, we must accurately forecast trends in demand for electronics devices that incorporate semiconductor products we produce. We must understand our customers’ needs as well as the likely end market trends and demand in the markets they serve. We must balance the likely manufacturing utilization demand of our product businesses and foundry business to optimize our capacity utilization. We must also invest in relevant research and development activities and manufacturing capacity and purchase necessary materials on a timely basis to meet our customers’ demand while maintaining our target margins and cash flow.

The semiconductor markets in which we participate are highly competitive. The prices of our products tend to decrease regularly over their useful lives, and such price decreases can be significant as new generations of products are introduced by us or our competitors. We strive to offset the impact of declining selling prices for existing products through cost reductions and the introduction of new products that command selling prices above the average selling price of our existing products. In addition, we seek to manage our inventories and manufacturing capacity so as to mitigate the risk of losses from product obsolescence.

Demand for our products and services is driven by overall demand for communications, IoT, consumer, industrial and automotive products and can be adversely affected by periods of weak consumer and enterprise spending or by market share losses by our customers. In order to mitigate the impact of market volatility on our business, we are diversifying our portfolio of products, customers, and target applications. We also expect that new competitors will emerge in these markets that may place increased pressure on the pricing for our products and services. While we believe we are well positioned competitively to compete in these markets and against these new competitors as a result of our long operating history, existing manufacturing capacity and our

worldwide customer base, if we are not effective in competing in these markets our operating results may be adversely affected.

Within our Foundry Services Group, net sales are driven by customers' decisions on which manufacturing services provider to use for a particular product. Most of our Foundry Services Group customers are fabless, while some are IDM customers. A customer will often have more than one supplier of manufacturing services. In any given period, our net sales depend heavily upon the end-market demand for the goods in which the products we manufacture for customers are used, the inventory levels maintained by our customers and in some cases, allocation of demand for manufacturing services among selected qualified suppliers.

Within our Standard Products Group, net sales are driven by design wins in which we are selected by an electronics original equipment manufacturer (OEM) or other potential customer to supply its demand for a particular product. A customer will often have more than one supplier designed in to multi-source components for a particular product line. Once we have design wins and the products enter into mass production, we often specify the pricing of a particular product for a set period of time, with periodic discussions and renegotiations of pricing with our customers. In any given period, our net sales depend heavily upon the end-market demand for the goods in which our products are used, the inventory levels maintained by our customers and in some cases, allocation of demand for components for a particular product among selected qualified suppliers.

In contrast to completely fabless semiconductor companies, our internal manufacturing capacity provides us with greater control over manufacturing costs and the ability to implement process and production improvements for our internally manufactured products, which can favorably impact gross profit margins. Our internal manufacturing capacity also allows for better control over delivery schedules, improved consistency over product quality and reliability and improved ability to protect intellectual property from misappropriation on these products. However, having internal manufacturing capacity exposes us to the risk of under-utilization of manufacturing capacity that results in lower gross profit margins, particularly during downturns in the semiconductor industry.

Our products and services require investments in capital equipment. Analog and mixed-signal manufacturing facilities and processes are typically distinguished by the design and process implementation expertise rather than the use of the most advanced equipment. Many of these processes also tend to migrate more slowly to smaller geometries due to technological barriers and increased costs. For example, some of our products use high-voltage technology that requires larger geometries and that may not migrate to smaller geometries for several years, if at all. As a result, our manufacturing base and strategy do not require substantial investment in leading edge process equipment for those products, allowing us to utilize our facilities and equipment over an extended period of time with moderate required capital investments. In addition, we are less likely to experience significant industry overcapacity, which can cause product prices to decline significantly. In general, we seek to invest in manufacturing capacity that can be used for multiple high-value applications over an extended period of time. In addition, we outsource manufacturing of those products which do require advanced technology and 12-inch wafer capacity. We believe this capital investment strategy enables us to optimize our capital investments and facilitates more diversified product and service offerings.

Since 2007, we have designed and manufactured organic light emitting diodes (OLED) display driver ICs in our internal manufacturing facilities. As we expanded our design capabilities to products that require lower geometries unavailable at our existing manufacturing facilities, we began outsourcing manufacturing of certain OLED display driver ICs to an external foundry from the second half of 2015. This additional source of manufacturing is an increasingly important part of our supply chain management. By outsourcing manufacturing of advanced OLED products to external foundries, we are able to dynamically adapt to the changing customer requirements and address growing markets without substantial capital investments by us. Both at the internal manufacturing facilities and external foundries, we apply our unique OLED process patents as well as other intellectual property, proprietary process design kits and custom design-flow methodologies.

In our previous public filings, we had used a term “active matrix organic light emitting diodes (AMOLED)” that described a display technology used in certain display driver ICs that we had designed and manufactured in our internal and external foundries. Beginning in the second quarter of 2017, we have used the term “OLED” instead of the term “AMOLED” in our public filings in order to be consistent with commonly accepted industry naming practices for this product category. There is no change to the products that we previously referred to as AMOLED display driver ICs.

Our success going forward will depend upon our ability to adapt to future challenges such as the emergence of new competitors for our products and services or the consolidation of current competitors. Additionally, we must innovate to remain ahead of, or at least rapidly adapt to, technological breakthroughs that may lead to a significant change in the technology necessary to deliver our products and services. We believe that our established relationships and close collaboration with leading customers enhance our awareness of new product opportunities, market and technology trends and improve our ability to adapt and grow successfully. In our Foundry Services Group, we strive to maintain competitiveness by offering high-value added processes, high-flexibility and excellent service by tailoring existing standard processes to meet customers’ design needs and porting customers’ own process technologies into our fabrication facilities.

We are in a period of weaker demand from our foundry customers in part as a result of recent softening global market conditions, including macroeconomic uncertainties. This, together with significantly lower than expected utilization, among other factors will adversely impact our Foundry Services Group gross margin and other operating results, and such impact likely will be material. We are also currently evaluating a number of options to optimize our foundry operations and expense structure with an intent toward maximizing shareholder value.

On February 14, 2019, we announced that we have undertaken a strategic evaluation of our Foundry Services Group business and fabrication facility located in Cheongju (“Fab 4”), the larger of our two 8” manufacturing facilities. Fab 4 is an analog and mixed signal fab that produces approximately 73% of our total capacity, and is used primarily to meet wafer demand from customers of our Foundry Services Group that rely on outside suppliers. The strategic evaluation is expected to include a range of possible options, including, but not limited to, joint ventures, strategic partnerships as well as M&A possibilities. We have engaged J.P. Morgan Securities LLC as our financial advisor to assist in the evaluation. It is possible that the announced strategic evaluation of our Foundry Services Group business and Fab 4 could adversely impact foundry loadings and Company margins.

### ***Recent Developments***

#### ***Repurchase of Long-term Borrowings***

In December 2018, we repurchased a principal amount of \$0.5 million and \$1.6 million of the 2021 Notes and the Exchangeable Notes, respectively. As a result, we recorded a \$0.2 million net loss as early extinguishment loss on our consolidated statements of operations for the year ended December 31, 2018.

#### ***Water Treatment Facility Arrangement***

On June 29, 2018, we entered into an arrangement whereby we acquired a water treatment facility to support our fabrication facility in Gumi, Korea from SK hynix for \$4.2 million, and sold it for \$4.2 million to a third party management company that we have engaged to run the facility for a 10-year term. This arrangement is accounted for as a financing due to our Korean subsidiary’s continuing involvement with the facility. As a result, on the acquisition date, we recorded the water treatment facility of \$4.2 million as property, plant and equipment, net, which is depreciated over its useful life. We also recorded the related liabilities of \$0.6 million as other current liabilities and \$3.6 million as other non-current liabilities, which relates to the financing and service portion of the arrangement and is amortized using the effective interest method over the contract period.

#### ***Segment Change***

In January 2018, as part of our ongoing portfolio optimization effort to realign business processes and streamline our organizational structure, we transferred a portion of our non-OLED display solutions business

from our Standards Products Group to our Foundry Services Group. The transferred non-OLED display business has technical and business characteristics more closely aligned with our Foundry Services business than with our Standard Products business, which resided within our Display solutions business line primarily as a result of a long standing customer relationship established in the past. The transferred non-OLED display business represented \$33.0 million of net sales for the year ended December 31, 2018. The corresponding non-OLED display business represented \$30.3 million and \$25.2 million of net sales for the years ended December 31, 2017 and 2016, respectively.

#### ***Tax Audit***

In September 2017, MagnaChip Semiconductor Ltd. (“MSK”), our Korean operating subsidiary, was notified that the Korean National Tax Service (the “KNTS”) would be examining the income- and non-income-based taxes of MSK for its 2012 to 2014 tax years. The KNTS had conducted its audit, primarily focusing on non-income-based value added tax (“VAT”) transactions associated with the periods with respect to which we previously restated our financial statements as a result of the independent investigation commenced by our Audit Committee in January 2014 (the “Restatement”).

As a result, the aggregate tax and penalty assessment by the KNTS was \$6.0 million, of which \$3.3 million had already been accrued by us in our financial statements in connection with the Restatement filed in 2015. Such amount also included approximately \$0.5 million related to employee withholding amounts and associated penalties, and to the extent any such tax obligation was that of MSK’s employees. In addition, KNTS assessed an administrative fine of \$2.0 million in connection with the above-described tax audit.

In December 2017, the KNTS concluded that no criminal charges would be brought against any current officers or directors of MSK or MSK itself. As a result, we took a charge of \$4.2 million in the fourth quarter of 2017 related to this additional tax assessment and associated penalties and administrative fine. We recorded the \$0.5 million related to employee withholding amounts as other receivables in our consolidated balance sheets as of December 31, 2017, as we expected to obtain reimbursement of the applicable amounts from those employees. Of the \$0.5 million, we have collected \$0.1 million and established an allowance of \$0.4 million and recorded it as selling, general and administrative expense for the three months ended September 30, 2018.

#### ***Secondary offering***

On August 15, 2017, certain of our stockholders that are affiliates of Avenue Capital Management II, L.P. (the “Selling Stockholders”) closed an underwritten registered public offering of 4,088,978 shares of our common stock at a price per share of \$11.10. We did not receive any proceeds from the sale of our common stock by the Selling Stockholders, but paid certain expenses in connection with such secondary offering pursuant to an existing contractual arrangement with the Selling Stockholders.

#### ***Events associated with the closure of our 6-inch fab and reduction of workforce***

In December 2014, we announced that our Board of Directors had adopted a plan to close our 6-inch fab. During the fourth quarter of 2015, we received an \$8.2 million deposit for sale of machinery in conjunction with the planned closure of our 6-inch fab. According to this plan, the 6-inch fab was closed on February 29, 2016. During the first quarter of 2016, we completed all procedures necessary to sell all machineries in our closed 6-inch fab and recognized a \$7.8 million restructuring gain from the related deposit of \$8.2 million, net of certain direct selling costs. On April 4, 2016, we commenced a voluntary resignation program (the “Program”), which was available to certain manufacturing employees, including our 6-inch fab employees, through April 29, 2016.

As of April 29, 2016, 169 employees elected to resign under the terms of the Program. We paid approximately \$8 million for severance benefits, which are required by law and had already been fully accrued in our financial statements, in a lump sum during the second quarter of 2016. Beginning in May 2016, we also

began to pay a portion of the \$4.2 million other termination benefits under the Program, which were paid in equal monthly installments over twelve months. We recorded the \$4.2 million charge related to the full amount of these other termination benefits payable under the Program during the second quarter of 2016.

As of December 21, 2016, we entered into a purchase and sale agreement to sell a building located in Cheongju, South Korea. The building has historically been used to house the 6-inch fab and became vacant upon the closure of the fabrication facility. As of December 31, 2015, the building was fully impaired. We received proceeds of \$18.2 million, including a \$1.7 million value-added tax, for the sale of the building on December 26, 2016. We recorded the \$18.2 million as restricted cash in our consolidated balance sheets as of December 31, 2016 as we were obligated to perform certain removal construction work that was expected to be completed by the end of March 2017. During the first quarter of 2017, we completed all removal construction work necessary to transfer the title of the building, and the \$18.2 million of restricted cash was fully released.

As of February 22, 2017, our Board of Directors approved the implementation of a headcount reduction plan (the “Headcount Reduction Plan”). As of June 30, 2017, 352 employees elected to resign from the Company during the period in which the Headcount Reduction Plan was offered. The Headcount Reduction Plan is expected to result in estimated annual cost savings of approximately \$24 million. The total cash cost of approximately \$31 million has been fully paid. We recorded in our consolidated statement of operations \$11.1 million and \$2.3 million termination related charges as “early termination charges” for the three months ended March 31, 2017 and June 30, 2017, respectively. The remaining total cost relates to statutory severance benefits, which are required by law and had already been fully accrued in our financial statements.

#### ***Issuance of Exchangeable Senior Notes and Stock Repurchase***

As of January 17, 2017, we closed the offering (the “Exchangeable Notes Offering”) by our Luxembourg subsidiary, MagnaChip Semiconductor S.A., of \$86.25 million aggregate principal amount of its 5.00% Exchangeable Senior Notes due 2021 (the “Exchangeable Notes”), reflecting the full exercise of the initial purchasers’ option to purchase additional Exchangeable Notes. We used a portion of the net proceeds from the Exchangeable Notes Offering to repurchase 1,795,444 shares of our common stock under our stock repurchase program, which was authorized by our board of directors on January 10, 2017, at an aggregate cost of \$11.4 million.

#### ***Sale of Sensor Business***

In March 2017, we sold our sensor product business, which was included in and reported as part of the Display Solutions line of our Standard Products Group, to a third party for proceeds of \$1.3 million, in an effort to improve our overall profitability. We recorded a \$0.4 million gain from this sale after deducting the book values of certain assets transferred to the buyer.

#### ***Restatement***

In January 2014, our Audit Committee commenced an independent investigation that resulted in the Restatement. In March, 2014, we voluntarily reported to the SEC that our Audit Committee had determined that we incorrectly recognized revenue on certain transactions and as a result would restate our financial statements, and that our Audit Committee had commenced an independent investigation.

On December 10, 2015, we entered into a Memorandum of Understanding with the plaintiffs’ representatives to settle the Class Action Litigation, as defined and detailed in “Item 8. Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements—Note 18. Commitments and Contingencies” in this Report, for an aggregate settlement payment of \$23.5 million. This settlement payment was fully funded by insurance proceeds that were received in the first quarter of 2016 and disbursed from the escrow account, previously recorded as restricted cash, in the third quarter of 2016.

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On January 22, 2016, we entered into a stipulation of settlement with the plaintiffs in the shareholder derivative actions, as described in “Item 8. Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements—Note 18. Commitments and Contingencies” in this Report, for an aggregate payment of \$3.0 million from our insurance proceeds that were received in the first quarter of 2016 and recorded in the escrow account. In October 2016, the court approved the settlement of the shareholder derivative actions for \$3.0 million, which included \$0.75 million awarded to plaintiffs’ counsel. Upon the expiration of the appeals period, \$2.25 million was disbursed from the escrow account, previously recorded as restricted cash, in December 2016. The remaining restricted cash related to insurance proceeds of \$3.1 million was also released in December 2016.

On May 1, 2017, the SEC announced that it had reached a final settlement with us, resolving the SEC’s investigation, as detailed in “Item 8. Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements—Note 18. Commitments and Contingencies” in this Report. In connection therewith, we have consented, without admitting or denying the SEC’s findings, to the entry of an administrative order by the SEC directing that we cease and desist from committing or causing any violations of certain provisions of the federal securities laws and related SEC regulations. The SEC’s administrative order was entered on May 1, 2017. The SEC imposed a monetary penalty of \$3.0 million on us. In the three months ended March 31, 2017, we established a reserve in that amount for the potential settlement of this matter and recorded it as selling, general and administrative expense in the consolidated statements of operations for the three months ended March 31, 2017. The reserved monetary penalty of \$3.0 million was paid to the SEC during the three months ended June 30, 2017.

As a result of the Restatement, we incurred substantial external accounting, legal and other related costs associated with the Restatement and certain litigation and other regulatory investigations and actions related thereto. We recorded Restatement related costs of \$10.3 million for the year ended December 31, 2017, which included tax assessment, and associated penalties of \$4.3 million, primarily related to non-income-based VAT transactions in the Restatement periods, compared to \$7.0 million of Restatement related costs for the year ended December 31, 2016. For the three months March 31, 2018, the reversal of a \$0.8 million accrual related to certain legal fees, incurred in prior periods and reimbursed by insurers in the current quarter, was recorded as a Restatement related gain.

### **Segments**

We report our financial results in two operating segments: Foundry Services Group and Standard Products Group. We identified these segments based on how we allocate resources and assess our performance.

In January 2018, as part of our ongoing portfolio optimization effort to realign business processes and streamline our organizational structure, we transferred a portion of our non-OLED display solutions business from our Standards Products Group to our Foundry Services Group. The transferred non-OLED display business has technical and business characteristics more closely aligned with our Foundry Services business than with our Standard Products business, which resided within our Display solutions business line primarily as a result of a long standing customer relationship established many years ago. We recast comparative segment financial information to conform to this current period change.

- **Foundry Services Group:** Our Foundry Services Group provides specialty analog and mixed-signal foundry services to fabless semiconductor companies and IDMs that serve communications, IoT, consumer, industrial and automotive applications. We manufacture wafers based on our customers’ product designs. We do not market these products directly to end customers but rather supply manufactured wafers and products to our customers to market to their end customers. We offer approximately 508 process flows to our foundry services customers. We also often partner with key customers to jointly develop or customize specialized processes that enable our customers to improve their products and allow us to develop unique manufacturing expertise. Our foundry services target customers who require differentiated, specialty analog

and mixed-signal process technologies such as high voltage complementary metal-oxide-semiconductor (CMOS), non-volatile memory or bipolar-CMOS-DMOS (BCD). These customers typically serve the consumer, computing, communication, industrial, automotive and IoT applications. For the year ended December 31, 2018, our Foundry Services Group business represented 43.3% of our net sales and its gross profit was \$82.6 million. For the years ended December 31, 2017 and 2016, our Foundry Services Group business represented, on an adjusted basis after recasting, 51.6% and 43.5% of our net sales, respectively, and its gross profit was \$101.8 million and \$73.1 million, respectively, as adjusted for the segment change described above.

- **Standard Products Group:** Our Standard Products Group includes our Display Solutions and Power Solutions business lines. Our Display Solutions products include source, gate drivers, timing controllers, and one-chip integrated solutions that cover a wide range of panel displays used in ultra high definition (UHD), high definition (HD), light emitting diode (LED), 3D and OLED televisions public displays, notebooks, mobile communications, entertainment devices and automotive applications. Our Display Solutions products support the industry's most advanced display technologies, such as OLEDs, and low temperature polysilicons (LTPS), as well as high-volume display technologies such as thin film transistors (TFT). Since 2007, we have designed and manufactured OLED display driver IC products. Our current portfolio of OLED solutions address a wide range of resolutions ranging from HD to Wide Quad High Definition (WQHD) for applications including smartphones, TVs, and other mobile devices. We believe we have a unique intellectual property portfolio and mixed-signal design and manufacturing expertise in the OLED industry. Our Power Solutions business line produces power management semiconductor products including discrete and integrated circuit solutions for power management in high-volume consumer applications. These products include metal oxide semiconductor field effect transistors (MOSFETs), insulated-gate bipolar transistors (IGBTs), AC-DC converters, DC-DC converters, LED drivers, switching regulators and linear regulators for a range of devices, including televisions, smartphones, mobile phones, desktop PCs, notebooks, tablet PCs, other consumer electronics, and industrial applications such as power suppliers, LED lighting, motor control and home appliances. For the year ended December 31, 2018, our Standard Products Group, which includes our Display Solutions and Power Solutions business lines, represented 56.7% of our net sales and its gross profit was \$115.5 million. For the years ended December 31, 2017 and 2016, our Standard Products Group business represented, on an adjusted basis after recasting, 48.4% and 56.4% of our net sales, respectively, and its gross profit was \$85.9 million and \$83.5 million, respectively, as adjusted for the segment change described above

## **Explanation and Reconciliation of Non-US GAAP Measures**

### ***Adjusted EBITDA and Adjusted Net Income (Loss)***

We use the terms Adjusted EBITDA and Adjusted Net Income (Loss) throughout this Report. Adjusted EBITDA, as we define it, is a non-US GAAP measure. We define Adjusted EBITDA for the periods indicated as EBITDA (as defined below), adjusted to exclude (i) restructuring and other gain, net, (ii) early termination charges, (iii) equity-based compensation expense, (iv) foreign currency loss (gain), net, (v) derivative valuation loss (gain), net, (vi) restatement related expenses (gain), (vii) secondary offering expense, (viii) loss on early extinguishment of long-term borrowings, net and (ix) other indemnification costs and reimbursement. EBITDA for the periods indicated is defined as net income (loss) before interest expense, net, income tax expenses, and depreciation and amortization.

See the footnotes to the table below for further information regarding these items. We present Adjusted EBITDA as a supplemental measure of our performance because:

- we believe that Adjusted EBITDA, by eliminating the impact of a number of items that we do not consider to be indicative of our core ongoing operating performance, provides a more comparable measure of our operating performance from period-to-period and may be a better indicator of future performance;
- we believe that Adjusted EBITDA is commonly requested and used by securities analysts, investors and other interested parties in the evaluation of the Company as an enterprise level performance measure that

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eliminates the effects of financing, income taxes and the accounting effects of capital spending, as well as other one time or recurring items described above; and

- we believe that Adjusted EBITDA is useful for investors, among other reasons, to assess the Company's period-to-period core operating performance and to understand and assess the manner in which management analyzes operating performance.

We use Adjusted EBITDA in a number of ways, including:

- for planning purposes, including the preparation of our annual operating budget;
- to evaluate the effectiveness of our enterprise level business strategies;
- in communications with our Board of Directors concerning our consolidated financial performance; and
- in certain of our compensation plans as a performance measure for determining incentive compensation payments.

We encourage you to evaluate each adjustment and the reasons we consider them appropriate. In evaluating Adjusted EBITDA, you should be aware that in the future we may incur expenses similar to the adjustments in this presentation. Adjusted EBITDA is not a measure defined in accordance with US GAAP and should not be construed as an alternative to income from continuing operations, cash flows from operating activities or net income, as determined in accordance with US GAAP. A reconciliation of net income to Adjusted EBITDA is as follows:

	Year Ended December 31, 2018	Year Ended December 31, 2017	Year Ended December 31, 2016
	(In millions)		
Net Income (Loss)	\$ (3.9)	\$ 84.9	\$ (29.6)
Interest expense, net	20.4	20.5	16.0
Income tax expenses	4.6	1.2	3.7
Depreciation and amortization	32.0	28.1	25.4
EBITDA	\$ 53.2	\$ 134.7	\$ 15.5
Adjustments:			
Restructuring and other gain, net(a)	—	(17.0)	(5.5)
Early termination charges(b)	—	13.4	4.2
Equity-based compensation expense(c)	4.4	2.3	3.8
Foreign currency loss (gain), net(d)	24.4	(65.5)	15.4
Derivative valuation loss (gain), net(e)	2.4	(0.2)	0.3
Restatement related expenses (gain)(f)	(0.8)	10.3	7.0
Secondary offering expenses(g)	—	0.7	—
Loss on early extinguishment of long-term borrowings, net(h)	0.2	—	—
Other indemnification costs and reimbursement(i)	0.4	—	—
Adjusted EBITDA	<u>\$ 84.3</u>	<u>\$ 78.7</u>	<u>\$ 40.7</u>

(a) For the year ended December 31, 2017, this adjustment eliminates the \$16.6 million restructuring gain on sale of a building in connection with the closure of our 6-inch fab and the \$0.4 million gain on sale of our sensor business. For the year ended December 31, 2016, this adjustment eliminates the \$7.8 million restructuring gain on sale of machinery in connection with the closure of our 6-inch fab, net of \$2.3 million training and transition costs related to our 6-inch fab employees.

(b) This adjustment eliminates the charges related to the reduction of workforce through the Headcount Reduction Plan in the first half of 2017 and the Program in the second quarter of 2016. As these termination related charges are recorded as a result of implementing the company-wide headcount reduction and are not

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expected to represent ongoing operating expenses to us, we believe our operating performance results are more usefully compared if these expenses are excluded.

- (c) This adjustment eliminates the impact of non-cash equity-based compensation expenses. Although we expect to incur non-cash equity-based compensation expenses in the future, these expenses do not generally require cash settlement, and, therefore, are not used by us to assess the profitability of our operations. We believe that analysts and investors will find it helpful to review our operating performance without the effects of these non-cash expenses as supplemental information.
- (d) This adjustment mainly eliminates the impact of non-cash foreign currency translation associated with intercompany debt obligations and foreign currency denominated receivables and payables, as well as the cash impact of foreign currency transaction gains or losses on collection of such receivables and payment of such payables. Although we expect to incur foreign currency translation gains or losses in the future, we believe that analysts and investors will find it helpful to review our operating performance without the effects of these primarily non-cash gains or losses, which we cannot control. Additionally, we believe the isolation of this adjustment provides investors with enhanced comparability to prior and future periods of our operating performance results.
- (e) This adjustment eliminates the impact of gain or loss recognized in income on derivatives, which represents hedge ineffectiveness or derivatives value changes excluded from the risk being hedged. We enter into derivative transactions to mitigate foreign exchange risks. As our derivative transactions are limited to a certain portion of our expected cash flows denominated in US dollars, and we do not enter into derivative transactions for trading or speculative purposes, we do not believe that these charges or gains are indicative of our core operating performance.
- (f) This adjustment eliminates expenses in connection with the Audit Committee's independent investigation and related restatement and litigation, primarily comprised of legal, audit and consulting fees, and certain other expenses. For 2018, this adjustment eliminates the reversal of a \$0.8 million accrual related to certain legal fees incurred in prior periods and reimbursed by insurers in the first quarter of 2018. For 2017, this adjustment includes the \$3.0 million civil penalty imposed by the SEC and the \$4.3 million of the additional tax assessment and associated penalties, primarily related to non-income-based VAT transactions in the Restatement periods, administrative fine and related legal fees. As these expenses meaningfully impacted our operating results and are not expected to represent an ongoing operating expense to us, we believe our operating performance results are more usefully compared if these expenses are excluded.
- (g) This adjustment eliminates expenses incurred for the secondary offering by the Selling Stockholders primarily in the third quarter of 2017.
- (h) This adjustment eliminates expenses related to the repurchase of a portion of the 2021 Notes and the Exchangeable Notes in December 2018.
- (i) This adjustment eliminates a \$0.4 million legal expense related to the indemnification of a former employee. As the legal expense for the former employee is borne by us under a negotiated separation agreement, we do not believe that this charge is indicative of our core operating performance and has been excluded for comparative purposes.

Adjusted EBITDA has limitations as an analytical tool, and you should not consider it in isolation, or as a substitute for analysis of our results as reported under US GAAP. Some of these limitations are:

- Adjusted EBITDA does not reflect our cash expenditures, or future requirements, for capital expenditures or contractual commitments;
- Adjusted EBITDA does not reflect changes in, or cash requirements for, our working capital needs;
- Adjusted EBITDA does not reflect the interest expense, or the cash requirements necessary to service interest or principal payments, on our debt;
- although depreciation and amortization are non-cash charges, the assets being depreciated and amortized will often need to be replaced in the future, and Adjusted EBITDA does not reflect any cash requirements for such replacements;

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- Adjusted EBITDA does not consider the potentially dilutive impact of issuing equity-based compensation to our management team and employees;
- Adjusted EBITDA does not reflect the costs of holding certain assets and liabilities in foreign currencies; and
- other companies in our industry may calculate Adjusted EBITDA differently than we do, limiting its usefulness as a comparative measure.

Because of these limitations, Adjusted EBITDA should not be considered as a measure of discretionary cash available to us to invest in the growth of our business. We compensate for these limitations by relying primarily on our US GAAP results and using Adjusted EBITDA only supplementally.

We present Adjusted Net Income (Loss) as a further supplemental measure of our performance. We prepare Adjusted Net Income (Loss) by adjusting net income (loss) to eliminate the impact of a number of non-cash expenses and other items that may be either one time or recurring that we do not consider to be indicative of our core ongoing operating performance. We believe that Adjusted Net Income (Loss) is particularly useful because it reflects the impact of our asset base and capital structure on our operating performance. We present Adjusted Net Income (Loss) for a number of reasons, including:

- we use Adjusted Net Income (Loss) in communications with our Board of Directors concerning our consolidated financial performance without the impact of non-cash expenses and the other items as we discussed below since we believe that it is a more consistent measure of our core operating results from period to period; and
- we believe that reporting Adjusted Net Income (Loss) is useful to readers in evaluating our core operating results because it eliminates the effects of non-cash expenses as well as the other items we discuss below, such as foreign currency gains and losses, which are out of our control and can vary significantly from period to period.

Adjusted Net Income (Loss) is not a measure defined in accordance with US GAAP and should not be construed as an alternative to income from continuing operations, cash flows from operating activities or net income, as determined in accordance with US GAAP. We encourage you to evaluate each adjustment and the reasons we consider them appropriate. Other companies in our industry may calculate Adjusted Net Income (Loss) differently than we do, limiting its usefulness as a comparative measure. In addition, in evaluating Adjusted Net Income (Loss), you should be aware that in the future we may incur expenses similar to the adjustments in this presentation. We define Adjusted Net Income (Loss) for the periods indicated as net income (loss), adjusted to exclude (i) restructuring and other gain, net, (ii) early termination charges, (iii) equity-based compensation expense, (iv) foreign currency loss (gain), net, (v) derivative valuation loss (gain), net, (vi) restatement related expenses (gain), (vii) secondary offering expense, (viii) loss on early extinguishment of long-term borrowings, net and (ix) other indemnification costs and reimbursement.

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The following table summarizes the adjustments to net income (loss) that we make in order to calculate Adjusted Net Income (Loss) for the periods indicated:

	Year Ended December 31, 2018	Year Ended December 31, 2017	Year Ended December 31, 2016
	(In millions)		
Net Income (Loss)	\$ (3.9)	\$ 84.9	\$ (29.6)
Adjustments:			
Restructuring and other gain, net(a)	—	(17.0)	(5.5)
Early termination charges(b)	—	13.4	4.2
Equity-based compensation expense(c)	4.4	2.3	3.8
Foreign currency loss (gain), net(d)	24.4	(65.5)	15.4
Derivative valuation loss (gain), net(e)	2.4	(0.2)	0.3
Restatement related expenses (gain)(f)	(0.8)	10.3	7.0
Secondary offering expenses(g)	—	0.7	—
Loss on early extinguishment of long-term borrowings, net(h)	0.2	—	—
Other indemnification costs and reimbursement(i)	0.4	—	—
Adjusted Net Income (Loss)	<u>\$ 27.1</u>	<u>\$ 28.9</u>	<u>\$ (4.5)</u>

- (a) For the year ended December 31, 2017, this adjustment eliminates the \$16.6 million restructuring gain on sale of a building in connection with the closure of our 6-inch fab and the \$0.4 million gain on sale of our sensor business. For the year ended December 31, 2016, this adjustment eliminates the \$7.8 million restructuring gain on sale of machinery in connection with the closure of our 6-inch fab, net of \$2.3 million training and transition costs related to our 6-inch fab employees.
- (b) This adjustment eliminates the charges related to the reduction of workforce through the Headcount Reduction Plan in the first half of 2017 and the Program in the second quarter of 2016. As these termination related charges are recorded as a result of implementing the company-wide headcount reduction and are not expected to represent ongoing operating expenses to us, we believe our operating performance results are more usefully compared if these expenses are excluded.
- (c) This adjustment eliminates the impact of non-cash equity-based compensation expenses. Although we expect to incur non-cash equity-based compensation expenses in the future, these expenses do not generally require cash settlement, and, therefore, are not used by us to assess the profitability of our operations. We believe that analysts and investors will find it helpful to review our operating performance without the effects of these non-cash expenses as supplemental information.
- (d) This adjustment mainly eliminates the impact of non-cash foreign currency translation associated with intercompany debt obligations and foreign currency denominated receivables and payables, as well as the cash impact of foreign currency transaction gains or losses on collection of such receivables and payment of such payables. Although we expect to incur foreign currency translation gains or losses in the future, we believe that analysts and investors will find it helpful to review our operating performance without the effects of these primarily non-cash gains or losses, which we cannot control. Additionally, we believe the isolation of this adjustment provides investors with enhanced comparability to prior and future periods of our operating performance results.
- (e) This adjustment eliminates the impact of gain or loss recognized in income on derivatives, which represents hedge ineffectiveness or derivatives value changes excluded from the risk being hedged. We enter into derivative transactions to mitigate foreign exchange risks. As our derivative transactions are limited to a certain portion of our expected cash flows denominated in US dollars, and we do not enter into derivative transactions for trading or speculative purposes, we do not believe that these charges or gains are indicative of our core operating performance.
- (f) This adjustment eliminates expenses in connection with the Audit Committee's independent investigation and related restatement and litigation, primarily comprised of legal, audit and consulting fees, and certain

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other expenses. For 2018, this adjustment eliminates the reversal of a \$0.8 million accrual related to certain legal fees incurred in prior periods and reimbursed by insurers in the first quarter of 2018. For 2017, this adjustment includes the \$3.0 million civil penalty imposed by the SEC and the \$4.3 million of the additional tax assessment and associated penalties, primarily related to non-income-based VAT transactions in the Restatement periods, administrative fine and related legal fees. As these expenses meaningfully impacted our operating results and are not expected to represent an ongoing operating expense to us, we believe our operating performance results are more usefully compared if these expenses are excluded.

- (g) This adjustment eliminates expenses incurred for the secondary offering by the Selling Stockholders primarily in the third quarter of 2017.
- (h) This adjustment eliminates expenses related to the repurchase of a portion of the 2021 Notes and the Exchangeable Notes in December 2018.
- (i) This adjustment eliminates a \$0.4 million legal expense related to the indemnification of a former employee. As the legal expense for the former employee is borne by us under a negotiated separation agreement, we do not believe that this charge is indicative of our core operating performance and has been excluded for comparative purposes.

There was no tax impact from the adjustments to net income to calculate our Adjusted Net Income (Loss) for the years ended December 31, 2018, 2017 and 2016 due to net operating loss carry-forwards available to offset taxable income and full allowance for deferred tax assets. We believe that all adjustments to net income (loss) used to calculate Adjusted Net Income (Loss) were applied consistently to the periods presented.

Adjusted Net Income (Loss) has limitations as an analytical tool, and you should not consider it in isolation, or as a substitute for analysis of our results as reported under US GAAP. Some of these limitations are:

- Adjusted Net Income (Loss) does not reflect changes in, or cash requirements for, our working capital needs;
- Adjusted Net Income (Loss) does not consider the potentially dilutive impact of issuing equity-based compensation to our management team and employees;
- Adjusted Net Income (Loss) does not reflect the costs of holding certain assets and liabilities in foreign currencies; and
- other companies in our industry may calculate Adjusted Net Income (Loss) differently than we do, limiting its usefulness as a comparative measure.

Because of these limitations, Adjusted Net Income (Loss) should not be considered as a measure of profitability of our business. We compensate for these limitations by relying primarily on our US GAAP results and using Adjusted Net Income (Loss) only supplementally.

Our Adjusted EBITDA and Adjusted Net Income for the year ended December 31, 2018 were \$84.3 million and \$27.1 million, respectively. Our Adjusted EBITDA and Adjusted Net Income for the year ended December 31, 2017 were \$78.7 million and \$28.9 million, respectively. Our Adjusted EBITDA and Adjusted Net Loss for the year ended December 31, 2016 were \$40.7 million and \$4.5 million, respectively.

### **Factors Affecting Our Results of Operations**

**Net Sales.** We derive virtually all of our sales (net of sales returns and allowances) from two segments: Foundry Services Group and Standard Products Group. Our product inventory is primarily located in Korea and is available for drop shipment globally. Outside of Korea, we maintain limited product inventory, and our sales representatives generally relay orders to our factories in Korea for fulfillment. We have strategically located our sales and technical support offices near concentrations of major customers. Our sales offices are located in Korea, the United States, Japan and Greater China. Our network of authorized agents and distributors is in the United States, Europe and the Asia Pacific region. Our net sales from All other consist principally of the disposal of scrap materials.

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Prior to the adoption of the new revenue standard effective on January 1, 2018, we had historically recognized revenue when risk and reward of ownership pass to the customer either upon shipment, upon product delivery at the customer's location or upon customer acceptance, depending on the terms of the arrangement. After the adoption of the new revenue standard effective on January 1, 2018, we recognize revenue over time for those foundry products without alternative use where we have an enforceable right to payment for the related foundry services completed to date. As we adopted the new revenue standard under the modified retrospective method, we have not changed the comparative information in our interim consolidated financial statements for the year ended December 31, 2017. Such comparative information continues to be reported under the accounting standards in effect for that period. See "Item 8. Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements—Note 1—Business, Basis of Presentation and Significant Accounting Policies—Basis of Presentation and Recent Accounting Pronouncements" in this Report for further discussion. For the years ended December 31, 2018 and 2017, we sold products to 370 and 343 customers, respectively, and our net sales to our ten largest customers represented 61% and 57% of our net sales, respectively. We have a combined production capacity of approximately 113,000 semiconductor wafers per month. We believe our large-scale, cost-effective fabrication facilities enable us to rapidly adjust our production levels to meet shifts in demand by our end customers.

**Gross Profit.** Our overall gross profit generally fluctuates as a result of changes in overall sales volumes and in the average selling prices of our products and services. Other factors that influence our gross profit include changes in product mix, the introduction of new products and services and subsequent generations of existing products and services, shifts in the utilization of our manufacturing facilities and the yields achieved by our manufacturing operations, changes in material, labor and other manufacturing costs including outsourced manufacturing expenses, and variation in depreciation expense.

**Average Selling Prices.** Average selling prices for our products tend to be highest at the time of introduction of new products which utilize the latest technology and tend to decrease over time as such products mature in the market and are replaced by next generation products. We strive to offset the impact of declining selling prices for existing products through our product development activities and by introducing new products that command selling prices above the average selling price of our existing products. In addition, we seek to manage our inventories and manufacturing capacity so as to preclude losses from product and productive capacity obsolescence.

**Material Costs.** Our cost of material consists of costs of raw materials, such as silicon wafers, chemicals, gases and tape and packaging supplies. We use processes that require specialized raw materials, such as silicon wafers, that are generally available from a limited number of suppliers. If demand increases or supplies decrease, the costs of our raw materials could increase significantly.

**Labor Costs.** A significant portion of our employees are located in Korea. Under Korean labor laws, most employees and certain executive officers with one or more years of service are entitled to severance benefits upon the termination of their employment based on their length of service and rate of pay. As of December 31, 2018, approximately 98% of our employees were eligible for severance benefits.

**Depreciation Expense.** We periodically evaluate the carrying values of long-lived assets, including property, plant and equipment and intangible assets, as well as the related depreciation periods. We depreciated our property, plant and equipment using the straight-line method over the estimated useful lives of our assets. Depreciation rates vary from 30-40 years on buildings to 5 to 12 years for certain equipment and assets. Our evaluation of carrying values is based on various analyses including cash flow and profitability projections. If our projections indicate that future undiscounted cash flows are not sufficient to recover the carrying values of the related long-lived assets, the carrying value of the assets is impaired and will be reduced, with the reduction charged to expense so that the carrying value is equal to fair value.

**Selling Expenses.** We sell our products worldwide through a direct sales force as well as a network of sales agents and representatives to OEMs, including major branded customers and contract manufacturers, and

indirectly through distributors. Selling expenses consist primarily of the personnel costs for the members of our direct sales force, a network of sales representatives and other costs of distribution. Personnel costs include base salary, benefits and incentive compensation.

**General and Administrative Expenses.** General and administrative expenses consist of the costs of various corporate operations, including finance, legal, human resources and other administrative functions. These expenses primarily consist of payroll-related expenses, consulting and other professional fees and office facility-related expenses.

**Research and Development.** The rapid technological change and product obsolescence that characterize our industry require us to make continuous investments in research and development. Product development time frames vary but, in general, we incur research and development costs one to two years before generating sales from the associated new products. These expenses include personnel costs for members of our engineering workforce, cost of photomasks, silicon wafers and other non-recurring engineering charges related to product design. Additionally, we develop base line process technology through experimentation and through the design and use of characterization wafers that help achieve commercially feasible yields for new products. The majority of research and development expenses of our Foundry Services Group are for process development that serves as a common technology platform for all of our product lines. For our Standard Products Group, the majority of research and development expenses are material-related costs for OLED display driver IC product development involving fine processes.

**Interest Expense.** Our interest expense was incurred primarily under our 2021 Notes and our Exchangeable Notes.

**Impact of Foreign Currency Exchange Rates on Reported Results of Operations.** Historically, a portion of our revenues and greater than the majority of our operating expenses and costs of sales have been denominated in non-US currencies, principally the Korean won, and we expect that this will remain true in the future. Because we report our results of operations in US dollars converted from our non-US revenues and expenses based on monthly average exchange rates, changes in the exchange rate between the Korean won and the US dollar could materially impact our reported results of operations and distort period to period comparisons. In particular, because of the difference in the amount of our consolidated revenues and expenses that are in US dollars relative to Korean won, depreciation in the US dollar relative to the Korean won could result in a material increase in reported costs relative to revenues, and therefore could cause our profit margins and operating income (loss) to appear to decline materially, particularly relative to prior periods. The converse is true if the US dollar were to appreciate relative to the Korean won. Moreover, our foreign currency gain or loss would be affected by changes in the exchange rate between the Korean won and the US dollar as a substantial portion of non-cash translation gain or loss is associated with the intercompany long-term loans to our Korean subsidiary, which is denominated in US dollars. As of December 31, 2018, the outstanding intercompany loan balance including accrued interest between our Korean subsidiary and our Dutch subsidiary was \$666.6 million. This amount included an intercompany loan of \$75.0 million executed during the three months ended March 31, 2017, which was used to transfer a portion of the net proceeds from the offering of the Exchangeable Notes from our Luxembourg subsidiary to our Dutch subsidiary, and then to our Korean subsidiary. As a result of such foreign currency fluctuations, it could be more difficult to detect underlying trends in our business and results of operations. In addition, to the extent that fluctuations in currency exchange rates cause our results of operations to differ from our expectations or the expectations of our investors, the trading price of our stock could be adversely affected.

From time to time, we may engage in exchange rate hedging activities in an effort to mitigate the impact of exchange rate fluctuations. Our Korean subsidiary enters into foreign currency forward and zero cost collar contracts in order to mitigate a portion of the impact of US dollar-Korean won exchange rate fluctuations on our operating results. Obligations under these foreign currency forward and zero cost collar contracts must be cash collateralized if our exposure exceeds certain specified thresholds. These forward and zero cost collar contracts may be terminated by the counterparty in a number of circumstances, including if our total cash and cash

equivalents is less than \$30.0 million at the end of a fiscal quarter unless a waiver is obtained from the counterparty. We cannot assure that any hedging technique we implement will be effective. If our hedging activities are not effective, changes in currency exchange rates may have a more significant impact on our results of operations.

**Foreign Currency Gain or Loss.** Foreign currency translation gains or losses on transactions by us or our subsidiaries in a currency other than our or our subsidiaries' functional currency are included in our statements of operations as a component of other income (expense). A substantial portion of this net foreign currency gain or loss relates to non-cash translation gain or loss related to the principal balance of intercompany balances at our Korean subsidiary that are denominated in US dollars. This gain or loss results from fluctuations in the exchange rate between the Korean won and US dollar.

**Income Taxes.** We record our income taxes in each of the tax jurisdictions in which we operate. This process involves using an asset and liability approach whereby deferred tax assets and liabilities are recorded for differences in the financial reporting bases and tax bases of our assets and liabilities. We exercise significant management judgment in determining our provision for income taxes, deferred tax assets and liabilities. We assess whether it is more likely than not that the deferred tax assets existing at the period-end will be realized in future periods. In such assessment, we consider all available positive and negative evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax planning strategies and recent results of operations. In the event we were to determine that we would be able to realize the deferred income tax assets in the future in excess of their net recorded amount, we would adjust the valuation allowance, which would reduce the provision for income taxes.

We are subject to income- or non-income-based tax examinations by tax authorities of the US, Korea and multiple other foreign jurisdictions, where applicable, for all open tax years. Significant estimates and judgments are required in determining our worldwide provision for income- or non-income based taxes. Some of these estimates are based on interpretations of existing tax laws or regulations. The ultimate amount of tax liability may be uncertain as a result. See "Item 8, Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements—Note 16. Income Taxes" included elsewhere in this Report.

**Capital Expenditures.** We primarily invest in manufacturing equipment, software design tools and other tangible assets mainly for fabrication facility maintenance, capacity expansion and technology improvement. Capacity expansions and technology improvements typically occur in anticipation of increases in demand. We typically pay for capital expenditures in partial installments with portions due on order, delivery and final acceptance. Our capital expenditures mainly include our payments for the purchase of property, plant and equipment.

**Inventories.** We monitor our inventory levels in light of product development changes and market expectations. We may be required to take additional charges for quantities in excess of demand, cost in excess of market value and product age. Our analysis may take into consideration historical usage, expected demand, anticipated sales price, new product development schedules, the effect new products might have on the sales of existing products, product age, customer design activity, customer concentration and other factors. These forecasts require us to estimate our ability to predict demand for current and future products and compare those estimates with our current inventory levels and inventory purchase commitments. Our forecasts for our inventory may differ from actual inventory use.

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**Results of Operations**

The following table sets forth, for the periods indicated, certain information related to our operations, expressed in US dollars and as a percentage of our net sales:

	Year Ended December 31, 2018		Year Ended December 31, 2017 (As adjusted)		Year Ended December 31, 2016 (As adjusted)	
	Amount	% of net sales	Amount	% of net sales	Amount	% of net sales
(In millions)						
<b>Consolidated statements of operations data:</b>						
Net sales	\$ 750.9	100.0%	\$ 679.7	100.0%	\$ 688.0	100.0%
Cost of sales	552.8	73.6	491.8	72.4	531.7	77.3
Gross profit	198.1	26.4	187.9	27.6	156.2	22.7
Selling, general and administrative expenses	72.6	9.7	81.8	12.0	83.5	12.1
Research and development expenses	78.0	10.4	70.5	10.4	72.2	10.5
Restructuring and other gain, net	—	—	(17.0)	(2.5)	(6.5)	(0.9)
Early termination charges	—	—	13.4	2.0	4.2	0.6
Operating income (loss)	47.4	6.3	39.2	5.8	2.7	0.4
Interest expense	(22.3)	(3.0)	(21.6)	(3.2)	(16.2)	(2.4)
Foreign currency gain (loss), net	(24.4)	(3.3)	65.5	9.6	(15.4)	(2.2)
Loss on early extinguishment of long-term borrowings, net	(0.2)	(0.0)	—	—	—	—
Others, net	0.3	0.0	2.9	0.4	3.0	0.4
	<u>(46.7)</u>	<u>(6.2)</u>	<u>46.9</u>	<u>6.9</u>	<u>(28.6)</u>	<u>(4.2)</u>
Income (loss) before income taxes	0.7	0.1	86.1	12.7	(25.9)	(3.8)
Income tax expenses (benefits)	4.6	0.6	1.2	0.2	3.7	0.5
Net income (loss)	<u>\$ (3.9)</u>	<u>(0.5)%</u>	<u>\$ 84.9</u>	<u>12.5%</u>	<u>\$ (29.6)</u>	<u>(4.3)%</u>
<b>Net Sales:</b>						
Foundry Services Group	\$ 325.3	43.3%	\$ 350.4	51.6%	\$ 299.1	43.5%
Standard Products Group						
Display Solutions	256.1	34.1	179.2	26.4	256.8	37.3
Power Solutions	169.3	22.5	149.8	22.0	131.5	19.1
Total Standard Products Group	425.4	56.7	329.1	48.4	388.3	56.4
All other	0.2	0.0	0.2	0.0	0.6	0.1
Total net sales	<u>\$ 750.9</u>	<u>100.0%</u>	<u>\$ 679.7</u>	<u>100.0%</u>	<u>\$ 688.0</u>	<u>100.0%</u>

**Results of Operations—Comparison of Years Ended December 31, 2018 and 2017**

The following table sets forth consolidated results of operations for the years ended December 31, 2018 and 2017:

	Year Ended December 31, 2018		Year Ended December 31, 2017		Change Amount
	Amount	% of Net Sales	Amount	% of Net Sales	
	(In millions)				
Net sales	\$ 750.9	100.0%	\$ 679.7	100.0%	\$ 71.2
Cost of sales	552.8	73.6	491.8	72.4	61.0
Gross profit	198.1	26.4	187.9	27.6	10.2
Selling, general and administrative expenses	72.6	9.7	81.8	12.0	(9.1)
Research and development expenses	78.0	10.4	70.5	10.4	7.5
Restructuring and other gain, net	—	—	(17.0)	(2.5)	17.0
Early termination charges	—	—	13.4	2.0	(13.4)
Operating income	47.4	6.3	39.2	5.8	8.2
Interest expense	(22.3)	(3.0)	(21.6)	(3.2)	(0.7)
Foreign currency gain (loss), net	(24.4)	(3.3)	65.5	9.6	(90.0)
Loss on early extinguishment of long-term borrowings, net	(0.2)	(0.0)	—	—	(0.2)
Others, net	0.3	0.0	2.9	0.4	(2.6)
	(46.7)	(6.2)	46.9	6.9	(93.5)
Income (loss) before income taxes	0.7	0.1	86.1	12.7	(85.3)
Income tax expenses	4.6	0.6	1.2	0.2	3.5
Net income (loss)	\$ (3.9)	(0.5)	\$ 84.9	12.5	\$ (88.8)

**Results by segment**

	Year Ended December 31, 2018		Year Ended December 31, 2017 (As adjusted)		Change Amount
	Amount	% of Net Sales	Amount	% of Net Sales	
	(In millions)				
<b>Net Sales</b>					
Foundry Services Group	\$ 325.3	43.3%	\$ 350.4	51.6%	\$ (25.1)
Standard Products Group					
Display Solutions	256.1	34.1	179.2	26.4	76.9
Power Solutions	169.3	22.5	149.8	22.0	19.4
Total Standard Products Group	425.4	56.7	329.1	48.4	96.3
All other	0.2	0.0	0.2	0.0	(0.0)
Total net sales	\$ 750.9	100.0%	\$ 679.7	100.0%	\$ 71.2

	Year Ended December 31, 2018		Year Ended December 31, 2017 (As adjusted)		Change Amount
	Amount	% of Net Sales	Amount	% of Net Sales	
(In millions)					
<b>Gross Profit</b>					
Foundry Services Group	\$ 82.6	25.4%	\$101.8	29.0%	\$(19.2)
Standard Products Group	115.5	27.1	85.9	26.1	29.6
All other	0.0	21.2	0.2	100.0	(0.2)
Total gross profit	<u>\$198.1</u>	<u>26.4%</u>	<u>\$187.9</u>	<u>27.6%</u>	<u>\$ 10.2</u>

### Net Sales

Net sales were \$750.9 million for the year ended December 31, 2018, a \$71.2 million, or 10.5%, increase compared to \$679.7 million for the year ended December 31, 2017. This increase was primarily attributable to an increase in revenue from our Standard Products Group, which was offset in part by a decrease in revenue from our Foundry Services Group.

**Foundry Services Group.** Net sales from our Foundry Services Group segment were \$325.3 million for the year ended December 31, 2018, a \$25.1 million, or 7.2%, decrease compared to net sales of \$350.4 million for the year ended December 31, 2017. The decrease was primarily attributable to a decrease in demand of low margin product sales from a global power management IC foundry customer and a decrease in demand from a customer serving the low- to mid-range mobile phone market. This decrease was offset in part by an increase in sales of certain battery charger related products from a global power management IC foundry customer.

**Standard Products Group.** Net sales from our Standard Products Group segment were \$425.4 million for the year ended December 31, 2018, a \$96.3 million, or 29.3%, increase compared to \$329.1 million for the year ended December 31, 2017. This increase was primarily attributable to an increase in revenue related to an improvement in mobile OLED display driver ICs due to the introduction of new OLED smartphones by Chinese manufacturers and higher demand for premium power products such as high-end MOSFETs and IGBTs primarily for TV and industrial applications. This increase was offset in part by a strategic reduction of our lower margin LCD business.

**All Other.** All other net sales remained constant at \$0.2 million for each of the years ended December 31, 2018 and 2017.

### Gross Profit

Total gross profit was \$198.1 million for the year ended December 31, 2018 compared to \$187.9 million for the year ended December 31, 2017, a \$10.2 million, or 5.4%, increase. Gross profit as a percentage of net sales for the year ended December 31, 2018 decreased to 26.4% compared to 27.6% for the year ended December 31, 2017, primarily due to a decrease in gross profit as a percentage of net sales from our Foundry Services Group, which was offset in part by an increase in gross profits as a percentage of net sales from our Standard Products Group.

**Foundry Services Group.** Gross profit from our Foundry Services Group segment was \$82.6 million for the year ended December 31, 2018, a \$19.2 million, or 18.9%, decrease compared to \$101.8 million for the year ended December 31, 2017. Gross profit as a percentage of net sales for the year ended December 31, 2018 decreased to 25.4% compared to 29.0% for the year ended December 31, 2017. The decrease in gross profit as a percentage of net sales was mainly attributable to a lower utilization rate, which was affected in part by a softening global market conditions, including macroeconomic uncertainties, and a strategic reduction of low margin LCD business. This decrease was also attributable to an unfavorable product mix and an increase in raw wafer prices.

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**Standard Products Group.** Gross profit from our Standard Products Group segment was \$115.5 million for the year ended December 31, 2018, a \$29.6 million, or 34.4%, increase from \$85.9 million for the year ended December 31, 2017. Gross profit as a percentage of net sales for the year ended December 31, 2018 increased to 27.1% compared to 26.1% for the year ended December 31, 2017. The increase in both gross profit and gross profit margin was primarily attributable to a favorable product mix from an increase in sales of mobile OLED display driver ICs.

**All Other.** All other gross profit was \$0.04 million for the year ended December 31, 2018 and \$0.2 million for the year ended December 31, 2017.

### **Net Sales by Geographic Region**

We report net sales by geographic region based on the location to which the products are billed. The following table sets forth our net sales by geographic region and the percentage of total net sales represented by each geographic region for the years ended December 31, 2018 and 2017:

	Year Ended December 31, 2018		Year Ended December 31, 2017		Change Amount
	Amount	% of Net Sales	Amount	% of Net Sales	
	(In millions)				
Korea	\$282.5	37.6%	\$279.9	41.2%	\$ 2.6
Asia Pacific (other than Korea)	380.6	50.7	322.6	47.5	58.0
U.S.A.	37.5	5.0	35.1	5.2	2.4
Europe	47.8	6.4	41.1	6.0	6.7
Others	2.5	0.3	1.0	0.1	1.5
	<u>\$750.9</u>	<u>100.0%</u>	<u>\$679.7</u>	<u>100.0%</u>	<u>\$ 71.2</u>

Net sales in Korea for the year ended December 31, 2018 increased from \$279.9 million to \$282.5 million compared to the year ended December 31, 2017, or by \$2.6 million, or 0.9%, primarily due to higher sales of premium power product and an increase in revenue related to the introduction of new OLED display driver ICs, which was offset in part by a strategic reduction of low margin LCD business.

Net sales in the Asia Pacific for the year ended December 31, 2018 increased from \$322.6 million to \$380.6 million compared to the year ended December 31, 2017, or by \$58.0 million, or 18.0%, primarily due to an increase in revenue related to increased sales to mobile OLED display driver ICs in connection with the introduction of new OLED smartphones. This increase was in part offset by a decrease in sales of certain products from a foundry customer serving the low- to mid-range mobile phone market, and a decrease in sales of certain low margin products from a global power management IC foundry customer.

Net sales in the United States for the year ended December 31, 2018 increased from \$35.1 million to \$37.5 million compared to the year ended December 31, 2017, or by \$2.4 million, or 6.8%, primarily due to an increase in sales of certain products from a global power management IC foundry customer.

Net sales in Europe for the year ended December 31, 2018 increased from \$41.1 million to \$47.8 million compared to the year ended December 31, 2017, or by \$6.7 million, or 16.4%, primarily due to an increase in sales of certain battery charger related products from a global power management IC foundry customer, which was offset in part by lower demand from a customer serving the high-end smartphone market.

### **Operating Expenses**

**Selling, General and Administrative Expenses.** Selling, general and administrative expenses were \$72.6 million, or 9.7% of net sales for the year ended December 31, 2018, compared to \$81.8 million, or 12.0%

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of net sales for the year ended December 31, 2017. The decrease of \$9.1 million, or 11.2%, was primarily attributable to a \$6.7 million decrease in professional fees, which were mainly comprised of legal and consulting services and a \$4.2 million charge related to an additional tax assessment and associated penalties and an administrative fine as a result of the tax audit conducted by the KNTS which concluded in the fourth quarter of 2017. These decreases were offset in part by an increase in employee compensation, including issuance of equity-based compensation.

**Research and Development Expenses.** Research and development expenses were \$78.0 million, or 10.4%, of net sales for the year ended December 31, 2018, compared to \$70.5 million, or 10.4%, of net sales for the year ended December 31, 2017. The increase of \$7.5 million, or 10.7%, was primarily attributable to an increase in development activities for new OLED products.

**Restructuring and Other Gain.** Restructuring and other gain of \$17.0 million recorded for the year ended December 31, 2017 resulted from a \$16.6 million restructuring gain on the sale of the building related to the closure of our 6-inch fab and a \$0.4 million gain on sale of our sensor business.

**Early Termination Charges.** Early termination charges of \$13.4 million for the year ended December 31, 2017 were recorded for the termination benefits payable to the employees affected under our Headcount Reduction Plan.

### **Operating Income**

As a result of the foregoing, operating income increased by an \$8.2 million in the year ended December 31, 2018 compared to the year ended December 31, 2017. As discussed above, the increase in operating income resulted from a \$10.2 million increase in gross profit, a \$9.1 million decrease in selling, general and administrative expenses and a \$13.4 million decrease in early termination charges, which were partially offset by a \$17.0 million decrease in restructuring and other gain and a \$7.5 million increase in research development expenses.

### **Other Income (Expense)**

**Interest Expense.** Interest expenses were \$22.3 million and \$21.6 million for the year ended December 31, 2018 and December 31, 2017, respectively.

**Foreign Currency Gain (Loss), Net.** Net foreign currency loss for the year ended December 31, 2018 was \$24.4 million compared to net foreign currency gain of \$65.5 million for the year ended December 31, 2017. The net foreign currency loss for the year ended December 31, 2018 was due to the depreciation in value of the Korean won relative to the US dollar during the period. The net foreign currency gain for the year ended December 31, 2017 was due to the appreciation in value of the Korean won relative to the US dollar during the period.

A substantial portion of our net foreign currency gain or loss is non-cash translation gain or loss associated with the intercompany long-term loans to our Korean subsidiary, which is denominated in US dollars, and is affected by changes in the exchange rate between the Korean won and the US dollar. As of December 31, 2018, the outstanding intercompany loan balance including accrued interest between our Korean subsidiary and our Dutch subsidiary was \$666.6 million. Foreign currency translation gain or loss from intercompany balances was included in determining our consolidated net income since the intercompany balances were not considered long-term investments in nature because management intended to settle these intercompany balances at their respective maturity dates.

**Loss on Early Extinguishment of Long-Term Borrowings, Net.** In December 2018, we repurchased a principal amount of \$0.5 million and \$1.6 million of the 2021 Notes and the Exchangeable Notes, respectively. In connection with these repurchases, we recognized a \$0.2 million of net loss for the year ended December 31, 2018.

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**Others, Net.** Others were comprised of gains and losses on the valuation of derivatives which were designated as hedging instruments, rental income and interest income. Others for the year ended December 31, 2018 and December 31, 2017 were \$0.3 million and \$2.9 million, respectively.

### ***Income Tax Expenses***

We are subject to income taxes in the United States and many foreign jurisdictions and our effective tax rate is affected by changes in the mix of earnings between countries with differing tax rates. Our primary foreign operations are in Korea where the statutory tax rate applicable to us was approximately 24.2% in each of 2018 and 2017. Statutory tax rates for our foreign subsidiaries except those in Luxembourg, Netherlands and Korea, were less than the US federal statutory rate of 21.0%.

We recorded income tax expenses of \$4.6 million and \$1.2 million for the years ended December 31, 2018 and 2017, respectively. The increase in income tax expenses for the year ended December 31, 2018 was primarily attributable to taxable income generated by our Korean subsidiary combined with its ability to utilize net operating carryforwards up to 70% of the taxable income, and a decrease in our uncertain tax positions that resulted in a reduction of income tax expense for the year ended December 31, 2017. Our effective tax rate was 620.6% for the year ended December 31, 2018, as compared to 1.3% for the year ended December 31, 2017.

We make an ongoing assessment regarding the realization of US and non-US deferred tax assets. The valuation allowances at December 31, 2018 and 2017 were primarily attributable to deferred tax assets for the uncertainty in taxable income at our Korean subsidiary for which we have recorded a full valuation allowance against the deferred tax assets, net of its deferred tax liabilities, and against certain of our foreign subsidiaries' deferred tax assets pertaining to their related tax loss carry-forwards and tax credits that are not anticipated to generate a tax benefit.

### ***Net Income***

As a result of the foregoing, net income decreased by \$88.8 million in the year ended December 31, 2018 compared to the year ended December 31, 2017. As discussed above, the decrease primarily resulted from a \$90.0 million increase in foreign currency loss and a \$3.5 million increase in income tax expenses, which was partially offset by an \$8.2 million increase in operating income.

**Results of Operations—Comparison of Years Ended December 31, 2017 and 2016**

The following table sets forth consolidated results of operations for the years ended December 31, 2017 and 2016:

	Year Ended December 31, 2017		Year Ended December 31, 2016		Change Amount
	Amount	% of Net Sales	Amount	% of Net Sales	
	(In millions)				
Net sales	\$679.7	100.0%	\$688.0	100.0%	\$ (8.3)
Cost of sales	491.8	72.4	531.7	77.3	(40.0)
Gross profit	187.9	27.6	156.2	22.7	31.7
Selling, general and administrative expenses	81.8	12.0	83.5	12.1	(1.8)
Research and development expenses	70.5	10.4	72.2	10.5	(1.7)
Restructuring and other charges (gain), net	(17.0)	(2.5)	(6.5)	(0.9)	(10.5)
Early termination charges	13.4	2.0	4.2	0.6	9.1
Operating income	39.2	5.8	2.7	0.4	36.5
Interest expense	(21.6)	(3.2)	(16.2)	(2.4)	(5.3)
Foreign currency gain (loss), net	65.5	9.6	(15.4)	(2.2)	80.9
Others, net	2.9	0.4	3.0	0.4	(0.1)
	46.9	6.9	(28.6)	(4.2)	75.5
Income (loss) before income taxes	86.1	12.7	(25.9)	(3.8)	112.0
Income tax expenses (benefits)	1.2	0.2	3.7	0.5	(2.6)
Net income (loss)	<u>\$ 84.9</u>	<u>12.5</u>	<u>\$ (29.6)</u>	<u>(4.3)</u>	<u>\$114.6</u>

**Results by segment**

	Year Ended December 31, 2017 (As adjusted)		Year Ended December 31, 2016 (As adjusted)		Change Amount
	Amount	% of Net Sales	Amount	% of Net Sales	
	(In millions)				
<b>Net Sales</b>					
Foundry Services Group	\$350.4	51.6%	\$299.1	43.5%	\$ 51.3
Standard Products Group					
Display Solutions	179.2	26.4	256.8	37.3	(77.6)
Power Solutions	149.8	22.0	131.5	19.1	18.4
Total Standard Products Group	329.1	48.4	388.3	56.4	(59.2)
All other	0.2	0.0	0.6	0.1	(0.4)
Total net sales	<u>\$679.7</u>	<u>100.0%</u>	<u>\$688.0</u>	<u>100.0%</u>	<u>\$ (8.3)</u>

	Year Ended December 31, 2017 (As adjusted)		Year Ended December 31, 2016 (As adjusted)		Change Amount
	Amount	% of Net Sales	Amount	% of Net Sales	
(In millions)					
<b>Gross Profit</b>					
Foundry Services Group	\$101.8	29.0%	\$ 73.1	24.4%	\$ 28.7
Standard Products Group	85.9	26.1	83.5	21.5	2.4
All other	0.2	100.0	(0.4)	(66.3)	0.6
Total gross profit	<u>\$187.9</u>	<u>27.6%</u>	<u>\$156.2</u>	<u>22.7%</u>	<u>\$ 31.7</u>

### Net Sales

Net sales were \$679.7 million for the year ended December 31, 2017, an \$8.3 million, or 1.2%, decrease compared to \$688.0 million for the year ended December 31, 2016. This decrease was primarily attributable to a net decrease in revenue from our Standard Products Group, which was offset in part by an increase in revenue from our Foundry Services Group as described below.

**Foundry Services Group.** Net sales from our Foundry Services Group segment were \$350.4 million for the year ended December 31, 2017, a \$51.3 million, or 17.1%, increase compared to net sales of \$299.1 million for the year ended December 31, 2016. The increase was primarily attributable to higher demand for our foundry services from certain customers serving the mid-range smartphone and consumer electronics markets and higher sales of certain products from a global power management IC foundry customer. These increases were partially offset by a net decrease in demand of our foundry services from a customer serving the high-end smartphone market.

**Standard Products Group.** Net sales from our Standard Products Group segment were \$329.1 million for the year ended December 31, 2017, a \$59.2 million, or 15.2%, decrease compared to \$388.3 million for the year ended December 31, 2016. This substantial decrease was primarily due to a significant decrease in revenue related to our Display Solutions business line, partially offset by increase in revenue related to our Power Solutions business line as described below.

Net sales from our Display Solutions business line were \$179.2 million for the year ended December 31, 2017, a \$77.6 million, or 30.2%, decrease from \$256.8 million for the year ended December 31, 2016. This decrease was primarily attributable to a decrease in revenue from our mobile OLED display driver ICs stemming from a timing mismatch between the drop-off in revenue from our existing OLED products and the introduction of new OLED products, and also from a prolonged slowdown in the China smartphone market. This decrease was partially offset by an increase in revenue from large display products mainly due to higher demand of source drivers for ultra high definition TVs. Net sales from our Power Solutions business line were \$149.8 million for the year ended December 31, 2017, a \$18.4 million, or 14.0%, increase from \$131.5 million for the year ended December 31, 2016. The increase in sales was primarily due to premium power products and MOSFETs for TV and mobile battery applications.

**All Other.** All other net sales were \$0.2 million for the year ended December 31, 2017 and \$0.6 million for the year ended December 31, 2016, respectively.

### Gross Profit

Total gross profit was \$187.9 million for the year ended December 31, 2017 compared to \$156.2 million for the year ended December 31, 2016, a \$31.7 million, or 20.3%, increase. Gross profit as a percentage of net sales for the year ended December 31, 2017 increased to 27.6% compared to 22.7% for the year ended December 31,

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2016. The increase in gross profit as a percentage of net sales was due to both our Foundry Services Group and Standard Products Group segments as described below.

**Foundry Services Group.** Gross profit from our Foundry Services Group segment was \$101.8 million for the year ended December 31, 2017, a \$28.7 million, or 39.3%, increase compared to \$73.1 million for the year ended December 31, 2016. Gross profit as a percentage of net sales for the year ended December 31, 2017 increased to 29.0% compared to 24.4% for the year ended December 31, 2016. The increase in gross profit as a percentage of net sales was mainly attributable to a better product mix, a higher utilization rate and a favorable impact from reduction in headcount, which was offset in part primarily by an increase in wafer price and employee costs associated with unused vacation.

**Standard Products Group.** Gross profit from our Standard Products Group segment was \$85.9 million for the year ended December 31, 2017, a \$2.4 million, or 2.8%, increase from \$83.5 million for the year ended December 31, 2016. Gross profit as a percentage of net sales for the year ended December 31, 2017 increased to 26.1% compared to 21.5% for the year ended December 31, 2016. The increase in gross profit as a percentage of net sales was mainly attributable to a higher utilization rate and a favorable impact from reduction in headcount, which was offset in part primarily by an increase in wafer price and employee costs associated with unused vacation.

**All Other.** All other gross profit for the year ended December 31, 2017 was \$0.2 million. All other gross profit for the year ended December 31, 2016 was a negative \$0.4 million mainly attributable to training and transition costs related to our closed 6-inch fab employees, which was partially offset by revenue from the disposal of waste materials.

### **Net Sales by Geographic Region**

We report net sales by geographic region based on the location to which the products are billed. The following table sets forth our net sales by geographic region and the percentage of total net sales represented by each geographic region for the years ended December 31, 2017 and 2016:

	Year Ended December 31, 2017		Year Ended December 31, 2016		Change Amount
	Amount	% of Net Sales	Amount	% of Net Sales	
Korea	\$279.9	41.2%	\$219.6	31.9%	\$ 60.3
Asia Pacific (other than Korea)	322.6	47.5	391.9	57.0	(69.3)
U.S.A.	35.1	5.2	33.2	4.8	1.9
Europe	41.1	6.0	42.3	6.1	(1.2)
Others	1.0	0.1	1.0	0.1	(0.0)
	<u>\$679.7</u>	<u>100.0%</u>	<u>\$688.0</u>	<u>100.0%</u>	<u>\$ (8.3)</u>

Net sales in Korea for the year ended December 31, 2017 increased from \$219.6 million to \$279.9 million compared to the year ended December 31, 2016, or by \$60.3 million, or 27.4%, primarily due to higher demand of large display applications for TVs and our foundry services from certain customers serving the mid-range smartphone and consumer electronics markets. Higher sales of premium power products and MOSFETs also had a favorable impact.

Net sales in Asia Pacific for the year ended December 31, 2017 decreased from \$391.9 million to \$322.6 million compared to the year ended December 31, 2016, or by \$69.3 million, or 17.7%, primarily due to lower level of sales of OLED display driver ICs, which was partially offset by an increase in sales of certain products from higher demand for our foundry services.

### **Operating Expenses**

**Selling, General and Administrative Expenses.** Selling, general and administrative expenses were \$81.8 million, or 12.0% of net sales for the year ended December 31, 2017, compared to \$83.5 million, or 12.1% of net sales for the year ended December 31, 2016. The decrease of \$1.8 million, or 2.1%, was attributable to a \$2.9 million decrease in salary expense as a result of our headcount reduction and a \$6.6 million decrease in professional fees mainly comprised of legal and consulting services. These decreases were offset in part primarily by a \$4.2 million charge of the additional tax assessment and associated penalties and administrative fine as a result of the tax audit conducted by the KNTS which concluded in the fourth quarter of 2017.

**Research and Development Expenses.** Research and development expenses were \$70.5 million, or 10.4% of net sales for the year ended December 31, 2017, compared to \$72.2 million, or 10.5% of net sales for the year ended December 31, 2016. The decrease of \$1.7 million, or 2.3%, was primarily attributable to a decrease in salary expense as a result of our headcount reduction of non-key R&D personnel.

**Restructuring and Other Charges(Gain), Net.** Restructuring and other charges (gain), net of \$17.0 million recorded for the year ended December 31, 2017 resulted from a \$16.6 million restructuring gain on the sale of the building related to the closure of our 6-inch fab and a \$0.4 million gain on sale of our sensor business. Restructuring and other charges (gain), net of \$6.5 million recorded for the year ended December 31, 2016 resulted from the sale of machinery related to the closure of our 6-inch fab, which was offset by \$1.3 million of training and transition costs related to the employees at our closed 6-inch fab.

**Early Termination Charges.** Termination related charges related to the reduction of workforce through the Headcount Reduction Plan for the year ended December 31, 2017 and the Program for the year ended December 31, 2016 were \$13.4 million and \$4.2 million, respectively.

### **Operating Income (Loss)**

As a result of the foregoing, operating income increased by \$36.5 million in the year ended December 31, 2017 compared to the year ended December 31, 2016. As discussed above, the increase in operating income resulted from a \$31.7 million increase in gross profit, a \$1.8 million decrease in selling, general and administrative expenses, a \$1.7 million decrease in research and development expenses and a \$10.5 million increase in restructuring gain, which was partially offset by a \$9.1 million increase in termination related charges.

### **Other Income (Expense)**

**Interest Expense.** Interest expense for the year ended December 31, 2017 was \$21.6 million compared to interest expense of \$16.2 million for the year ended December 31, 2016. The increase of \$5.3 million was attributable to the interest expense recorded for the Exchangeable Notes issued in January 2017.

**Foreign Currency Gain (Loss), Net.** Net foreign currency gain for the year ended December 31, 2017 was \$65.5 million compared to net foreign currency loss of \$15.4 million for the year ended December 31, 2016. The net foreign currency gain for the year ended December 31, 2017 was due to the appreciation in value of the Korean won relative to the US dollar during the period. The net foreign currency loss for the year ended December 31, 2016 was due to the depreciation in value of the Korean won relative to the US dollar during the period.

A substantial portion of our net foreign currency gain or loss is non-cash translation gain or loss associated with the intercompany long-term loans to our Korean subsidiary, which is denominated in US dollars, and is affected by changes in the exchange rate between the Korean won and the US dollar. As of December 31, 2017, the outstanding intercompany loan balance including accrued interest between our Korean subsidiary and our

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Dutch subsidiary was \$677.3 million. Foreign currency translation gain or loss from intercompany balances was included in determining our consolidated net income since the intercompany balances were not considered long-term investments in nature because management intended to settle these intercompany balances at their respective maturity dates.

**Others, Net.** Others were comprised of gains and losses on the valuation of derivatives which were designated as hedging instruments, rental income and interest income. Others for the year ended December 31, 2017 and December 31, 2016 were \$2.9 million and \$3.0 million, respectively.

### ***Income Tax Expenses (Benefits)***

We are subject to income taxes in the United States and many foreign jurisdictions and our effective tax rate is affected by changes in the mix of earnings between countries with differing tax rates. Our primary foreign operations are in Korea where the statutory tax rate applicable to us was approximately 24.2% in 2017 and 2016. Statutory tax rates for all foreign subsidiaries were less than the US federal statutory rate of 35.0%.

We recorded income tax expenses of \$1.2 million and \$3.7 million for the years ended December 31, 2017 and 2016, respectively. The decrease in income tax expenses in 2017 was primarily attributable to our revised tax positions in connection with our Korean subsidiary. The effective tax rate was 1.3% for the year ended December 31, 2017, as compared to negative for the year ended December 31, 2016.

We make an ongoing assessment regarding the realization of US and non-US deferred tax assets. The valuation allowances at December 31, 2017 and 2016 were primarily attributable to deferred tax assets for the uncertainty in taxable income at our Korean subsidiary for which we have recorded a full valuation allowance against the deferred tax assets, net of its deferred tax liabilities, and against certain of our foreign subsidiaries' deferred tax assets pertaining to their related tax loss carry-forwards and tax credits that are not anticipated to generate a tax benefit.

### ***Net Income***

As a result of the foregoing, net income increased by \$114.6 million in the year ended December 31, 2017 compared to the year ended December 31, 2016. As discussed above, the increase primarily resulted from a \$36.5 million increase in operating income and an \$80.9 million increase in foreign currency gain, which was partially offset by a \$5.3 million increase in interest expense recorded for the Exchangeable Notes issued in January 2017.

### ***Liquidity and Capital Resources***

Our principal capital requirements are to fund sales and marketing, invest in research and development and capital equipment, to make debt service payments and to fund working capital needs. We calculate working capital as current assets less current liabilities.

Our principal sources of liquidity are our cash, cash equivalents, our cash flows from operations and our financing activities. Our ability to manage cash and cash equivalents may be limited, as our primary cash flows are dictated by the terms of our sales and supply agreements, contractual obligations, debt instruments and legal and regulatory requirements. From time to time, we may sell accounts receivable to third parties under factoring agreements or engage in accounts receivable discounting to facilitate the collection of cash. For a description of our factoring arrangements and accounts receivable discounting, please see "Item 8. Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements—Note 3. Accounts Receivable" included elsewhere in this Report. In addition, from time to time, we may make payments to our vendors on extended terms with their consent. As of December 31, 2018, we do not have any accounts payable on extended terms or payment deferral with our vendors.

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We currently believe that we will have sufficient cash reserves from cash on hand and expected cash from operations to fund our operations as well as capital expenditures for the next twelve months and the foreseeable future.

As of December 31, 2018, cash and cash equivalents held by our Korean subsidiary were \$109.0 million, which represents 82% of our total cash and cash equivalents of \$132.4 million on a consolidated basis. We, as a holding company resident in the United States, issued our 2021 Notes. Payments under our outstanding 2021 Notes are currently funded in part by our Korean subsidiary's repayment of its existing loans from our Dutch subsidiary, with our Dutch subsidiary using such repayments in turn to repay the loans owed to our Luxembourg subsidiary, which repays loans owed to us. Our Exchangeable Notes were issued by our Luxembourg subsidiary and the proceeds from the Exchangeable Notes Offering, were transferred to our Dutch and Korean subsidiaries through intercompany loans. Therefore, we expect payments under the Exchangeable Notes to be funded in part by our Korean subsidiary's repayment of its existing or new loans from our Dutch subsidiary, with our Dutch subsidiary using such repayments in turn to repay loans owed to our Luxembourg subsidiary.

We may, from time to time, repurchase a portion of our outstanding 2021 Notes and our Exchangeable Notes through open market purchases or privately negotiated transactions subject to prevailing market conditions and our available cash reserves.

### Year ended December 31, 2018 compared to year ended December 31, 2017

As of December 31, 2018, our cash and cash equivalents balance was \$132.4 million, a \$3.9 million increase, compared to \$128.6 million as of December 31, 2017. The increase resulted from a \$39.2 million of cash inflow provided by operating activities and a \$1.3 million of cash inflow provided by financing activities, which was partially offset by a \$33.3 million of cash outflow used in investing activities.

Cash inflow provided by operating activities totaled \$39.2 million for the year ended December 31, 2018, compared to \$20.3 million of cash outflow used in operating activities for the year ended December 31, 2017. The net operating cash inflow for the year ended December 31, 2018 reflects our net loss of \$3.9 million, as adjusted favorably by \$86.3 million, which mainly consisted of depreciation and amortization, provision for severance benefits and net foreign currency loss, and net unfavorable impact of \$43.1 million from changes of operating assets and liabilities.

Our working capital balance as of December 31, 2018 was \$220.1 million compared to \$192.1 million as of December 31, 2017. The \$28.0 million increase was primarily attributable to a \$38.2 million increase in unbilled accounts receivable, which was a new item created in our balance sheet beginning January 1, 2018 to conform with the new revenue recognition standard and represented our contractual right to consideration for manufacturing work performed on a customer contract or an individual purchase order basis, which had not been invoiced to the customer. This increase was offset in part by a \$12.0 million decrease in account receivables.

Cash outflow used in investing activities totaled \$33.3 million for the year ended December 31, 2018, compared to \$35.4 million for the year ended December 31, 2017. The \$2.1 million decrease in investing activities was attributable to a \$5.7 million net decrease in hedge collateral, which was partially offset by a \$3.6 million net increase in guarantee deposits.

Cash inflow generated by financing activities totaled \$1.3 million for the year ended December 31, 2018, compared to \$72.7 million for the year ended December 31, 2017. The financing cash inflow for the year ended December 31, 2018 was primarily attributable to proceeds of \$4.3 million in connection with the water treatment facility arrangement and \$1.1 million of proceeds received from the issuance of common stock in connection with the exercise of stock options, which was offset in part by the payment of \$2.2 million for the repurchases of 2021 Notes and Exchangeable Notes in December 2018 and \$1.6 million for the repurchase of our common stock in December 2018 pursuant to our stock repurchase plan. The financing cash inflow for the year ended December 31, 2017 consisted of \$80.3 million of net proceeds received from the issuance of the Exchangeable

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Notes and \$3.7 million of proceeds received from the exercise of stock options, which was partly offset by the payment of \$11.4 million for the repurchase of 1,795,444 shares of our common stock in January 2017 pursuant to our stock repurchase plan.

We routinely make capital expenditures for fabrication facility maintenance, enhancement of our existing facilities and reinforcement of our global research and development capability. For the year ended December 31, 2018, capital expenditures for plant, property and equipment were \$33.2 million, a \$0.6 million, or 1.7%, increase from \$32.7 million for the year ended December 31, 2017. The capital expenditures for the year ended December 31, 2018 included a \$4.3 million payment for the purchase of the water treatment facility. The remaining expenditures were related to meeting our customer demand, and supporting technology and facility improvements at our fabrication facilities.

### Year ended December 31, 2017 compared to year ended December 31, 2016

As of December 31, 2017, our cash, cash equivalents and restricted cash balance was \$128.6 million, a \$27.0 million increase, compared to \$101.6 million as of December 31, 2016. The increase resulted from a \$72.7 million of cash inflow provided by financing activities, which was partially offset by a \$20.3 million of cash outflow used in operating activities and a \$35.4 million of cash outflow used in investing activities.

Cash outflow used in operating activities totaled \$20.3 million for the year ended December 31, 2017, compared to \$9.4 million of cash inflow provided by operating activities for the year ended December 31, 2016. The net operating cash outflow for the year ended December 31, 2017 reflects our net income of \$84.9 million and non-cash adjustments of a net negative \$37.7 million, which mainly consisted of depreciation and amortization, provision for severance benefits and net foreign currency gain, and a net decrease in operating assets and liabilities of \$67.5 million. The decrease in operating assets and liabilities was primarily related to an increase in accounts receivable as of December 31, 2017 due to a significant decrease in accounts receivable discounting during 2017 and the payments of statutory severance to the employees that resigned from our Company.

Our working capital balance as of December 31, 2017 was \$192.1 million compared to \$89.3 million as of December 31, 2016. The \$102.9 million increase was primarily attributable to a \$45.2 million increase in cash and cash equivalents, a \$30.3 million increase in account receivables, a \$16.0 million increase in inventory and a \$16.5 million decrease in deposits received, which were partially offset by an \$18.3 million decrease in restricted cash and a \$14.4 million increase in account payables.

Cash outflow used in investing activities totaled \$35.4 million for the year ended December 31, 2017, compared to cash inflow provided by investing activities totaled \$1.0 million for the year ended December 31, 2016. The \$36.4 million increase was attributable to a \$16.4 million decrease in proceeds from disposal of plant, property and equipment, a \$13.9 million net increase in capital expenditures and a \$7.0 million net increase in hedge collateral, which was partially offset by a \$1.0 million net decrease in guarantee deposits.

Cash inflow generated by financing activities totaled \$72.7 million for the year ended December 31, 2017, compared to \$1.7 million for the year ended December 31, 2016. The \$71.0 million increase was primarily was attributable to \$80.3 million of net proceeds received from the issuance of the Exchangeable Notes and a \$2.0 million increase in proceeds received from exercised stock options, which was partly offset by the payment of \$11.4 million for the repurchase of 1,795,444 shares of our common stock in January 2017 pursuant to our stock repurchase plan.

We routinely make capital expenditures for fabrication facility maintenance, enhancement of our existing facilities and reinforcement of our global research and development capability. For the year ended December 31, 2017, capital expenditures for plant, property and equipment were \$32.7 million, a \$13.9 million, or 74.4%, increase from \$18.7 million for the year ended December 31, 2016. The increase was mainly for meeting our customer demand, and supporting technology and facility improvements at our fabrication facilities.

## Contractual Obligations

The following summarizes our contractual obligations as of December 31, 2018:

	Payments Due by Period						
	Total	2019	2020	2021	2022	2023	Thereafter
	(In millions)						
Exchangeable Notes(1)	\$ 95.2	\$ 4.2	\$ 4.2	\$ 86.8	\$ —	\$ —	\$ —
Senior notes(2)	269.1	14.9	14.9	239.4	—	—	—
Operating leases(3)	26.1	4.3	3.6	1.6	1.3	1.3	14.0
Water Treatment Services(3)(4)	57.6	8.7	8.7	8.6	8.5	5.9	17.2
Others(5)	24.8	11.5	10.6	2.6	—	—	—

- (1) Interest payments as well as \$84.66 million aggregate principal amount of the Exchangeable Notes outstanding as of December 31, 2018, which bear interest at a rate of 5.0% per annum and are scheduled to mature in 2021 if not earlier converted.
- (2) Interest payments as well as \$224.5 million aggregate principal amount of the 2021 Notes outstanding as of December 31, 2018, which bear interest at a rate of 6.625% per annum and are scheduled to mature in 2021 if not earlier redeemed.
- (3) Assumes constant currency exchange rate for Korean won to US dollars of 1,118.1:1, the exchange rate as of December 31, 2018.
- (4) Includes future payments for water treatment services for our fabrication facilities in Korea based on the contractual terms.
- (5) Includes license agreements, funding obligations for the accrued severance benefits and other contractual obligations.

The indentures relating to the Exchangeable Notes and the 2021 Notes contain covenants as detailed in “Item 8. Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements—Note 10. Long-term Borrowings” in this Report. Those covenants are subject to a number of exceptions and qualifications. Certain of those restrictive covenants will terminate if the Exchangeable Notes or the 2021 Notes are rated investment grade at any time.

We lease land, office space and equipment under various operating lease agreements that expire through 2034.

We are a party to arrangements for the water treatment facilities in Cheongju and Gumi, Korea, which include 5-year and 10-year service agreements, respectively.

Beginning in July 2018, we have contributed a certain percentage of severance benefits, accrued for eligible employees for their services beginning January 1, 2018, to certain severance insurance deposit accounts. These accounts consist of time deposits and other guaranteed principal and interest, and are maintained at insurance companies, banks or security companies for the benefit of employees. We deduct the contributions made to these severance insurance deposit accounts from our accrued severance benefits. As of December 31, 2018, our accrued severance benefits totaled \$146.0 million and cumulative contributions to these severance insurance deposit accounts amounted to \$2.5 million. Our related cash payments for future contributions are \$2.7 million and \$3.6 million for 2019 and 2020, respectively, to the extent that our obligations are contractual, fixed and reasonably estimable.

We follow US GAAP guidance on uncertain tax positions. Our unrecognized tax benefits totaled \$0.4 million as of December 31, 2018. These unrecognized tax benefits have been excluded from the above table because we cannot estimate the period of cash settlement with the respective taxing authorities.

## Critical Accounting Policies and Estimates

Preparing financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities as of the date of the financial statements, the

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reported amounts of revenues and expenses during the reporting periods and the related disclosures in our consolidated financial statements and accompanying notes.

We believe that the accounting policies discussed below are critical due to the fact that they involve a high degree of judgment and estimates about the effects of matters that are inherently uncertain. We base these estimates and judgments on historical experience, knowledge of current conditions and other assumptions and information that we believe to be reasonable. Estimates and assumptions about future events and their effects cannot be determined with certainty. Accordingly, these estimates may change as new events occur, as more experience is acquired, as additional information is obtained and as the business environment in which we operate changes.

### ***Revenue Recognition***

We recognize revenue when it satisfies the performance obligation of transferring control over a product or service to a customer. Revenue is measured based on the consideration specified in a contract with a customer, which consideration is paid in exchange for a product or service.

Our Foundry Services Group manufactures products, which we refer to as foundry products, based on customers' specific product designs. We recognize revenue over time for foundry products that do not have an alternative use when we have an enforceable right to payment. Revenue recognized over time is in proportion of wafer manufacturing costs incurred relative to total estimated costs for completion. However, in certain circumstances, pursuant to a customer contract or an individual purchase order, we may not have an enforceable right to payment for services performed at a given time. In this situation, we recognize revenue at the time when a customer obtains control of the product, which is generally upon product shipment, delivery at the customer's location or upon customer acceptance, depending on the terms of the arrangement.

Our Standards Products Group sells products manufactured based on our design. Our products are either standardized with an alternative use or we do not have an enforceable right to payment for the related manufacturing services completed to date. For those products, revenue is recognized when a customer obtains control of the product, which is generally upon product shipment, delivery at the customer's location or upon customer acceptance, depending on the terms of the arrangement.

A portion of our sales are made through distributors for which we apply the same revenue recognition guidance described above. We defer the recognition of revenue when a distributor receives consideration from the customers prior to the performance obligation being fulfilled. These amounts are classified as deferred revenue on the consolidated balance sheets.

We provide warranty provisions under which customers can return defective products. We also provide allowances for additional products that may have to be provided free of charge to compensate customers for not meeting previously agreed upon yield criteria, which we refer to as the low yield compensation reserve. We estimate the costs related to warranty claims, repair or replacements and low yield compensation reserves, and record them as components of cost of sales.

In addition, we offer sales returns (other than those that relate to defective products under warranty), cash discounts for early payments, volume discounts and certain allowances to our customers, including our distributors. We record reserves for those returns, discounts and allowances as a deduction from sales, based on historical experience and other quantitative and qualitative factors.

Substantially all of our contracts are one year or less in duration. The standard payment terms with customers are generally thirty to sixty days from the time of shipment, product delivery to the customer's location or customer acceptance, depending on the terms of the related arrangement.

### ***Sales of Accounts Receivable***

We account for transfers of financial assets under ASC 860, "Transfers and Servicing," as either sales or financings. Transfers of financial assets that result in sales accounting are those in which (1) the transfer legally

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isolates the transferred assets from the transferor, (2) the transferee has the right to pledge or exchange the transferred assets and no condition both constrains the transferee's right to pledge or exchange the assets and provides more than a trivial benefit to the transferor and (3) the transferor does not maintain effective control over the transferred assets. If the transfer does not meet these criteria, the transfer is accounted for as a financing. Financial assets that are treated as sales are removed from our accounts with any realized gain or loss reflected in earnings during the period of sale.

### ***Product Warranties***

We record, in other current liabilities, warranty liabilities for the estimated costs that may be incurred under our basic limited warranty. The standard limited warranty period is one to two years for the majority of products. This warranty covers defective products, and related liabilities are accrued when product revenues are recognized. Factors that affect our warranty liabilities include historical and anticipated rates of warranty claims and repair or replacement costs per claim to satisfy our warranty obligation. We also record, in other current liabilities, low yield compensation reserves for our estimated costs for products that may have to be provided free of charge to compensate customers for not meeting previously agreed upon yield criteria. Factors that affect our low yield compensation reserves include historical and anticipated rates of claims for not meeting previously agreed upon yield criteria. We periodically assess the adequacy of our recorded warranty liabilities and low yield compensation reserves, and adjust our estimates when necessary.

### ***Inventories***

Inventories are stated at the lower of cost or net realizable value, using the first in, first out method ("FIFO"). If net realizable value is less than cost at the balance sheet date, the carrying amount is reduced to the realizable value, and the difference is recognized as a loss on valuation of inventories within cost of sales. Inventory reserves are established when conditions indicate that the net realizable value is less than costs due to physical deterioration, obsolescence, changes in price levels, or other causes based on individual facts and circumstances. We evaluate the sufficiency of inventory reserves and take into consideration historical usage, expected demand, anticipated sales price, new product development schedules, the effect new products might have on the sale of existing products, product age and other factors. Reserves are also established for excess inventory based on our current inventory levels and projected demand and our ability to sell those specific products. Situations that could cause these inventory reserves include a decline in business and economic conditions, decline in consumer confidence caused by changes in market conditions, sudden and significant decline in demand for our products, inventory obsolescence because of rapidly changing technology and consumer requirements, or failure to estimate end customer demand properly. A reduction of these inventory reserves may be recorded if previously reserved items are subsequently sold as a result of unexpected changes to certain aforementioned situations.

The gross amount of inventory reserves charged to cost of sales totaled \$6.0 million, \$4.8 million and \$7.6 million in the fiscal years ended December 31, 2018, 2017 and 2016, respectively. The new cost base related to the sale of inventory that was previously written down totaled \$1.8 million, \$3.8 million and \$5.0 million in the fiscal years ended December 31, 2018, 2017 and 2016, respectively.

As prescribed in ASC 330, "Inventory," once a reserve is established for a particular item based on our assessment as described above, it is maintained until the related item is sold or scrapped as a new cost basis has been established that cannot subsequently be marked up. In addition, the cost of inventories is determined based on the normal capacity of each fabrication facility. In case the capacity utilization is lower than a certain level that management believes to be normal, the fixed overhead costs per production unit which exceed those under normal capacity are charged to cost of sales rather than capitalized as inventories.

### ***Vendor Rebates***

We, from time to time, entered into arrangements whereby rebates are obtained from vendors when we achieve certain levels of purchases. The vendor rebates are computed at an agreed upon amount or percentage of

purchase levels. As these vendor rebates are impacted by actual and estimated purchases for the applicable agreed upon period, we periodically assess the progress of our purchase levels and revise the estimates when necessary. We account for such rebates as a reduction of inventory until we sell the product, at which time such rebates are reflected as a reduction of cost of sales in our consolidated statements of operations. Vendor rebates recorded as a reduction of cost of sales were \$0.4 million, \$0.4 million and \$4.0 million for the years ended December 31, 2018, 2017 and 2016, respectively, and recorded as a reduction of inventory were \$0, \$0 and \$0.4 million for the years ended December 31, 2018, 2017 and 2016, respectively.

#### ***Impairment of Long-Lived Assets***

We review property, plant and equipment and other long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable in accordance with ASC 360, "Property, Plant and Equipment". Recoverability is measured by comparing its carrying amount with the future net undiscounted cash flows the assets are expected to generate. If such assets are considered to be impaired, the impairment is measured as the difference between the carrying amount of the assets and the fair value of assets using the present value of the future net cash flows generated by the respective long-lived assets.

#### ***Intangible Assets***

Intangible assets other than intellectual property include technology and customer relationships which are amortized on a straight-line basis over periods ranging from one to five years. Intellectual property assets acquired represent rights under patents, trademarks and property use rights and are amortized over their respective periods of benefit, ranging up to ten years, on a straight-line basis.

#### ***Income Taxes***

We account for income taxes in accordance with ASC 740, "Income Taxes" ("ASC 740"). ASC 740 requires recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in a company's financial statements or tax returns. Under this method, deferred tax assets and liabilities are determined based upon the difference between the financial statement carrying amounts and the tax bases of assets and liabilities using enacted tax rates in effect in the years in which the differences are expected to reverse. Valuation allowances are established when it is necessary to reduce deferred tax assets to the amount expected to be realized. Income tax expense is the tax payable for the period and the change during the period in deferred tax assets and liabilities.

We recognize and measure uncertain tax positions taken or expected to be taken in a tax return utilizing a two-step process. In the first step, recognition, we determine whether it is more-likely-than-not that a tax position will be sustained upon examination, including resolution of any related appeals or litigation processes, based on the technical merits of the position. The second step addresses measurement of a tax position that meets the more-likely-than-not criteria. The tax position is measured at the largest amount of benefit that has a likelihood of greater than 50 percent of being realized upon ultimate settlement.

#### ***Derivative Financial Instruments***

We apply the provisions of ASC 815, which requires the recognition of all derivative instruments as either assets or liabilities measured at fair value.

Under the provisions of ASC 815, we may designate a derivative instrument as hedging the exposure to variability in expected future cash flows that are attributable to a particular risk (a "cash flow hedge") or hedging the exposure to changes in the fair value of an asset or a liability (a "fair value hedge"). Special accounting for qualifying hedges allows the effective portion of a derivative instrument's gains and losses to offset related results on the hedged item in the consolidated statements of operations and requires that a company formally document, designate and assess the effectiveness of the transactions that receive hedge accounting treatment.

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Both at the inception of a hedge and on an ongoing basis, a hedge must be expected to be highly effective in achieving offsetting changes in cash flows or fair value attributable to the underlying risk being hedged. If we determine that a derivative instrument is no longer highly effective as a hedge, it discontinues hedge accounting prospectively and future changes in the fair value of the derivative are recognized in current earnings. We assess hedge effectiveness at the end of each quarter.

In accordance with ASC 815, changes in the fair value of derivative instruments that are cash flow hedges are recognized in accumulated other comprehensive income (loss) and reclassified into earnings in the period in which the hedged item affects earnings. Ineffective portions of a derivative instrument's change in fair value are immediately recognized in earnings. Derivative instruments that do not qualify, or cease to qualify, as hedges must be adjusted to fair value and the adjustments are recorded through net income (loss).

The cash flows from derivative instruments receiving hedge accounting treatment are classified in the same categories as the hedged items in the consolidated statements of cash flows.

### **Recent Accounting Pronouncement**

See Note 1 "Business, Basis of Presentation and Summary of Significant Accounting Policies" in the Notes to the Consolidated Financial Statements in Item 8 of Part II of this Report, for a full description of recent accounting pronouncements, including the expected dates of adoption, which is incorporated herein by reference.

### **Item 7A. Quantitative and Qualitative Disclosures About Market Risk**

We are exposed to the market risk that the value of a financial instrument will fluctuate due to changes in market conditions, primarily from changes in foreign currency exchange rates and interest rates. In the normal course of our business, we are subject to market risks associated with interest rate movements and currency movements on our assets and liabilities.

#### **Foreign Currency Exposures**

We have exposure to foreign currency exchange rate fluctuations on net income from our subsidiaries denominated in currencies other than US dollars, as our foreign subsidiaries in Korea, Taiwan, China, Japan and Hong Kong use local currency as their functional currency. From time to time these subsidiaries have cash and financial instruments in local currency. The amounts held in Japan, Taiwan, Hong Kong and China are not material in regards to foreign currency movements. However, based on the cash and financial instruments balance at December 31, 2018 for our Korean subsidiary, a 10% devaluation of the Korean won against the US dollar would have resulted in a decrease of \$3.2 million in our US dollar financial instruments and cash balances.

See "Note 8. Derivative Financial Instruments" to our consolidated financial statements under "Item 8. Financial Statements and Supplementary Data" and "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations—Factors Affecting Our Results of Operations—Impact of Foreign Currency Exchange Rates on Reported Results of Operations" for additional information regarding our foreign exchange hedging activities.

#### **Interest Rate Exposures**

As of December 31, 2018, \$84.66 million aggregate principal amount of our Exchangeable Notes were outstanding. Interest on the Exchangeable Notes accrues at a fixed rate of 5.0% per annum and is paid semi-annually every March 1 and September 1 of each year until the Exchangeable Notes mature on March 1, 2021. As of December 31, 2018, \$224.5 million aggregate principal amount of our 2021 Notes were also outstanding. Interest on the 2021 Notes accrues at a fixed rate of 6.625% per annum and is paid semi-annually every January 15 and July 15 of each year until the 2021 Notes mature on July 15, 2021. Since the interest rates are fixed, we have no market risk related to the Exchangeable Notes and the 2021 Notes.

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## Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of  
MagnaChip Semiconductor Corporation

### **Opinions on the Financial Statements and Internal Control over Financial Reporting**

We have audited the accompanying consolidated balance sheets of MagnaChip Semiconductor Corporation and its subsidiaries (the “Company”) as of December 31, 2018 and 2017, and the related consolidated statements of operations, comprehensive income / (loss), changes in stockholders’ equity and cash flows for each of the three years in the period ended December 31, 2018, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control—Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control—Integrated Framework* (2013) issued by the COSO.

### *Change in Accounting Principle*

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for revenue from contracts with customers in 2018.

### **Basis for Opinions**

The Company’s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management’s Annual Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

***Definition and Limitations of Internal Control over Financial Reporting***

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Samil PricewaterhouseCoopers

Seoul, Korea  
February 22, 2019

We have served as the Company's auditor since 2004.

**MAGNACHIP SEMICONDUCTOR CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED BALANCE SHEETS**

	December 31,	
	2018	2017
(In thousands of US dollars, except share data)		
<b>Assets</b>		
Current assets		
Cash and cash equivalents	\$ 132,438	\$ 128,575
Accounts receivable, net	80,003	92,026
Unbilled accounts receivable	38,181	—
Inventories, net	71,611	73,073
Other receivables	3,702	4,292
Prepaid expenses	11,133	9,250
Hedge collateral (Note 8)	5,810	7,600
Other current assets (Notes 1 and 2)	9,867	15,444
Total current assets	352,745	330,260
Property, plant and equipment, net	202,171	205,903
Intangible assets, net	3,953	4,061
Long-term prepaid expenses	15,598	12,791
Other non-current assets	8,729	5,774
Total assets	\$ 583,196	\$ 558,789
<b>Liabilities and Stockholders' Equity</b>		
Current liabilities		
Accounts payable	\$ 55,631	\$ 65,940
Other accounts payable	15,168	10,261
Accrued expenses	46,250	51,746
Deferred revenue	6,477	8,335
Other current liabilities (Note 1)	9,133	1,860
Total current liabilities	132,659	138,142
Long-term borrowings, net	303,577	303,416
Accrued severance benefits, net	146,031	148,905
Other non-current liabilities	18,239	7,963
Total liabilities	600,506	598,426
Commitments and contingencies (Note 18)		
Stockholders' equity		
Common stock, \$0.01 par value, 150,000,000 shares authorized, 43,054,458 shares issued and 34,441,232 outstanding at December 31, 2018 and 42,563,808 shares issued and 34,189,599 outstanding at December 31, 2017	431	426
Additional paid-in capital	142,600	136,259
Accumulated deficit	(36,305)	(40,889)
Treasury stock, 8,613,226 shares at December 31, 2018 and 8,374,209 shares at December 31, 2017, respectively	(103,926)	(102,319)
Accumulated other comprehensive loss	(20,110)	(33,114)
Total stockholders' deficit	(17,310)	(39,637)
Total liabilities and stockholders' equity	\$ 583,196	\$ 558,789

*The accompanying notes are an integral part of these consolidated financial statements*

**MAGNACHIP SEMICONDUCTOR CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**

	Year Ended December 31,		
	2018	2017	2016
	(In thousands of US dollars, except share data)		
Net sales	\$ 750,898	\$ 679,672	\$ 687,969
Cost of sales	552,802	491,779	531,743
Gross profit	<u>198,096</u>	<u>187,893</u>	<u>156,226</u>
Operating expenses			
Selling, general and administrative expenses	72,639	81,775	83,549
Research and development expenses	78,039	70,523	72,180
Restructuring and other charges (gain), net	—	(17,010)	(6,480)
Early termination charges	—	13,369	4,240
Total operating expenses	<u>150,678</u>	<u>148,657</u>	<u>153,489</u>
Operating income	<u>47,418</u>	<u>39,236</u>	<u>2,737</u>
Interest expense	(22,282)	(21,559)	(16,238)
Foreign currency gain (loss), net	(24,445)	65,516	(15,360)
Loss on early extinguishment of long-term borrowings, net	(206)	—	—
Other income, net	264	2,898	2,990
Income (loss) before income tax expenses	749	86,091	(25,871)
Income tax expenses	4,649	1,155	3,744
Net income (loss)	<u>\$ (3,900)</u>	<u>\$ 84,936</u>	<u>\$ (29,615)</u>
Earnings (loss) per common share—			
Basic	\$ (0.11)	\$ 2.50	\$ (0.85)
Diluted	\$ (0.11)	\$ 2.02	\$ (0.85)
Weighted average number of shares—			
Basic	34,469,921	33,943,264	34,833,967
Diluted	34,469,921	44,755,137	34,833,967

*The accompanying notes are an integral part of these consolidated financial statements*

**MAGNACHIP SEMICONDUCTOR CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME / (LOSS)**

	Year Ended December 31,		
	2018	2017	2016
	(In thousands of US dollars)		
Net income (loss)	\$ (3,900)	\$ 84,936	\$ (29,615)
Other comprehensive income (loss)			
Foreign currency translation adjustments	18,352	(52,873)	14,650
Derivative adjustments			
Fair valuation of derivatives	(1,589)	7,736	(1,032)
Reclassification adjustment for loss (gain) on derivatives included in net loss	(3,759)	(2,001)	637
Total other comprehensive income (loss)	13,004	(47,138)	14,255
Total comprehensive income (loss)	<u>\$ 9,104</u>	<u>\$ 37,798</u>	<u>\$ (15,360)</u>

*The accompanying notes are an integral part of these consolidated financial statements*

**MAGNACHIP SEMICONDUCTOR CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY**

(In thousands of US dollars, except share data)	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Total
	Shares	Amount					
<b>Balance at January 1, 2016</b>	<u>34,568,942</u>	<u>\$ 411</u>	<u>\$ 124,618</u>	<u>\$ (96,210)</u>	<u>\$ (90,918)</u>	<u>\$ (231)</u>	<u>\$ (62,330)</u>
Stock-based compensation	—	—	3,843	—	—	—	3,843
Exercise of stock options	296,103	3	1,730	—	—	—	1,733
Settlement of restricted stock units	183,293	2	(2)	—	—	—	—
Other comprehensive income, net	—	—	—	—	—	14,255	14,255
Net loss	—	—	—	(29,615)	—	—	(29,615)
<b>Balance at December 31, 2016</b>	<u>35,048,338</u>	<u>\$ 416</u>	<u>\$ 130,189</u>	<u>\$ (125,825)</u>	<u>\$ (90,918)</u>	<u>\$ 14,024</u>	<u>\$ (72,114)</u>
Stock-based compensation	—	—	2,336	—	—	—	2,336
Exercise of stock options	539,183	6	3,738	—	—	—	3,744
Settlement of restricted stock units	397,522	4	(4)	—	—	—	—
Acquisition of treasury stock	(1,795,444)	—	—	—	(11,401)	—	(11,401)
Other comprehensive income, net	—	—	—	—	—	(47,138)	(47,138)
Net income	—	—	—	84,936	—	—	84,936
<b>Balance at December 31, 2017, as previously reported</b>	<u>34,189,599</u>	<u>\$ 426</u>	<u>\$ 136,259</u>	<u>\$ (40,889)</u>	<u>\$ (102,319)</u>	<u>\$ (33,114)</u>	<u>\$ (39,637)</u>
Impact of adopting the new revenue standard	—	—	—	8,484	—	—	8,484
<b>Balance at January 1, 2018, as adjusted</b>	<u>34,189,599</u>	<u>\$ 426</u>	<u>\$ 136,259</u>	<u>\$ (32,405)</u>	<u>\$ (102,319)</u>	<u>\$ (33,114)</u>	<u>\$ (31,153)</u>
Stock-based compensation	—	—	5,213	—	—	—	5,213
Exercise of stock options	162,341	2	1,131	—	—	—	1,133
Settlement of restricted stock units	328,309	3	(3)	—	—	—	—
Acquisition of treasury stock	(239,017)	—	—	—	(1,607)	—	(1,607)
Other comprehensive income, net	—	—	—	—	—	13,004	13,004
Net loss	—	—	—	(3,900)	—	—	(3,900)
<b>Balance at December 31, 2018</b>	<u>34,441,232</u>	<u>\$ 431</u>	<u>\$ 142,600</u>	<u>\$ (36,305)</u>	<u>\$ (103,926)</u>	<u>\$ (20,110)</u>	<u>\$ (17,310)</u>

*The accompanying notes are an integral part of these consolidated financial statements*

**MAGNACHIP SEMICONDUCTOR CORPORATION AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

	Year Ended December 31,		
	2018	2017	2016
(In thousands of US dollars)			
<b>Cash flows from operating activities</b>			
Net income (loss)	\$ (3,900)	\$ 84,936	\$ (29,615)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities			
Depreciation and amortization	32,048	28,146	25,416
Provision for severance benefits	17,644	24,373	14,432
Amortization of debt issuance costs and original issue discount	2,183	1,987	707
Loss (gain) on foreign currency, net	30,215	(77,600)	18,884
Restructuring gain and other	—	(17,010)	(7,785)
Stock-based compensation	5,213	2,336	3,843
Loss on early extinguishment of long-term borrowings, net	206	—	—
Other	(1,235)	49	103
Changes in operating assets and liabilities			
Accounts receivable, net	8,294	(22,210)	285
Unbilled accounts receivable	(1,284)	—	—
Inventories, net	(30,675)	(8,077)	(557)
Other receivables	1,260	2,218	26,137
Other current assets	9,942	2,318	5,000
Accounts payable	(8,389)	10,320	(4,163)
Other accounts payable	(11,183)	(12,141)	(6,603)
Accrued expenses	(4,730)	(12,020)	(16,305)
Deferred revenue	2,891	(3,949)	1,674
Other current liabilities	2,123	(1,281)	(5,331)
Other non-current liabilities	2,346	(760)	(1,574)
Payment of severance benefits	(11,688)	(21,506)	(15,352)
Other	(2,045)	(382)	173
Net cash provided by (used in) operating activities	<u>39,236</u>	<u>(20,253)</u>	<u>9,369</u>
<b>Cash flows from investing activities</b>			
Proceeds from settlement of hedge collateral	14,342	10,615	6,317
Payment of hedge collateral	(12,907)	(14,839)	(3,552)
Proceeds from disposal of plant, property and equipment	1,685	1,209	17,605
Purchase of property, plant and equipment	(28,948)	(32,661)	(18,727)
Payment for property related to water treatment facility arrangement	(4,283)	—	—
Payment for intellectual property registration	(961)	(1,207)	(1,049)
Collection of guarantee deposits	801	1,462	619
Payment of guarantee deposits	(3,016)	(41)	(193)
Other	(19)	94	23
Net cash provided by (used in) investing activities	<u>(33,306)</u>	<u>(35,368)</u>	<u>1,043</u>
<b>Cash flows from financing activities</b>			
Proceeds from issuance of senior notes	—	86,250	—
Payment of debt issuance costs	—	(5,902)	—
Repurchase of long-term borrowings	(2,228)	—	—
Proceeds from exercise of stock options	1,132	3,744	1,732
Acquisition of treasury stock	(1,607)	(11,401)	—
Proceeds from property related to water treatment facility arrangement (Note 5)	4,283	—	—
Repayment of financing related to water treatment facility arrangement (Note 5)	(286)	—	—
Net cash provided by financing activities	<u>1,294</u>	<u>72,691</u>	<u>1,732</u>
Effect of exchange rates on cash, cash equivalents and restricted cash	<u>(3,361)</u>	<u>9,899</u>	<u>(1,420)</u>
Net increase in cash, cash equivalents and restricted cash	<u>3,863</u>	<u>26,969</u>	<u>10,724</u>
<b>Cash, cash equivalents and restricted cash</b>			
Beginning of the period	<u>128,575</u>	<u>101,606</u>	<u>90,882</u>
End of the period	<u>\$ 132,438</u>	<u>\$ 128,575</u>	<u>\$ 101,606</u>
<b>Supplemental cash flow information</b>			
Cash paid for interest	<u>\$ 19,255</u>	<u>\$ 17,590</u>	<u>\$ 14,906</u>
Cash paid for income taxes	<u>\$ 920</u>	<u>\$ 1,027</u>	<u>\$ 693</u>
<b>Non-cash investing and financing activities</b>			
Property, plant and equipment additions in other accounts payable	<u>\$ 5,249</u>	<u>\$ 2,520</u>	<u>\$ 3,091</u>

*The accompanying notes are an integral part of these consolidated financial statements*

**MAGNACHIP SEMICONDUCTOR CORPORATION AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**(TABULAR DOLLARS IN THOUSANDS, EXCEPT SHARE DATA)**

**1. Business, Basis of Presentation and Summary of Significant Accounting Policies**

***Business***

MagnaChip Semiconductor Corporation (together with its subsidiaries, the “Company”) is a designer and manufacturer of analog and mixed-signal semiconductor platform solutions for communications, Internet of Things (“IoT”) applications, consumer, industrial and automotive applications. The Company provides technology platforms for analog, mixed signal, power, high voltage, non-volatile memory and Radio Frequency (“RF”) applications. The Company’s business is comprised of two operating segments: Foundry Services Group and Standard Products Group. The Company’s Foundry Services Group provides specialty analog and mixed-signal foundry services mainly for fabless and Integrated Device Manufacturer (“IDM”) semiconductor companies that primarily serve communications, IoT, consumer, industrial and automotive applications. The Company’s Standard Products Group is comprised of two business lines: Display Solutions and Power Solutions. The Company’s Display Solutions products provide panel display solutions to major suppliers of large and small rigid and flexible panel displays, and mobile, automotive applications and home appliances. The Company’s Power Solutions products include discrete and integrated circuit solutions for power management in communications, consumer and industrial applications.

***Basis of Presentation***

The consolidated financial statements are presented in accordance with accounting principles generally accepted in the United States of America (“US GAAP”).

Significant accounting policies followed by the Company in the preparation of the accompanying consolidated financial statements are summarized below.

Upon the adoption of Accounting Standards Update No. 2014-09, “Revenue from Contracts with Customers (Topic 606)” (“ASU 2014-09”) effective on January 1, 2018 (the “new revenue standard”), the Company has updated its accounting policy for revenue recognition as detailed below. As the Company adopted the new revenue standard using the modified retrospective method, which allows the recognition of the cumulative effect of initially applying the new revenue standard as an adjustment to the Company’s equity as of January 1, 2018. The comparative information has not been restated and continues to be reported under the accounting standards in effect for those periods.

***Principles of Consolidation***

The consolidated financial statements include the accounts of the Company including its wholly-owned subsidiaries. All intercompany transactions and balances are eliminated in consolidation.

***Reclassifications***

Certain charges related to the closure of the Company’s 6-inch fab and headcount reduction during 2016, previously included in selling, general and administrative expenses in the consolidated statements of operations for the year ended December 31, 2016, have been reclassified to restructuring and other charges (gain), net and early termination charges, respectively, to conform to the Company’s presentation for the year ended December 31, 2017. These reclassifications had no impact on the Company’s net income (loss), the consolidated balance sheets, the consolidated statements of comprehensive income (loss) and the consolidated statements of cash flows as previously reported.

**MAGNACHIP SEMICONDUCTOR CORPORATION AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(CONTINUED)**  
**(TABULAR DOLLARS IN THOUSANDS, EXCEPT SHARE DATA)**

***Use of Estimates***

The preparation of financial statements in accordance with US GAAP requires management to make estimates and assumptions about future events. These estimates and the underlying assumptions affect the amounts of assets and liabilities reported, disclosures about contingent assets and liabilities, and reported amounts of revenue and expenses. Such estimates include the valuation of accounts receivable, inventories, stock based compensation, property plant and equipment, intangible assets, other long-lived assets, long-term employee benefits, contingencies liabilities, estimated future cash flows and other assumptions used in long-lived asset impairment tests and calculation of income taxes and deferred tax valuation allowances, and assumptions used in the calculation of sales incentives, among others. Although these estimates and assumptions are based on management's best knowledge of current events and actions that the Company may undertake in the future, actual results may be significantly different from the estimates. Changes in those estimates resulting from continuing changes in the economic environment will be reflected in the financial statements in future periods.

***Foreign Currency Translation***

The Company has assessed in accordance with Accounting Standards Codification (ASC) 830, "Foreign Currency Matters" ("ASC 830"), the functional currency of each of its subsidiaries in Luxembourg and the Netherlands and has designated the US dollar to be their respective functional currencies. The Korean Won is the functional currency for the Company's Korean subsidiary, which is the primary operating subsidiary of the Company. The Company and its other subsidiaries are utilizing their local currencies as their functional currencies. The financial statements of the subsidiaries in functional currencies other than the US dollar are translated into the US dollar in accordance with ASC 830. All the assets and liabilities are translated to the US dollar at the end-of-period exchange rates. Capital accounts are determined to be of a permanent nature and are therefore translated using historical exchange rates. Revenues and expenses are translated using average exchange rates for the respective periods. Foreign currency translation adjustments arising from differences in exchange rates from period to period are included in the foreign currency translation adjustment account in accumulated other comprehensive loss of stockholders' equity. Gains and losses due to transactions in currencies other than the functional currency are included as a component of other income, net in the statement of operations.

***Cash and Cash Equivalents***

Cash equivalents consist of highly liquid investments with an original maturity date of three months or less when purchased.

***Accounts Receivable Reserves***

An allowance for doubtful accounts is provided based on the aggregate estimated uncollectability of the Company's accounts receivable. The Company also records an estimate for sales returns, included within accounts receivable, net, based on the historical experience of the amount of goods that will be returned and refunded or replaced. In addition, the Company also includes in accounts receivable, net, an allowance for volume discounts offered to certain customers and distributors for meeting agreed upon levels of sales volume.

***Sales of Accounts Receivable***

The Company accounts for transfers of financial assets under ASC 860, "Transfers and Servicing," as either sales or financings. Transfers of financial assets that result in sales accounting are those in which (1) the transfer

**MAGNACHIP SEMICONDUCTOR CORPORATION AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(CONTINUED)**  
**(TABULAR DOLLARS IN THOUSANDS, EXCEPT SHARE DATA)**

legally isolates the transferred assets from the transferor, (2) the transferee has the right to pledge or exchange the transferred assets and no condition both constrains the transferee's right to pledge or exchange the assets and provides more than a trivial benefit to the transferor, and (3) the transferor does not maintain effective control over the transferred assets. If the transfer does not meet these criteria, the transfer is accounted for as a financing. Financial assets that are treated as sales are removed from the Company's accounts with any realized gain or loss reflected in earnings during the period of sale.

***Inventories***

Inventories are stated at the lower of cost or net realizable value, using the first in, first out method ("FIFO"). If net realizable value is less than cost at the balance sheet date, the carrying amount is reduced to the realizable value, and the difference is recognized as a loss on valuation of inventories within cost of sales. Inventory reserves are established when conditions indicate that the net realizable value is less than costs due to physical deterioration, obsolescence, changes in price levels, or other causes based on individual facts and circumstances. The Company evaluates the sufficiency of inventory reserves and take into consideration historical usage, expected demand, anticipated sales price, new product development schedules, the effect new products might have on the sale of existing products, product age and other factors. Reserves are also established for excess inventory based on the Company's current inventory levels and projected demand and its ability to sell those specific products. Situations that could cause these inventory reserves include a decline in business and economic conditions, decline in consumer confidence caused by changes in market conditions, sudden and significant decline in demand for our products, inventory obsolescence because of rapidly changing technology and consumer requirements, or failure to estimate end customer demand properly. A reduction of these inventory reserves may be recorded if previously reserved items are subsequently sold as a result of unexpected changes to certain aforementioned situations.

In addition, as prescribed in ASC 330, "Inventory," once a reserve is established for a particular item based on the Company's assessment as described above, it is maintained until the related item is sold or scrapped as a new cost basis has been established that cannot subsequently be marked up. In addition, the cost of inventories is determined based on the normal capacity of each fabrication facility. In case the capacity utilization is lower than a certain level that management believes to be normal, the fixed overhead costs per production unit which exceeds those under normal capacity are charged to cost of sales rather than capitalized as inventories.

***Advances to Suppliers***

The Company, from time to time, may make prepayments to suppliers to procure materials to meet its planned production. The Company recorded prepayments of \$8,132 thousand and \$7,404 thousand as other current assets as of December 31, 2018 and 2017, respectively.

***Vendor Rebates***

The Company, from time to time, enters into arrangements whereby rebates are obtained from vendors when the Company achieves certain levels of purchases. The vendor rebates are computed at an agreed upon amount or percentage of purchase levels. As these vendor rebates are impacted by actual and estimated purchases for the applicable agreed upon period, the Company periodically assesses the progress of its purchase levels and revises the estimates when necessary. The Company accounts for such rebates as a reduction of inventory until the Company sells the product, at which time such rebates are reflected as a reduction of cost of sales in its consolidated statements of operations. Vendor rebates recorded as a reduction of cost of sales were \$378 thousand, \$379 thousand and \$4,044 thousand for the years ended December 31, 2018, 2017 and 2016,

**MAGNACHIP SEMICONDUCTOR CORPORATION AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(CONTINUED)**  
**(TABULAR DOLLARS IN THOUSANDS, EXCEPT SHARE DATA)**

respectively, and as a reduction of inventory were \$0, \$0 and \$359 thousand as of December 31, 2018, 2017 and 2016, respectively.

***Property, Plant and Equipment***

Property, plant and equipment are stated at cost, less accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the assets as set forth below.

Buildings	30 - 40 years
Building related structures	10 - 20 years
Machinery and equipment	10 - 12 years
Others	3 - 10 years

Routine maintenance and repairs are charged to expense as incurred. Expenditures that enhance the value or significantly extend the useful lives of the related assets are capitalized.

***Impairment of Long-Lived Assets***

The Company reviews property, plant and equipment and other long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable in accordance with ASC 360, "Property, Plant and Equipment." Recoverability is measured by comparing its carrying amount with the future net undiscounted cash flows the assets are expected to generate. If such assets are considered to be impaired, the impairment is measured as the difference between the carrying amount of the assets and the fair value of assets using the present value of the future net cash flows generated by the respective long-lived assets.

***Restructuring Charges***

The Company recognizes restructuring charges in accordance with ASC 420, "Exit or Disposal Cost Obligations." Certain costs and expenses related to exit or disposal activities are recorded as restructuring charges when liabilities for those costs and expenses are incurred.

***Lease Transactions***

The Company accounts for lease transactions as either operating leases or capital leases, depending on the terms of the underlying lease agreements. Machinery and equipment acquired under capital lease agreements are recorded at the lower of the present value of future minimum lease payments and estimated fair value of leased property and depreciated using the straight-line method over their estimated useful lives. In addition, the aggregate lease payments are recorded as capital lease obligations, net of unaccrued interest. Interest is amortized over the lease period using the effective interest rate method. Leases that do not qualify as capital leases are classified as operating leases, and the related rental payments are expensed on a straight-line basis over the shorter of the estimated useful lives of the leased property and the lease term.

***Intangible Assets***

Intangible assets other than intellectual property include technology and customer relationships that are amortized on a straight-line basis over periods ranging from one to five years. Intellectual property assets acquired represent rights under patents, trademarks and property use rights and are amortized over their respective periods of benefit, ranging up to ten years, on a straight-line basis.

**MAGNACHIP SEMICONDUCTOR CORPORATION AND SUBSIDIARIES**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(CONTINUED)**  
**(TABULAR DOLLARS IN THOUSANDS, EXCEPT SHARE DATA)**

***Fair Value Disclosures of Financial Instruments***

The Company follows ASC 820, “Fair Value Measurements and Disclosures” (“ASC 820”) for measurement and disclosures about fair value of its financial instruments. ASC 820 establishes a framework for measuring fair value in US GAAP, and expands disclosures about fair value measurements. To increase consistency and comparability in fair value measurements and related disclosures, ASC 820 establishes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. The fair value hierarchy gives the highest priority to quoted prices (unadjusted) in active markets for identical assets or liabilities and the lowest priority to unobservable inputs. The three levels of fair value hierarchy defined by ASC 820 are:

Level 1—Inputs are unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date.

Level 2—Inputs (other than quoted market prices included in Level 1) are either directly or indirectly observable for the asset or liability through correlation with market data at the measurement date and for the duration of the instrument’s anticipated life.

Level 3—Inputs reflect management’s best estimate of what market participants would use in pricing the asset or liability at the measurement date. Consideration is given to the risk inherent in the valuation technique and the risk inherent in the inputs to the model. Valuation of instruments includes unobservable inputs to the valuation methodology that are significant to the measurement of fair value of assets or liabilities.

As defined by ASC 820, the fair value of a financial instrument is the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale, which was further clarified as the price that would be received to sell an asset or paid to transfer a liability (“an exit price”) in an orderly transaction between market participants at the measurement date. The carrying amounts of the Company’s financial assets and liabilities, such as cash equivalents, accounts receivable, other receivables, accounts payable and other accounts payable approximate their fair values because of the short maturity of these instruments.

***Accrued Severance Benefits***

The majority of accrued severance benefits is for employees in the Company’s Korean subsidiary, MagnaChip Semiconductor Ltd. Pursuant to the Employee Retirement Benefit Security Act of Korea, eligible employees and executive officers with one or more years of service are entitled to severance benefits upon the termination of their employment based on their length of service and rate of pay. As of December 31, 2018, 98% of all employees of the Company were eligible for severance benefits.

Accrued severance benefits are funded through a group severance insurance plan. The amounts funded under this insurance plan are classified as a reduction of the accrued severance benefits. Subsequent accruals are to be funded at the discretion of the Company.

In accordance with the National Pension Act of the Republic of Korea, a certain portion of accrued severance benefits is deposited with the National Pension Fund and deducted from the accrued severance benefits. The contributed amount is paid to employees from the National Pension Fund upon their retirement.

Beginning in July 2018, the Company began contributing a percentage of severance benefits, which may be adjusted from time to time, accrued for eligible employees for their services beginning January 1, 2018, to certain

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severance insurance deposit accounts. These accounts consist of time deposits and other guaranteed principal and interest accounts, and are maintained at insurance companies, banks or security companies for the benefit of the Company's employees.

***Revenue Recognition***

The Company recognizes revenue when it satisfies the performance obligation of transferring control over a product or service to a customer. Revenue is measured based on the consideration specified in a contract with a customer, which consideration is paid in exchange for a product or service.

The Foundry Services Group of the Company manufactures products, which we refer to as foundry products, based on customers' specific product designs. The Company recognizes revenue over time for foundry products that do not have an alternative use when the Company has an enforceable right to payment. Revenue recognized over time is in proportion of wafer manufacturing costs incurred relative to total estimated costs for completion. However, in certain circumstances, pursuant to a customer contract or an individual purchase order, the Company may not have an enforceable right to payment for services performed at a given time. In this situation, the Company recognizes revenue at the time when a customer obtains control of the product, which is generally upon product shipment, delivery at the customer's location or upon customer acceptance, depending on the terms of the arrangement.

The Standards Products Group of the Company sells products manufactured based on the Company's design. The Standard Products Group's products are either standardized with an alternative use or the Company does not have an enforceable right to payment for the related manufacturing services completed to date. For those products, revenue is recognized when a customer obtains control of the product, which is generally upon product shipment, delivery at the customer's location or upon customer acceptance, depending on the terms of the arrangement.

A portion of the Company's sales are made through distributors for which the Company applies the same revenue recognition guidance described above. The Company defers the recognition of revenue when a distributor receives consideration from the customers prior to the performance obligation being fulfilled. These amounts are classified as deferred revenue on the consolidated balance sheets.

In accordance with revenue recognition guidance, any tax assessed by a governmental authority that is both imposed on and concurrent with a specific revenue-producing transaction, and that is collected by the Company from a customer, is excluded from revenue and presented in the statement of operations on a net basis.

The Company provides warranty provisions under which customers can return defective products. The Company also provides allowances for additional products that may have to be provided free of charge to compensate customers for not meeting previously agreed upon yield criteria, which the Company refers to as the low yield compensation reserve. The Company estimates the costs related to warranty claims, repair or replacements and low yield compensation reserves, and records them as components of cost of sales.

In addition, the Company offers sales returns (other than those that relate to defective products under warranty), cash discounts for early payments, volume discounts and certain allowances to the Company's customers, including the Company's distributors. The Company records reserves for those returns, discounts and allowances as a deduction from sales, based on historical experience and other quantitative and qualitative factors.

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Substantially all of the Company's contracts are one year or less in duration. The standard payment terms with customers are generally thirty to sixty days from the time of shipment, product delivery to the customer's location or customer acceptance, depending on the terms of the related arrangement.

All amounts billed to a customer related to shipping and handling are classified as sales while all costs incurred by the Company for shipping and handling are classified as selling, general and administrative expenses. The amounts charged to selling, general and administrative expenses were \$1,861 thousand, \$1,652 thousand, and \$1,631 thousand for the years ended December 31, 2018, 2017 and 2016, respectively.

***Derivative Financial Instruments***

The Company applies the provisions of ASC 815, "Derivatives and Hedging" ("ASC 815"). This Statement requires the recognition of all derivative instruments as either assets or liabilities measured at fair value.

Under the provisions of ASC 815, the Company may designate a derivative instrument as hedging the exposure to variability in expected future cash flows that are attributable to a particular risk (a "cash flow hedge") or hedging the exposure to changes in the fair value of an asset or a liability (a "fair value hedge"). Special accounting for qualifying hedges allows the effective portion of a derivative instrument's gains and losses to offset related results on the hedged item in the consolidated statements of operations and requires that a company formally document, designate and assess the effectiveness of the transactions that receive hedge accounting treatment. Both at the inception of a hedge and on an ongoing basis, a hedge must be expected to be highly effective in achieving offsetting changes in cash flows or fair value attributable to the underlying risk being hedged. If the Company determines that a derivative instrument is no longer highly effective as a hedge, it discontinues hedge accounting prospectively and future changes in the fair value of the derivative are recognized in current earnings. The Company assesses hedge effectiveness at the end of each quarter.

In accordance with ASC 815, changes in the fair value of derivative instruments that are cash flow hedges are recognized in accumulated other comprehensive income (loss) and reclassified into earnings in the period in which the hedged item affects earnings. Ineffective portions of a derivative instrument's change in fair value are immediately recognized in earnings. Derivative instruments that do not qualify, or cease to qualify, as hedges must be adjusted to fair value and the adjustments are recorded through net income (loss).

The cash flows from derivative instruments receiving hedge accounting treatment are classified in the same categories as the hedged items in the consolidated statements of cash flows.

***Advertising***

The Company expenses advertising costs as incurred. Advertising expense was approximately \$121 thousand, \$95 thousand and \$149 thousand for the years ended December 31, 2018, 2017 and 2016, respectively.

***Product Warranties***

The Company records, in other current liabilities, warranty liabilities for the estimated costs that may be incurred under its basic limited warranty. The standard limited warranty period is one to two years for the majority of products. This warranty covers defective products, and related liabilities are accrued when product revenues are recognized. Factors that affect the Company's warranty liabilities include historical and anticipated

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rates of warranty claims and repair or replacement costs per claim to satisfy the Company's warranty obligation. The Company also records, in other current liabilities, low yield compensation reserves for its estimated costs for products that may have to be provided free of charge to compensate customers for not meeting previously agreed upon yield criteria. Factors that affect the Company's low yield compensation reserves include historical and anticipated rates of claims for not meeting previously agreed upon yield criteria. The Company periodically assesses the adequacy of those recorded warranty liabilities and low yield compensation reserves, and adjusts its estimates when necessary.

***Research and Development***

Research and development costs are expensed as incurred and include wafers, masks, employee expenses, contractor fees, building costs, utilities and administrative expenses.

***Licensed Patents and Technologies***

The Company has entered into a number of royalty agreements to license patents and technology used in the design of its products. The Company carries two types of royalties: lump-sum and running basis. Lump-sum royalties, which require initial payments, usually paid in installments, represent a non-refundable commitment, such that the total present value of these payments is recorded as a prepaid expense and a liability upon execution of the agreements and the costs are amortized over the contract period using the straight-line method and charged to research and development expenses in the consolidated statements of operations.

Running royalties are paid based on the revenue of related products sold by the Company.

***Stock-Based Compensation***

The Company follows the provisions of ASC 718, "Compensation-Stock Compensation" ("ASC 718"). Under ASC 718, stock-based compensation cost is measured at the grant date, based on the fair value of the award, and is recognized as expense, net of the estimated forfeiture rate, over the requisite service period. As permitted under ASC 718, the Company elected to recognize compensation expense for all options with graded vesting based on the graded attribution method.

The Company uses the Black-Scholes option-pricing model to measure the grant-date-fair-value of options. The Black-Scholes model requires certain assumptions to determine an option's fair value, including expected term, risk free interest rate, expected volatility and fair value of underlying common share. The expected term of each option grant was based on employees' expected exercises and post-vesting employment termination behavior and the risk free interest rate was based on the US Treasury yield curve for the period corresponding with the expected term at the time of grant. No dividends were assumed for this calculation of option value.

***Earnings per Share***

In accordance with ASC 260, "Earnings Per Share", the Company computes basic earnings per share by dividing net income (loss) available to common stockholders by the weighted average number of common shares outstanding during the period. Diluted earnings per share reflect the dilution of potential common stock outstanding during the period including stock options and restricted stock units, using the treasury stock method (by using the average stock price for the period to determine the number of shares assumed to be purchased from the exercise of stock options and restricted stock units), and convertibles, using the if-converted method. In

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determining the hypothetical shares repurchased, the Company uses the average share price for the period. In the case that earnings are negative, any potential common stock equivalents would have the effect of being anti-dilutive in the computation of net loss per share.

***Income Taxes***

The Company accounts for income taxes in accordance with ASC 740, “Income Taxes” (“ASC 740”). ASC 740 requires recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in a company’s financial statements or tax returns. Under this method, deferred tax assets and liabilities are determined based upon the difference between the financial statement carrying amounts and the tax bases of assets and liabilities using enacted tax rates in effect in the years in which the differences are expected to reverse. Valuation allowances are established when it is necessary to reduce deferred tax assets to the amount expected to be realized. Income tax expense is the tax payable for the period and the change during the period in deferred tax assets and liabilities.

The Company recognizes and measures uncertain tax positions taken or expected to be taken in a tax return utilizing a two-step process. In the first step, recognition, the Company determines whether it is more-likely-than-not that a tax position will be sustained upon examination, including resolution of any related appeals or litigation processes, based on the technical merits of the position. The second step addresses measurement of a tax position that meets the more-likely-than-not criteria. The tax position is measured at the largest amount of benefit that has a likelihood of greater than 50 percent of being realized upon ultimate settlement.

***Concentration of Credit Risk***

The Company performs periodic credit evaluations of its customers’ financial condition and generally does not require collateral for customers on accounts receivable. The Company maintains reserves for potential credit losses, which are periodically reviewed.

***Recent Accounting Pronouncements***

In August 2018, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update No. 2018-13 “Fair Value Measurement (Topic 820): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement” (“ASU 2018-13”). ASU 2018-13 amends existing fair value measurement disclosure requirements by adding, changing, or removing certain disclosures. ASU 2018-13 is effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years, with early adoption permitted for any eliminated or modified disclosures. The Company does not expect that the adoption will have an impact on the Company’s consolidated financial statements.

In February 2018, the FASB issued Accounting Standards Update No. 2018-02 “Income Statement—Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income” (“ASU 2018-02”). ASU 2018-02 addresses the accounting issue pertaining to the deferred tax amounts that are “stranded” in accumulated other comprehensive income as a result of the Tax Cuts and Jobs Act. ASU 2018-02 is effective for interim and annual periods beginning after December 15, 2018 and interim periods within those fiscal years. The Company does not have deferred tax amounts recorded through accumulated other comprehensive income and thus does not expect that the adoption will have an impact on its consolidated financial statements.

In August 2017, the FASB issued Accounting Standards Update No. 2017-12, “Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities” (“ASU 2017-12”). ASU 2017-12

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provides new guidance about income statement classification and eliminates the requirement to separately measure and report hedge ineffectiveness. The entire change in fair value for qualifying hedge instruments included in the effectiveness will be recorded in other comprehensive income (OCI) and amounts deferred in OCI will be reclassified to earnings in the same income statement line item in which the earnings effect of the hedged item is reported. ASU 2017-12 is effective for interim and annual periods for the Company on January 1, 2019, with early adoption permitted. The Company does not expect the adoption of ASU 2017-12 to have a material effect on the Company's consolidated financial statements.

In July 2017, the FASB issued Accounting Standards Update No. 2017-11, "Earnings Per Share (Topic 260); Distinguishing Liabilities from Equity (Topic 480); Derivatives and Hedging (Topic 815)" ("ASU 2017-11"), which addresses the complexity of accounting for certain financial instruments with down round features. Down round features are features of certain equity-linked instruments (or embedded features) that result in the strike price being reduced on the basis of the pricing of future equity offerings. Current accounting guidance creates cost and complexity for entities that issue financial instruments (such as warrants and convertible instruments) with down round features that require fair value measurement of the entire instrument or conversion option. For public business entities, the amendments in ASU 2017-11 are effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. The Company does not expect the adoption of ASU 2017-11 to have a material effect on the Company's consolidated financial statements.

In February 2016, the FASB issued Accounting Standards Update No. 2016-02, "Leases (Topic 842)" ("ASU 2016-02") in order to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet for those leases classified as operating leases under US GAAP. ASU 2016-02 requires that a lessee recognize a liability to make lease payments and a right-of-use asset representing its right to use the underlying asset for the lease term on the balance sheet. ASU 2016-02 is effective for fiscal years beginning after December 15, 2018, including interim periods within those reporting periods using a modified retrospective approach and early adoption is permitted. In January 2018, the FASB issued Accounting Standards Update No 2018-01, "Leases (Topic 842) Land Easement Practical Expedient for Transition to Topic 842" ("ASU 2018-01"). ASU 2018-01 permits an entity to elect an optional transition practical expedient not to evaluate land easements that exist or expired before the entity's adoption of ASU 2016-02 and that were not accounted for as leases under previous lease guidance. In July 2018, the FASB issued Accounting Standards Update No 2018-10, "Codification Improvements to Topic 842 Leases" ("ASU 2018-10"). ASU 2018-10 provides narrow amendments to clarify how to apply certain aspects of the new lease standard. In July 2018, the FASB also issued Accounting Standards Update No 2018-11, "Leases (Topic 842) Targeted Improvements" ("ASU 2018-11"). ASU 2018-11 allows an entity to recognize a cumulative-effect adjustment to the opening balance of retained earnings upon adoption of ASU 2016-02 (the "modified retrospective transition method"). In December 2018, the FASB issued Accounting Standards Update No 2018-20, "Leases (Topic 842) Narrow Scope Improvements for Lessors" ("ASU 2018-20"). ASU 2018-20 provides certain amendments that affect narrow aspects of the guidance issued in ASU 2016-02. The effective date and transition requirements for ASU 2016-02, ASU 2018-01, ASU 2018-10, ASU 2018-11 and ASU 2018-20 are the same (collectively, the "new lease standard").

Based on the preliminary work completed, the Company anticipates that the most significant impact from the adoption of the new lease standard will be the recognition of a right-of-use asset and a lease liability on its consolidated balance sheet for leases with a duration of greater than one year. The Company will adopt the new lease standard in the first quarter of 2019 utilizing the modified retrospective transition method that allows a cumulative-effect adjustment from the adoption of the new lease standard to be recorded at the beginning of the first quarter of 2019. While the Company is continuing to assess the potential impacts of the new lease standard,

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the Company estimates that the impact on its consolidated balance sheet as of January 1, 2019 to be less than 5% of total assets and liabilities.

***Recently Adopted Accounting Pronouncements***

In May 2017, the FASB issued Accounting Standards Update No. 2017-09, “Compensation-Stock Compensation (Topic 718): Scope of Modification Accounting” (“ASU 2017-09”). ASU 2017-09 provides clarity and reduces both (i) diversity in practice and (ii) cost and complexity when applying the guidance in Topic 718 to a change to the terms or conditions of a share-based payment award. The amendments in ASU 2017-09 provide guidance about which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting in Topic 718. The Company adopted ASU 2017-09 in the first quarter of 2018, and the adoption did not impact the Company’s consolidated financial statements.

In November 2016, the FASB issued ASU 2016-18, Statement of Cash Flows (Topic 230), Restricted Cash (“ASU 2016-18”). ASU 2016-18 clarifies certain existing principles in ASC 230, Statement of Cash Flows (“ASC 230”), including (i) providing additional guidance related to transfers between cash and restricted cash, (ii) how entities present “net cash used in operating” and “net cash used in investing” in their statement of cash flows, and (iii) the cash receipts and cash payments that directly affect the restricted cash accounts. The Company adopted ASU 2016-18 in the first quarter of 2018. As of December 31, 2016, the Company held \$18,251 thousand of restricted cash in connection with an arrangement to sell the building that housed the Company’s legacy 6-inch fab. This restricted cash was not previously included in the ending cash balance as of December 31, 2016 within the consolidated statements of cash flows. As a result of adopting ASU 2016-18, the consolidated statement of cash flows for the year ended December 31, 2017 was revised to include such restricted cash of \$18,251 thousand as cash, cash equivalents and restricted cash as of January 1, 2017. This change resulted in an increase of \$1,809 thousand in net cash used in operating activities, an increase of \$17,625 thousand in net cash used in investing activities, and an increase of \$1,183 thousand in changes in cash, cash equivalents and restricted cash due to the effect of exchange rates, from what was previously reported. Also, as a result of adopting ASU 2016-18, the consolidated statement of cash flows for the year ended December 31, 2016 was revised to include this restricted cash of \$18,251 thousand as cash, cash equivalents and restricted cash as of December 31, 2016, resulting in an increase of \$1,738 in net cash provided by operating activities, a decrease in net cash used in investing activities of \$16,917 thousand, and a decrease of \$404 thousand in changes in cash, cash equivalents and restricted cash due to the effect of exchange rates, from what was previously reported for 2016.

In August 2016, the FASB issued Accounting Standards Update No. 2016-15, “Statement of Cash Flows (Topic 230), Classification of Certain Cash Receipts and Cash Payments” (“ASU 2016-15”). ASU 2016-15 reduces the existing diversity in practice in financial reporting across all industries by clarifying certain existing principles in ASC 230, including providing additional guidance on how and what an entity should consider in determining the classification of certain cash flows. The Company adopted ASU 2016-15 in the first quarter of 2018, and the adoption of ASU 2016-15 did not impact the Company’s consolidated financial statements.

In May 2014, the FASB issued ASU 2014-09. ASU 2014-09 supersedes the revenue recognition requirements in “Revenue Recognition (Topic 605)”, and requires entities to recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled to in exchange for those goods or services. ASU 2014-09 is effective for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period. The new guidance allows for the amendments to be applied either retrospectively to each prior reporting period presented (the “full

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retrospective method”) or retrospectively as a cumulative-effect adjustment as of the date of adoption (the “modified retrospective method”). In March 2016, the FASB issued ASU 2016-08, which clarifies the implementation guidance on principal versus agent considerations. In April 2016, the FASB issued ASU 2016-10, which clarifies identifying performance obligations and the licensing implementation guidance. In May 2016, the FASB issued ASU 2016-12, which improves certain aspects of ASC Topic 606 “Revenue from Contracts with Customers.” In December 2016, the FASB issued ASU 2016-20, which improves certain aspects of ASC Topic 606 “Revenue from Contracts with Customers.” The effective date and transition requirements for ASU 2016-08, ASU 2016-10, ASU 2016-12 and ASU 2016-20 are the same as the effective date and transition requirements of ASU 2014-09 (collectively, the “new revenue standard”).

Prior to the adoption of the new revenue standard effective on January 1, 2018, the Company had historically recognized revenue when risk and reward of ownership passed to the customer either upon shipment, upon product delivery at the customer’s location or upon customer acceptance, depending on the terms of the related arrangement. After the adoption of the new revenue standard effective on January 1, 2018, the Company recognizes revenue over time for foundry products that do not have an alternative use when the Company has an enforceable right to payment. As the Company adopted the new revenue standard using the modified retrospective method, it recognized the cumulative effect of initially applying the new revenue standard as an adjustment to the Company’s equity as of January 1, 2018, while prior period amounts are not adjusted and continue to be reported under the accounting standards in effect for such periods. The cumulative effect of the adjustments increased unbilled accounts receivable by \$38,307 thousand and decreased inventories, net by \$29,823 thousand, resulting in a net increase of \$8,484 thousand in the Company’s beginning equity as of January 1, 2018. There was no net income tax impact from those cumulative effect adjustments due to full allowance on deferred tax assets.

Of the recorded unbilled accounts receivable of \$38,307 thousand as of January 1, 2018, \$36,946 thousand was billed to customers upon shipment, upon product delivery or upon customer acceptance, depending on the terms of the related arrangement, during the year ended December 31, 2018. Of the recorded deferred revenue of \$8,335 thousand as of December 31, 2017, \$3,496 thousand was recognized as revenue during the year ended December 31, 2018, and \$4,671 thousand was reclassified to other current liabilities as the relevant advance payment agreement with a certain customer was terminated.

The Company evaluated contracts for significant financing components or disclosure requirements for any remaining performance obligations. This evaluation did not result in any financial or disclose impact as substantially all of the Company’s contracts were one year or less in duration and the related payments were expected to be received within one year or less from the transfer of the promised product to a customer.

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The impacts of adopting the new revenue standard on the Company's consolidated financial statements for the year ended December 31, 2018 are as follows (in thousands):

	As of December 31, 2018		
	As Reported	Adjustments	Amounts Without Adoption of Topic 606
	(In thousands of US dollars, except share data)		
<b>Assets</b>			
<b>Current assets</b>			
Unbilled accounts receivable	\$ 38,181	\$ 38,181	\$ —
Inventories, net	71,611	(28,100)	99,711
Total current assets	<u>352,745</u>	<u>10,081</u>	<u>342,664</u>
Total assets	<u>583,196</u>	<u>10,081</u>	<u>573,115</u>
<b>Liabilities and Stockholders' Equity</b>			
<b>Stockholders' equity</b>			
Accumulated deficit	(36,305)	10,444	(46,749)
Accumulated other comprehensive loss	(20,110)	(363)	(19,747)
Total stockholders' deficit	<u>(17,310)</u>	<u>10,081</u>	<u>(27,391)</u>
Total liabilities and stockholders' deficit	<u>\$ 583,196</u>	<u>\$ 10,081</u>	<u>\$ 573,115</u>

Unbilled accounts receivable represent the Company's contractual right to consideration for manufacturing work performed on a customer contract or an individual purchase order, which has not been invoiced to the customer.

	Year Ended December 31, 2018		
	As Reported	Adjustments	Amounts Without Adoption of Topic 606
	(In thousands of US dollars, except share data)		
Net sales	\$ 750,898	\$ 1,284	\$ 749,614
Cost of sales	552,802	(676)	553,478
Gross profit	<u>198,096</u>	<u>1,960</u>	<u>196,136</u>
Operating income	<u>47,418</u>	<u>1,960</u>	<u>45,458</u>
Income (loss) before income tax expenses	<u>749</u>	<u>1,960</u>	<u>(1,211)</u>
Net loss	<u>\$ (3,900)</u>	<u>\$ 1,960</u>	<u>\$ (5,860)</u>
<b>Loss per common share—</b>			
Basic	\$ (0.11)	\$ 0.06	\$ (0.17)
Diluted	\$ (0.11)	\$ 0.06	\$ (0.17)

**2. Fair Value Measurements**

ASC 820 defines fair value, establishes a consistent framework for measuring fair value and expands disclosure requirements about fair value measurements. ASC 820 requires, among other things, the Company's

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valuation techniques used to measure fair value to maximize the use of observable inputs and minimize the use of unobservable inputs.

*Fair Value of Financial Instruments*

As of December 31, 2018, the following table represents the Company’s liabilities measured at fair value on a recurring basis and the basis for that measurement (in thousands):

	Carrying Value December 31, 2018	Fair Value Measurement December 31, 2018	Quoted Prices in Active Markets for Identical Asset (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Liabilities:</b>					
Derivative liabilities (other current liabilities)	\$ 724	\$ 724	—	\$ 724	—

As of December 31, 2017, the following table represents the Company’s assets measured at fair value on a recurring basis and the basis for that measurement (in thousands):

	Carrying Value December 31, 2017	Fair Value Measurement December 31, 2017	Quoted Prices in Active Markets for Identical Asset (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Assets:</b>					
Derivative assets (other current assets)	\$ 5,179	\$ 5,179	—	\$ 5,179	—

Items not reflected in the table above include cash equivalents, accounts receivable, other receivables, accounts payable, and other accounts payable, fair value of which approximate carrying values due to the short-term nature of these instruments. The fair value of assets and liabilities whose carrying value approximates fair value is determined using Level 2 inputs.

*Fair Value of Long-term Borrowings*

	December 31, 2018		December 31, 2017	
	Carrying Value	Fair Value	Carrying Value	Fair Value
(In thousands of US dollars)				
<b>Long-term Borrowings:</b>				
5.0% Exchangeable Senior Notes due March 2021 (Level 2)	\$ 81,418	\$ 86,835	\$ 81,576	\$ 127,617
6.625% senior notes due July 2021 (Level 2)	\$ 222,159	\$ 202,046	\$ 221,840	\$ 224,719

On January 17, 2017, the Company’s wholly-owned subsidiary, MagnaChip Semiconductor S.A., closed an offering (the “Exchangeable Notes Offering”) of 5.0% Exchangeable Senior Notes due March 1, 2021 (the “Exchangeable Notes”) of \$86,250 thousand, which represents the principal amount, excluding \$5,902 thousand of debt issuance costs. In December 2018, MagnaChip Semiconductor S.A repurchased a principal amount equal to \$1,590 thousand of the Exchangeable Notes in the open market. The Company estimates the fair value of the Exchangeable Notes using the market approach, which utilizes quoted market prices that fall under Level 2. For further description of the Exchangeable Notes, see Note 10, “Long-term Borrowings”.

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On July 18, 2013, the Company issued 6.625% senior notes due July 15, 2021 (the “2021 Notes”) of \$225.0 million, which represents the principal amount, excluding \$1.1 million of original issue discount and \$5.1 million of debt issuance costs. In December 2018, the Company repurchased a principal amount equal to \$500 thousand of the 2021 Notes in the open market. The Company estimates the fair value of the 2021 Notes using the market approach, which utilizes quoted market prices that fall under Level 2. For further description of the 2021 Notes, see Note 10, “Long-term Borrowings.”

*Fair Values Measured on a Non-recurring Basis*

The Company’s non-financial assets, such as property, plant and equipment, and intangible assets are recorded at fair value upon acquisition and are remeasured at fair value only if an impairment charge is recognized. As of December 31, 2018 and 2017, the Company did not have any assets or liabilities measured at fair value on a non-recurring basis.

### 3. Accounts Receivable

Accounts receivable as of December 31, 2018 and 2017 consisted of the following (in thousands):

	December 31,	
	2018	2017
Accounts receivable	\$80,155	\$86,167
Notes receivable	856	7,425
Less:		
Allowances for doubtful accounts	(90)	(94)
Sales return reserves	(439)	(628)
Low yield compensation reserve	—	(844)
Volume discounts	(479)	—
Accounts receivable, net	<u>\$80,003</u>	<u>\$92,026</u>

Changes in allowance for doubtful accounts for the years ended December 31, 2018, 2017 and 2016 are as follows (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Beginning balance	\$ (94)	\$ (83)	\$ (236)
Reversal	—	—	148
Translation adjustments	4	(11)	5
Ending balance	<u>\$ (90)</u>	<u>\$ (94)</u>	<u>\$ (83)</u>

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Changes in sales return reserves for the years ended December 31, 2018, 2017 and 2016 are as follows (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Beginning balance	\$ (628)	\$ (1,107)	\$ (1,481)
Reversal (Provision)	(245)	(40)	(26)
Usage	414	626	361
Translation adjustments	20	(107)	39
Ending balance	<u>\$ (439)</u>	<u>\$ (628)</u>	<u>\$ (1,107)</u>

Changes in low yield compensation reserve for the years ended December 31, 2017 and 2016 are as follows (in thousands):

Beginning in the first quarter of 2018, the Company recognized the low yield compensation reserves as a component of cost of sales, which were previously recorded as a deduction of sales.

	Year Ended December 31,		
	2018	2017	2016
Beginning balance	\$ —	\$ (432)	\$ (480)
Reversal (Provision)	—	(362)	(29)
Usage	—	22	63
Translation adjustments	—	(72)	14
Ending balance	<u>\$ —</u>	<u>\$ (844)</u>	<u>\$ (432)</u>

Changes in volume discounts for the year ended December 31, 2018 are as follows (in thousands):

Beginning balance	\$ —
Provision	(889)
Usage	404
Translation adjustments	6
Ending balance	<u>\$ (479)</u>

The Company has entered into an agreement to sell selected trade accounts receivable to a financial institution from time to time since March 2012. After the sale, the Company does not retain any interest in the receivables and the applicable financial institution collects these accounts receivable directly from the customer. The proceeds from the sales of these accounts receivable totaled \$25,266 thousand, \$18,973 thousand and \$25,146 for the years ended December 31, 2018, 2017 and 2016, respectively, and these sales resulted in pre-tax losses of \$63 thousand, \$55 thousand and \$78 thousand for the years ended December 31, 2018, 2017 and 2016, respectively, which are included in selling, general and administrative expenses in the consolidated statements of operations. Net proceeds of the accounts receivable sale program are recognized in the consolidated statements of cash flows as part of operating cash flows.

The Company uses receivable discount programs with certain customers. These discount arrangements allow the Company to accelerate collection of customers' receivables.

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**4. Inventories**

Inventories as of December 31, 2018 and 2017 consist of the following (in thousands):

	Year Ended December 31,	
	2018	2017
Finished goods	14,334	13,737
Semi-finished goods and work-in-process	39,135	53,148
Raw materials	21,150	12,445
Materials in-transit	1,890	134
Less: inventory reserve	(4,898)	(6,391)
Inventories, net	<u>\$ 71,611</u>	<u>\$ 73,073</u>

Changes in inventory reserve for the years ended December 31, 2018, 2017 and 2016 are as follows (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Beginning balance	\$(6,391)	\$(7,177)	\$(16,033)
Change in reserve			
Inventory reserve charged to costs of sales	(6,014)	(4,789)	(7,646)
Sale of previously reserved inventory	1,773	3,784	4,985
	(4,241)	(1,005)	(2,661)
Write off	5,469	2,620	11,384
Translation adjustments	265	(829)	133
Ending balance	<u>\$(4,898)</u>	<u>\$(6,391)</u>	<u>\$(7,177)</u>

Inventory reserve represents the Company's best estimate in value lost due to excessive inventory level, physical deterioration, obsolescence, changes in price levels, or other causes based on individual facts and circumstances. Inventory reserve relates to inventory items including finished goods, semi-finished goods, work-in-process and raw materials. Write off of this reserve is recognized only when the related inventory has been disposed or scrapped.

**5. Property, Plant and Equipment**

Property, plant and equipment as of December 31, 2018 and 2017 are comprised of the following (in thousands):

	December 31,	
	2018	2017
Buildings and related structures	\$ 70,665	\$ 69,958
Machinery and equipment	323,325	308,713
Others	44,724	42,497
	438,714	421,168
Less: accumulated depreciation	(251,962)	(231,356)
Land	15,419	16,091
Property, plant and equipment, net	<u>\$ 202,171</u>	<u>\$ 205,903</u>

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Aggregate depreciation expenses totaled \$31,229 thousand \$27,498 thousand and \$24,941 thousand for the years ended December 31, 2018, 2017 and 2016, respectively.

As of June 29, 2018, the Company's Korean subsidiary entered into an arrangement whereby it (i) acquired a water treatment facility from SK hynix for \$4,172 thousand to support its fab in Gumi, Korea, and (ii) subsequently sold the water treatment facility for \$4,172 thousand to a third party management company that the Company engaged to run the facility for a 10-year term. This arrangement is accounted for as a financing due to the Company's Korean subsidiary's continuing involvement with the facility. As a result, on the acquisition date, the Company recorded \$4,172 thousand as property, plant and equipment, net, which is depreciated over the water treatment facility's estimated useful life. The Company also recorded the related liabilities of \$553 thousand as other current liabilities and \$3,619 thousand as other non-current liabilities, which relate to the financing and service portions, respectively, of the arrangement and are amortized using the effective interest method over the 10-year contract period.

**6. Intangible Assets**

Intangible assets as of December 31, 2018 and 2017 are comprised of the following (in thousands):

	December 31, 2018		
	Gross amount	Accumulated amortization	Net amount
Technology	\$19,350	\$ (19,350)	\$ —
Customer relationships	27,791	(27,791)	—
Intellectual property assets	11,571	(7,618)	3,953
Intangible assets, net	<u>\$58,712</u>	<u>\$ (54,759)</u>	<u>\$3,953</u>
	December 31, 2017		
	Gross amount	Accumulated amortization	Net amount
Technology	\$20,194	\$ (20,194)	\$ —
Customer relationships	29,002	(29,002)	—
Intellectual property assets	11,319	(7,258)	4,061
Intangible assets, net	<u>\$60,515</u>	<u>\$ (56,454)</u>	<u>\$4,061</u>

Aggregate amortization expense for intangible assets totaled \$819 thousand, \$648 thousand and \$475 thousand for the years ended December 31, 2018, 2017 and 2016, respectively. The aggregate amortization expense of intangible assets for the next five years are estimated to be \$845 thousand, \$827 thousand, \$792 thousand, \$688 thousand and \$491 thousand, for the years ended December 31, 2019, 2020, 2021, 2022 and 2023, respectively.

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**7. Accrued Expenses**

Accrued expenses as of December 31, 2018 and 2017 are comprised of the following (in thousands):

	<u>December 31,</u>	
	<u>2018</u>	<u>2017</u>
Payroll, benefits and related taxes, excluding severance benefits	\$14,548	\$16,724
Withholding tax attributable to intercompany interest income	20,879	18,138
Interest on senior notes	8,226	8,268
Outside service fees	935	1,942
Others	1,662	6,674
Accrued expenses	<u>\$46,250</u>	<u>\$51,746</u>

**8. Derivative Financial Instruments**

The Company's Korean subsidiary from time to time has entered into zero cost collar and forward contracts to hedge the risk of changes in the functional-currency-equivalent cash flows attributable to currency rate changes on US dollar denominated revenues.

Details of derivative contracts as of December 31, 2018 are as follows (in thousands):

<u>Date of transaction</u>	<u>Type of derivative</u>	<u>Total notional amount</u>	<u>Month of settlement</u>
June 27, 2018	Zero cost collar	\$ 18,000	January 2019 to June 2019
June 27, 2018	Forward	\$ 36,000	January 2019 to June 2019

Details of derivative contracts as of December 31, 2017 are as follows (in thousands):

<u>Date of transaction</u>	<u>Type of derivative</u>	<u>Total notional amount</u>	<u>Month of settlement</u>
June 22, 2017	Zero cost collar	\$ 20,000	January 2018 to February 2018
September 28, 2017	Zero cost collar	\$ 54,000	January 2018 to June 2018
September 28, 2017	Forward	\$ 36,000	January 2018 to June 2018

The zero cost collar and forward contracts qualify as cash flow hedges under ASC 815, "Derivatives and Hedging," since at both the inception of the contracts and on an ongoing basis, the hedging relationship was and is expected to be highly effective in achieving offsetting cash flows attributable to the hedged risk during the term of the contracts. The Company is utilizing the "hypothetical derivative" method to measure the effectiveness by comparing the changes in value of the actual derivative versus the change in fair value of the "hypothetical derivative."

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The fair values of the Company's outstanding zero cost collar and forward contracts recorded as assets and liabilities as of December 31, 2018 and 2017 are as follows (in thousands):

		December 31,	
		2018	2017
<b>Derivatives designated as hedging instruments:</b>			
<b>Asset Derivatives:</b>			
Zero cost collars	Other current assets	\$ —	\$ 2,827
Forward	Other current assets	\$ —	\$ 2,352
<b>Liability Derivatives:</b>			
Zero cost collars	Other current liabilities	\$ 117	\$ —
Forward	Other current liabilities	\$ 607	\$ —

Offsetting of derivative liabilities as of December 31, 2018 is as follows (in thousands):

As of December 31, 2018	Gross amounts of recognized liabilities	Gross amounts offset in the balance sheets	Net amounts of liabilities presented in the balance sheets	Gross amounts not offset in the balance sheets		Net amount
				Financial instruments	Cash collateral pledged	
<b>Liability Derivatives:</b>						
Zero cost collars	\$ 117	\$ —	\$ 117	\$ —	\$ (360)	\$ (243)
Forward	\$ 607	\$ —	\$ 607	\$ —	\$ (1,450)	\$ (843)

Offsetting of derivative assets as of December 31, 2017 is as follows (in thousands):

As of December 31, 2017	Gross amounts of recognized assets	Gross amounts offset in the balance sheets	Net amounts of assets presented in the balance sheets	Gross amounts not offset in the balance sheets		Net amount
				Financial instruments	Cash collateral pledged	
<b>Asset Derivatives:</b>						
Zero cost collars	\$ 2,827	\$ —	\$ 2,827	\$ —	\$ —	\$ 2,827
Forward	\$ 2,352	\$ —	\$ 2,352	\$ —	\$ —	\$ 2,352

For derivative instruments that are designated and qualify as cash flow hedges, the effective portion of the gain or loss on the derivative is reported as a component of accumulated other comprehensive income ("AOCI") and reclassified into earnings in the same period or periods during which the hedged transaction affects earnings. Gains and losses on the derivative, representing either hedge ineffectiveness or hedge components excluded from the assessment of effectiveness, are recognized in current earnings.

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The following table summarizes the impact of derivative instruments on the consolidated statement of operations for the years ended December 31, 2018 and 2017 (in thousands):

Derivatives in ASC 815 Cash Flow Hedging Relationships	Amount of Gain (Loss) Recognized in AOCI on Derivatives (Effective Portion)		Location of Gain Reclassified from AOCI into Statement of Operations (Effective Portion)	Amount of Gain Reclassified from AOCI into Statement of Operations (Effective Portion)		Location of Gain (loss) Recognized in Statement of Operations on Derivative (Ineffective Portion)	Amount of Gain (loss) Recognized in Statement of Operations on Derivatives (Ineffective Portion)	
	2018	2017		2018	2017		2018	2017
	Zero cost collars	\$ (747)		\$4,692	Net sales		\$2,103	\$1,501
Forwards	\$ (842)	\$3,044	Net sales	\$1,656	\$ 500	Other income, net	\$ (2,094)	\$ (370)
<b>Total</b>	<b>\$ (1,589)</b>	<b>\$7,736</b>		<b>\$3,759</b>	<b>\$2,001</b>		<b>\$ (2,370)</b>	<b>\$ 236</b>

As of December 31, 2018, the amount expected to be reclassified from accumulated other comprehensive loss into loss within the next twelve months is \$49 thousand.

The Company set aside \$4,000 thousand and \$7,600 thousand of cash deposits to the counterparty, Nomura Financial Investment (Korea) Co., Ltd. (“NFIK”) as required for the zero cost collar and forward contracts outstanding as of December 31, 2018 and 2017, respectively. These cash deposits are recorded as hedge collateral on the consolidated balance sheets.

The Company is required to deposit additional cash collateral with NFIK for any exposure in excess of \$500 thousand. \$1,810 thousand of additional cash collateral was required as of December 31, 2018 and recorded as hedge collateral on the consolidated balance sheets. There was no such cash collateral required as of December 31, 2017. These outstanding zero cost collar and forward contracts are subject to termination if the sum of qualified and unrestricted cash and cash equivalents held by the Company is less than \$30,000 thousand on the last day of a fiscal quarter.

## 9. Product Warranties

Changes in accrued warranty liabilities for the years ended December 31, 2018, 2017 and 2016 are as follows (in thousands):

Beginning in the first quarter of 2018, the Company recognized low yield compensation reserves as a component of cost of sales. Low yield compensation reserves were previously recorded as a deduction of sales.

The Company accounted for this change prospectively as a change in accounting estimate, which resulted in an increase of \$844 thousand in current liabilities, as of January 1, 2018.

	Year Ended December 31,		
	2018	2017	2016
Beginning balance	\$1,060	\$ 466	\$1,425
Change in reversal (provision)	222	(224)	(426)
Usage	(636)	(65)	(527)
Translation adjustments	(36)	39	(6)
Ending balance	<u>\$ 610</u>	<u>\$ 216</u>	<u>\$ 466</u>

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**10. Long-term Borrowings**

Long-term borrowings as of December 31, 2018 and 2017 are as follows (in thousands):

	December 31,	
	2018	2017
5.0% Exchangeable Senior Notes due March 2021	\$ 84,660	\$ 86,250
6.625% senior notes due July 2021	\$224,500	\$225,000
Less: unamortized discount and debt issuance costs	(5,583)	(7,834)
Long-term borrowings, net of unamortized discount and debt issuance costs	<u>\$303,577</u>	<u>\$303,416</u>

**5.0% Exchangeable Senior Notes**

On January 17, 2017, MagnaChip Semiconductor S.A. closed the Exchangeable Notes Offering of \$86,250 thousand aggregate principal amount of 5.0% Exchangeable Notes. Interest on the Exchangeable Notes accrues at a rate of 5.0% per annum, payable semi-annually on March 1 and September 1 of each year, beginning on March 1, 2017. The Exchangeable Notes will mature on March 1, 2021, unless earlier repurchased or converted. Holders may convert their notes at their option at any time prior to the close of business on the business day immediately preceding the stated maturity date.

The Company used a portion of the net proceeds from the issuance to repurchase 1,795,444 shares of common stock under its stock repurchase program at an aggregate cost of \$11,401 thousand.

Upon conversion, the Company will deliver for each \$1,000 principal amount of converted notes a number of shares equally to the exchange rate, which will initially be 121.1387 shares of common stock per \$1,000 principal amount of Exchangeable Notes, equivalent to an initial exchange price of approximately \$8.26 per share of common stock. The exchange rate will be subject to adjustment in some circumstances, but will not be adjusted for any accrued and unpaid interest. In addition, if a “make-whole fundamental change” (as defined in the Exchangeable Notes indenture (the “Exchangeable Notes Indenture”)) occurs prior to the stated maturity date, the Company will increase the exchange rate for a holder who elects to convert its notes in connection with such make-whole fundamental change in certain circumstances. MagnaChip Semiconductor S.A. may also, under certain circumstances, be required to pay additional amounts to holders of Exchangeable Notes if withholding or deduction is required in a relevant tax jurisdiction.

If the Company undergoes a fundamental change, subject to certain conditions, holders may require the Company to repurchase for cash all or part of their notes at a purchase price equal to 100% of the principal amount of the notes to be repurchased, plus accrued and unpaid interest to, but excluding, the fundamental change purchase date. In addition, upon certain events of default described in the Exchangeable Notes Indenture, the trustee or holders of at least 25% principal amount of the Exchangeable Notes may declare 100% of the then outstanding Exchangeable Notes due and payable in full, together with all accrued and unpaid interest thereon. Payment of principal on the Exchangeable Notes may also accelerate and become automatically due and payable upon certain events of default involving bankruptcy or insolvency proceedings involving the Company, MagnaChip Semiconductor S.A. and their significant subsidiaries. The Exchangeable Notes are not redeemable at the option of MagnaChip Semiconductor S.A. prior to the maturity date.

The Exchangeable Notes Indenture contains covenants that limit the ability of the Company, MagnaChip Semiconductor S.A. and the Company’s other restricted subsidiaries to: (i) declare or pay any dividend or make

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any payment or distribution on account of or purchase or redeem the Company's capital stock or equity interests of the restricted subsidiaries; (ii) make any principal payment on, or redeem or repurchase, prior to any scheduled repayment or maturity, any subordinated indebtedness; (iii) make certain investments; (iv) incur additional indebtedness and issue certain types of capital stock; (v) create or incur any lien (except for permitted liens) that secures obligations under any indebtedness; (vi) merge with or into or sell all or substantially all of the Company's assets to other companies; (vii) enter into certain types of transactions with affiliates; (viii) guarantee the payment of any indebtedness; and (ix) designate unrestricted subsidiaries.

These covenants are subject to a number of exceptions and qualifications. Certain of these restrictive covenants will terminate if the Exchangeable Notes are rated investment grade at any time.

The Company incurred debt issuance costs of \$5,902 thousand related to the issuance of the Exchangeable Notes. The debt issuance costs are recorded as a direct deduction from the long-term borrowings in the consolidated balance sheets and amortized to interest expense using the effective interest method over the term of the Exchangeable Notes. Interest expense related to the Exchangeable Notes for year ended December 31, 2018 and 2017 was \$5,678 thousand and \$5,349 thousand, respectively.

In December 2018, the Company repurchased a principal amount equal to \$1,590 thousand of the Exchangeable Notes in the open market, resulting in a loss of \$234 thousand, which was recorded as loss on early extinguishment of long-term borrowings, net in the consolidated statements of operations of the year ended December 31, 2018.

**6.625% Senior Notes**

On July 18, 2013, the Company issued a \$225,000,000 aggregate principal amount of the 2021 Notes at a price of 99.5%. Interest on the 2021 Notes accrues at a rate of 6.625% per annum, payable semi-annually on January 15 and July 15 of each year, beginning on January 15, 2014.

The Company can optionally redeem all or a part of the 2021 Notes according to the following schedule: on or after July 15, 2017, the Company may on any one or more occasions redeem all or a part of the 2021 Notes, at a redemption price equal to 101.656% and 100% of the principal amount of the notes redeemed on or after July 15, 2018 and 2019, respectively, plus accrued and unpaid interest and special interest, if any, on the notes redeemed, to the applicable date of redemption.

The Indenture relating to the 2021 Notes contains covenants that limit the ability of the Company and its restricted subsidiaries to: (i) declare or pay any dividend or make any payment or distribution on account of or purchase or redeem the Company's capital stock or equity interests of the restricted subsidiaries; (ii) make any principal payment on, or redeem or repurchase, prior to any scheduled repayment or maturity, any subordinated indebtedness; (iii) make certain investments; (iv) incur additional indebtedness and issue certain types of capital stock; (v) create or incur any lien (except for permitted liens) that secures obligations under any indebtedness; (vi) merge with or into or sell all or substantially all of the Company's assets to other companies; (vii) enter into certain types of transactions with affiliates; (viii) guarantee the payment of any indebtedness; (ix) enter into sale-leaseback transactions; (x) enter into agreements that would restrict the ability of the restricted subsidiaries to make distributions with respect to their equity to the Company or other restricted subsidiaries, to make loans to the Company or other restricted subsidiaries or to transfer assets to the Company or other restricted subsidiaries; and (xi) designate unrestricted subsidiaries.

These covenants are subject to a number of exceptions and qualifications. Certain of these restrictive covenants will terminate if the 2021 Notes are rated investment grade at any time.

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The Company incurred original issue discount of \$1,125 thousand and debt issuance costs of \$5,120 thousand related to the issuance of the 2021 Notes. The original issue discount and the debt issuance costs are recorded as a direct deduction from the long-term borrowings in the consolidated balance sheets and amortized to interest expense using the effective interest method over the term of the 2021 Notes. Interest expenses related to the 2021 Notes for the year ended December 31, 2018 and 2017 were \$15,719 thousand and \$15,664 thousand, respectively.

In December 2018, the Company repurchased a principal amount equal to \$500 thousand of the 2021 Notes in the open market, resulting in a net gain of \$28 thousand, which was recorded as loss on early extinguishment of long-term borrowings, net in the consolidated statements of operations for the year ended December 31, 2018.

#### 11. Accrued Severance Benefits

The majority of accrued severance benefits are for employees in the Company's Korean subsidiary. Pursuant to the Employee Retirement Benefit Security Act of Korea, eligible employees and executive officers with one or more years of service are entitled to severance benefits upon the termination of their employment based on their length of service and rate of pay. As of December 31, 2018, 98% of all employees of the Company were eligible for severance benefits.

Changes in accrued severance benefits are as follows (in thousands):

	<b>Year Ended December 31,</b>	
	<b>2018</b>	<b>2017</b>
Beginning balance	\$ 149,796	\$ 130,144
Provisions	17,644	24,373
Severance payments	(11,688)	(21,506)
Translation adjustments	(6,344)	16,785
	<u>149,408</u>	<u>149,796</u>
Less: Cumulative contributions to severance insurance deposit accounts	(2,549)	—
The National Pension Fund	(230)	(259)
Group severance insurance plan	(598)	(632)
Accrued severance benefits, net	<u>\$ 146,031</u>	<u>\$ 148,905</u>

The severance benefits funded through the Company's severance insurance deposit accounts, National Pension Fund and group severance insurance plan will be used exclusively for payment of severance benefits to eligible employees. These amounts have been deducted from the accrued severance benefit balance.

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The Company is liable to pay the following future benefits to its non-executive employees upon their normal retirement age (in thousands):

	<b>Severance Benefit</b>
2019	\$ 582
2020	1,082
2021	1,523
2022	1,343
2023	1,802
2024 – 2028	26,316

The above amounts were determined based on the non-executive employees' current salary rates and the number of service years that will be accumulated upon their retirement dates. These amounts do not include amounts that might be paid to non-executive employees that will cease working with the Company before their normal retirement ages.

The above table reflects an effect of a mandatory extension of retirement age in Korea from 57 to 60 under the Employment Promotion for the Aged Act effective from the beginning of 2016.

## 12. Equity Incentive Plans

The Company adopted its 2009 Common Unit Plan, or the 2009 Plan, effective December 8, 2009, which is administered by the Compensation Committee of the Company's Board of Directors (the "Compensation Committee"). The 2009 Plan terminated in connection with the Company's initial public offering in March 2011, and no additional options or other equity awards may be granted under the 2009 Plan. However, options granted under the 2009 Plan prior to its termination will remain outstanding until they are either exercised or expire. The Company adopted its 2011 Equity Incentive Plan, or the 2011 Plan, in March 2010. The Company amended and restated the 2011 Plan in February 2011, and the Company's stockholders approved the amendment in March 2011 to reflect that it became effective in 2011 in connection with the Company's initial public offering in March 2011. The 2011 Plan was amended on October 23, 2017, to revise the clawback policy of the 2011 Plan. The 2011 Plan was amended on April 26, 2018 to amend the tax withholding provisions as they relate to directed sales of shares. Awards may be granted under the 2011 Plan to the Company's employees, officers, directors, or consultants or those of any present or future parent or subsidiary corporation or other affiliated entity. While the Company may grant incentive stock options only to employees, the Company may grant nonstatutory stock options, stock appreciation rights, restricted stock purchase rights or bonuses, restricted stock units, performance shares, performance units and cash-based awards or other stock-based awards to any eligible participant, subject to terms and conditions determined by the Compensation Committee. The term of options shall not exceed ten years from the date of grant. Restricted stock purchase rights shall be exercisable within a period established by the Compensation Committee, which shall in no event exceed thirty days from the effective date of the grant. As of December 31, 2018, an aggregate maximum of 8,695 thousand shares were authorized and 1,025 thousand shares were reserved for all future grants.

Stock options and stock appreciation rights must have exercise prices at least equal to the fair market value of the stock at the time of their grant pursuant to the 2011 Plan. The requisite service period, or the period during which a grantee is required to provide service in exchange for option grants, coincides with the vesting period. Stock options typically vest over one to three years following grant.

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Restricted stock units granted under the 2011 Plan represent a right to receive shares of the Company's common stock when the restricted stock unit vests. No monetary payment (other than applicable tax withholding) shall be required as a condition of receiving shares pursuant to a restricted stock unit, the consideration for which shall be services actually rendered to a participating company or for its benefit. Stock issued pursuant to any restricted stock unit may (but need not) be made subject to vesting conditions based upon the satisfaction of such service requirements, conditions, restrictions or performance criteria as shall be established by the Compensation Committee and set forth in the award agreement evidencing such award. Restricted stock units typically vest over one to three years following grant.

The purchase price for shares issuable under each restricted stock purchase right shall be established by the Compensation Committee in its discretion. No monetary payment (other than applicable tax withholding) shall be required as a condition of receiving shares pursuant to a restricted stock bonus, the consideration for which shall be services actually rendered to a participating company or for its benefit. Stock issued pursuant to any restricted stock award may (but need not) be made subject to vesting conditions based upon the satisfaction of such service requirements, conditions, restrictions or performance criteria as shall be established by the Compensation Committee and set forth in the award agreement evidencing such award. During any period in which stock acquired pursuant to a restricted stock award remain subject to vesting conditions, such stock may not be sold, exchanged, transferred, pledged, assigned or otherwise disposed of other than pursuant to an ownership change event or transfer by will or the laws of descent and distribution. The grantee shall have all of the rights of a stockholder of the Company holding stock, including the right to vote such stock and to receive all dividends and other distributions paid with respect to such stock; provided, however, that if so determined by the Compensation Committee and provided by the award agreement, such dividends and distributions shall be subject to the same vesting conditions as the stock subject to the restricted stock award with respect to which such dividends or distributions were paid. If a grantee's service terminates for any reason, whether voluntary or involuntary (including the grantee's death or disability), then (a) the Company (or its assignee) has the option to repurchase for the purchase price paid by the grantee any stock acquired by the grantee pursuant to a restricted stock purchase right which remain subject to vesting conditions as of the date of the grantee's termination of service and (b) the grantee shall forfeit to the Company any stock acquired by the grantee pursuant to a restricted stock bonus which remain subject to vesting conditions as of the date of the grantee's termination of service. The Company has the right to assign at any time any repurchase right it may have, whether or not such right is then exercisable, to one or more persons as may be selected by the Company.

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The following summarizes restricted stock unit activities for the years ended December 31, 2018, 2017 and 2016.

	<b>Number of Restricted Stock Units</b>	<b>Weighted Average Grant-Date Fair Value of Restricted Stock Units</b>
Outstanding at January 1, 2016	135,370	7.72
Granted	505,689	5.71
Vested	(101,240)	7.09
Forfeited	(21,339)	6.24
Outstanding at December 31, 2016	<u>518,480</u>	<u>\$ 5.94</u>
Granted	172,716	11.15
Vested	(368,555)	5.72
Forfeited	(830)	8.33
Outstanding at December 31, 2017	<u>321,811</u>	<u>\$ 8.99</u>
Granted	739,231	9.64
Vested	(373,620)	9.24
Forfeited	(33,462)	10.31
Outstanding at December 31, 2018	<u>653,960</u>	<u>\$ 9.52</u>

Total compensation expenses recorded for the restricted stock units were \$4,096 thousand, \$1,601 thousand and \$2,292 thousand for the years ended December 31, 2018, 2017 and 2016, respectively. As of December 31, 2018, there was \$3,234 thousand of total unrecognized compensation cost related to unvested restricted stock units, which is expected to be recognized over a weighted average future period of 1.0 year. Total fair value of restricted stock units vested were \$2,647 thousand, \$2,107 thousand and \$717 thousand for the years ended December 31, 2018, 2017 and 2016, respectively.

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The following summarizes stock option activities for the years ended December 31, 2018, 2017 and 2016. At the date of grant, all options had an exercise price not less than the fair value of common stock (aggregate intrinsic value in thousands):

	Number of Options	Weighted Average Exercise Price of Stock Options	Aggregate Intrinsic Value of Stock Options	Weighted Average Remaining Contractual Life of Stock Options
Outstanding at January 1, 2016	3,179,899	\$ 9.61	\$ —	6.7 years
Granted	827,406	6.04	—	—
Forfeited	(282,537)	7.67	—	—
Exercised	(296,103)	5.85	806	—
Outstanding at December 31, 2016	<u>3,428,665</u>	\$ 9.23	\$ 525	6.7 years
Vested and expected to vest at December 31, 2016	3,389,763	9.27	508	6.7 years
Exercisable at December 31, 2016	<u>2,531,243</u>	10.11	236	5.9 years
Outstanding at January 1, 2017	3,428,665	\$ 9.23	\$ 525	6.7 years
Granted	70,865	10.43	—	—
Forfeited	(88,443)	12.77	—	—
Exercised	(539,183)	6.94	1,540	—
Outstanding at December 31, 2017	<u>2,871,904</u>	\$ 9.59	\$ 6,073	6.2 years
Vested and expected to vest at December 31, 2017	2,865,475	9.59	6,050	6.2 years
Exercisable at December 31, 2017	<u>2,395,979</u>	10.11	4,603	5.7 years
Outstanding at January 1, 2018	2,871,904	\$ 9.59	\$ 6,073	6.2 years
Forfeited	(34,807)	10.97	—	—
Exercised	(162,341)	6.97	737	—
Outstanding at December 31, 2018	<u>2,674,756</u>	\$ 9.73	\$ 395	5.2 years
Vested and expected to vest at December 31, 2018	2,674,266	9.73	394	5.2 years
Exercisable at December 31, 2018	<u>2,544,565</u>	9.94	306	5.1 years

Total compensation expenses recorded for the stock options were \$313 thousand, \$734 thousand and \$1,551 thousand for the years ended December 31, 2018, 2017 and 2016, respectively. As of December 31, 2018, there was \$13 thousand of total unrecognized compensation cost related to unvested stock options, which is expected to be recognized over a weighted average future period of 0.2 years. Total weighted average grant-date fair value of vested options was \$786 thousand, \$794 thousand and \$1,011 thousand for the years ended December 31, 2018, 2017 and 2016, respectively.

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The Company utilizes the Black-Scholes option-pricing model to measure the fair value of each option grant. There was no grant of stock options during the year ended December 31, 2018. The following summarizes the grant-date fair value of options granted for the years ended December 31, 2017 and 2016 and assumptions used in the Black-Scholes option-pricing model on a weighted average basis. For the year ended December 31, 2017, the expected volatility was estimated using historical volatility of the Company's share prices. For the years ended December 31, 2016, it was based on historical volatility of share prices of similar public entities:

	Year Ended December 31,		
	2018	2017	2016
Grant-date fair value of option	—	\$ 5.02	\$ 1.54
Expected term	—	2.5 Years	2.7 Years
Risk-free interest rate	—	1.2%	1.0%
Expected volatility	—	81.7%	36.8%
Expected dividends	—	—	—

The number and weighted average grant-date fair value of the unvested stock options are as follows:

	Year Ended December 31,					
	2018		2017		2016	
	Number	Weighted Average Grant-Date Fair Value	Number	Weighted Average Grant-Date Fair Value	Number	Weighted Average Grant-Date Fair Value
Unvested options at the beginning of the period	475,925	\$ 2.19	897,421	\$ 1.72	631,997	\$ 2.40
Granted options during the period	—	—	70,865	5.02	827,406	1.54
Vested options during the period	(313,160)	2.51	(455,301)	1.74	(446,570)	2.26
Forfeited options during the period	(14,738)	1.73	(19,031)	1.77	(85,934)	1.88
Exercised options during the period	(17,836)	1.66	(18,029)	1.59	(29,478)	1.24
Unvested options at the end of the period	<u>130,191</u>	\$ 1.54	<u>475,925</u>	\$ 2.19	<u>897,421</u>	\$ 1.72

**13. Restructuring and Other Charges (Gain), Net**

As of December 21, 2016, the Company entered into a purchase and sale agreement to sell a building located in Cheongju, South Korea. The building has historically been used to house the Company's six-inch fabrication facility in Cheongju, South Korea (the "6-inch fab") and became vacant upon the closure of the fabrication facility in February 2016. As of December 31, 2015, the building was fully impaired. The Company received proceeds of \$18,204 thousand, including a \$1,655 thousand value-added tax, for the sale of the building in December 2016. As the Company was obligated to perform certain removal construction work, it recorded the \$18,204 thousand proceeds as restricted cash and \$16,549 thousand as deposits received in its consolidated balance sheets as of December 31, 2016. During the first quarter of 2017, the Company completed all removal construction work necessary to transfer the title of the building, and the \$18,204 thousand of restricted cash was fully released. Accordingly, the Company recorded \$16,635 thousand as restructuring gain in the consolidated statements of operations for the three months ended March 31, 2017.

In March 2017, the Company sold its sensor product business, which was included in and reported as part of Display Solutions line of its Standard Products Group, to a third party for proceeds of \$1,295 thousand, in an

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effort to improve our overall profitability. The Company recorded \$375 thousand net gain from this sale after deducting the book values of certain assets transferred to the buyer.

During the first quarter of 2016, the Company completed all procedures necessary to sell all machineries in its closed 6-inch fab and recognized the \$7,785 thousand of restructuring gain from the related deposit of \$8,165 thousand received as of December 31, 2015, net of certain direct selling costs.

**14. Early Termination Charges**

As of February 22, 2017, the Company's Board of Directors approved the implementation of a new headcount reduction plan (the "Headcount Reduction Plan"). As of June 30, 2017, 352 employees elected to resign from the Company during the period in which the Headcount Reduction Plan was offered. The total cash cost of approximately \$31 million has been fully paid. The Company recorded in its consolidated statement of operations \$11,107 thousand and \$2,262 thousand in termination related charges as early termination charges for the three months ended March 31, 2017 and June 30, 2017, respectively. The remaining total estimated cost relates to statutory severance benefits, which are required by law and have already been fully accrued in the Company's financial statements.

**15. Foreign Currency Gain (Loss), Net**

Net foreign currency gain or loss includes non-cash translation gain or loss associated with intercompany balances. A substantial portion of the Company's net foreign currency gain or loss is non-cash translation gain or loss associated with intercompany long-term loans to our Korean subsidiary. The loans are denominated in US dollars and are affected by changes in the exchange rate between the Korean won and the US dollar. As of December 31, 2018, 2017 and 2016, the outstanding intercompany loan balances including accrued interest between the Korean subsidiary and the Dutch subsidiary were \$666,597 thousand, \$677,267 thousand and \$598,212 thousand, respectively. The Korean won to US dollar exchange rates were 1,118.1:1, 1,071.4:1 and 1,208.5:1 using the first base rate as of December 31, 2018, 2017 and 2016, respectively, as quoted by the KEB Hana Bank.

**16. Income Taxes**

The Company's income tax expenses are composed of domestic and foreign income taxes depending on the relevant tax jurisdictions. Domestic income (loss) before taxes and income tax expenses are generated or incurred in the United States, where the parent company resides.

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The components of income tax expenses are as follows (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Income (loss) before income tax expenses			
Domestic	\$ 3,492	\$27,461	\$ (1,738)
Foreign	(2,743)	58,630	(24,133)
	<u>\$ 749</u>	<u>\$86,091</u>	<u>\$ (25,871)</u>
Current income tax expense (benefit)			
Domestic	\$ (383)	\$ (359)	\$ (6)
Foreign	5,010	3,680	3,386
Uncertain tax position liability (domestic)	(2)	(476)	12
Uncertain tax position liability (foreign)	(46)	(1,635)	339
	<u>4,579</u>	<u>1,210</u>	<u>3,731</u>
Deferred income taxes expense (benefit)			
Foreign	70	(55)	13
Total income tax expenses	<u>\$ 4,649</u>	<u>\$ 1,155</u>	<u>\$ 3,744</u>
Effective tax rate	<u>620.6%</u>	<u>1.3%</u>	<u>(14.5)%</u>

The differences between the annual effective tax rates and the US federal statutory rates of 21.0%, 35% and 35% in 2018, 2017 and 2016, respectively, primarily result from the non-income based withholding tax attributable to intercompany interest income of the Company's Dutch subsidiary, application of lower tax rates associated with certain earnings from the Company's operations outside the US, the parent Company's interest income, which is non-taxable for US tax purposes and the change of deferred tax assets and valuation allowance. The statutory income tax rate of the Company's Korean operating subsidiary was approximately 24.2% in 2018, 2017 and 2016.

The Company's income tax expenses are primarily attributable to interest on intercompany loan balances. The increase in income tax expense for the year ended December 31, 2018 was primarily attributable to taxable income generated by the Company's Korean subsidiary, combined with its ability to utilize net operating carryforwards for up to 70% of the taxable income, and a decrease in the Company's uncertain tax positions that resulted in a reduction of income tax expense for the year ended December 31, 2017.

The income tax expense of \$3,744 thousand for 2016 included the impact of the reversal of withholding tax payable with respect to the waiver of the accrued interest on the loans granted to our Korean subsidiary by our Dutch subsidiary in 2015. The Company's Korean and Dutch subsidiaries agreed that the Company's Dutch subsidiary waived and released a partial amount of unpaid interest of \$174 million on its intercompany loans granted to the Company's Korean subsidiary in order to decrease the cumulative losses of the Company's Korean subsidiary to enhance the subsidiary's credit standing under the local banking rules. This transaction created a taxable income for the Company's Korean subsidiary but did not result in a liability because of the utilization of expired loss carryforwards, which is deductible only against gains from cancellation of debt. The loss was not tax deductible for the Company's Dutch subsidiary. This transaction also resulted in taxable loss for the Company's Luxemburg subsidiary and this tax benefit was offset by an increase in the change in valuation allowance. In connection with the waiver of unpaid interest, the related withholding tax was reversed, resulting in the recognition of income tax benefit of \$17.8 million as of December 31, 2015.

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The provision for domestic and foreign income taxes incurred is different from the amount calculated by applying the statutory tax rate to the net income before income taxes. The significant items causing this difference are as follows (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Provision computed at statutory rate	\$ 157	\$ 30,223	\$ (9,055)
State tax	46	5,445	(1,383)
Change in statutory tax rates	1	13,438	—
Difference in foreign tax rates	377	(17,789)	3,378
Permanent differences			
Derivative assets adjustment	(1,111)	1,937	(149)
TPECs, hybrid and other interest	(5,555)	(7,526)	(10,353)
Thin capitalization	1,262	1,888	2,120
Permanent foreign currency gain (loss)	1,235	(838)	(54)
Penalty	436	4,001	689
Other permanent differences	445	633	50
Withholding tax	3,270	3,339	3,092
Foreign exchange rate adjustment	(3,725)	16,075	(1,838)
Change in valuation allowance	6,260	(56,744)	10,095
Tax credits claimed	(416)	(659)	(706)
Tax credits expired	817	2,638	1,578
Uncertain tax positions liability	(48)	(2,111)	351
Change in net operating loss carry-forwards	—	6,878	—
Others	1,198	327	5,929
Income tax expenses	<u>\$ 4,649</u>	<u>\$ 1,155</u>	<u>\$ 3,744</u>

The permanent differences above include non-taxable Tracking Preferred Equity Certificates (TPECs) and interest income from other financial instruments for US tax purposes and non-deductible interest expense according to the thin capitalization rule for Korean tax purposes. The \$3,725 thousand tax impact to foreign exchange rate adjustment in 2018 was mainly related to the foreign exchange translation gain on the Company's Luxembourg and Dutch subsidiaries' foreign currency assets and liabilities. The Company has recorded a full valuation allowance against the deferred tax assets, net of its deferred tax liabilities, and against certain foreign subsidiaries' deferred tax assets. The \$6,260 thousand tax impact to change in valuation allowance in 2018 was a result of the increase in valuation allowance against the Company's deferred tax assets. The income tax expense of \$13,438 thousand in 2017 due to change in statutory tax rates was primarily related to a remeasurement of deferred tax assets and liabilities using the reduced US federal statutory rate of 21.0% from 35.0% effective January 1, 2018.

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A summary of the composition of net deferred income tax assets (liabilities) as of December 31, 2018 and 2017 are as follows (in thousands):

	Year Ended December 31,	
	2018	2017
<b>Deferred tax assets</b>		
Inventory reserves	\$ 8,274	\$ 1,630
Derivative liabilities	175	—
Accrued expenses	3,210	2,826
Product warranties	67	52
Other reserves	187	356
Property, plant and equipment	1,906	9,759
Intangible assets	12	35
Accumulated severance benefits	36,166	36,245
Foreign currency translation losses	28,718	20,067
NOL carry-forwards	164,824	175,543
Tax credit	18,352	20,583
Other long-term payable	3,634	1,801
Others	5,132	3,546
Total deferred tax assets	270,657	272,443
Less: Valuation allowance	(248,633)	(251,132)
	<u>22,024</u>	<u>21,311</u>
<b>Deferred tax liabilities</b>		
Derivative assets	—	1,253
Foreign currency translation gain (loss)	17,777	18,187
Prepaid expense	3,612	1,464
Others	420	143
Total deferred tax liabilities	21,809	21,047
Net deferred tax assets	\$ 215	\$ 264
<b>Net deferred tax assets reported in</b>		
Other non-current assets	\$ 215	\$ 264

The valuation allowances at December 31, 2018 and 2017 are primarily attributable to deferred tax assets for the uncertainty in taxable income at certain of the Company's foreign subsidiaries, including its Korean operating subsidiary.

Changes in valuation allowance for deferred tax assets for the years ended December 31, 2018, 2017 and 2016 are as follows (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Beginning balance	\$251,132	\$281,473	\$279,867
Charged to expense	7,653	(54,816)	10,095
NOL/tax credit claimed/expired	(1,393)	(1,928)	(872)
Translation adjustments	(8,759)	26,403	(7,617)
Ending balance	<u>\$248,633</u>	<u>\$251,132</u>	<u>\$281,473</u>

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The evaluation of the recoverability of the deferred tax asset and the need for a valuation allowance requires the Company to weigh all positive and negative evidence to reach a conclusion that it is more likely than not that all or some portion of the deferred tax asset will not be realized. The weight given to the evidence is commensurate with the extent to which it can be objectively verified. The more negative evidence that exists, the more positive evidence is necessary and the more difficult it is to support a conclusion that a valuation allowance is not needed. Realization of the future tax benefits related to the deferred tax assets is dependent on many factors, including the Company's ability to generate future taxable income within the period during which the temporary differences reverse, the outlook for the economic environment in which the Company operates and the overall future industry outlook.

As of December 31, 2018 and 2017, the Company had net deferred tax assets of \$215 thousand and \$264 thousand, respectively, mainly related to the Company's Japanese subsidiary. As of December 31, 2018, 2017 and 2016, the Company recorded a valuation allowance of \$248,633 thousand, \$251,132 thousand and \$281,473 thousand on its deferred tax assets related to temporary differences, net operating loss carry-forwards and tax credits of domestic and foreign subsidiaries. The Company recorded these valuation allowances on deferred tax assets based on its assessment that the negative evidence of expected losses in early future years outweighs the positive evidence of historical income.

As of December 31, 2018, the Company had approximately \$730,472 thousand of net operating loss carry-forwards available to offset future taxable income, of which \$246,463 thousand is associated with the Company's Korean subsidiary, which expires in part at various dates through 2026. The net operating loss of \$297,848 thousand associated with the Company's Luxembourg subsidiary is mainly attributable to certain expenses incurred in connection with its shareholding in the Company's Dutch subsidiary. Although this net operating loss amount is carried forward indefinitely, it will be recaptured on future capital gain. The remaining net operating loss mainly relates to the US parent company and its domestic subsidiary and substantially all of the net operating loss expires at various dates through 2038. The Company utilized net operating loss of \$369 thousand, \$417 thousand, and \$279 thousand, for the years ended December 31, 2018, 2017 and 2016, respectively. The Company also has Korean, Dutch and US tax credit carry-forwards of approximately \$4,032 thousand, \$14,311 thousand and \$9 thousand, respectively, as of December 31, 2018. The Korean tax credits expire at various dates starting from 2019 to 2023, and the Dutch tax credits are carried forward to be used for an indefinite period of time.

**United States Tax Reform**

On December 22, 2017, H.R. 1, originally known as the Tax Cuts and Jobs Act in the US was enacted (the "Tax Reform"). The Tax Reform reduces the US federal statutory rate to 21.0% from 35.0% effective January 1, 2018. The Tax Reform contains several key provisions that affect the Company's assessment on its deferred taxes, which include the remeasurement of deferred taxes, recognition of liabilities for taxes on mandatory deemed repatriations and certain other foreign income, and reassessment of the realizability of deferred tax assets. As of December 31, 2017, the Company remeasured its deferred tax assets and liabilities at the reduced rate of 21%, assessed the realizability of remeasured deferred tax assets and reduced its net deferred tax assets by \$13,438 thousand in 2017.

During 2018, the Company analyzed the mandatory deemed repatriation tax and concluded that the Company has no tax liability on previously untaxed accumulated earnings and profits of its foreign subsidiaries. The Company also reviewed the other components of the Tax Reform and based on its evaluation, no material impact was recorded to the Company's consolidated financial statements for the year ended December 31, 2018.

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**Uncertainty in Income Taxes**

The Company and its subsidiaries file income tax returns in Korea, Japan, Taiwan, the US and in various other jurisdictions. The Company is subject to income- or non-income tax examinations by tax authorities of these jurisdictions for all open tax years.

As of December 31, 2018, 2017 and 2016, the Company recorded \$426 thousand, \$475 thousand and \$1,768 thousand of unrecognized tax benefits, respectively.

A tabular reconciliation of the total amounts of unrecognized tax benefits at the beginning and end of each period is as follows (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Unrecognized tax benefits, balance at the beginning	\$475	\$1,768	\$1,779
Additions based on tax positions related to the current year	10	10	371
Additions (reductions) for tax positions of prior years	—	(676)	317
Lapse of statute of limitations	(51)	(735)	(670)
Translation adjustments	(8)	108	(29)
Unrecognized tax benefits, balance at the ending	<u>\$426</u>	<u>\$ 475</u>	<u>\$1,768</u>

The accrued interest and penalties totaled \$0, \$8 thousand and \$691 thousand as of December 31, 2018, 2017 and 2016, respectively.

The Company is currently unaware of any uncertain tax positions that could result in significant additional payments, accruals, or other material deviation in this estimate over the next 12 months.

**Other Matter**

In September 2017, the Company's Korean subsidiary was notified that the KNTS would be examining its income- and non-income-based taxes for its 2012 to 2014 tax years. The KNTS conducted its audit, primarily focusing on non-income-based VAT transactions associated with the Restatement periods.

As a result, the aggregate tax and penalty assessment by the KNTS was \$6,030 thousand, of which \$3,336 thousand had already been accrued by the Company in its financial statements in connection with the Restatement filed in 2015. Such amount also included \$548 thousand related to employee withholding amounts and associated penalties, and to the extent any such tax obligation was that of the Company's Korean subsidiary's employees, the Company expects to seek reimbursement of the applicable amounts from those employees. In addition, KNTS assessed an administrative fine of \$2,034 thousand in connection with the above-described tax audit.

During the fourth quarter of 2017, the Company recorded the \$4,179 thousand related to this additional tax assessment and associated penalties and administrative fine as selling, general and administrative expenses in its consolidated statements of operations for the year ended December 31, 2017 and recorded the \$548 thousand related to employee withholding amounts as other receivables in our consolidated balance sheets as of December 31, 2017 as the Company expects to seek reimbursement of the applicable amounts from those employees. Of the \$548 thousand, the Company has collected \$118 thousand and established an allowance of \$430 thousand, which it has recorded as a selling, general and administrative expense for the three months ended September 30, 2018.



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Upon the adoption of the new revenue standard, the Company's revenue for Foundry Services Group is disaggregated depending on the timing of revenue recognition (in thousands):

	Year Ended December 31, 2018		
	Revenue recognized at the time of shipment or delivery	Revenue recognized over time	Total
<b>Net Sales</b>			
Foundry Services Group	\$ 80,578	\$ 244,734	\$ 325,312

The following is a summary of net sales by geographic region, based on the location to which the products are billed (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Korea	\$282,516	\$279,883	\$219,618
Asia Pacific (other than Korea)	380,598	322,595	391,875
U.S.A.	37,483	35,089	33,201
Europe	47,831	41,109	42,274
Others	2,470	996	1,001
Total	<u>\$750,898</u>	<u>\$679,672</u>	<u>\$687,969</u>

For the years ended December 31, 2018, 2017 and 2016, the Company's net sales in Greater China (China, Hong Kong and Macau) represented 66.6%, 49.7% and 62.4%, respectively, and net sales in Taiwan represented 26.2%, 36.4% and 27.6%, respectively, of the Company's net sales in the Asia Pacific (other than Korea).

Net sales from the Company's top ten largest customers accounted for 61%, 57% and 64% for the years ended December 31, 2018, 2017 and 2016, respectively.

For the year ended December 31, 2018, the Company had two customers that represented 19.3% and 13.3% of its net sales. For the year ended December 31, 2017, the Company had one customer that represented 15.6% of its net sales. For the year ended December 31, 2016, the Company had two customers that represented 23.5% and 11.4% of its net sales, respectively.

98% of the Company's property, plant and equipment are located in Korea as of December 31, 2018.

**18. Commitments and Contingencies**

***Operating Agreements with SK Hynix***

In connection with the acquisition of the non-memory semiconductor business from SK Hynix on October 4, 2004 (the "Original Acquisition"), the Company entered into several agreements with SK Hynix, including a non-exclusive cross license that provides the Company with access to certain of SK Hynix's intellectual property for use in the manufacture and sale of non-memory semiconductor products. The Company also agreed to provide certain utilities and infrastructure support services to SK Hynix.

Upon the closing of the Original Acquisition, the Company's Korean subsidiary and SK Hynix also entered into lease agreements under which the Company's Korean subsidiary leases space to SK Hynix in several

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buildings, primarily warehouses and utility facilities, in Cheongju, Korea. These leases are generally for an initial term of 20 years plus an indefinite number of renewal terms of 10 years each. Each of the leases is cancelable upon 90 days' notice by the lessee. The Company also leases certain land from SK Hynix located in Cheongju, Korea. The term of this lease is indefinite unless otherwise agreed by the parties, and as long as the buildings remain on the lease site and are owned and used by the Company for permitted uses.

***Operating Leases***

The Company leases land, office space and equipment under various operating lease agreements with various terms. Rental expenses were approximately \$8,053 thousand, \$7,498 thousand and \$8,898 thousand for the years ended December 31, 2018, 2017 and 2016, respectively.

As of December 31, 2018, the minimum aggregate rental payments due under non-cancelable lease contracts are as follows (in thousands):

2019	\$ 4,319
2020	3,569
2021	1,570
2022	1,319
2023	1,309
2024 and thereafter	13,978
	<u>\$26,064</u>

***Long-term Purchase Agreements***

The Company purchases raw materials from a variety of vendors. During the normal course of business, in order to manage manufacturing lead times and help assure adequate supply, the Company from time to time may enter into multi-year purchase agreements, which specify future quantities and pricing of materials to be supplied by the vendors. The Company reviews the terms of the long-term supply agreements and assesses the need for any accrual for estimated losses, such as lower of cost or net realizable value that will not be recovered by future sales prices. No such accrual was required as of December 31, 2018 or 2017.

***SEC Enforcement Staff Review***

In March 2014, the Company voluntarily reported to the Securities and Exchange Commission, or the SEC, that the Company's Audit Committee had determined that the Company incorrectly recognized revenue on certain transactions and as a result would restate its financial statements, and that the Audit Committee had commenced an independent investigation. Over the course of 2014 and the first two quarters of 2015, the Company voluntarily produced documents to the SEC regarding the various accounting issues identified during the independent investigation, and whether the Company's hiring of an accountant from the Company's independent registered public accounting firm impacted that accounting firm's independence. On July 22, 2014, the Staff of the SEC's Division of Enforcement obtained a Formal Order of Investigation. On March 12, 2015, the SEC issued a subpoena for documents to the Company in connection with its investigation. On May 1, 2017, the SEC announced that it had reached a final settlement with the Company, resolving the SEC's investigation. In that connection, the Company has consented, without admitting or denying the SEC's findings, to the entry of an administrative order by the SEC directing that the Company cease and desist from committing or causing any violations of certain provisions of the federal securities laws and related SEC regulations. The SEC's

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administrative order was entered on May 1, 2017. The SEC imposed a monetary penalty of \$3,000 thousand on the Company. In the first quarter ended March 31, 2017, the Company established a reserve in that amount for the potential settlement of this matter. The reserved monetary penalty of \$3,000 thousand was paid to the SEC during the second quarter of 2017. The Company also agreed to an undertaking to cooperate fully with the SEC in any and all investigations, litigations or other proceedings relating to or arising from the matters described in the SEC's order. In connection with the settlement, the SEC considered remedial acts promptly undertaken by the Company and its cooperation with the SEC staff during the course of the investigation. Among other things, as previously disclosed in the Company's filings with the SEC, the Audit Committee of the Company self-investigated and self-reported the accounting errors, selected new management and implemented various additional controls designed to prevent similar errors going forward.

***Securities Class Action Complaints***

On March 12, 2014, a purported class action was filed against the Company and certain of the Company's now-former officers. On April 21, 2015, a related purported class action lawsuit (Okla. Police Pension & Retirement Sys. v. MagnaChip Semiconductor Corp., et al., No. 3:15-cv-01797) was filed against the Company, certain of the Company's current directors and former and now-former officers, a shareholder of the Company, and certain financial firms that acted as underwriters of the Company's public stock offerings. On June 15, 2015, these two class action lawsuits were consolidated. On June 26, 2015, an amended complaint was filed in the consolidated action, against the Company, certain of the Company's current directors and former officers, a shareholder of the Company, and certain financial firms that acted as underwriters of the Company's public stock offerings on behalf of a putative class consisting of all persons other than the defendants who purchased or acquired the Company's securities between February 1, 2012 and February 12, 2015 and a putative subclass consisting of all purchasers of the Company's common stock pursuant to or traceable to a shelf registration statement and prospectus issued in connection with the Company's February 6, 2013 public stock offering. The consolidated amended complaint asserted claims on behalf of the putative class for (i) alleged violations of Section 10(b) of the Exchange Act and Rule 10b-5 promulgated thereunder by the Company and certain of the Company's current directors and former officers, (ii) alleged violations of Section 20(a) of the Exchange Act by certain of the Company's current directors and former officers, and (iii) alleged violations of Sections 20(a) and 20(A) of the Exchange Act by a shareholder. The consolidated amended complaint also asserted claims on behalf the subclass for (i) alleged violations of Section 11 of the Securities Act by the Company, certain of the Company's current directors and former officers, and certain financial firms that acted as underwriters of the Company's public stock offerings, (ii) alleged violations of Section 12 of the Securities Act by the Company, certain of the Company's current directors and former officers, a shareholder of the Company, and certain financial firms that acted as underwriters of the Company's public stock offerings, (iii) alleged violations of Section 15 of the Securities Act by the Company, certain of the Company's former officers, and a shareholder of the Company.

On December 10, 2015, the Company and certain of its current and former officers and directors entered into a Memorandum of Understanding with the plaintiffs' representatives to memorialize an agreement in principle to settle the consolidated securities class action lawsuit, Thomas, et al. v. MagnaChip Semiconductor Corp. et al., Civil Action No. 3:14-CV-01160-JST, pending in the United States District Court for the Northern District of California (the "Class Action Litigation"). On February 5, 2016, the plaintiffs in the consolidated securities class action filed a motion for preliminary approval of the settlement, as well as the stipulation and agreement of settlement and related exhibits. The stipulation and agreement of settlement provided that all claims asserted against all defendants in the Class Action Litigation except for Avenue Capital Management II, L.P. would be released. The stipulation and agreement of settlement also provided for an aggregate settlement

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payment by the Company of \$23,500 thousand, which would include all attorneys' fees, costs of administration and plaintiffs' out-of-pocket expenses, lead plaintiff compensatory awards and disbursements. The settlement also included the dismissal of all claims against the Company and the named individuals in the Class Action Litigation without any liability or wrongdoing attributed to them.

On April 13, 2016, the plaintiffs filed a renewed motion for preliminary approval of the settlement. On July 18, 2016, the court granted plaintiffs' renewed motion for preliminary approval of the settlement. On October 17, 2016, plaintiffs filed their motions for final approval of the settlement and plan of allocation of the settlement and for an award of attorneys' fees, reimbursement of litigation expenses, and reimbursement of the costs and expenses of Lead Plaintiff Keith Thomas. On December 1, 2016, following a hearing on November 21, 2016 and an order dated November 21, 2016, the court entered a supplemental order and final judgment (the "Judgment") granting final approval of the settlement. The Judgment was not appealed within the applicable appeals period (on or before January 3, 2017). The settlement therefore became effective after the expiration of the appeals period. The settlement was fully funded by insurance proceeds.

The Company recorded the \$23,500 thousand of the settlement obligation for the Class Action Litigation as accrued expenses in the consolidated balance sheets as of December 31, 2015 and as selling, general and administrative expenses in the consolidated statements of operations for the year ended December 31, 2015. The Company recorded \$29,571 thousand of the proceeds from the insurers as other receivables in the consolidated balance sheets as of December 31, 2015 and as a deduction of the selling, general and administrative expenses in the consolidated statements of operations for the year ended December 31, 2015. The proceeds from the insurers of \$29,571 thousand were deposited into the Company's escrow account during the first quarter of 2016 and the Company reclassified the \$29,571 thousand deposits recorded in other receivables into restricted cash. During the third quarter of 2016, the Company disbursed the aggregate settlement payment of \$23,500 thousand after the court granted plaintiffs' renewed motion for preliminary approval of the settlement in July 2016. Upon the settlement payment, \$6,114 thousand of the insurance proceeds remained in the Company's escrow account. For subsequent treatment of the escrow amount, see "Shareholder Derivative Complaints" below.

**Shareholder Derivative Complaints**

A shareholder derivative action, styled *Hemmingson et al. v. Elkins et al.*, Case No. 1-15-cv-278614, was filed in the Superior Court of the State of California in and for Santa Clara County on March 25, 2015, naming as defendants certain of the Company's current directors and former and now-former officers, as well as a shareholder of the Company, and naming the Company as a nominal defendant. The complaint in this action asserted claims for (i) alleged breaches of fiduciary duty by certain of the Company's current directors and former and now-former officers for purportedly knowingly failing to maintain adequate internal controls over its accounting and reporting functions and disseminating to shareholders certain alleged materially false and misleading statements, (ii) alleged breaches of fiduciary duty by certain of the Company's current directors and a current shareholder of the Company for purported insider trading, and (iii) alleged unjust enrichment by a shareholder of the Company for purported insider trading.

On June 1, 2015, a shareholder derivative action was filed in the Superior Court of the State of California, Santa Clara County styled *Bushansky v. Norby, et al.*, No. 1-15-CV-281284 (PHK) (Cal. Super. Ct. Santa Clara Cnty.). The complaint names as defendants certain of the Company's current directors and former officers, and a shareholder of the Company, with the Company being named as a nominal defendant. The complaint asserted claims for (i) alleged breaches of fiduciary duties by certain of the Company's current directors and former officers for knowingly failing to maintain adequate internal controls over the Company's accounting and

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reporting functions and disseminating to shareholders certain alleged materially false and misleading statements; and (ii) alleged aiding and abetting of such breaches of fiduciary duties by all defendants.

On January 22, 2016, the Company and the plaintiffs in the *Hemmingson* and *Bushansky* actions entered into and filed a stipulation of settlement with the Superior Court of the State of California, Santa Clara County. The settlement provided for the resolution of all of the pending claims in both shareholder derivative actions against the Company and the individual defendants, without any liability or wrongdoing attributed to them. The settlement also provided for an aggregate payment from the Company defendants' directors and officers insurance policies of \$3,000 thousand to be made to an escrow account, which would be remitted to the Company once the settlement becomes final, less (i) any applicable costs of such escrow account, (ii) any amount awarded by the court to the plaintiff's counsel for attorney's fees and litigation expenses and (iii) the cost of providing notice of the settlement to the Company's stockholders. The proposed settlement also required that the Company implement certain corporate governance measures. The \$3,000 thousand settlement payment was included in the insurance proceeds of \$29,571 thousand as discussed in "Securities Class Action Complaints" above.

On February 22, 2016, the plaintiffs filed an unopposed motion for preliminary approval of the proposed derivative settlement. On June 10, 2016, the court granted plaintiffs' motion for preliminary approval of the proposed settlement. On October 18, 2016, after a hearing held on October 14, 2016, the court entered its order and final judgment (the "Shareholder Derivative Judgment") granting final approval of the proposed settlement and awarding plaintiffs' counsel \$750 thousand for attorneys' fees and litigation expenses. The Shareholder Derivative Judgment was not appealed within the applicable appeals period (on or before December 19, 2016). The settlement therefore became effective after the expiration of the appeals period and \$2,258 thousand (\$2,250 thousand plus applicable interest) was paid to the Company from the escrow account, previously recorded as restricted cash, in December 2016. The remaining restricted cash related to insurance proceeds of \$3,078 thousand was also released in December 2016.

**19. Accumulated Other Comprehensive Income (Loss)**

Accumulated other comprehensive income (loss) consists of the following at December 31, 2018 and 2017, respectively (in thousands):

	Year Ended December 31,	
	2018	2017
Foreign currency translation adjustments	\$ (20,061)	\$ (38,413)
Derivative adjustments	(49)	5,299
Total	<u>\$ (20,110)</u>	<u>\$ (33,114)</u>

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Changes in accumulated other comprehensive income (loss) for the years ended December 31, 2018, 2017 and 2016 are as follows (in thousands):

	Foreign currency translation adjustments	Derivative adjustments	Total
<b>Year Ended December 31, 2018</b>			
Beginning balance	\$ (38,413)	\$ 5,299	\$(33,114)
Other comprehensive income (loss) before reclassifications	18,352	(1,589)	16,763
Amounts reclassified from accumulated other comprehensive income	—	(3,759)	(3,759)
Net current-period other comprehensive income (loss)	18,352	(5,348)	13,004
Ending balance	<u>\$ (20,061)</u>	<u>\$ (49)</u>	<u>\$(20,110)</u>
<b>Year Ended December 31, 2017</b>			
Beginning balance	\$ 14,460	\$ (436)	\$ 14,024
Other comprehensive income (loss) before reclassifications	(52,873)	7,736	(45,137)
Amounts reclassified from accumulated other comprehensive income	—	(2,001)	(2,001)
Net current-period other comprehensive income (loss)	(52,873)	5,735	(47,138)
Ending balance	<u>\$ (38,413)</u>	<u>\$ 5,299</u>	<u>\$(33,114)</u>
<b>Year Ended December 31, 2016</b>			
Beginning balance	\$ (190)	\$ (41)	\$ (231)
Other comprehensive income (loss) before reclassifications	14,650	(1,032)	13,618
Amounts reclassified from accumulated other comprehensive loss	—	637	637
Net current-period other comprehensive income (loss)	14,650	(395)	14,255
Ending balance	<u>\$ 14,460</u>	<u>\$ (436)</u>	<u>\$14,024</u>

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**20. Earnings (Loss) per Share**

The following table illustrates the computation of basic and diluted loss per common share:

	Year Ended December 31,		
	2018	2017	2016
	(In thousands of US dollars, except share data)		
<b>Basic Earnings per Share</b>			
Net income (loss)	\$ (3,900)	\$ 84,936	\$ (29,615)
Basic weighted average common stock outstanding	34,469,921	33,943,264	34,833,967
Basic earnings (loss) per share	\$ (0.11)	\$ 2.50	\$ (0.85)
<b>Diluted Earnings per Share</b>			
Net income (loss)	\$ (3,900)	\$ 84,936	\$ (29,615)
Add back: Interest expense on Exchangeable Notes	—	5,349	—
Net income (loss) allocated to common stockholders	\$ (3,900)	\$ 90,285	\$ (29,615)
Basic weighted average common stock outstanding	34,469,921	33,943,264	34,833,967
Net effect of dilutive equity awards	—	821,664	—
Net effect of assumed conversion of 5.0% Exchangeable Notes to common stock	—	9,990,209	—
Diluted weighted average common stock outstanding	34,469,921	44,755,137	34,833,967
Diluted earnings (loss) per share	\$ (0.11)	\$ 2.02	\$ (0.85)

The following outstanding instruments were excluded from the computation of diluted loss per share, as they would have an anti-dilutive effect on the calculation:

	Year Ended December 31,		
	2018	2017	2016
Options	2,674,756	835,572	3,428,665
Restricted Stock Units	699,271	—	518,480

For the year ended December 31, 2018, 10,438,187 shares of potential common stock from the assumed conversion of Exchangeable Notes was excluded from the computation of diluted loss per share as the effect was anti-dilutive for the period.

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## 21. Unaudited Quarterly Financial Results

The following tables present selected unaudited Consolidated Statements of Operations for each quarter of the years ended December 31, 2018 and 2017.

	Fiscal Year 2018			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
	(In thousands of US dollars, except share data)			
Net sales	\$ 165,819	\$ 199,685	\$ 206,000	\$ 179,394
Gross profit	44,581	53,854	55,749	43,912
Operating income	7,379	13,914	18,265	7,860
Net income (loss)	\$ 2,763	\$ (21,505)	\$ 17,222	\$ (2,380)
Earnings (loss) per share:				
Basic	\$ 0.08	\$ (0.62)	\$ 0.50	\$ (0.07)
Diluted	\$ 0.08	\$ (0.62)	\$ 0.41	\$ (0.07)
Weighted average common stock outstanding:				
Basic	34,253,111	34,420,654	34,573,377	34,627,292
Diluted	35,154,693	34,420,654	46,021,610	34,627,292

	Fiscal Year 2017			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
	(In thousands of US dollars, except share data)			
Net sales	\$ 161,710	\$ 166,685	\$ 176,697	\$ 174,580
Gross profit	41,570	46,662	50,310	49,351
Operating income	6,367	9,742	15,490	7,637
Net income (loss)	\$ 43,738	\$ (8,059)	\$ 5,604	\$ 43,653
Earnings (loss) per share:				
Basic	\$ 1.30	\$ (0.24)	\$ 0.16	\$ 1.28
Diluted	\$ 1.05	\$ (0.24)	\$ 0.15	\$ 0.99
Weighted average common stock outstanding:				
Basic	33,662,297	33,952,574	34,103,029	34,176,812
Diluted	42,892,044	33,952,574	45,542,418	45,573,889

## 22. Subsequent Events

### *Repurchase of Long-term Borrowings*

In January and February 2019, the Company repurchased a principal amount equal to \$250 thousand of the 2021 Notes and a principal amount equal to \$920 thousand of the Exchangeable Notes.

### *Stock Repurchase*

In January 2019, the Company repurchased 361,988 shares of its common stock at an aggregate cost of \$2,346 thousand in the open market under the Company's stock repurchase program, which was authorized by its board of directors on January 10, 2017.

**Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure**

None.

**Item 9A. Controls and Procedures**

**(a) Evaluation of Disclosure Controls and Procedures**

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our periodic reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer ("Principal Executive Officer") and Chief Financial Officer ("Principal Financial Officer"), as appropriate, to allow for timely decisions regarding required disclosure.

Management of the Company, with the participation of our Principal Executive Officer and our Principal Financial Officer, conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures, as such term is defined under Rules 13a-15(e) and 15d-15(e) promulgated under the Exchange Act, as of December 31, 2018. Based on this evaluation, our Principal Executive Officer and our Principal Financial Officer have concluded that our disclosure controls and procedures were effective as of December 31, 2018.

**(b) Management's Annual Report on Internal Control Over Financial Reporting**

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Our internal control over financial reporting is a process designed under the supervision of our Principal Executive Officer and our Principal Financial Officer, and effected by our Board, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with policies or procedures may deteriorate.

Under the supervision and with the participation of our Principal Executive Officer and our Principal Financial Officer, we conducted an evaluation of the effectiveness of the Company's internal control over financial reporting as of December 31, 2018, based on the criteria set forth in *Internal Control—Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on our assessment, we concluded that our internal control over financial reporting was effective as of December 31, 2018.

The effectiveness of the Company's internal control over financial reporting as of December 31, 2018 has been audited by Samil PricewaterhouseCoopers, an independent registered public accounting firm, as stated in their report which appears in Item 8 of this Report.

**(c) Changes in Internal Control Over Financial Reporting**

There were no changes in internal control over financial reporting during the quarter ended December 31, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

**Item 9B. Other Information**

None.

**PART III**

**Item 10. Directors, Executive Officers and Corporate Governance**

The information required by this item relating to our executive officers is included in “Item 1. Business—Executive Officers of the Company.” The other information required by this item is incorporated by reference to our definitive proxy statement relating to our 2019 annual meeting of stockholders or will be included by amendment to this Report within 120 days after the end of the fiscal year to which this Report relates.

**Item 11. Executive Compensation**

The information required by this item is incorporated by reference to our definitive proxy statement relating to our 2019 annual meeting of stockholders or will be included by amendment to this Report within 120 days after the end of the fiscal year to which this Report relates.

**Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters**

The information required by this item is incorporated by reference to our definitive proxy statement relating to our 2019 annual meeting of stockholders or will be included by amendment to this Report within 120 days after the end of the fiscal year to which this Report relates.

**Item 13. Certain Relationships and Related Transactions, and Director Independence**

The information required by this item is incorporated by reference to our definitive proxy statement relating to our 2019 annual meeting of stockholders or will be included by amendment to this Report within 120 days after the end of the fiscal year to which this Report relates.

**Item 14. Principal Accounting Fees and Services.**

The information required by this item is incorporated by reference to our definitive proxy statement relating to our 2019 annual meeting of stockholders or will be included by amendment to this Report within 120 days after the end of the fiscal year to which this Report relates.

**PART IV****Item 15. Exhibits and Financial Statement Schedules**

## 1. Financial Statements

The information required by this item is included in Item 8 of Part II of this Report.

## 2. Financial Statement Schedules

Financial Statement Schedules are omitted because of the absence of the conditions under which they are required or because the information required by such omitted schedules is set forth in the financial statements or the notes thereto.

## 3. Exhibits

<u>Exhibit No.</u>	<u>Exhibit Description</u>
2.1	<a href="#">Second Amended Chapter 11 Plan of Reorganization Proposed by the Official Committee of Unsecured Creditors of MagnaChip Semiconductor Finance Company, et al., dated as of September 24, 2009 (incorporated by reference to Exhibit 2.1 to our Amendment No. 1 to Registration Statement on Form S-1 filed on April 20, 2010 (Registration No. 333-165467)).</a>
3.1	<a href="#">Certificate of Conversion of MagnaChip Semiconductor LLC (incorporated by reference to Exhibit 3.1 to our Current Report on Form 8-K filed on March 11, 2011).</a>
3.2	<a href="#">Certificate of Incorporation of MagnaChip Semiconductor Corporation (incorporated by reference to Exhibit 3.2 to our Current Report on Form 8-K filed on March 11, 2011).</a>
3.3	<a href="#">Amended and Restated Bylaws of MagnaChip Semiconductor Corporation (incorporated by reference to Exhibit 3.1 to our Current Report on Form 8-K filed on May 6, 2016).</a>
3.4	<a href="#">Form of Plan of Conversion of MagnaChip Semiconductor LLC (incorporated by reference to Exhibit 3.6 to our Amendment No. 2 to Registration Statement on Form S-1 filed on May 11, 2010 (Registration No. 333-165467)).</a>
3.5	<a href="#">Certificate of Designation, Preferences and Rights of Series A Junior Participating Preferred Stock of MagnaChip Semiconductor Corporation, as filed with the Secretary of the State of Delaware on March 6, 2015 (incorporated by reference to Exhibit 3.1 to our Current Report on Form 8-K filed on March 6, 2015).</a>
4.1	<a href="#">Indenture, dated as of July 18, 2013, between MagnaChip Semiconductor Corporation, as issuer, and Wilmington Trust, National Association, as trustee (incorporated by reference to Exhibit 4.1 to our Current Report on Form 8-K filed on July 18, 2013).</a>
4.2	<a href="#">First Supplemental Indenture, dated as of March 27, 2014, to Indenture, dated as of July 18, 2013, between MagnaChip Semiconductor Corporation, as issuer, and Wilmington Trust, National Association, as trustee (incorporated by reference to Exhibit 4.2 to our Current Report on Form 8-K filed on June 25, 2014).</a>
4.3	<a href="#">Form of 6.625% Senior Notes due 2021 and notation of guarantee (included in Exhibit 4.1)</a>
4.4	<a href="#">Indenture, dated as of January 17, 2017, among MagnaChip Semiconductor S.A., as issuer, MagnaChip Semiconductor Corporation, as guarantor, and US Bank National Association, as trustee (incorporated by reference to Exhibit 4.6 to our Annual Report on Form 10-K filed on February 21, 2017).</a>
4.5	<a href="#">Form of 5.00% Exchangeable Senior Note due 2021 and note guarantee (included in Exhibit 4.4)</a>

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<u>Exhibit No.</u>	<u>Exhibit Description</u>
10.1	<a href="#"><u>Intellectual Property License Agreement, dated as of October 6, 2004, by and between Hynix Semiconductor Inc. and MagnaChip Semiconductor, Ltd. (Korea)(incorporated by reference to Exhibit 10.2 to our Amendment No. 1 to Registration Statement on Form S-1 filed on April 20, 2010 (Registration No. 333-165467)).</u></a>
10.2(1)	<a href="#"><u>Land Lease and Easement Agreement, dated as of October 6, 2004, by and between Hynix Semiconductor Inc. and MagnaChip Semiconductor, Ltd. (Korea)(incorporated by reference to Exhibit 10.3 to our Amendment No. 1 to Registration Statement on Form S-1 filed on April 20, 2010 (Registration No. 333-165467)).</u></a>
10.3	<a href="#"><u>First Amendment to Land Lease and Easement Agreement, dated as of December 30, 2005, by and between Hynix Semiconductor Inc. and MagnaChip Semiconductor, Ltd. (Korea)(incorporated by reference to Exhibit 10.4 to our Amendment No. 1 to Registration Statement on Form S-1 filed on April 20, 2010 (Registration No. 333-165467)).</u></a>
10.4(1)	<a href="#"><u>General Service Supply Agreement, dated as of October 6, 2004, by and between Hynix Semiconductor Inc. and MagnaChip Semiconductor, Ltd. (Korea)(incorporated by reference to Exhibit 10.5 to Amendment No. 2 to MagnaChip Semiconductor S.A.'s and MagnaChip Semiconductor Finance Company's Registration Statement on Form S-4 (Registration No. 333-168516) filed on October 14, 2010).</u></a>
10.5	<a href="#"><u>First Amendment to the General Service Supply Agreement, dated as of December 30, 2005, by and between Hynix Semiconductor Inc. and MagnaChip Semiconductor, Ltd. (Korea)(incorporated by reference to Exhibit 10.6 to our Amendment No. 1 to Registration Statement on Form S-1 filed on April 20, 2010 (Registration No. 333-165467)).</u></a>
10.6(1)	<a href="#"><u>License Agreement (ModularBCD), dated as of March 18, 2005, by and between Advanced Analogic Technologies, Inc. and MagnaChip Semiconductor, Ltd. (Korea)(incorporated by reference to Exhibit 10.7 to our Registration Statement on Form S-1 filed on March 15, 2010 (Registration No. 333-165467)).</u></a>
10.7(1)	<a href="#"><u>Amended &amp; Restated License Agreement (TrenchDMOS), dated as of September 19, 2007, by and between Advanced Analogic Technologies, Inc. and MagnaChip Semiconductor, Ltd. (Korea)(incorporated by reference to Exhibit 10.8 to Amendment No. 2 to MagnaChip Semiconductor S.A.'s and MagnaChip Semiconductor Finance Company's Registration Statement on Form S-4 (Registration No. 333-168516) filed on October 14, 2010).</u></a>
10.8(1)	<a href="#"><u>Technology License Agreement, dated as of December 16, 1996, by and between Advanced RISC Machines Limited and MagnaChip Semiconductor, Ltd. (Korea)(successor in interest to LG Semicon Company Limited)(incorporated by reference to Exhibit 10.9 to our Registration Statement on Form S-1 filed on March 15, 2010 (Registration No. 333-165467)).</u></a>
10.9(1)	<a href="#"><u>Amendment to the Technology License Agreement, dated as of October 16, 2006, by and between ARM Limited and MagnaChip Semiconductor, Ltd. (Korea)(incorporated by reference to Exhibit 10.10 to Amendment No. 2 to MagnaChip Semiconductor S.A.'s and MagnaChip Semiconductor Finance Company's Registration Statement on Form S-4 (Registration No. 333-168516) filed on October 14, 2010).</u></a>
10.10(1)	<a href="#"><u>ARM7201TDSP Device License Agreement, dated as of August 26, 1997, by and between Advanced RISC Machines Limited and MagnaChip Semiconductor, Ltd. (Korea)(successor in interest to LG Semicon Company Limited)(incorporated by reference to Exhibit 10.11 to our Registration Statement on Form S-1 filed on March 15, 2010 (Registration No. 333-165467)).</u></a>

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<u>Exhibit No.</u>	<u>Exhibit Description</u>
10.11(1)	<a href="#"><u>Technology License Agreement, dated as of October 5, 1995, by and between Advanced RISC Machines Limited and MagnaChip Semiconductor, Ltd. (Korea) (successor in interest to LG Semicon Company Limited) (incorporated by reference to Exhibit 10.12 to Amendment No. 2 to MagnaChip Semiconductor S.A.'s and MagnaChip Semiconductor Finance Company's Registration Statement on Form S-4 (Registration No. 333-168516) filed on October 14, 2010).</u></a>
10.12(1)	<a href="#"><u>Technology License Agreement, dated as of July 2001, by and between ARM Limited and MagnaChip Semiconductor, Ltd. (Korea) (successor in interest to Hynix Semiconductor Inc.) (incorporated by reference to Exhibit 10.13 to our Registration Statement on Form S-1 filed on March 15, 2010 (Registration No. 333-165467)).</u></a>
10.13(1)	<a href="#"><u>Technology License Agreement, dated as of August 22, 2001, by and between ARM Limited and MagnaChip Semiconductor, Ltd. (Korea) (successor in interest to Hynix Semiconductor Inc.) (incorporated by reference to Exhibit 10.14 to our Registration Statement on Form S-1 filed on March 15, 2010 (Registration No. 333-165467)).</u></a>
10.14	<a href="#"><u>Technology License Agreement, dated as of May 20, 2004, by and between ARM Limited and MagnaChip Semiconductor, Ltd. (Korea) (successor in interest to Hynix Semiconductor Inc.) (incorporated by reference to Exhibit 10.15 to our Registration Statement on Form S-1 filed on March 15, 2010 (Registration No. 333-165467)).</u></a>
10.15(1)	<a href="#"><u>Design Migration Agreement, dated as of May 1, 2007, by and between ARM Limited and MagnaChip Semiconductor, Ltd. (Korea) (incorporated by reference to Exhibit 10.16 to Amendment No. 2 to MagnaChip Semiconductor S.A.'s and MagnaChip Semiconductor Finance Company's Registration Statement on Form S-4 (Registration No. 333-168516) filed on October 14, 2010).</u></a>
10.16	<a href="#"><u>Basic Contract on Joint Development and Grant of License, dated as of November 10, 2006, by and between MagnaChip Semiconductor, Ltd. and Silicon Works Co., Ltd. (English translation) (incorporated by reference to Exhibit 10.17 to our Registration Statement on Form S-1 filed on March 15, 2010 (Registration No. 333-165467)).</u></a>
10.17	<a href="#"><u>Amendment to Basic Contract on Joint Development and Grant of License, dated as of May 18, 2016, by and between MagnaChip Semiconductor, Ltd. and Silicon Works Co., Ltd. (English translation) (incorporated by reference to Exhibit 10.2 to our Quarterly Report on Form 10-Q filed on August 5, 2016).</u></a>
10.18	<a href="#"><u>Master Service Agreement, dated as of December 27, 2000 by and between Sharp Corporation and MagnaChip Semiconductor, Ltd. (Korea) (successor in interest to Hyundai Electronics Japan Co., Ltd) (English translation) (incorporated by reference to Exhibit 10.18 to our Amendment No. 1 to Registration Statement on Form S-1 filed on April 20, 2010 (Registration No. 333-165467)).</u></a>
10.19*	<a href="#"><u>MagnaChip Semiconductor LLC 2009 Common Unit Plan (incorporated by reference to Exhibit 10.20 to our Registration Statement on Form S-1 filed on March 15, 2010 (Registration No. 333-165467)).</u></a>
10.20*	<a href="#"><u>MagnaChip Semiconductor LLC 2009 Common Unit Plan form of Option Agreement (Non-U.S. Participants) (incorporated by reference to Exhibit 10.21 to our Registration Statement on Form S-1 filed on March 15, 2010 (Registration No. 333-165467)).</u></a>
10.21*	<a href="#"><u>MagnaChip Semiconductor LLC 2009 Common Unit Plan form of Option Agreement (U.S. Participants) (incorporated by reference to Exhibit 10.22 to our Registration Statement on Form S-1 filed on March 15, 2010 (Registration No. 333-165467)).</u></a>
10.22*	<a href="#"><u>MagnaChip Semiconductor LLC 2009 Common Unit Plan form of Restricted Unit Agreement (Non-U.S. Participants). Incorporated by reference to Exhibit 10.23 to our Registration Statement on Form S-1 filed on March 15, 2010 (Registration No. 333-165467).</u></a>

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<u>Exhibit No.</u>	<u>Exhibit Description</u>
10.23*	<a href="#">MagnaChip Semiconductor LLC 2009 Common Unit Plan form of Restricted Unit Agreement (U.S. Participants).(incorporated by reference to Exhibit 10.24 to our Registration Statement on Form S-1 filed on March 15, 2010 (Registration No. 333-165467)).</a>
10.24*#	<a href="#">MagnaChip Semiconductor Corporation 2011 Equity Incentive Plan (as amended on April 26, 2018).</a>
10.25*	<a href="#">MagnaChip Semiconductor Corporation 2011 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.26 to our Amendment No 9 to the Registration Statement on Form S-1 filed on February 18, 2011 (Registration No. 333-165467)).</a>
10.26*	<a href="#">Offer Letter, dated as of June 20, 2007, by and between MagnaChip Semiconductor, Ltd. (Korea) and Tae Jong Lee (incorporated by reference to Exhibit 10.42 to our Registration Statement on Form S-1 filed on March 15, 2010 (Registration No. 333-165467)).</a>
10.26-1*	<a href="#">Severance Agreement, dated November 3, 2015, from MagnaChip Semiconductor, Ltd. (Korea) and MagnaChip Semiconductor Corporation to Tae Jong Lee (incorporated by reference to Exhibit 10.5 to our Quarterly Report on Form 10-Q filed on November 6, 2015).</a>
10.26-2*#	<a href="#">Separation Agreement, dated as of January 9, 2019 among MagnaChip Semiconductor, Ltd. (Korea), MagnaChip Semiconductor Corporation and Tae Jong Lee.</a>
10.27*	<a href="#">MagnaChip Semiconductor Corporation Form of Indemnification Agreement with Directors and Officers (incorporated by reference to Exhibit 10.49 to our Registration Statement on Form S-1 filed on March 15, 2010 (Registration No. 333-165467)).</a>
10.28*	<a href="#">Offer Letter, dated as of March 8, 2014, by and between MagnaChip Semiconductor, Ltd. (Korea) and Jonathan W. Kim (incorporated by reference to Exhibit 10.35 to our Annual Report on Form 10-K filed on February 12, 2015).</a>
10.28-1*	<a href="#">Severance Agreement, dated November 3, 2015, from MagnaChip Semiconductor, Ltd. (Korea) and MagnaChip Semiconductor Corporation to Jonathan W. Kim (incorporated by reference to Exhibit 10.3 to our Quarterly Report on Form 10-Q filed on November 6, 2015).</a>
10.29*	<a href="#">Offer Letter, dated as of April 15, 2013, by and between MagnaChip Semiconductor, Ltd. (Korea) and Young-Joon Kim (incorporated by reference to Exhibit 10.36 to our Annual Report on Form 10-K filed on February 12, 2015).</a>
10.29-1*	<a href="#">Amendment of Offer Letter, dated July 27, 2015, from MagnaChip Semiconductor, Ltd. (Korea) to Young-Joon Kim (incorporated by reference to Exhibit 10.1 to our Quarterly Report on Form 10-Q filed on November 6, 2015).</a>
10.29-2*	<a href="#">Severance Agreement, dated November 3, 2015, from MagnaChip Semiconductor, Ltd. (Korea) and MagnaChip Semiconductor Corporation to Young-Joon Kim (incorporated by reference to Exhibit 10.2 to our Quarterly Report on Form 10-Q filed on November 6, 2015).</a>
10.29-3*	<a href="#">Employment Agreement, dated as of April 26, 2018, by and between MagnaChip Semiconductor Corporation and Young Joon Kim (incorporated by reference to Exhibit 10.1 to our Current Report on Form 8-K filed on April 27, 2018).</a>
10.29-4*#	<a href="#">Amendment to Employment Agreement by and between MagnaChip Semiconductor Corporation and Young Joon Kim, dated as of September 3, 2018.</a>
10.29-5*	<a href="#">Form of Restricted Stock Units Agreement for Chief Executive Officer (incorporated by reference to Exhibit 10.2 to our Current Report on Form 8-K filed on April 27, 2018).</a>
10.29-6*	<a href="#">Form of Restricted Stock Units Agreement (TSR Performance) for Chief Executive Officer (incorporated by reference to Exhibit 10.3 to our Current Report on Form 8-K filed on April 27, 2018).</a>

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<u>Exhibit No.</u>	<u>Exhibit Description</u>
10.29-7*	<a href="#">Form of Restricted Stock Units Agreement (AOP Performance) for Chief Executive Officer (incorporated by reference to Exhibit 10.4 to our Current Report on Form 8-K filed on April 27, 2018).</a>
10.30*	<a href="#">Offer Letter, dated as of September 27, 2013, by and between MagnaChip Semiconductor, Ltd. (Korea) and Theodore Kim (incorporated by reference to Exhibit 10.37 to our Annual Report on Form 10-K filed on February 12, 2015).</a>
10.30-1*	<a href="#">Severance Agreement, dated November 3, 2015, from MagnaChip Semiconductor, Ltd. (Korea) and MagnaChip Semiconductor Corporation to Theodore S. Kim (incorporated by reference to Exhibit 10.4 to our Quarterly Report on Form 10-Q filed on November 6, 2015).</a>
10.30-2*	<a href="#">Employment Agreement, dated as of October 22, 2018, by and between MagnaChip Semiconductor Corporation and Theodore Kim (incorporated by reference to Exhibit 10.1 to our Current Report on Form 8-K filed on October 26, 2018).</a>
10.31*	<a href="#">Offer Letter, dated as of October 16, 2013, by and between MagnaChip Semiconductor, Ltd. (Korea) and Woung Moo Lee (incorporated by reference to Exhibit 10.36 to our Annual Report on Form 10-K filed on February 22, 2016).</a>
10.31-1*	<a href="#">Severance Agreement, dated November 3, 2015, from MagnaChip Semiconductor, Ltd. (Korea) and MagnaChip Semiconductor Corporation to Woung Moo Lee (incorporated by reference to Exhibit 10.6 to our Quarterly Report on Form 10-Q filed on November 6, 2015).</a>
10.31-2*	<a href="#">Employment Agreement, dated as of October 22, 2018, by and between MagnaChip Semiconductor Corporation and Woung Moo Lee (incorporated by reference to Exhibit 10.2 to our Current Report on Form 8-K filed on October 26, 2018).</a>
10.32*	<a href="#">MagnaChip Semiconductor LLC Profit Sharing Plan as adopted on December 31, 2009 and amended on February 15, 2010 (incorporated by reference to Exhibit 10.54 to our Quarterly Report on Form 10-Q filed on August 5, 2011).</a>
10.33*	<a href="#">MagnaChip Semiconductor Corporation 2011 Form of Stock Option Agreement (U.S. Participants) (incorporated by reference to Exhibit 10.55 to our Amendment No 9 to the Registration Statement on Form S-1 filed on February 18, 2011 (Registration No. 333-165467)).</a>
10.34*	<a href="#">MagnaChip Semiconductor Corporation 2011 Form of Stock Option Agreement (Non-U.S. Participants) (incorporated by reference to Exhibit 10.56 to our Amendment No 9 to the Registration Statement on Form S-1 filed on February 18, 2011 (Registration No. 333-165467)).</a>
10.35*	<a href="#">MagnaChip Semiconductor Corporation 2011 Form of Restricted Stock Units Agreement (U.S. Participants) (incorporated by reference to Exhibit 10.57 to our Amendment No 9 to the Registration Statement on Form S-1 filed on February 18, 2011 (Registration No. 333-165467)).</a>
10.36*	<a href="#">MagnaChip Semiconductor Corporation 2011 Form of Restricted Stock Units Agreement (Non-U.S. Participants) (incorporated by reference to Exhibit 10.58 to our Amendment No 9 to the Registration Statement on Form S-1 filed on February 18, 2011 (Registration No. 333-165467)).</a>
10.37*	<a href="#">MagnaChip Semiconductor Corporation 2011 Form of Restricted Stock Agreement (U.S. Participants) (incorporated by reference to Exhibit 10.59 to our Amendment No 9 to the Registration Statement on Form S-1 filed on February 18, 2011 (Registration No. 333-165467)).</a>
10.38*	<a href="#">MagnaChip Semiconductor Corporation 2011 Form of Restricted Stock Agreement (Non-U.S. Participants) (incorporated by reference to Exhibit 10.60 to our Amendment No 9 to the Registration Statement on Form S-1 filed on February 18, 2011 (Registration No. 333-165467)).</a>
10.39*	<a href="#">MagnaChip Semiconductor Corporation 2011 Form of Restricted Stock Units Agreement (Nonemployee Director) (incorporated by reference to Exhibit 10.1 to our Quarterly Report on Form 10-Q filed on May 6, 2016).</a>

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<u>Exhibit No.</u>	<u>Exhibit Description</u>
10.40	<a href="#">Settlement Agreement, dated as of May 26, 2016, by and among MagnaChip Semiconductor Corporation, Engaged Capital, LLC, Engaged Capital Master Feeder I, LP, Engaged Capital Master Feeder II, LP, Engaged Capital I, LP, Engaged Capital I Offshore, Ltd., Engaged Capital II, LP, Engaged Capital II Offshore Ltd., Engaged Capital Holdings, LLC and Glenn W. Welling (incorporated by reference to Exhibit 10.1 to our Current Report on Form 8-K filed on May 27, 2016).</a>
10.41*	<a href="#">Form of Restricted Stock Units Agreement (incorporated by reference to Exhibit 10.3 to our Current Report on Form 8-K filed on October 26, 2018).</a>
10.42*	<a href="#">Form of Restricted Stock Units Agreement (TSR Performance) (incorporated by reference to Exhibit 10.4 to our Current Report on Form 8-K filed on October 26, 2018).</a>
10.43*	<a href="#">Form of Restricted Stock Units Agreement (AOP Performance) (incorporated by reference to Exhibit 10.5 to our Current Report on Form 8-K filed on October 26, 2018).</a>
21.1	<a href="#">Subsidiaries of the Registrant (incorporated by reference to Exhibit 21.1 to our Annual Report on Form 10-K filed on February 12, 2015)</a>
23.1#	<a href="#">Consent of Samil PricewaterhouseCoopers</a>
31.1#	<a href="#">Certification of Chief Executive Officer required by Rule 13(a)-14(a), as adopted pursuant to § 302 of the Sarbanes-Oxley Act of 2002</a>
31.2#	<a href="#">Certification of Chief Financial Officer required by Rule 13(a)-14(a), as adopted pursuant to § 302 of the Sarbanes-Oxley Act of 2002</a>
32.1†	<a href="#">Certification of Chief Executive Officer required by 18 U.S.C § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002</a>
32.2†	<a href="#">Certification of Chief Financial Officer required by 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002</a>
101.INS#	XBRL Instance Document
101.SCH#	XBRL Taxonomy Extension Schema Document
101.CAL#	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF#	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB#	XBRL Taxonomy Extension Label Linkbase Document
101.PRE#	XBRL Taxonomy Extension Presentation Linkbase Document

### Footnotes:

- (1) Certain portions of this document have been omitted pursuant to a grant of confidential treatment by the SEC.  
\* Management contract, compensatory plan or arrangement  
# Filed herewith  
† Furnished herewith

### **Item 16. Form 10-K Summary**

None.

**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Report to be signed on its behalf by the undersigned, thereunto duly authorized.

**MAGNACHIP SEMICONDUCTOR CORPORATION**

By: /s/ Young-Joon Kim  
Name: Young-Joon Kim  
Title: Chief Executive Officer and Director  
Date: February 22, 2019

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

	<u>Date</u>
<u>/s/ Young-Joon Kim</u> Young-Joon Kim, <i>Chief Executive Officer and Director (Principal Executive Officer)</i>	February 22, 2019
<u>/s/ Jonathan W. Kim</u> Jonathan W. Kim, <i>Chief Financial Officer, Executive Vice President and Chief Accounting Officer (Principal Financial and Accounting Officer)</i>	February 22, 2019
<u>/s/ Melvin Keating</u> Melvin Keating, <i>Director</i>	February 22, 2019
<u>/s/ Ilbok Lee</u> Ilbok Lee, <i>Director</i>	February 22, 2019
<u>/s/ Camillo Martino</u> Camillo Martino, <i>Director</i>	February 22, 2019
<u>/s/ Gary Tanner</u> Gary Tanner, <i>Director</i>	February 22, 2019
<u>/s/ Nader Tavakoli</u> Nader Tavakoli, <i>Non-Executive Chairman of the Board of Directors</i>	February 22, 2019

**MAGNACHIP SEMICONDUCTOR  
CORPORATION**

**2011 EQUITY INCENTIVE PLAN**

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**MagnaChip Semiconductor Corporation**  
**2011 Equity Incentive Plan**

**1. ESTABLISHMENT, PURPOSE AND TERM OF PLAN.**

1.1 **Establishment.** The MagnaChip Semiconductor Corporation 2011 Equity Incentive Plan (the “**Plan**”) is hereby established effective as of March 10, 2011, the effective date of the Conversion (the “**Effective Date**”).

1.2 **Purpose.** The purpose of the Plan is to advance the interests of the Participating Company Group and its stockholders by providing an incentive to attract, retain and reward persons performing services for the Participating Company Group and by motivating such persons to contribute to the growth and profitability of the Participating Company Group. The Plan seeks to achieve this purpose by providing for Awards in the form of Options, Stock Appreciation Rights, Restricted Stock Purchase Rights, Restricted Stock Bonuses, Restricted Stock Units, Performance Shares, Performance Units, Cash-Based Awards and Other Stock-Based Awards.

1.3 **Term of Plan.** The Plan shall continue in effect until its termination by the Committee; provided, however, that all Awards shall be granted, if at all, within ten (10) years from the Effective Date.

**2. DEFINITIONS AND CONSTRUCTION.**

2.1 **Definitions.** Whenever used herein, the following terms shall have their respective meanings set forth below:

(a) “**Affiliate**” means (i) a parent entity, other than a Parent Corporation, that directly, or indirectly through one or more intermediary entities, controls the Company or (ii) a subsidiary entity, other than a Subsidiary Corporation, that is controlled by the Company directly or indirectly through one or more intermediary entities. For this purpose, the terms “parent,” “subsidiary,” “control” and “controlled by” shall have the meanings assigned such terms for the purposes of registration of securities on Form S-8 under the Securities Act.

(b) “**Award**” means any Option, Stock Appreciation Right, Restricted Stock Purchase Right, Restricted Stock Bonus, Restricted Stock Unit, Performance Share, Performance Unit, Cash-Based Award or Other Stock-Based Award granted under the Plan.

(c) “**Award Agreement**” means a written or electronic agreement between the Company and a Participant setting forth the terms, conditions and restrictions applicable to an Award.

(d) “**Board**” means the Board of Directors of the Company.

(e) “**Cash-Based Award**” means an Award denominated in cash and granted pursuant to Section 11.

(f) “**Cashless Exercise**” means a Cashless Exercise as defined in Section 6.3(b)(i).

(g) “**Cause**” means, unless such term or an equivalent term is otherwise defined by the applicable Award Agreement or other written agreement between a Participant and a Participating Company applicable to an Award, any of the following: (i) the Participant’s failure to substantially perform the Participant’s customary duties with a Participating Company in the ordinary course (other than such failure resulting from the Participant’s incapacity due to physical or mental illness) that, if susceptible to cure, has not been cured as determined by the Participating Company within 30 days after a written demand for substantial performance is delivered to the Participant by the Participating Company, which demand specifically identifies the manner in which the Participating Company believes that the Participant has not substantially performed the Participant’s duties; (ii) the Participant’s gross negligence, intentional misconduct or fraud in the performance of his or her Service; (iii) the Participant’s indictment (or equivalent) for a felony or to a crime involving fraud or dishonesty; (iv) a judicial determination that the Participant committed fraud or dishonesty against any natural person, firm, partnership, limited liability company, association, corporation, company, trust, business trust, governmental authority or other entity; (v) the Participant’s material violation of one or more of the Participating Company Group’s policies applicable to the Participant’s Service as may be in effect from time to time; or (vi) the Participant’s conduct that brings or could reasonably be expected to bring the Participating Company Group into public disgrace or disrepute and that has a material adverse effect on the business of the Participating Company Group.

(h) “**Change in Control**” means, unless such term or an equivalent term is otherwise defined by the applicable Award Agreement, the occurrence of any one or a combination of the following:

(i) any “person” (as such term is used in Sections 13(d) and 14(d) of the Exchange Act) becomes the “beneficial owner” (as such term is defined in Rule 13d-3 promulgated under the Exchange Act), directly or indirectly, of securities of the Company representing more than fifty percent (50%) of the total Fair Market Value or total combined voting power of the Company’s then-outstanding securities entitled to vote generally in the election of Directors; provided, however, that a Change in Control shall not be deemed to have occurred if such degree of beneficial ownership results from any of the following: (A) an acquisition by any person who on the Effective Date is the beneficial owner of more than fifty percent (50%) of such voting power, (B) any acquisition directly from the Company, including, without limitation, pursuant to or in connection with a public offering of securities, (C) any acquisition by the Company, (D) any acquisition by a trustee or other fiduciary under an employee benefit plan of a Participating Company or (E) any acquisition by an entity owned directly or indirectly by the stockholders of the Company in substantially the same proportions as their ownership of the voting securities of the Company; or

(ii) an Ownership Change Event or series of related Ownership Change Events (collectively, a “**Transaction**”) in which the stockholders of the Company immediately before the Transaction do not retain immediately after the Transaction direct or indirect beneficial ownership of more than fifty percent (50%) of the total combined voting power of the outstanding securities entitled to vote generally in the election of Directors or, in the case of an Ownership Change Event described in Section 2.1(ee)(iii), the entity to which the assets of the Company were transferred (the “**Transferee**”), as the case may be; or

(iii) approval by the stockholders of a plan of complete liquidation or dissolution of the Company;

provided, however, that a Change in Control shall be deemed not to include a transaction described in subsections (i) or (ii) of this Section 2.1(h) in which a majority of the members of the board of directors of the continuing, surviving or successor entity, or parent thereof, immediately after such transaction is comprised of Incumbent Directors.

For purposes of the preceding sentence, indirect beneficial ownership shall include, without limitation, an interest resulting from ownership of the voting securities of one or more corporations or other business entities which own the Company or the Transferee, as the case may be, either directly or through one or more subsidiary corporations or other business entities. The Committee shall determine whether multiple acquisitions of the voting securities of the Company and/or multiple Ownership Change Events are related and to be treated in the aggregate as a single Change in Control, and its determination shall be final, binding and conclusive.

(i) “**Code**” means the Internal Revenue Code of 1986, as amended, and any applicable regulations or administrative guidelines promulgated thereunder.

(j) “**Committee**” means the Compensation Committee and such other committee or subcommittee of the Board, if any, duly appointed to administer the Plan and having such powers in each instance as shall be specified by the Board. If, at any time, there is no committee of the Board then authorized or properly constituted to administer the Plan, the Board shall exercise all of the powers of the Committee granted herein, and, in any event, the Board may in its discretion exercise any or all of such powers.

(k) “**Company**” means MagnaChip Semiconductor Corporation, a Delaware corporation, or any successor corporation thereto.

(l) “**Consultant**” means a person engaged to provide consulting or advisory services (other than as an Employee or a member of the Board) to a Participating Company, provided that the identity of such person, the nature of such services or the entity to which such services are provided would not preclude the Company from offering or selling securities to such person pursuant to the Plan in reliance on registration on Form S-8 under the Securities Act.

(m) “**Conversion**” means the conversion of MagnaChip Semiconductor LLC, a Delaware limited liability company, into the Company pursuant to Section 18-216 of the Delaware Limited Liability Company Act.

(n) “**Covered Employee**” means, at any time the Plan is subject to Section 162(m), any Employee who is or may reasonably be expected to become a “covered employee” as defined in Section 162(m), or any successor statute, and who is designated, either

as an individual Employee or a member of a class of Employees, by the Committee no later than the earlier of (i) the date that is ninety (90) days after the beginning of the Performance Period, or (ii) the date on which twenty-five percent (25%) of the Performance Period has elapsed, as a "Covered Employee" under this Plan for such applicable Performance Period.

(o) "**Director**" means a member of the Board.

(p) "**Disability**" means the permanent and total disability of the Participant, within the meaning of Section 22(e)(3) of the Code.

(q) "**Dividend Equivalent Right**" means the right of a Participant, granted at the discretion of the Committee or as otherwise provided by the Plan, to receive a credit for the account of such Participant in an amount equal to the cash dividends paid on one share of Stock for each share of Stock represented by an Award held by such Participant.

(r) "**Employee**" means any person treated as an employee (including an Officer or a member of the Board who is also treated as an employee) in the records of a Participating Company and, with respect to any Incentive Stock Option granted to such person, who is an employee for purposes of Section 422 of the Code; provided, however, that neither service as a member of the Board nor payment of a director's fee shall be sufficient to constitute employment for purposes of the Plan. The Company shall determine in good faith and in the exercise of its discretion whether an individual has become or has ceased to be an Employee and the effective date of such individual's employment or termination of employment, as the case may be. For purposes of an individual's rights, if any, under the terms of the Plan as of the time of the Company's determination of whether or not the individual is an Employee, all such determinations by the Company shall be final, binding and conclusive as to such rights, if any, notwithstanding that the Company or any court of law or governmental agency subsequently makes a contrary determination as to such individual's status as an Employee.

(s) "**Exchange Act**" means the Securities Exchange Act of 1934, as amended.

(t) "**Fair Market Value**" means, as of any date, the value of a share of Stock or other property as determined by the Committee, in its discretion, or by the Company, in its discretion, if such determination is expressly allocated to the Company herein, subject to the following:

(i) Except as otherwise determined by the Committee, if, on such date, the Stock is listed or quoted on a national or regional securities exchange or quotation system, the Fair Market Value of a share of Stock shall be the closing price of a share of Stock as quoted on the national or regional securities exchange or quotation system constituting the primary market for the Stock, as reported in *The Wall Street Journal* or such other source as the Company deems reliable. If the relevant date does not fall on a day on which the Stock has traded on such securities exchange or quotation system, the date on which the Fair Market Value shall be established shall be the last day on which the Stock was so traded or quoted prior to the relevant date, or such other appropriate day as shall be determined by the Committee, in its discretion.

(ii) Notwithstanding the foregoing, the Committee may, in its discretion, determine the Fair Market Value of a share of Stock on the basis of the opening, closing, or average of the high and low sale prices of a share of Stock on such date or the preceding trading day, the actual sale price of a share of Stock received by a Participant, any other reasonable basis using actual transactions in the Stock as reported on a national or regional securities exchange or quotation system, or on any other basis consistent with the requirements of Section 409A. The Committee may also determine the Fair Market Value upon the average selling price of the Stock during a specified period that is within thirty (30) days before or thirty (30) days after such date, provided that, with respect to the grant of an Option or SAR, the commitment to grant such Award based on such valuation method must be irrevocable before the beginning of the specified period. The Committee may vary its method of determination of the Fair Market Value as provided in this Section for different purposes under the Plan to the extent consistent with the requirements of Section 409A.

(iii) If, on such date, the Stock is not listed or quoted on a national or regional securities exchange or quotation system, the Fair Market Value of a share of Stock shall be as determined by the Committee in good faith without regard to any restriction other than a restriction which, by its terms, will never lapse, and in a manner consistent with the requirements of Section 409A.

(u) “**Incentive Stock Option**” means an Option intended to be (as set forth in the Award Agreement) and which qualifies as an incentive stock option within the meaning of Section 422(b) of the Code.

(v) “**Incumbent Director**” means a director who either (i) is a member of the Board as of the Effective Date or (ii) is elected, or nominated for election, to the Board with the affirmative votes of at least a majority of the Incumbent Directors at the time of such election or nomination (but excluding a director who was elected or nominated in connection with an actual or threatened proxy contest relating to the election of directors of the Company).

(w) “**Insider**” means an Officer, Director or any other person whose transactions in Stock are subject to Section 16 of the Exchange Act.

(x) “**Net Exercise**” means a Net Exercise as defined in Section 6.3(b)(iii).

(y) “**Nonemployee Director**” means a Director who is not an Employee.

(z) “**Nonemployee Director Award**” means any Award granted to a Nonemployee Director.

(aa) “**Nonstatutory Stock Option**” means an Option not intended to be (as set forth in the Award Agreement) or which does not qualify as an incentive stock option within the meaning of Section 422(b) of the Code.

(bb) “**Officer**” means any person designated by the Board as an officer of the Company.

(cc) "**Option**" means an Incentive Stock Option or a Nonstatutory Stock Option granted pursuant to the Plan.

(dd) "**Other Stock-Based Award**" means an Award denominated in shares of Stock and granted pursuant to Section 11.

(ee) "**Ownership Change Event**" means the occurrence of any of the following with respect to the Company: (i) the direct or indirect sale or exchange in a single or series of related transactions by the stockholders of the Company of securities of the Company representing more than fifty percent (50%) of the total combined voting power of the Company's then outstanding securities entitled to vote generally in the election of Directors; (ii) a merger or consolidation in which the Company is a party; or (iii) the sale, exchange, or transfer of all or substantially all of the assets of the Company (other than a sale, exchange or transfer to one or more subsidiaries of the Company).

(ff) "**Parent Corporation**" means any present or future "parent corporation" of the Company, as defined in Section 424(e) of the Code.

(gg) "**Participant**" means any eligible person who has been granted one or more Awards.

(hh) "**Participating Company**" means the Company or any Parent Corporation, Subsidiary Corporation or Affiliate.

(ii) "**Participating Company Group**" means, at any point in time, the Company and all other entities collectively which are then Participating Companies.

(jj) "**Performance Award**" means an Award of Performance Shares or Performance Units.

(kk) "**Performance Award Formula**" means, for any Performance Award, a formula or table established by the Committee pursuant to Section 10.3 which provides the basis for computing the value of a Performance Award at one or more levels of attainment of the applicable Performance Goal(s) measured as of the end of the applicable Performance Period.

(ll) "**Performance-Based Compensation**" means compensation under an Award that satisfies the requirements of Section 162(m) for certain performance-based compensation paid to Covered Employees.

(mm) "**Performance Goal**" means a performance goal established by the Committee pursuant to Section 10.3.

(nn) "**Performance Period**" means a period established by the Committee pursuant to Section 10.3 at the end of which one or more Performance Goals are to be measured.

(oo) "**Performance Share**" means a right granted to a Participant pursuant to Section 10 to receive a payment equal to the value of a Performance Share, as determined by the Committee, based upon attainment of applicable Performance Goal(s).

(pp) "**Performance Unit**" means a right granted to a Participant pursuant to Section 10 to receive a payment equal to the value of a Performance Unit, as determined by the Committee, based upon attainment of applicable Performance Goal(s).

(qq) "**Predecessor Plan**" means the MagnaChip Semiconductor LLC 2009 Common Unit Plan, as amended.

(rr) "**Restricted Stock Award**" means an Award of a Restricted Stock Bonus or a Restricted Stock Purchase Right.

(ss) "**Restricted Stock Bonus**" means Stock granted to a Participant pursuant to Section 8.

(tt) "**Restricted Stock Purchase Right**" means a right to purchase Stock granted to a Participant pursuant to Section 8.

(uu) "**Restricted Stock Unit**" means a right granted to a Participant pursuant to Section 9 to receive on a future date or event a share of Stock or cash in lieu thereof, as determined by the Committee.

(vv) "**Rule 16b-3**" means Rule 16b-3 under the Exchange Act, as amended from time to time, or any successor rule or regulation.

(ww) "**SAR**" or "**Stock Appreciation Right**" means a right granted to a Participant pursuant to Section 7 to receive payment, for each share of Stock subject to such Award, of an amount equal to the excess, if any, of the Fair Market Value of a share of Stock on the date of exercise of the Award over the exercise price thereof.

(xx) "**Section 162(m)**" means Section 162(m) of the Code.

(yy) "**Section 409A**" means Section 409A of the Code.

(zz) "**Section 409A Deferred Compensation**" means compensation provided pursuant to an Award that constitutes nonqualified deferred compensation within the meaning of Section 409A.

(aaa) "**Securities Act**" means the Securities Act of 1933, as amended.

(bbb) "**Service**" means a Participant's employment or service with the Participating Company Group, whether as an Employee, a Director or a Consultant. Unless otherwise provided by the Committee, a Participant's Service shall not be deemed to have terminated merely because of a change in the capacity in which the Participant renders such Service or a change in the Participating Company for which the Participant renders such Service, provided that there is no interruption or termination of the Participant's Service. Furthermore, a

Participant's Service shall not be deemed to have been interrupted or terminated if the Participant takes any military leave, sick leave, or other bona fide leave of absence approved by the Company. However, unless otherwise provided by the Committee, if any such leave taken by a Participant exceeds ninety (90) days, then on the ninety-first (91st) day following the commencement of such leave the Participant's Service shall be deemed to have terminated, unless the Participant's right to return to Service is guaranteed by statute or contract. Notwithstanding the foregoing, unless otherwise designated by the Company or required by law, an unpaid leave of absence shall not be treated as Service for purposes of determining vesting under the Participant's Award Agreement. A Participant's Service shall be deemed to have terminated either upon an actual termination of Service or upon the business entity for which the Participant performs Service ceasing to be a Participating Company. Subject to the foregoing, the Company, in its discretion, shall determine whether the Participant's Service has terminated and the effective date of such termination.

(ccc) "**Stock**" means the common stock of the Company, as adjusted from time to time in accordance with Section 4.5.

(ddd) "**Stock Tender Exercise**" means a Stock Tender Exercise as defined in Section 6.3(b)(ii).

(eee) "**Subsidiary Corporation**" means any present or future "subsidiary corporation" of the Company, as defined in Section 424(f) of the Code.

(fff) "**Ten Percent Owner**" means a Participant who, at the time an Option is granted to the Participant, owns stock possessing more than ten percent (10%) of the total combined voting power of all classes of stock of a Participating Company (other than an Affiliate) within the meaning of Section 422(b)(6) of the Code.

(ggg) "**Trading Compliance Policy**" means the written policy of the Company pertaining to the purchase, sale, transfer or other disposition of the Company's equity securities by Directors, Officers, Employees or other service providers who may possess material, nonpublic information regarding the Company or its securities.

(hhh) "**Vesting Conditions**" mean those conditions established in accordance with the Plan prior to the satisfaction of which an Award or shares subject to an Award remain subject to forfeiture or a repurchase option in favor of the Company exercisable for the Participant's monetary purchase price, if any, for such shares upon the Participant's termination of Service.

**2.2 Construction.** Captions and titles contained herein are for convenience only and shall not affect the meaning or interpretation of any provision of the Plan. Except when otherwise indicated by the context, the singular shall include the plural and the plural shall include the singular. Use of the term "or" is not intended to be exclusive, unless the context clearly requires otherwise.

### **3. ADMINISTRATION.**

**3.1 Administration by the Committee.** The Plan shall be administered by the Committee. All questions of interpretation of the Plan, of any Award Agreement or of any other form of agreement or other document employed by the Company in the administration of the Plan or of any Award shall be determined by the Committee, and such determinations shall be final, binding and conclusive upon all persons having an interest in the Plan or such Award, unless fraudulent or made in bad faith. Any and all actions, decisions and determinations taken or made by the Committee in the exercise of its discretion pursuant to the Plan or Award Agreement or other agreement thereunder (other than determining questions of interpretation pursuant to the preceding sentence) shall be final, binding and conclusive upon all persons having an interest therein. All expenses reasonably incurred by the Company in the administration of the Plan shall be paid by the Company.

**3.2 Authority of Officers.** Any Officer shall have the authority to act on behalf of the Company with respect to any matter, right, obligation, determination or election that is the responsibility of or that is allocated to the Company herein, provided that the Officer has actual authority with respect to such matter, right, obligation, determination or election. The Board or Committee may, in its discretion, delegate to a committee comprised of one or more Officers the authority to grant one or more Awards, without further approval of the Board or the Committee, to any Employee, other than a person who, at the time of such grant, is an Insider or a Covered Person; provided, however, that (a) the exercise price per share of each such Award which is an Option or SAR shall be not less than the Fair Market Value per share of the Stock on the effective date of grant (or, if the Stock has not traded on such date, on the last day preceding the effective date of grant on which the Stock was traded), (b) each such Award shall be subject to the terms and conditions of the appropriate standard form of Award Agreement approved by the Board or the Committee and shall conform to the provisions of the Plan, and (c) each such Award shall conform to guidelines as shall be established from time to time by resolution of the Board or the Committee.

**3.3 Administration with Respect to Insiders.** With respect to participation by Insiders in the Plan, at any time that any class of equity security of the Company is registered pursuant to Section 12 of the Exchange Act, the Plan shall be administered in compliance with the requirements, if any, of Rule 16b-3.

**3.4 Committee Complying with Section 162(m).** If the Company is a “publicly held corporation” within the meaning of Section 162(m), the Board may establish a Committee of “outside directors” within the meaning of Section 162(m) to approve the grant of any Award intended to result in the payment of Performance-Based Compensation.

**3.5 Powers of the Committee.** In addition to any other powers set forth in the Plan and subject to the provisions of the Plan, the Committee shall have the full and final power and authority, in its discretion:

(a) to determine the persons to whom, and the time or times at which, Awards shall be granted and the number of shares of Stock, units or monetary value to be subject to each Award;

(b) to determine the type of Award granted;

(c) to determine the Fair Market Value of shares of Stock or other property;

(d) to determine the terms, conditions and restrictions applicable to each Award (which need not be identical) and any shares acquired pursuant thereto, including, without limitation, (i) the exercise or purchase price of shares pursuant to any Award, (ii) the method of payment for shares purchased pursuant to any Award, (iii) the method for satisfaction of any tax withholding obligation arising in connection with any Award, including by the withholding or delivery of shares, (iv) the timing, terms and conditions of the exercisability or vesting of any Award or any shares acquired pursuant thereto, (v) the Performance Measures, Performance Period, Performance Award Formula and Performance Goals applicable to any Award and the extent to which such Performance Goals have been attained, (vi) the time of the expiration of any Award, (vii) the effect of the Participant's termination of Service on any of the foregoing, and (viii) all other terms, conditions and restrictions applicable to any Award or shares acquired pursuant thereto not inconsistent with the terms of the Plan;

(e) to determine whether an Award will be settled in shares of Stock, cash, other property or in any combination thereof;

(f) to approve one or more forms of Award Agreement;

(g) to amend, modify, extend, cancel or renew any Award or to waive any restrictions or conditions applicable to any Award or any shares acquired pursuant thereto;

(h) to accelerate, continue, extend or defer the exercisability or vesting of any Award or any shares acquired pursuant thereto, including with respect to the period following a Participant's termination of Service;

(i) to prescribe, amend or rescind rules, guidelines and policies relating to the Plan, or to adopt sub-plans or supplements to, or alternative versions of, the Plan, including, without limitation, as the Committee deems necessary or desirable to comply with the laws or regulations of or to accommodate the tax policy, accounting principles or custom of, foreign jurisdictions whose citizens may be granted Awards; and

(j) to correct any defect, supply any omission or reconcile any inconsistency in the Plan or any Award Agreement and to make all other determinations and take such other actions with respect to the Plan or any Award as the Committee may deem advisable to the extent not inconsistent with the provisions of the Plan or applicable law.

**3.6 Option or SAR Repricing.** Without the affirmative vote of holders of a majority of the shares of Stock cast in person or by proxy at a meeting of the stockholders of the Company at which a quorum representing a majority of all outstanding shares of Stock is present or represented by proxy, the Committee shall not approve a program providing for either (a) the cancellation of outstanding Options or SARs having exercise prices per share greater than the then Fair Market Value of a share of Stock ("**Underwater Awards**") and the grant in substitution therefore of new Options or SARs having a lower exercise price or payments in cash, or (b) the

amendment of outstanding Underwater Awards to reduce the exercise price thereof. This Section shall not apply to adjustments pursuant to the assumption of or substitution for an Option or SAR in a manner that would comply with Section 424(a) or Section 409A of the Code or to an adjustment pursuant to Section 4.5.

**3.7 Indemnification.** In addition to such other rights of indemnification as they may have as members of the Board or the Committee or as officers or employees of the Participating Company Group, to the extent permitted by applicable law, members of the Board or the Committee and any officers or employees of the Participating Company Group to whom authority to act for the Board, the Committee or the Company is delegated shall be indemnified by the Company against all reasonable expenses, including attorneys' fees, actually and necessarily incurred in connection with the defense of any action, suit or proceeding, or in connection with any appeal therein, to which they or any of them may be a party by reason of any action taken or failure to act under or in connection with the Plan, or any right granted hereunder, and against all amounts paid by them in settlement thereof (provided such settlement is approved by independent legal counsel selected by the Company) or paid by them in satisfaction of a judgment in any such action, suit or proceeding, except in relation to matters as to which it shall be adjudged in such action, suit or proceeding that such person is liable for gross negligence, bad faith or intentional misconduct in duties; provided, however, that within sixty (60) days after the institution of such action, suit or proceeding, such person shall offer to the Company, in writing, the opportunity at its own expense to handle and defend the same.

#### **4. SHARES SUBJECT TO PLAN.**

**4.1 Maximum Number of Shares Issuable.** Subject to adjustment as provided in Sections 4.2, 4.3, 4.4 and 4.5, the maximum aggregate number of shares of Stock that may be issued under the Plan shall be equal to 891,703 and shall consist of authorized but unissued or reacquired shares of Stock or any combination thereof.

**4.2 Annual Increase in Maximum Number of Shares Issuable.** Subject to adjustment as provided in Section 4.5, the maximum aggregate number of shares of Stock that may be issued under the Plan as set forth in Section 4.1 shall be cumulatively increased automatically on January 1, 2012 and on each subsequent January 1 through and including January 1, 2021, by a number of shares (the "**Annual Increase**") equal to the smaller of (a) two percent (2%) of the number of shares of Stock issued and outstanding on the immediately preceding December 31, or (b) an amount determined by the Board.

**4.3 Adjustment for Unissued or Forfeited Predecessor Plan Shares.** The maximum aggregate number of shares of Stock that may be issued under the Plan as set forth in Section 4.1 shall be cumulatively increased from time to time by:

(a) the number of shares of Stock subject to that portion of any option or other award outstanding pursuant to the Predecessor Plan as of the Effective Date which, on or after the Effective Date, expires or is terminated or canceled for any reason without having been exercised or settled in full; and

(b) the number of shares of Stock acquired pursuant to the Predecessor Plan subject to forfeiture or repurchase by the Company at the Participant's purchase price which, on or after the Effective Date, is so forfeited or repurchased;

provided further, however, that the aggregate number of shares of Stock authorized for issuance under the Predecessor Plan that may become authorized for issuance under the Plan pursuant to this Section 4.3 shall not exceed 1,412,352.

**4.4 Share Counting.** If an outstanding Award for any reason expires or is terminated or canceled without having been exercised or settled in full, or if shares of Stock acquired pursuant to an Award subject to forfeiture or repurchase are forfeited or repurchased by the Company for an amount not greater than the Participant's purchase price, the shares of Stock allocable to the terminated portion of such Award or such forfeited or repurchased shares of Stock shall again be available for issuance under the Plan. Shares of Stock shall not be deemed to have been issued pursuant to the Plan with respect to any portion of an Award that is settled in cash. Shares withheld or reacquired by the Company in satisfaction of tax withholding obligations pursuant to Section 16.2 shall not again be available for issuance under the Plan. Upon payment in shares of Stock pursuant to the exercise of an SAR, the number of shares available for issuance under the Plan shall be reduced by the gross number of shares for which such SAR was exercised. If the exercise price of an Option is paid by tender to the Company, or attestation to the ownership, of shares of Stock owned by the Participant, or by means of a Net Exercise, the number of shares available for issuance under the Plan shall be reduced by the gross number of shares for which the Option is exercised.

**4.5 Adjustments for Changes in Capital Structure.** Subject to any required action by the stockholders of the Company and the requirements of Sections 409A and 424 of the Code to the extent applicable, in the event of any change in the Stock effected without receipt of consideration by the Company, whether through merger, consolidation, reorganization, reincorporation, recapitalization, reclassification, stock dividend, stock split, reverse stock split, split-up, split-off, spin-off, combination of shares, exchange of shares, or similar change in the capital structure of the Company, or in the event of payment of a dividend or distribution to the stockholders of the Company in a form other than Stock (excepting regular, periodic cash dividends) that has a material effect on the Fair Market Value of shares of Stock, appropriate and proportionate adjustments shall be made in the number and kind of shares subject to the Plan and to any outstanding Awards, the number of shares resulting from any prior Annual Increase, the Award limits set forth in Section 5.3, and in the exercise or purchase price per share under any outstanding Award in order to prevent dilution or enlargement of Participants' rights under the Plan. For purposes of the foregoing, conversion of any convertible securities of the Company shall not be treated as "effected without receipt of consideration by the Company." If a majority of the shares which are of the same class as the shares that are subject to outstanding Awards are exchanged for, converted into, or otherwise become (whether or not pursuant to an Ownership Change Event) shares of another corporation (the "**New Shares**"), the Committee may unilaterally amend the outstanding Awards to provide that such Awards are for New Shares. In the event of any such amendment, the number of shares subject to, and the exercise or purchase price per share of, the outstanding Awards shall be adjusted in a fair and equitable manner as determined by the Committee, in its discretion. Any fractional share resulting from an adjustment pursuant to this Section shall be rounded down to the nearest whole number, and in

no event may the exercise or purchase price under any Award be decreased to an amount less than the par value, if any, of the stock subject to such Award. The Committee in its discretion, may also make such adjustments in the terms of any Award to reflect, or related to, such changes in the capital structure of the Company or distributions as it deems appropriate, including modification of Performance Goals, Performance Award Formulas and Performance Periods. The adjustments determined by the Committee pursuant to this Section shall be final, binding and conclusive.

**4.6 Assumption or Substitution of Awards.** The Committee may, without affecting the number of shares of Stock reserved or available hereunder, authorize the issuance or assumption of benefits under this Plan in connection with any merger, consolidation, acquisition of property or stock, or reorganization upon such terms and conditions as it may deem appropriate, subject to compliance with Section 409A and any other applicable provisions of the Code.

## **5. ELIGIBILITY, PARTICIPATION AND AWARD LIMITATIONS.**

**5.1 Persons Eligible for Awards.** Awards may be granted only to Employees, Consultants and Directors.

**5.2 Participation in the Plan.** Awards are granted solely at the discretion of the Committee. Eligible persons may be granted more than one Award. However, eligibility in accordance with this Section shall not entitle any person to be granted an Award, or, having been granted an Award, to be granted an additional Award.

### **5.3 Incentive Stock Option Limitations.**

(a) **Maximum Number of Shares Issuable Pursuant to Incentive Stock Options.** Subject to adjustment as provided in Section 4.5, the maximum aggregate number of shares of Stock that may be issued under the Plan pursuant to the exercise of Incentive Stock Options shall not exceed 891,703 shares, cumulatively increased on January 1, 2012 and on each subsequent January 1, through and including January 1, 2021, by a number of shares equal to the smaller of the Annual Increase determined under Section 4.2 or 1,579,780 shares. The maximum aggregate number of shares of Stock that may be issued under the Plan pursuant to all Awards other than Incentive Stock Options shall be the number of shares determined in accordance with Section 4.1, subject to adjustment as provided in Sections 4.2, 4.3, 4.4 and 4.5.

(b) **Persons Eligible.** An Incentive Stock Option may be granted only to a person who, on the effective date of grant, is an Employee of the Company, a Parent Corporation or a Subsidiary Corporation (each being an “**ISO-Qualifying Corporation**”). Any person who is not an Employee of an ISO-Qualifying Corporation on the effective date of the grant of an Option to such person may be granted only a Nonstatutory Stock Option.

(c) **Fair Market Value Limitation.** To the extent that options designated as Incentive Stock Options (granted under all stock option plans of the Participating Company Group, including the Plan) become exercisable by a Participant for the first time during any calendar year for stock having a Fair Market Value greater than One Hundred Thousand Dollars (\$100,000), the portion of such options which exceeds such amount shall be

treated as Nonstatutory Stock Options. For purposes of this Section, options designated as Incentive Stock Options shall be taken into account in the order in which they were granted, and the Fair Market Value of stock shall be determined as of the time the option with respect to such stock is granted. If the Code is amended to provide for a limitation different from that set forth in this Section, such different limitation shall be deemed incorporated herein effective as of the date and with respect to such Options as required or permitted by such amendment to the Code. If an Option is treated as an Incentive Stock Option in part and as a Nonstatutory Stock Option in part by reason of the limitation set forth in this Section, the Participant may designate which portion of such Option the Participant is exercising. In the absence of such designation, the Participant shall be deemed to have exercised the Incentive Stock Option portion of the Option first. Upon exercise, shares issued pursuant to each such portion shall be separately identified.

## **6. STOCK OPTIONS.**

Options shall be evidenced by Award Agreements specifying the number of shares of Stock covered thereby, in such form as the Committee shall from time to time establish. Award Agreements evidencing Options may incorporate all or any of the terms of the Plan by reference and shall comply with and be subject to the following terms and conditions:

**6.1 Exercise Price.** The exercise price for each Option shall be established in the discretion of the Committee; provided, however, that (a) the exercise price per share shall be not less than the Fair Market Value of a share of Stock on the effective date of grant of the Option and (b) no Incentive Stock Option granted to a Ten Percent Owner shall have an exercise price per share less than one hundred ten percent (110%) of the Fair Market Value of a share of Stock on the effective date of grant of the Option. Notwithstanding the foregoing, an Option (whether an Incentive Stock Option or a Nonstatutory Stock Option) may be granted with an exercise price lower than the minimum exercise price set forth above if such Option is granted pursuant to an assumption or substitution for another option in a manner that would qualify under the provisions of Section 409A or 424(a) of the Code.

**6.2 Exercisability and Term of Options.** Options shall be exercisable at such time or times, or upon such event or events, and subject to such terms, conditions, performance criteria and restrictions as shall be determined by the Committee and set forth in the Award Agreement evidencing such Option; provided, however, that (a) no Option shall be exercisable after the expiration of ten (10) years after the effective date of grant of such Option, (b) no Incentive Stock Option granted to a Ten Percent Owner shall be exercisable after the expiration of five (5) years after the effective date of grant of such Option and (c) no Option granted to an Employee who is a non-exempt employee for purposes of the Fair Labor Standards Act of 1938, as amended, shall be first exercisable until at least six (6) months following the date of grant of such Option (except in the event of such Employee's death, disability or retirement, upon a Change in Control, or as otherwise permitted by the Worker Economic Opportunity Act). Subject to the foregoing, unless otherwise specified by the Committee in the grant of an Option, each Option shall terminate ten (10) years after the effective date of grant of the Option, unless earlier terminated in accordance with its provisions.

### 6.3 Payment of Exercise Price.

(a) **Forms of Consideration Authorized.** Except as otherwise provided below, payment of the exercise price for the number of shares of Stock being purchased pursuant to any Option shall be made (i) in cash, by check or in cash equivalent; (ii) if permitted by the Committee and subject to the limitations contained in Section 6.3(b), by means of (1) a Cashless Exercise, (2) a Stock Tender Exercise or (3) a Net Exercise; (iii) by such other consideration as may be approved by the Committee from time to time to the extent permitted by applicable law, or (iv) by any combination thereof. The Committee may at any time or from time to time grant Options which do not permit all of the foregoing forms of consideration to be used in payment of the exercise price or which otherwise restrict one or more forms of consideration.

(b) **Limitations on Forms of Consideration.**

(i) **Cashless Exercise.** A “*Cashless Exercise*” means the delivery of a properly executed notice of exercise together with irrevocable instructions to a broker providing for the assignment to the Company of the proceeds of a sale or loan with respect to some or all of the shares being acquired upon the exercise of the Option (including, without limitation, through an exercise complying with the provisions of Regulation T as promulgated from time to time by the Board of Governors of the Federal Reserve System). The Company reserves, at any and all times, the right, in the Company’s sole and absolute discretion, to establish, decline to approve or terminate any program or procedures for the exercise of Options by means of a Cashless Exercise, including with respect to one or more Participants specified by the Company notwithstanding that such program or procedures may be available to other Participants.

(ii) **Stock Tender Exercise.** A “*Stock Tender Exercise*” means the delivery of a properly executed exercise notice accompanied by a Participant’s tender to the Company, or attestation to the ownership, in a form acceptable to the Company of whole shares of Stock owned by the Participant having a Fair Market Value that does not exceed the aggregate exercise price for the shares with respect to which the Option is exercised. A Stock Tender Exercise shall not be permitted if it would constitute a violation of the provisions of any law, regulation or agreement restricting the redemption of the Company’s stock. If required by the Company, an Option may not be exercised by tender to the Company, or attestation to the ownership, of shares of Stock unless such shares either have been owned by the Participant for a period of time required by the Company (and not used for another option exercise by attestation during such period) or were not acquired, directly or indirectly, from the Company.

(iii) **Net Exercise.** A “*Net Exercise*” means the delivery of a properly executed exercise notice followed by a procedure pursuant to which (1) the Company will reduce the number of shares otherwise issuable to a Participant upon the exercise of an Option by the largest whole number of shares having a Fair Market Value that does not exceed the aggregate exercise price for the shares with respect to which the Option is exercised, and (2) the Participant shall pay to the Company in cash the remaining balance of such aggregate exercise price not satisfied by such reduction in the number of whole shares to be issued.

#### 6.4 Effect of Termination of Service.

(a) **Option Exercisability.** Subject to earlier termination of the Option as otherwise provided by this Plan and unless otherwise provided by the Committee, an Option shall terminate immediately upon the Participant's termination of Service to the extent that it is then unvested and shall be exercisable after the Participant's termination of Service to the extent it is then vested only during the applicable time period determined in accordance with this Section and thereafter shall terminate.

(i) **Disability.** If the Participant's Service terminates because of the Disability of the Participant, the Option, to the extent unexercised and exercisable for vested shares on the date on which the Participant's Service terminated, may be exercised by the Participant (or the Participant's guardian or legal representative) at any time prior to the expiration of twelve (12) months after the date on which the Participant's Service terminated, but in any event no later than the date of expiration of the Option's term as set forth in the Award Agreement evidencing such Option (the "**Option Expiration Date**").

(ii) **Death.** If the Participant's Service terminates because of the death of the Participant, the Option, to the extent unexercised and exercisable for vested shares on the date on which the Participant's Service terminated, may be exercised by the Participant's legal representative or other person who acquired the right to exercise the Option by reason of the Participant's death at any time prior to the expiration of twelve (12) months after the date on which the Participant's Service terminated, but in any event no later than the Option Expiration Date. The Participant's Service shall be deemed to have terminated on account of death if the Participant dies within three (3) months after the Participant's termination of Service.

(iii) **Termination for Cause.** Notwithstanding any other provision of the Plan to the contrary, if the Participant's Service is terminated for Cause or if, following the Participant's termination of Service and during any period in which the Option otherwise would remain exercisable, the Participant engages in any act that would constitute Cause, the Option shall terminate in its entirety and cease to be exercisable immediately upon such termination of Service or act.

(iv) **Other Termination of Service.** If the Participant's Service terminates for any reason, except Disability, death or Cause, the Option, to the extent unexercised and exercisable for vested shares on the date on which the Participant's Service terminated, may be exercised by the Participant at any time prior to the expiration of three (3) months after the date on which the Participant's Service terminated, but in any event no later than the Option Expiration Date.

(b) **Extension if Exercise Prevented by Law.** Notwithstanding the foregoing, other than termination of Service for Cause, if the exercise of an Option within the applicable time periods set forth in Section 6.4(a) is prevented by the provisions of Section 14 below, the Option shall remain exercisable until the later of (i) thirty (30) days after the date such exercise first would no longer be prevented by such provisions or (ii) the end of the applicable time period under Section 6.4(a), but in any event no later than the Option Expiration Date.

**6.5 Transferability of Options.** During the lifetime of the Participant, an Option shall be exercisable only by the Participant or the Participant's guardian or legal representative. An Option shall not be subject in any manner to anticipation, alienation, sale, exchange, transfer, assignment, pledge, encumbrance, or garnishment by creditors of the Participant or the Participant's beneficiary, except transfer by will or by the laws of descent and distribution. Notwithstanding the foregoing, to the extent permitted by the Committee, in its discretion, and set forth in the Award Agreement evidencing such Option, an Option shall be assignable or transferable subject to the applicable limitations, if any, described in the General Instructions to Form S-8 under the Securities Act or, in the case of an Incentive Stock Option, only as permitted by applicable regulations under Section 421 of the Code in a manner that does not disqualify such Option as an Incentive Stock Option.

## **7. STOCK APPRECIATION RIGHTS.**

Stock Appreciation Rights shall be evidenced by Award Agreements specifying the number of shares of Stock subject to the Award, in such form as the Committee shall from time to time establish. Award Agreements evidencing SARs may incorporate all or any of the terms of the Plan by reference and shall comply with and be subject to the following terms and conditions:

**7.1 Types of SARs Authorized.** SARs may be granted in tandem with all or any portion of a related Option (a "**Tandem SAR**") or may be granted independently of any Option (a "**Freestanding SAR**"). A Tandem SAR may only be granted concurrently with the grant of the related Option.

**7.2 Exercise Price.** The exercise price for each SAR shall be established in the discretion of the Committee; provided, however, that (a) the exercise price per share subject to a Tandem SAR shall be the exercise price per share under the related Option and (b) the exercise price per share subject to a Freestanding SAR shall be not less than the Fair Market Value of a share of Stock on the effective date of grant of the SAR. Notwithstanding the foregoing, an SAR may be granted with an exercise price lower than the minimum exercise price set forth above if such SAR is granted pursuant to an assumption or substitution for another stock appreciation right in a manner that would qualify under the provisions of Section 409A of the Code.

### **7.3 Exercisability and Term of SARs.**

(a) **Tandem SARs.** Tandem SARs shall be exercisable only at the time and to the extent, and only to the extent, that the related Option is exercisable, subject to such provisions as the Committee may specify where the Tandem SAR is granted with respect to less than the full number of shares of Stock subject to the related Option. The Committee may, in its discretion, provide in any Award Agreement evidencing a Tandem SAR that such SAR may not be exercised without the advance approval of the Company and, if such approval is not given, then the Option shall nevertheless remain exercisable in accordance with its terms. A Tandem SAR shall terminate and cease to be exercisable no later than the date on which the related Option expires or is terminated or canceled. Upon the exercise of a Tandem SAR with respect to some or all of the shares subject to such SAR, the related Option shall be canceled

automatically as to the number of shares with respect to which the Tandem SAR was exercised. Upon the exercise of an Option related to a Tandem SAR as to some or all of the shares subject to such Option, the related Tandem SAR shall be canceled automatically as to the number of shares with respect to which the related Option was exercised.

(b) **Freestanding SARs.** Freestanding SARs shall be exercisable at such time or times, or upon such event or events, and subject to such terms, conditions, performance criteria and restrictions as shall be determined by the Committee and set forth in the Award Agreement evidencing such SAR; provided, however, that (i) no Freestanding SAR shall be exercisable after the expiration of ten (10) years after the effective date of grant of such SAR and (ii) no Freestanding SAR granted to an Employee who is a non-exempt employee for purposes of the Fair Labor Standards Act of 1938, as amended, shall be first exercisable until at least six (6) months following the date of grant of such SAR (except in the event of such Employee's death, disability or retirement, upon a Change in Control, or as otherwise permitted by the Worker Economic Opportunity Act). Subject to the foregoing, unless otherwise specified by the Committee in the grant of a Freestanding SAR, each Freestanding SAR shall terminate ten (10) years after the effective date of grant of the SAR, unless earlier terminated in accordance with its provisions.

**7.4 Exercise of SARs.** Upon the exercise (or deemed exercise pursuant to Section 7.5) of an SAR, the Participant (or the Participant's legal representative or other person who acquired the right to exercise the SAR by reason of the Participant's death) shall be entitled to receive payment of an amount for each share with respect to which the SAR is exercised equal to the excess, if any, of the Fair Market Value of a share of Stock on the date of exercise of the SAR over the exercise price. Payment of such amount shall be made (a) in the case of a Tandem SAR, solely in shares of Stock in a lump sum upon the date of exercise of the SAR and (b) in the case of a Freestanding SAR, in cash, shares of Stock, or any combination thereof as determined by the Committee, in a lump sum upon the date of exercise of the SAR. When payment is to be made in shares of Stock, the number of shares to be issued shall be determined on the basis of the Fair Market Value of a share of Stock on the date of exercise of the SAR. For purposes of Section 7, an SAR shall be deemed exercised on the date on which the Company receives notice of exercise from the Participant or as otherwise provided in Section 7.5.

**7.5 Deemed Exercise of SARs.** If, on the date on which an SAR would otherwise terminate or expire, the SAR by its terms remains exercisable immediately prior to such termination or expiration and, if so exercised, would result in a payment to the holder of such SAR, then any portion of such SAR which has not previously been exercised shall automatically be deemed to be exercised as of such date with respect to such portion.

**7.6 Effect of Termination of Service.** Subject to earlier termination of the SAR as otherwise provided herein and unless otherwise provided by the Committee, an SAR shall be exercisable after a Participant's termination of Service only to the extent and during the applicable time period determined in accordance with Section 6.4 (treating the SAR as if it were an Option) and thereafter shall terminate.

**7.7 Transferability of SARs.** During the lifetime of the Participant, an SAR shall be exercisable only by the Participant or the Participant's guardian or legal representative.

An SAR shall not be subject in any manner to anticipation, alienation, sale, exchange, transfer, assignment, pledge, encumbrance, or garnishment by creditors of the Participant or the Participant's beneficiary, except transfer by will or by the laws of descent and distribution. Notwithstanding the foregoing, to the extent permitted by the Committee, in its discretion, and set forth in the Award Agreement evidencing such Award, a Tandem SAR related to a Nonstatutory Stock Option or a Freestanding SAR shall be assignable or transferable subject to the applicable limitations, if any, described in the General Instructions to Form S-8 under the Securities Act.

#### 8. **RESTRICTED STOCK AWARDS.**

Restricted Stock Awards shall be evidenced by Award Agreements specifying whether the Award is a Restricted Stock Bonus or a Restricted Stock Purchase Right and the number of shares of Stock subject to the Award, in such form as the Committee shall from time to time establish. Award Agreements evidencing Restricted Stock Awards may incorporate all or any of the terms of the Plan by reference and shall comply with and be subject to the following terms and conditions:

**8.1 Types of Restricted Stock Awards Authorized.** Restricted Stock Awards may be granted in the form of either a Restricted Stock Bonus or a Restricted Stock Purchase Right. Restricted Stock Awards may be granted upon such conditions as the Committee shall determine, including, without limitation, upon the attainment of one or more Performance Goals described in Section 10.4. If either the grant of or satisfaction of Vesting Conditions applicable to a Restricted Stock Award is to be contingent upon the attainment of one or more Performance Goals, the Committee shall follow procedures substantially equivalent to those set forth in Sections 10.3 through 10.5(a).

**8.2 Purchase Price.** The purchase price for shares of Stock issuable under each Restricted Stock Purchase Right shall be established by the Committee in its discretion. No monetary payment (other than applicable tax withholding) shall be required as a condition of receiving shares of Stock pursuant to a Restricted Stock Bonus, the consideration for which shall be services actually rendered to a Participating Company or for its benefit. Notwithstanding the foregoing, if required by applicable state corporate law, the Participant shall furnish consideration in the form of cash or past services rendered to a Participating Company or for its benefit having a value not less than the par value of the shares of Stock subject to a Restricted Stock Award.

**8.3 Purchase Period.** A Restricted Stock Purchase Right shall be exercisable within a period established by the Committee, which shall in no event exceed thirty (30) days from the effective date of the grant of the Restricted Stock Purchase Right.

**8.4 Payment of Purchase Price.** Except as otherwise provided below, payment of the purchase price for the number of shares of Stock being purchased pursuant to any Restricted Stock Purchase Right shall be made (a) in cash, by check or in cash equivalent, (b) by such other consideration as may be approved by the Committee from time to time to the extent permitted by applicable law, or (c) by any combination thereof.

**8.5 Vesting and Restrictions on Transfer.** Shares issued pursuant to any Restricted Stock Award may (but need not) be made subject to Vesting Conditions based upon the satisfaction of such Service requirements, conditions, restrictions or performance criteria, including, without limitation, Performance Goals as described in Section 10.4, as shall be established by the Committee and set forth in the Award Agreement evidencing such Award. During any period in which shares acquired pursuant to a Restricted Stock Award remain subject to Vesting Conditions, such shares may not be sold, exchanged, transferred, pledged, assigned or otherwise disposed of other than pursuant to an Ownership Change Event or as provided in Section 8.8. The Committee, in its discretion, may provide in any Award Agreement evidencing a Restricted Stock Award that, if the satisfaction of Vesting Conditions with respect to any shares subject to such Restricted Stock Award would otherwise occur on a day on which the sale of such shares would violate the provisions of the Trading Compliance Policy, then satisfaction of the Vesting Conditions automatically shall be determined on the next trading day on which the sale of such shares would not violate the Trading Compliance Policy. Upon request by the Company, each Participant shall execute any agreement evidencing such transfer restrictions prior to the receipt of shares of Stock hereunder and shall promptly present to the Company any and all certificates representing shares of Stock acquired hereunder for the placement on such certificates of appropriate legends evidencing any such transfer restrictions.

**8.6 Voting Rights; Dividends and Distributions.** Except as provided in this Section, Section 8.5 and any Award Agreement, during any period in which shares acquired pursuant to a Restricted Stock Award remain subject to Vesting Conditions, the Participant shall have all of the rights of a stockholder of the Company holding shares of Stock, including the right to vote such shares and to receive all dividends and other distributions paid with respect to such shares; provided, however, that unless otherwise determined by the Committee and provided by the Award Agreement, such dividends and distributions shall be subject to the same Vesting Conditions as the shares subject to the Restricted Stock Award with respect to which such dividends or distributions were paid, and otherwise shall be paid no later than the end of the calendar year in which such dividends or distributions are paid to stockholders (or, if later, the 15th day of the third month following the date such dividends or distributions are paid to stockholders). In the event of a dividend or distribution paid in shares of Stock or other property or any other adjustment made upon a change in the capital structure of the Company as described in Section 4.5, any and all new, substituted or additional securities or other property (other than regular, periodic cash dividends) to which the Participant is entitled by reason of the Participant's Restricted Stock Award shall be immediately subject to the same Vesting Conditions as the shares subject to the Restricted Stock Award with respect to which such dividends or distributions were paid or adjustments were made.

**8.7 Effect of Termination of Service.** Unless otherwise provided by the Committee in the Award Agreement evidencing a Restricted Stock Award, if a Participant's Service terminates for any reason, whether voluntary or involuntary (including the Participant's death or disability), then (a) the Company shall have the option to repurchase for the purchase price paid by the Participant any shares acquired by the Participant pursuant to a Restricted Stock Purchase Right which remain subject to Vesting Conditions as of the date of the Participant's termination of Service and (b) the Participant shall forfeit to the Company any shares acquired by the Participant pursuant to a Restricted Stock Bonus which remain subject to Vesting Conditions as of the date of the Participant's termination of Service. The Company shall have the right to assign at any time any repurchase right it may have, whether or not such right is then exercisable, to one or more persons as may be selected by the Company.

**8.8 Nontransferability of Restricted Stock Award Rights.** Rights to acquire shares of Stock pursuant to a Restricted Stock Award shall not be subject in any manner to anticipation, alienation, sale, exchange, transfer, assignment, pledge, encumbrance or garnishment by creditors of the Participant or the Participant's beneficiary, except transfer by will or the laws of descent and distribution. All rights with respect to a Restricted Stock Award granted to a Participant hereunder shall be exercisable during his or her lifetime only by such Participant or the Participant's guardian or legal representative.

#### **9. RESTRICTED STOCK UNIT AWARDS.**

Restricted Stock Unit Awards shall be evidenced by Award Agreements specifying the number of Restricted Stock Units subject to the Award, in such form as the Committee shall from time to time establish. Award Agreements evidencing Restricted Stock Units may incorporate all or any of the terms of the Plan by reference and shall comply with and be subject to the following terms and conditions:

**9.1 Grant of Restricted Stock Unit Awards.** Restricted Stock Unit Awards may be granted upon such conditions as the Committee shall determine, including, without limitation, upon the attainment of one or more Performance Goals described in Section 10.4. If either the grant of a Restricted Stock Unit Award or the Vesting Conditions with respect to such Award is to be contingent upon the attainment of one or more Performance Goals, the Committee shall follow procedures substantially equivalent to those set forth in Sections 10.3 through 10.5(a).

**9.2 Purchase Price.** No monetary payment (other than applicable tax withholding, if any) shall be required as a condition of receiving a Restricted Stock Unit Award, the consideration for which shall be services actually rendered to a Participating Company or for its benefit. Notwithstanding the foregoing, if required by applicable state corporate law, the Participant shall furnish consideration in the form of cash or past services rendered to a Participating Company or for its benefit having a value not less than the par value of the shares of Stock issued upon settlement of the Restricted Stock Unit Award.

**9.3 Vesting.** Restricted Stock Unit Awards may (but need not) be made subject to Vesting Conditions based upon the satisfaction of such Service requirements, conditions, restrictions or performance criteria, including, without limitation, Performance Goals as described in Section 10.4, as shall be established by the Committee and set forth in the Award Agreement evidencing such Award. The Committee, in its discretion, may provide in any Award Agreement evidencing a Restricted Stock Unit Award that, if the satisfaction of Vesting Conditions with respect to any shares subject to the Award would otherwise occur on a day on which the sale of such shares would violate the provisions of the Trading Compliance Policy, then the satisfaction of the Vesting Conditions automatically shall be determined on the first to occur of (a) the next trading day on which the sale of such shares would not violate the Trading Compliance Policy or (b) the later of (i) last day of the calendar year in which the original vesting date occurred or (ii) the last day of the Company's taxable year in which the original vesting date occurred.

**9.4 Voting Rights, Dividend Equivalent Rights and Distributions.** Participants shall have no voting rights with respect to shares of Stock represented by Restricted Stock Units until the date of the issuance of such shares (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company). However, the Committee, in its discretion, may provide in the Award Agreement evidencing any Restricted Stock Unit Award that the Participant shall be entitled to Dividend Equivalent Rights with respect to the payment of cash dividends on Stock during the period beginning on the date such Award is granted and ending, with respect to each share subject to the Award, on the earlier of the date the Award is settled or the date on which it is terminated. Such Dividend Equivalent Rights, if any, shall be paid by crediting the Participant with a cash amount or with additional whole Restricted Stock Units as of the date of payment of such cash dividends on Stock, as determined by the Committee. The number of additional Restricted Stock Units (rounded to the nearest whole number), if any, to be so credited shall be determined by dividing (a) the amount of cash dividends paid on such date with respect to the number of shares of Stock represented by the Restricted Stock Units previously credited to the Participant by (b) the Fair Market Value per share of Stock on such date. Such cash amounts and/or additional Restricted Stock Units shall be subject to the same terms and conditions and shall be settled in the same manner and at the same time as the Restricted Stock Units originally subject to the Restricted Stock Unit Award. In the event of a dividend or distribution paid in shares of Stock or other property or any other adjustment made upon a change in the capital structure of the Company as described in Section 4.5, appropriate adjustments shall be made in the Participant's Restricted Stock Unit Award so that it represents the right to receive upon settlement any and all new, substituted or additional securities or other property (other than regular, periodic cash dividends) to which the Participant would be entitled by reason of the shares of Stock issuable upon settlement of the Award, and all such new, substituted or additional securities or other property shall be immediately subject to the same Vesting Conditions as are applicable to the Award.

**9.5 Effect of Termination of Service.** Unless otherwise provided by the Committee and set forth in the Award Agreement evidencing a Restricted Stock Unit Award, if a Participant's Service terminates for any reason, whether voluntary or involuntary (including the Participant's death or disability), then the Participant shall forfeit to the Company any Restricted Stock Units pursuant to the Award which remain subject to Vesting Conditions as of the date of the Participant's termination of Service.

**9.6 Settlement of Restricted Stock Unit Awards.** The Company shall issue to a Participant on the date on which Restricted Stock Units subject to the Participant's Restricted Stock Unit Award vest or on such other date determined by the Committee, in its discretion, and set forth in the Award Agreement one (1) share of Stock (and/or any other new, substituted or additional securities or other property pursuant to an adjustment described in Section 9.4) for each Restricted Stock Unit then becoming vested or otherwise to be settled on such date, subject to the withholding of applicable taxes, if any. If permitted by the Committee, the Participant may elect, consistent with the requirements of Section 409A, to defer receipt of all or any portion of the shares of Stock or other property otherwise issuable to the Participant pursuant to this Section, and such deferred issuance date(s) and amount(s) elected by the

Participant shall be set forth in the Award Agreement. Notwithstanding the foregoing, the Committee, in its discretion, may provide for settlement of any Restricted Stock Unit Award by payment to the Participant in cash of an amount equal to the Fair Market Value on the payment date of the shares of Stock or other property otherwise issuable to the Participant pursuant to this Section.

**9.7 Nontransferability of Restricted Stock Unit Awards.** The right to receive shares pursuant to a Restricted Stock Unit Award shall not be subject in any manner to anticipation, alienation, sale, exchange, transfer, assignment, pledge, encumbrance, or garnishment by creditors of the Participant or the Participant's beneficiary, except transfer by will or by the laws of descent and distribution. All rights with respect to a Restricted Stock Unit Award granted to a Participant hereunder shall be exercisable during his or her lifetime only by such Participant or the Participant's guardian or legal representative.

#### **10. PERFORMANCE AWARDS.**

Performance Awards shall be evidenced by Award Agreements in such form as the Committee shall from time to time establish. Award Agreements evidencing Performance Awards may incorporate all or any of the terms of the Plan by reference and shall comply with and be subject to the following terms and conditions:

**10.1 Types of Performance Awards Authorized.** Performance Awards may be granted in the form of either Performance Shares or Performance Units. Each Award Agreement evidencing a Performance Award shall specify the number of Performance Shares or Performance Units subject thereto, the Performance Award Formula, the Performance Goal(s) and Performance Period applicable to the Award, and the other terms, conditions and restrictions of the Award.

**10.2 Initial Value of Performance Shares and Performance Units.** Unless otherwise provided by the Committee in granting a Performance Award, each Performance Share shall have an initial monetary value equal to the Fair Market Value of one (1) share of Stock, subject to adjustment as provided in Section 4.5, on the effective date of grant of the Performance Share, and each Performance Unit shall have an initial monetary value established by the Committee at the time of grant. The final value payable to the Participant in settlement of a Performance Award determined on the basis of the applicable Performance Award Formula will depend on the extent to which Performance Goals established by the Committee are attained within the applicable Performance Period established by the Committee.

**10.3 Establishment of Performance Period, Performance Goals and Performance Award Formula.** In granting each Performance Award, the Committee shall establish in writing the applicable Performance Period, Performance Award Formula and one or more Performance Goals which, when measured at the end of the Performance Period, shall determine on the basis of the Performance Award Formula the final value of the Performance Award to be paid to the Participant. Unless otherwise permitted in compliance with the requirements under Section 162(m) with respect to each Performance Award intended to result in the payment of Performance-Based Compensation, the Committee shall establish the Performance Goal(s) and Performance Award Formula applicable to each Performance Award

no later than the earlier of (a) the date ninety (90) days after the commencement of the applicable Performance Period or (b) the date on which 25% of the Performance Period has elapsed, and, in any event, at a time when the outcome of the Performance Goals remains substantially uncertain. Once established, the Performance Goals and Performance Award Formula applicable to a Covered Employee shall not be changed during the Performance Period. The Company shall notify each Participant granted a Performance Award of the terms of such Award, including the Performance Period, Performance Goal(s) and Performance Award Formula.

**10.4 Measurement of Performance Goals.** Performance Goals shall be established by the Committee on the basis of targets to be attained (“*Performance Targets*”) with respect to one or more measures of business or financial performance (each, a “*Performance Measure*”), subject to the following:

(a) ***Performance Measures.*** Performance Measures shall be calculated in accordance with the Company’s financial statements, or, if such terms are not used in the Company’s financial statements, they shall be calculated in accordance with generally accepted accounting principles, a method used generally in the Company’s industry, or in accordance with a methodology established by the Committee prior to the grant of the Performance Award. Performance Measures shall be calculated with respect to the Company and each Subsidiary Corporation consolidated therewith for financial reporting purposes or such division or other business unit as may be selected by the Committee. Unless otherwise determined by the Committee prior to the grant of the Performance Award, the Performance Measures applicable to the Performance Award shall be calculated prior to the accrual of expense for any Performance Award for the same Performance Period and excluding the effect (whether positive or negative) on the Performance Measures of any change in accounting standards or any extraordinary, unusual or nonrecurring item, as determined by the Committee, occurring after the establishment of the Performance Goals applicable to the Performance Award. Each such adjustment, if any, shall be made solely for the purpose of providing a consistent basis from period to period for the calculation of Performance Measures in order to prevent the dilution or enlargement of the Participant’s rights with respect to a Performance Award. Performance Measures may be one or more of the following, as determined by the Committee:

- (i) revenue;
- (ii) sales;
- (iii) expenses;
- (iv) operating income;
- (v) gross margin;
- (vi) operating margin;
- (vii) earnings before any one or more of: stock-based compensation expense, interest, taxes, depreciation and amortization;

- (viii) pre-tax profit;
- (ix) net operating income;
- (x) net income;
- (xi) economic value added;
- (xii) free cash flow;
- (xiii) operating cash flow;
- (xiv) balance of cash, cash equivalents and marketable securities;
- (xv) stock price;
- (xvi) earnings per share;
- (xvii) return on stockholder equity;
- (xviii) return on capital;
- (xix) return on assets;
- (xx) return on investment;
- (xxi) total stockholder return;
- (xxii) employee satisfaction;
- (xxiii) employee retention;
- (xxiv) market share;
- (xxv) customer satisfaction;
- (xxvi) product development;
- (xxvii) research and development expenses;
- (xxviii) completion of an identified special project; and
- (xxix) completion of a joint venture or other corporate transaction.

(b) **Performance Targets.** Performance Targets may include a minimum, maximum, target level and intermediate levels of performance, with the final value of a Performance Award determined under the applicable Performance Award Formula by the level attained during the applicable Performance Period. A Performance Target may be stated as an absolute value, an increase or decrease in a value, or as a value determined relative to an index, budget or other standard selected by the Committee.

## 10.5 Settlement of Performance Awards.

(a) **Determination of Final Value.** As soon as practicable following the completion of the Performance Period applicable to a Performance Award, the Committee shall certify in writing the extent to which the applicable Performance Goals have been attained and the resulting final value of the Award earned by the Participant and to be paid upon its settlement in accordance with the applicable Performance Award Formula.

(b) **Discretionary Adjustment of Award Formula.** In its discretion, the Committee may, either at the time it grants a Performance Award or at any time thereafter, provide for the positive or negative adjustment of the Performance Award Formula applicable to a Performance Award granted to any Participant who is not a Covered Employee to reflect such Participant's individual performance in his or her position with the Company or such other factors as the Committee may determine. If permitted under a Covered Employee's Award Agreement, the Committee shall have the discretion, on the basis of such criteria as may be established by the Committee, to reduce some or all of the value of the Performance Award that would otherwise be paid to the Covered Employee upon its settlement notwithstanding the attainment of any Performance Goal and the resulting value of the Performance Award determined in accordance with the Performance Award Formula. No such reduction may result in an increase in the amount payable upon settlement of another Participant's Performance Award that is intended to result in Performance-Based Compensation.

(c) **Effect of Leaves of Absence.** Unless otherwise required by law or a Participant's Award Agreement, payment of the final value, if any, of a Performance Award held by a Participant who has taken in excess of thirty (30) days in unpaid leaves of absence during a Performance Period shall be prorated on the basis of the number of days of the Participant's Service during the Performance Period during which the Participant was not on an unpaid leave of absence.

(d) **Notice to Participants.** As soon as practicable following the Committee's determination and certification in accordance with Sections 10.5(a) and (b), the Company shall notify each Participant of the determination of the Committee.

(e) **Payment in Settlement of Performance Awards.** As soon as practicable following the Committee's determination and certification in accordance with Sections 10.5(a) and (b), but in any event within the Short-Term Deferral Period described in Section 15.1 (except as otherwise provided below or consistent with the requirements of Section 409A), payment shall be made to each eligible Participant (or such Participant's legal representative or other person who acquired the right to receive such payment by reason of the Participant's death) of the final value of the Participant's Performance Award. Payment of such amount shall be made in cash, shares of Stock, or a combination thereof as determined by the Committee. Unless otherwise provided in the Award Agreement evidencing a Performance Award, payment shall be made in a lump sum. If permitted by the Committee, the Participant may elect, consistent with the requirements of Section 409A, to defer receipt of all or any portion

of the payment to be made to the Participant pursuant to this Section, and such deferred payment date(s) elected by the Participant shall be set forth in the Award Agreement. If any payment is to be made on a deferred basis, the Committee may, but shall not be obligated to, provide for the payment during the deferral period of Dividend Equivalent Rights or interest.

(f) **Provisions Applicable to Payment in Shares.** If payment is to be made in shares of Stock, the number of such shares shall be determined by dividing the final value of the Performance Award by the Fair Market Value of a share of Stock determined by the method specified in the Award Agreement. Shares of Stock issued in payment of any Performance Award may be fully vested and freely transferable shares or may be shares of Stock subject to Vesting Conditions as provided in Section 8.5. Any shares subject to Vesting Conditions shall be evidenced by an appropriate Award Agreement and shall be subject to the provisions of Sections 8.5 through 8.8 above.

**10.6 Voting Rights; Dividend Equivalent Rights and Distributions.** Participants shall have no voting rights with respect to shares of Stock represented by Performance Share Awards until the date of the issuance of such shares, if any (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company). However, the Committee, in its discretion, may provide in the Award Agreement evidencing any Performance Share Award that the Participant shall be entitled to Dividend Equivalent Rights with respect to the payment of cash dividends on Stock during the period beginning on the date the Award is granted and ending, with respect to each share subject to the Award, on the earlier of the date on which the Performance Shares are settled or the date on which they are forfeited. Such Dividend Equivalent Rights, if any, shall be credited to the Participant either in cash or in the form of additional whole Performance Shares as of the date of payment of such cash dividends on Stock, as determined by the Committee. The number of additional Performance Shares (rounded to the nearest whole number), if any, to be so credited shall be determined by dividing (a) the amount of cash dividends paid on the dividend payment date with respect to the number of shares of Stock represented by the Performance Shares previously credited to the Participant by (b) the Fair Market Value per share of Stock on such date. Dividend Equivalent Rights may be paid currently or may be accumulated and paid to the extent that Performance Shares become nonforfeitable, as determined by the Committee. Settlement of Dividend Equivalent Rights may be made in cash, shares of Stock, or a combination thereof as determined by the Committee, and may be paid on the same basis as settlement of the related Performance Share as provided in Section 10.5. Dividend Equivalent Rights shall not be paid with respect to Performance Units. In the event of a dividend or distribution paid in shares of Stock or other property or any other adjustment made upon a change in the capital structure of the Company as described in Section 4.5, appropriate adjustments shall be made in the Participant's Performance Share Award so that it represents the right to receive upon settlement any and all new, substituted or additional securities or other property (other than regular, periodic cash dividends) to which the Participant would be entitled by reason of the shares of Stock issuable upon settlement of the Performance Share Award, and all such new, substituted or additional securities or other property shall be immediately subject to the same Performance Goals as are applicable to the Award.

**10.7 Effect of Termination of Service.** Unless otherwise provided by the Committee and set forth in the Award Agreement evidencing a Performance Award, the effect of a Participant's termination of Service on the Performance Award shall be as follows:

(a) **Death or Disability.** If the Participant's Service terminates because of the death or Disability of the Participant before the completion of the Performance Period applicable to the Performance Award, the final value of the Participant's Performance Award shall be determined by the extent to which the applicable Performance Goals have been attained with respect to the entire Performance Period and shall be prorated based on the number of months of the Participant's Service during the Performance Period. Payment shall be made following the end of the Performance Period in any manner permitted by Section 10.5.

(b) **Other Termination of Service.** If the Participant's Service terminates for any reason except death or Disability before the completion of the Performance Period applicable to the Performance Award, such Award shall be forfeited in its entirety; provided, however, that in the event of an involuntary termination of the Participant's Service, the Committee, in its discretion, may waive the automatic forfeiture of all or any portion of any such Award and determine the final value of the Performance Award in the manner provided by Section 10.7(a). Payment of any amount pursuant to this Section shall be made following the end of the Performance Period in any manner permitted by Section 10.5.

**10.8 Nontransferability of Performance Awards.** Prior to settlement in accordance with the provisions of the Plan, no Performance Award shall be subject in any manner to anticipation, alienation, sale, exchange, transfer, assignment, pledge, encumbrance, or garnishment by creditors of the Participant or the Participant's beneficiary, except transfer by will or by the laws of descent and distribution. All rights with respect to a Performance Award granted to a Participant hereunder shall be exercisable during his or her lifetime only by such Participant or the Participant's guardian or legal representative.

#### **11. CASH-BASED AWARDS AND OTHER STOCK-BASED AWARDS.**

Cash-Based Awards and Other Stock-Based Awards shall be evidenced by Award Agreements in such form as the Committee shall from time to time establish. Award Agreements evidencing Cash-Based Awards and Other Stock-Based Awards may incorporate all or any of the terms of the Plan by reference and shall comply with and be subject to the following terms and conditions:

**11.1 Grant of Cash-Based Awards.** Subject to the provisions of the Plan, the Committee, at any time and from time to time, may grant Cash-Based Awards to Participants in such amounts and upon such terms and conditions, including the achievement of performance criteria, as the Committee may determine.

**11.2 Grant of Other Stock-Based Awards.** The Committee may grant other types of equity-based or equity-related Awards not otherwise described by the terms of this Plan (including the grant or offer for sale of unrestricted securities, stock-equivalent units, stock appreciation units, securities or debentures convertible into common stock or other forms determined by the Committee) in such amounts and subject to such terms and conditions as the

Committee shall determine. Other Stock-Based Awards may be made available as a form of payment in the settlement of other Awards or as payment in lieu of compensation to which a Participant is otherwise entitled. Other Stock-Based Awards may involve the transfer of actual shares of Stock to Participants, or payment in cash or otherwise of amounts based on the value of Stock and may include, without limitation, Awards designed to comply with or take advantage of the applicable local laws of jurisdictions other than the United States.

**11.3 Value of Cash-Based and Other Stock-Based Awards.** Each Cash-Based Award shall specify a monetary payment amount or payment range as determined by the Committee. Each Other Stock-Based Award shall be expressed in terms of shares of Stock or units based on such shares of Stock, as determined by the Committee. The Committee may require the satisfaction of such Service requirements, conditions, restrictions or performance criteria, including, without limitation, Performance Goals as described in Section 10.4, as shall be established by the Committee and set forth in the Award Agreement evidencing such Award. If the Committee exercises its discretion to establish performance criteria, the final value of Cash-Based Awards or Other Stock-Based Awards that will be paid to the Participant will depend on the extent to which the performance criteria are met. The establishment of performance criteria with respect to the grant or vesting of any Cash-Based Award or Other Stock-Based Award intended to result in Performance-Based Compensation shall follow procedures substantially equivalent to those applicable to Performance Awards set forth in Section 10.

**11.4 Payment or Settlement of Cash-Based Awards and Other Stock-Based Awards.** Payment or settlement, if any, with respect to a Cash-Based Award or an Other Stock-Based Award shall be made in accordance with the terms of the Award, in cash, shares of Stock or other securities or any combination thereof as the Committee determines. The determination and certification of the final value with respect to any Cash-Based Award or Other Stock-Based Award intended to result in Performance-Based Compensation shall comply with the requirements applicable to Performance Awards set forth in Section 10. To the extent applicable, payment or settlement with respect to each Cash-Based Award and Other Stock-Based Award shall be made in compliance with the requirements of Section 409A.

**11.5 Voting Rights; Dividend Equivalent Rights and Distributions.** Participants shall have no voting rights with respect to shares of Stock represented by Other Stock-Based Awards until the date of the issuance of such shares of Stock (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), if any, in settlement of such Award. However, the Committee, in its discretion, may provide in the Award Agreement evidencing any Other Stock-Based Award that the Participant shall be entitled to Dividend Equivalent Rights with respect to the payment of cash dividends on Stock during the period beginning on the date such Award is granted and ending, with respect to each share subject to the Award, on the earlier of the date the Award is settled or the date on which it is terminated. Such Dividend Equivalent Rights, if any, shall be paid in accordance with the provisions set forth in Section 9.4. Dividend Equivalent Rights shall not be granted with respect to Cash-Based Awards. In the event of a dividend or distribution paid in shares of Stock or other property or any other adjustment made upon a change in the capital structure of the Company as described in Section 4.5, appropriate adjustments shall be made in the Participant's Other Stock-Based Award so that it represents the right to receive upon settlement

any and all new, substituted or additional securities or other property (other than regular, periodic cash dividends) to which the Participant would be entitled by reason of the shares of Stock issuable upon settlement of such Award, and all such new, substituted or additional securities or other property shall be immediately subject to the same Vesting Conditions and performance criteria, if any, as are applicable to the Award.

**11.6 Effect of Termination of Service.** Each Award Agreement evidencing a Cash-Based Award or Other Stock-Based Award shall set forth the extent to which the Participant shall have the right to retain such Award following termination of the Participant's Service. Such provisions shall be determined in the discretion of the Committee, need not be uniform among all Cash-Based Awards or Other Stock-Based Awards, and may reflect distinctions based on the reasons for termination, subject to the requirements of Section 409A, if applicable.

**11.7 Nontransferability of Cash-Based Awards and Other Stock-Based Awards.** Prior to the payment or settlement of a Cash-Based Award or Other Stock-Based Award, the Award shall not be subject in any manner to anticipation, alienation, sale, exchange, transfer, assignment, pledge, encumbrance, or garnishment by creditors of the Participant or the Participant's beneficiary, except transfer by will or by the laws of descent and distribution. The Committee may impose such additional restrictions on any shares of Stock issued in settlement of Cash-Based Awards and Other Stock-Based Awards as it may deem advisable, including, without limitation, minimum holding period requirements, restrictions under applicable federal securities laws, under the requirements of any stock exchange or market upon which such shares of Stock are then listed and/or traded, or under any state securities laws or foreign law applicable to such shares of Stock.

## **12. STANDARD FORMS OF AWARD AGREEMENT.**

**12.1 Award Agreements.** Each Award shall comply with and be subject to the terms and conditions set forth in the appropriate form of Award Agreement approved by the Committee and as amended from time to time. No Award or purported Award shall be a valid and binding obligation of the Company unless evidenced by a fully executed Award Agreement, which execution may be evidenced by electronic means.

**12.2 Authority to Vary Terms.** The Committee shall have the authority from time to time to vary the terms of any standard form of Award Agreement either in connection with the grant or amendment of an individual Award or in connection with the authorization of a new standard form or forms; provided, however, that the terms and conditions of any such new, revised or amended standard form or forms of Award Agreement are not inconsistent with the terms of the Plan.

## **13. CHANGE IN CONTROL.**

**13.1 Effect of Change in Control on Awards.** Subject to the requirements and limitations of Section 409A, if applicable, the Committee may provide for any one or more of the following:

(a) **Accelerated Vesting.** In its discretion, the Committee may provide in the grant of any Award or at any other time may take such action as it deems appropriate to provide for acceleration of the exercisability, vesting and/or settlement in connection with a Change in Control of each or any outstanding Award or portion thereof and shares acquired pursuant thereto upon such conditions, including termination of the Participant's Service prior to, upon, or following such Change in Control, and to such extent as the Committee shall determine.

(b) **Assumption, Continuation or Substitution.** In the event of a Change in Control, the surviving, continuing, successor, or purchasing corporation or other business entity or parent thereof, as the case may be (the "**Acquiror**"), may, without the consent of any Participant, assume or continue the Company's rights and obligations under each or any Award or portion thereof outstanding immediately prior to the Change in Control or substitute for each or any such outstanding Award or portion thereof a substantially equivalent award with respect to the Acquiror's stock, as applicable. For purposes of this Section, if so determined by the Committee in its discretion, an Award denominated in shares of Stock shall be deemed assumed if, following the Change in Control, the Award confers the right to receive, subject to the terms and conditions of the Plan and the applicable Award Agreement, for each share of Stock subject to the Award immediately prior to the Change in Control, the consideration (whether stock, cash, other securities or property or a combination thereof) to which a holder of a share of Stock on the effective date of the Change in Control was entitled (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding shares of Stock); provided, however, that if such consideration is not solely common stock of the Acquiror, the Committee may, with the consent of the Acquiror, provide for the consideration to be received upon the exercise or settlement of the Award, for each share of Stock subject to the Award, to consist solely of common stock of the Acquiror equal in Fair Market Value to the per share consideration received by holders of Stock pursuant to the Change in Control. Any Award or portion thereof which is neither assumed or continued by the Acquiror in connection with the Change in Control nor exercised or settled as of the time of consummation of the Change in Control shall terminate and cease to be outstanding effective as of the time of consummation of the Change in Control.

(c) **Cash-Out of Outstanding Stock-Based Awards.** The Committee may, in its discretion and without the consent of any Participant, determine that, upon the occurrence of a Change in Control, each or any Award denominated in shares of Stock or portion thereof outstanding immediately prior to the Change in Control and not previously exercised or settled shall be canceled in exchange for a payment with respect to each vested share (and each unvested share, if so determined by the Committee) of Stock subject to such canceled Award in (i) cash, (ii) stock of the Company or of a corporation or other business entity a party to the Change in Control, or (iii) other property which, in any such case, shall be in an amount having a Fair Market Value equal to the Fair Market Value of the consideration to be paid per share of Stock in the Change in Control, reduced (but not below zero) by the exercise or purchase price per share, if any, under such Award. In the event such determination is made by the Committee, an Award having an exercise or purchase price per share equal to or greater than the Fair Market Value of the consideration to be paid per share of Stock in the Change in Control may be canceled without payment of consideration to the holder thereof. Payment pursuant to this Section (reduced by applicable withholding taxes, if any) shall be made to Participants in respect of the vested portions of their canceled Awards as soon as practicable following the date of the Change in Control and in respect of the unvested portions of their canceled Awards in accordance with the vesting schedules applicable to such Awards.

**13.2 Effect of Change in Control on Nonemployee Director Awards.** Subject to the requirements and limitations of Section 409A, if applicable, including as provided by Section 15.4(f), in the event of a Change in Control, each outstanding Nonemployee Director Award shall become immediately exercisable and vested in full and, except to the extent assumed, continued or substituted for pursuant to Section 13.1(b), shall be settled effective immediately prior to the time of consummation of the Change in Control.

**13.3 Federal Excise Tax Under Section 4999 of the Code.**

(a) **Excess Parachute Payment.** In the event that any acceleration of vesting pursuant to an Award and any other payment or benefit received or to be received by a Participant would subject the Participant to any excise tax pursuant to Section 4999 of the Code due to the characterization of such acceleration of vesting, payment or benefit as an “excess parachute payment” under Section 280G of the Code, the Participant may elect to reduce the amount of any acceleration of vesting called for under the Award in order to avoid such characterization.

(b) **Determination by Independent Accountants.** To aid the Participant in making any election called for under Section 13.3(a), no later than the date of the occurrence of any event that might reasonably be anticipated to result in an “excess parachute payment” to the Participant as described in Section 13.3(a), the Company shall request a determination in writing by independent public accountants selected by the Company (the “**Accountants**”). As soon as practicable thereafter, the Accountants shall determine and report to the Company and the Participant the amount of such acceleration of vesting, payments and benefits which would produce the greatest after-tax benefit to the Participant. For the purposes of such determination, the Accountants may rely on reasonable, good faith interpretations concerning the application of Sections 280G and 4999 of the Code. The Company and the Participant shall furnish to the Accountants such information and documents as the Accountants may reasonably request in order to make their required determination. The Company shall bear all fees and expenses the Accountants charge in connection with their services contemplated by this Section.

**14. COMPLIANCE WITH SECURITIES LAW.**

The grant of Awards and the issuance of shares of Stock pursuant to any Award shall be subject to compliance with all applicable requirements of federal, state and foreign law with respect to such securities and the requirements of any stock exchange or market system upon which the Stock may then be listed. In addition, no Award may be exercised or shares issued pursuant to an Award unless (a) a registration statement under the Securities Act shall at the time of such exercise or issuance be in effect with respect to the shares issuable pursuant to the Award, or (b) in the opinion of legal counsel to the Company, the shares issuable pursuant to the Award may be issued in accordance with the terms of an applicable exemption from the registration requirements of the Securities Act. The inability of the Company to obtain from any regulatory body having jurisdiction the authority, if any, deemed by the Company’s legal counsel

to be necessary to the lawful issuance and sale of any shares under the Plan shall relieve the Company of any liability in respect of the failure to issue or sell such shares as to which such requisite authority shall not have been obtained. As a condition to issuance of any Stock, the Company may require the Participant to satisfy any qualifications that may be necessary or appropriate, to evidence compliance with any applicable law or regulation and to make any representation or warranty with respect thereto as may be requested by the Company.

**15. COMPLIANCE WITH SECTION 409A.**

**15.1 Awards Subject to Section 409A.** The Company intends that Awards granted pursuant to the Plan shall either be exempt from or comply with Section 409A, and the Plan shall be so construed. The provisions of this Section 15 shall apply to any Award or portion thereof that constitutes or provides for payment of Section 409A Deferred Compensation. Such Awards may include, without limitation:

(a) A Nonstatutory Stock Option or SAR that includes any feature for the deferral of compensation other than the deferral of recognition of income until the later of (i) the exercise or disposition of the Award or (ii) the time the stock acquired pursuant to the exercise of the Award first becomes substantially vested.

(b) Any Restricted Stock Unit Award, Performance Award, Cash-Based Award or Other Stock-Based Award that either (i) provides by its terms for settlement of all or any portion of the Award at a time or upon an event that will or may occur later than the end of the Short-Term Deferral Period (as defined below) or (ii) permits the Participant granted the Award to elect one or more dates or events upon which the Award will be settled after the end of the Short-Term Deferral Period.

Subject to the provisions of Section 409A, the term “**Short-Term Deferral Period**” means the 2½ month period ending on the later of (i) the 15th day of the third month following the end of the Participant’s taxable year in which the right to payment under the applicable portion of the Award is no longer subject to a substantial risk of forfeiture or (ii) the 15th day of the third month following the end of the Company’s taxable year in which the right to payment under the applicable portion of the Award is no longer subject to a substantial risk of forfeiture. For this purpose, the term “substantial risk of forfeiture” shall have the meaning provided by Section 409A.

**15.2 Deferral and/or Distribution Elections.** Except as otherwise permitted or required by Section 409A, the following rules shall apply to any compensation deferral and/or payment elections (each, an “**Election**”) that may be permitted or required by the Committee pursuant to an Award providing Section 409A Deferred Compensation:

(a) Elections must be in writing and specify the amount of the payment in settlement of an Award being deferred, as well as the time and form of payment as permitted by this Plan.

(b) Elections shall be made by the end of the Participant’s taxable year prior to the year in which services commence for which an Award may be granted to such Participant.

(c) Elections shall continue in effect until a written revocation or change in Election is received by the Company, except that a written revocation or change in Election must be received by the Company prior to the last day for making the Election determined in accordance with paragraph (b) above or as permitted by Section 15.3.

**15.3 Subsequent Elections.** Except as otherwise permitted or required by Section 409A, any Award providing Section 409A Deferred Compensation which permits a subsequent Election to delay the payment or change the form of payment in settlement of such Award shall comply with the following requirements:

(a) No subsequent Election may take effect until at least twelve (12) months after the date on which the subsequent Election is made.

(b) Each subsequent Election related to a payment in settlement of an Award not described in Section 15.4(a)(ii), 15.4(a)(iii) or 15.4(a)(vi) must result in a delay of the payment for a period of not less than five (5) years from the date on which such payment would otherwise have been made.

(c) No subsequent Election related to a payment pursuant to Section 15.4(a)(iv) shall be made less than twelve (12) months before the date on which such payment would otherwise have been made.

(d) Subsequent Elections shall continue in effect until a written revocation or change in the subsequent Election is received by the Company, except that a written revocation or change in a subsequent Election must be received by the Company prior to the last day for making the subsequent Election determined in accordance the preceding paragraphs of this Section 15.3.

**15.4 Payment of Section 409A Deferred Compensation.**

(a) **Permissible Payments.** Except as otherwise permitted or required by Section 409A, an Award providing Section 409A Deferred Compensation must provide for payment in settlement of the Award only upon one or more of the following:

(i) The Participant's "separation from service" (as defined by Section 409A);

(ii) The Participant's becoming "disabled" (as defined by Section 409A);

(iii) The Participant's death;

(iv) A time or fixed schedule that is either (i) specified by the Committee upon the grant of an Award and set forth in the Award Agreement evidencing such Award or (ii) specified by the Participant in an Election complying with the requirements of Section 15.2 or 15.3, as applicable;

(v) A change in the ownership or effective control of the Company or in the ownership of a substantial portion of the assets of the Company determined in accordance with Section 409A; or

(vi) The occurrence of an “unforeseeable emergency” (as defined by Section 409A).

(b) **Installment Payments.** It is the intent of this Plan that any right of a Participant to receive installment payments (within the meaning of Section 409A) shall, for all purposes of Section 409A, be treated as a right to a series of separate payments.

(c) **Required Delay in Payment to Specified Employee Pursuant to Separation from Service.** Notwithstanding any provision of the Plan or an Award Agreement to the contrary, except as otherwise permitted by Section 409A, no payment pursuant to Section 15.4(a)(i) in settlement of an Award providing for Section 409A Deferred Compensation may be made to a Participant who is a “specified employee” (as defined by Section 409A) as of the date of the Participant’s separation from service before the date (the “**Delayed Payment Date**”) that is six (6) months after the date of such Participant’s separation from service, or, if earlier, the date of the Participant’s death. All such amounts that would, but for this paragraph, become payable prior to the Delayed Payment Date shall be accumulated and paid on the Delayed Payment Date.

(d) **Payment Upon Disability.** All distributions of Section 409A Deferred Compensation payable by reason of a Participant becoming disabled shall be paid in a lump sum or in periodic installments as established by the Participant’s Election. If the Participant has made no Election with respect to distributions of Section 409A Deferred Compensation upon becoming disabled, all such distributions shall be paid in a lump sum upon the determination that the Participant has become disabled.

(e) **Payment Upon Death.** If a Participant dies before complete distribution of amounts payable upon settlement of an Award subject to Section 409A, such undistributed amounts shall be distributed to his or her beneficiary under the distribution method for death established by the Participant’s Election upon receipt by the Committee of satisfactory notice and confirmation of the Participant’s death. If the Participant has made no Election with respect to distributions of Section 409A Deferred Compensation upon death, all such distributions shall be paid in a lump sum upon receipt by the Committee of satisfactory notice and confirmation of the Participant’s death.

(f) **Payment Upon Change in Control.** Notwithstanding any provision of the Plan or an Award Agreement to the contrary, to the extent that any amount constituting Section 409A Deferred Compensation would become payable under this Plan by reason of a Change in Control, such amount shall become payable only if the event constituting a Change in Control would also constitute a change in ownership or effective control of the Company or a change in the ownership of a substantial portion of the assets of the Company within the meaning of Section 409A. Any Award which constitutes Section 409A Deferred Compensation and which would vest and otherwise become payable upon a Change in Control as a result of the failure of the Acquiror to assume, continue or substitute for such Award in

accordance with Section 13.1(b) shall vest to the extent provided by such Award but shall be converted automatically at the effective time of such Change in Control into a right to receive, in cash on the date or dates such award would have been settled in accordance with its then existing settlement schedule (or as required by Section 15.4(c)), an amount or amounts equal in the aggregate to the intrinsic value of the Award at the time of the Change in Control.

(g) **Payment Upon Unforeseeable Emergency.** The Committee shall have the authority to provide in the Award Agreement evidencing any Award providing for Section 409A Deferred Compensation for payment in settlement of all or a portion of such Award in the event that a Participant establishes, to the satisfaction of the Committee, the occurrence of an unforeseeable emergency. In such event, the amount(s) distributed with respect to such unforeseeable emergency cannot exceed the amounts reasonably necessary to satisfy the emergency need plus amounts necessary to pay taxes reasonably anticipated as a result of such distribution(s), after taking into account the extent to which such emergency need is or may be relieved through reimbursement or compensation by insurance or otherwise, by liquidation of the Participant's assets (to the extent the liquidation of such assets would not itself cause severe financial hardship) or by cessation of deferrals under the Award. All distributions with respect to an unforeseeable emergency shall be made in a lump sum upon the Committee's determination that an unforeseeable emergency has occurred. The Committee's decision with respect to whether an unforeseeable emergency has occurred and the manner in which, if at all, the payment in settlement of an Award shall be altered or modified, shall be final, conclusive, and not subject to approval or appeal.

(h) **Prohibition of Acceleration of Payments.** Notwithstanding any provision of the Plan or an Award Agreement to the contrary, this Plan does not permit the acceleration of the time or schedule of any payment under an Award providing Section 409A Deferred Compensation, except as permitted by Section 409A.

(i) **No Representation Regarding Section 409A Compliance.** Notwithstanding any other provision of the Plan, the Company makes no representation that Awards shall be exempt from or comply with Section 409A. No Participating Company shall be liable for any tax, penalty or interest imposed on a Participant by Section 409A.

## **16. TAX WITHHOLDING.**

**16.1 Tax Withholding in General.** The Company shall have the right to deduct from any and all payments made under the Plan, or to require the Participant, through payroll withholding, cash payment or otherwise, to make adequate provision for, the federal, state, local and foreign taxes (including social insurance), if any, required by law to be withheld by any Participating Company with respect to an Award or the shares acquired pursuant thereto. The Company shall have no obligation to deliver shares of Stock, to release shares of Stock from an escrow established pursuant to an Award Agreement, or to make any payment in cash under the Plan until the Participating Company Group's tax withholding obligations have been satisfied by the Participant.

**16.2 Withholding in or Directed Sale of Shares.** The Committee shall have the right, but not the obligation, to cause the Company to deduct from the shares of Stock issuable to a Participant upon the exercise or settlement of an Award, or to accept from the Participant the tender of, a number of whole shares of Stock having a Fair Market Value, as determined by the Committee, equal to all or any part of the tax withholding obligations of any Participating Company (provided such shares of Stock are not pledged or otherwise serve as security and the withholding of which would not trigger adverse accounting treatment). The Fair Market Value of any shares of Stock withheld or tendered to satisfy any such tax withholding obligations shall not exceed the amount determined by the maximum statutory rates applicable to the Participant in the applicable jurisdiction(s); provided, however, that such withholding will not exceed the minimum amount required to be withheld, unless (i) an additional amount can be withheld and not result in adverse accounting consequences, (ii) such additional withholding amount is authorized by the Committee, and (iii) the total amount withheld does not exceed the Participant's estimated tax obligations attributable to the applicable transaction. The Committee may require a Participant to direct a broker, upon the vesting, exercise or settlement of an Award, to sell a portion of the shares subject to the Award determined by the Committee in its discretion to be sufficient to cover the tax withholding obligations of any Participating Company and to remit an amount equal to such tax withholding obligations to such Participating Company in cash.

**17. AMENDMENT, SUSPENSION OR TERMINATION OF PLAN.**

The Committee may amend, suspend or terminate the Plan at any time. However, without the approval of the Company's stockholders, there shall be (a) no increase in the maximum aggregate number of shares of Stock that may be issued under the Plan (except by operation of the provisions of Section 4.5), (b) no change in the class of persons eligible to receive Incentive Stock Options, and (c) no other amendment of the Plan that would require approval of the Company's stockholders under any applicable law, regulation or rule, including the rules of any stock exchange or quotation system upon which the Stock may then be listed or quoted. No amendment, suspension or termination of the Plan shall affect any then outstanding Award unless expressly provided by the Committee. Except as provided by the next sentence, no amendment, suspension or termination of the Plan may have a materially adverse effect on any then outstanding Award without the consent of the Participant. Notwithstanding any other provision of the Plan to the contrary, the Committee may, in its sole and absolute discretion and without the consent of any Participant, amend the Plan or any Award Agreement, to take effect retroactively or otherwise, as it deems necessary or advisable for the purpose of conforming the Plan or such Award Agreement to any present or future law, regulation or rule applicable to the Plan, including, but not limited to, Section 409A.

**18. MISCELLANEOUS PROVISIONS.**

**18.1 Repurchase Rights.** Shares issued under the Plan may be subject to one or more repurchase options, or other conditions and restrictions as determined by the Committee in its discretion at the time the Award is granted. The Company shall have the right to assign at any time any repurchase right it may have, whether or not such right is then exercisable, to one or more persons as may be selected by the Company. Upon request by the Company, each Participant shall execute any agreement evidencing such transfer restrictions prior to the receipt of shares of Stock hereunder and shall promptly present to the Company any and all certificates representing shares of Stock acquired hereunder for the placement on such certificates of appropriate legends evidencing any such transfer restrictions.

## 18.2 Forfeiture Events.

(a) The Committee may specify in an Award Agreement that the Participant's rights, payments, and benefits with respect to an Award shall be subject to reduction, cancellation, forfeiture, or recoupment upon the occurrence of specified events, in addition to any otherwise applicable vesting or performance conditions of an Award. Such events may include, but shall not be limited to, termination of Service for Cause or any act by a Participant, whether before or after termination of Service, that would constitute Cause for termination of Service.

(b) Performance Awards granted to certain Participants who are executive officers of the Company or otherwise designated by the Board will be subject to the Company's clawback policy applicable to the such Participants as may be in effect from time to time, including, as applicable, being subject to recoupment or clawback by the Company on the terms and conditions as provided for under Section 10D of the Act and any applicable rules or regulations promulgated by the Securities Exchange Commission or any national securities exchange or national securities association on which the Stock may then be listed and as in effect from time to time.

**18.3 Provision of Information.** Each Participant shall be given access to information concerning the Company equivalent to that information generally made available to the Company's common stockholders.

**18.4 Rights as Employee, Consultant or Director.** No person, even though eligible pursuant to Section 5, shall have a right to be selected as a Participant, or, having been so selected, to be selected again as a Participant. Nothing in the Plan or any Award granted under the Plan shall confer on any Participant a right to remain an Employee, Consultant or Director or interfere with or limit in any way any right of a Participating Company to terminate the Participant's Service at any time. To the extent that an Employee of a Participating Company other than the Company receives an Award under the Plan, that Award shall in no event be understood or interpreted to mean that the Company is the Employee's employer or that the Employee has an employment relationship with the Company.

**18.5 Rights as a Stockholder.** A Participant shall have no rights as a stockholder with respect to any shares covered by an Award until the date of the issuance of such shares (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company). No adjustment shall be made for dividends, distributions or other rights for which the record date is prior to the date such shares are issued, except as provided in Section 4.5 or another provision of the Plan.

**18.6 Delivery of Title to Shares.** Subject to any governing rules or regulations, the Company shall issue or cause to be issued the shares of Stock acquired pursuant to an Award and shall deliver such shares to or for the benefit of the Participant by means of one or more of the following: (a) by delivering to the Participant evidence of book entry shares of Stock credited to the account of the Participant, (b) by depositing such shares of Stock for the benefit of the Participant with any broker with which the Participant has an account relationship, or (c) by delivering such shares of Stock to the Participant in certificate form.

18.7 **Fractional Shares.** The Company shall not be required to issue fractional shares upon the exercise or settlement of any Award.

18.8 **Retirement and Welfare Plans.** Neither Awards made under this Plan nor shares of Stock or cash paid pursuant to such Awards may be included as “compensation” for purposes of computing the benefits payable to any Participant under any Participating Company’s retirement plans (both qualified and non-qualified) or welfare benefit plans unless such other plan expressly provides that such compensation shall be taken into account in computing a Participant’s benefit.

18.9 **Beneficiary Designation.** Subject to local laws and procedures, each Participant may file with the Company a written designation of a beneficiary who is to receive any benefit under the Plan to which the Participant is entitled in the event of such Participant’s death before he or she receives any or all of such benefit. Each designation will revoke all prior designations by the same Participant, shall be in a form prescribed by the Company, and will be effective only when filed by the Participant in writing with the Company during the Participant’s lifetime. If a married Participant designates a beneficiary other than the Participant’s spouse, the effectiveness of such designation may be subject to the consent of the Participant’s spouse. If a Participant dies without an effective designation of a beneficiary who is living at the time of the Participant’s death, the Company will pay any remaining unpaid benefits to the Participant’s legal representative.

18.10 **Severability.** If any one or more of the provisions (or any part thereof) of this Plan shall be held invalid, illegal or unenforceable in any respect, such provision shall be modified so as to make it valid, legal and enforceable, and the validity, legality and enforceability of the remaining provisions (or any part thereof) of the Plan shall not in any way be affected or impaired thereby.

18.11 **No Constraint on Corporate Action.** Nothing in this Plan shall be construed to: (a) limit, impair, or otherwise affect the Company’s or another Participating Company’s right or power to make adjustments, reclassifications, reorganizations, or changes of its capital or business structure, or to merge or consolidate, or dissolve, liquidate, sell, or transfer all or any part of its business or assets; or (b) limit the right or power of the Company or another Participating Company to take any action which such entity deems to be necessary or appropriate.

18.12 **Unfunded Obligation.** Participants shall have the status of general unsecured creditors of the Company. Any amounts payable to Participants pursuant to the Plan shall be considered unfunded and unsecured obligations for all purposes, including, without limitation, Title I of the Employee Retirement Income Security Act of 1974. No Participating Company shall be required to segregate any monies from its general funds, or to create any trusts, or establish any special accounts with respect to such obligations. The Company shall retain at all times beneficial ownership of any investments, including trust investments, which

the Company may make to fulfill its payment obligations hereunder. Any investments or the creation or maintenance of any trust or any Participant account shall not create or constitute a trust or fiduciary relationship between the Committee or any Participating Company and a Participant, or otherwise create any vested or beneficial interest in any Participant or the Participant's creditors in any assets of any Participating Company. The Participants shall have no claim against any Participating Company for any changes in the value of any assets which may be invested or reinvested by the Company with respect to the Plan.

**18.13 Choice of Law.** Except to the extent governed by applicable federal law, the validity, interpretation, construction and performance of the Plan and each Award Agreement shall be governed by the laws of the State of California, without regard to its conflict of law rules.

IN WITNESS WHEREOF, the undersigned Secretary of the Company certifies that the foregoing sets forth the MagnaChip Semiconductor Corporation 2011 Equity Incentive Plan as duly adopted by the Board on March 10, 2011.

/s/ John McFarland

John McFarland, Corporate Secretary

PLAN HISTORY AND NOTES TO COMPANY

March 10, 2011	Board of Directors of MagnaChip Semiconductor Corporation adopts Plan with a reserve of 891,703 shares (subject to increases and other adjustments as provided by the Plan), subject to approval by the stockholders of MagnaChip Semiconductor Corporation and to be effective upon the Conversion.
March 10, 2011	Effective date of statutory conversion of MagnaChip Semiconductor LLC into the Company.
March 10, 2011	Plan approved by the stockholders of the Company.
March 10, 2011	Effective date of registration of Stock under Section 12 of the Exchange Act.
March 16, 2011	Effective date of initial Form S-8 under the Plan.
October 23, 2017	Plan amended by the Board of Directors of the Company to replace Section 18.2(b) of the Plan in its entirety.
April 26, 2018	Plan amended by the Compensation Committee of the Board of Directors of the Company to replace Section 16.2 of the Plan in its entirety.



MagnaChip Semiconductor Corporation  
c/o MagnaChip Semiconductor, Ltd.  
501, Teheran-ro, Gangnam-gu  
Seoul 06168, Korea  
Office (82) 2-6903-3666  
Fax (82) 2-6903-5093  
theodore.kim@magnachip.com

January 9, 2019

**Via E-mail**  
[address omitted]

Re: **Separation Agreement**

Dear Mr. Lee:

This letter agreement (this "**Separation Agreement**") confirms our mutual understanding regarding your resignation, from the position of Executive Vice President and the General Manager of Foundry Services Group of MagnaChip Semiconductor Corporation ("**Parent**") and from all other positions with each of Parent's direct and indirect subsidiaries (Parent, together with each of its direct and indirect subsidiaries, the "**Company**"), effective as of January 9, 2019 (the "**Resignation Date**").

1. **Incorporation by Reference**. Reference is made to that certain letter agreement by and between MagnaChip Semiconductor, Ltd. ("**MSK**") and you, entered into as of November 3, 2015 (the "**Severance Agreement**"). Except as otherwise provided herein, all terms and conditions contained in the Severance Agreement shall remain in full force and effect. If any provision contained in the Severance Agreement conflicts with any provision in this Separation Agreement, the provision contained in this Separation Agreement shall govern and control. Capitalized terms used herein without definition shall have the respective meanings assigned to them in the Severance Agreement. Sections 8 (Cooperation), 9 (Taxes; Section 409A), 11 (General) and 12 (Disputes) of the Severance Agreement are hereby incorporated herein by reference, and they shall have the same effect herein as in the Severance Agreement.

2. **Severance Benefit**. Notwithstanding anything to the contrary provided in the Severance Agreement, your resignation shall be deemed to be a Qualifying Termination and, subject to **Section 2(b)** below, you shall be entitled to the Severance Benefit, as modified by this Separation Agreement:

(a) In lieu of the payments set forth in Section (i) of Exhibit A (Severance Benefit) of the Severance Agreement, you shall be entitled to the following payments from MSK (collectively, the "**Separation Payment**"):

(i) an amount equal to KRW 175,000,000 (the "**First Payment**") payable within 14 days following your execution and delivery to the Company of this Separation Agreement and the Release in accordance with the normal payroll practices of MSK; and

(ii) an amount equal to KRW 175,000,000 (the "**Second Payment**") payable one (1) year after the Resignation Date in accordance with the normal payroll practices of MSK; **provided** that, in the event that a Change in Control occurs within three (3) months after the Resignation Date, the Second Payment shall be KRW 525,000,000.

(b) Notwithstanding anything herein or in the Severance Agreement to the contrary, the Severance Benefit (including the Separation Payment) to be provided to you shall be contingent upon and subject to:

- (i) your execution and non-revocation of the Release and your satisfaction of the Release Condition;
- (ii) your compliance with all of the terms of the Severance Agreement (including Sections 3, 4, 7 and 8 thereof); and
- (iii) your compliance with all the terms of this Separation Agreement (including Section 3 below).

(c) The form of Release is hereby amended and restated in its entirety to read as set forth on Exhibit A attached hereto.

### 3. Covenants.

(a) To the fullest extent permitted by applicable law, you agree that for the 12-month period following the Resignation Date, you will not, directly or indirectly, have any equity or equity-based interest, or work or otherwise provide services as an employee, contractor, officer, owner, consultant, partner, director or otherwise, in any business anywhere in the world that competes with any of the businesses of the Company. Notwithstanding the foregoing, you shall be permitted to acquire a passive stock or equity interest in such a business, provided that the stock or other equity interest acquired is not more than five percent (5%) of the outstanding interest in such business.

(b) To the fullest extent permitted by applicable law, you agree that for the 36-month period following the Resignation Date, you will not, directly or indirectly, on your own behalf or on behalf of another (i) solicit, induce or attempt to solicit or induce any officer, director, employee or consultant of the Company to terminate their relationship with or leave the employ of the Company, or in any way interfere with the relationship between the Company, on the one hand, and any officer, director, employee, or consultant thereof, on the other hand, (ii) hire (or other similar arrangement) any person (in any capacity whether as an officer, director, employee or consultant) who is, or at any time in the 12 months preceding the Resignation Date was, an officer, director, employee or consultant of the Company or (iii) induce or attempt to induce any customer, supplier, prospect, licensee or other business relation of the Company to cease doing business with the Company, or in any way interfere with the relationship between any such customer, supplier, prospect, licensee or business relation, on the one hand, and the Company, on the other hand.

(c) You recognize and acknowledge that you have access to confidential information and/or have had or will have material contact with the Company's customers, suppliers, licensees, representatives, agents, partners, licensors, or business relations. You agree that following the Resignation Date in perpetuity, you shall maintain in confidence and shall not directly, indirectly or otherwise, use, disseminate, disclose or publish, or use for your benefit or the benefit of any person, any confidential or proprietary information or trade secrets of or relating to the Company, including, without limitation, information with respect to the Company's operations, processes, products, inventions, business practices, finances, principals, vendors, suppliers, customers, potential customers, marketing methods, costs, prices, contractual relationships, regulatory status, compensation paid to employees or other terms of employment, or deliver to any person any document, record, notebook, computer program or similar repository of or containing any such confidential or proprietary information or trade secrets. Upon your resignation, you shall promptly deliver to the Company all correspondence, drawings, manuals, letters, notes, notebooks, reports, programs, plans, proposals, financial documents, or any other documents concerning the Company's customers, business plans, marketing strategies, products or processes. You may respond to a lawful and valid subpoena or other legal process but shall give the Company the earliest possible notice thereof, shall, as much in advance of the return date as possible, make available to the Company and its counsel the documents and other information sought and, if requested by the Company, shall reasonably assist such counsel in resisting or otherwise responding to such process.

(d) You shall not, at any time following the Resignation Date in perpetuity, directly or indirectly, knowingly disparage, criticize, or otherwise make derogatory statements regarding the Company, or any of its successors, directors or officers. The foregoing shall not be violated by your truthful responses to legal process or inquiry by a governmental authority.

(e) You agree that the results and proceeds of your services for the Company (including any trade secrets, products, services, processes, know-how, designs, developments, innovations, analyses, drawings, reports, techniques, formulas, methods, developmental or experimental work, improvements, discoveries, inventions, ideas, source and object codes, programs, matters of a literary, musical, dramatic or otherwise creative nature, writings and other works of authorship) resulting from services performed for the Company and any works in progress, whether or not patentable or registrable under copyright or similar statutes, that were made, developed, conceived or reduced to practice or learned by you, either alone or jointly with others (collectively, "Inventions"), shall be works-made-for-hire and the Company (or, if applicable or as directed by the Company) shall be deemed the sole owner throughout the universe of any and all trade secret, patent, copyright and other intellectual property rights (collectively, "Proprietary Rights") of whatsoever nature therein, whether or not now or hereafter known, existing, contemplated, recognized or developed, with the right to use the same in perpetuity in any manner the Company determines in its sole discretion, without any further payment to you whatsoever. If, for any reason, any of such results and proceeds shall not legally be a work-made-for-hire and/or there are any Proprietary Rights which do not accrue to the Company under the immediately preceding sentence, then you hereby irrevocably assign and agree to assign any and all of your right, title and interest thereto, including, without limitation, any and all Proprietary Rights of whatsoever nature therein, whether or not now or hereafter known, existing, contemplated, recognized or developed, to the Company (or, if applicable or as directed by the Company, any of its subsidiaries and

affiliates), and the Company or such subsidiaries and affiliates shall have the right to use the same in perpetuity throughout the universe in any manner determined by the Company or such subsidiaries and affiliates without any further payment to you whatsoever. As to any Invention that you are required to assign, you shall promptly and fully disclose to the Company all information known to you concerning such Invention. You hereby waive and quitclaim to the Company any and all claims, of any nature whatsoever, that you now or may hereafter have for infringement of any Proprietary Rights assigned hereunder to the Company.

(f) You agree that, from time to time, as may be requested by the Company and at the Company's sole cost and expense, you shall do any and all things that the Company may reasonably deem useful or desirable to establish or document the Company's exclusive ownership throughout the United States of America or any other country of any and all Proprietary Rights in any such Inventions, including, without limitation, the execution of appropriate copyright and/or patent applications or assignments. To the extent you have any Proprietary Rights in the Inventions that cannot be assigned in the manner described above, you unconditionally and irrevocably waive the enforcement of such Proprietary Rights. This Section 3(f) is subject to and shall not be deemed to limit, restrict or constitute any waiver by the Company of any Proprietary Rights of ownership to which the Company may be entitled by operation of law by virtue of your employment with, or service to, the Company. You further agree that, from time to time, as may be requested by the Company and at the Company's sole cost and expense, you shall assist the Company in every proper and lawful way to obtain and from time to time enforce Proprietary Rights relating to Inventions in any and all countries. To this end, you shall execute, verify and deliver such documents and perform such other acts (including appearances as a witness) as the Company may reasonably request for use in applying for, obtaining, perfecting, evidencing, sustaining, and enforcing such Proprietary Rights and the assignment thereof. In addition, you shall execute, verify, and deliver assignments of such Proprietary Rights to the Company or its designees. Your obligation to assist the Company with respect to Proprietary Rights relating to such Inventions in any and all countries shall continue beyond your resignation from the Company.

(g) In the event that any term of this Section 3 shall be determined by any court of competent jurisdiction to be unenforceable by reason of its extending for too great a period of time or over too great a geographical area or by reason of its being too extensive in any other respect, it will be interpreted to extend only over the maximum period of time for which it may be enforceable, over the maximum geographical area as to which it may be enforceable, or to the maximum extent in all other respects as to which it may be enforceable, all as determined by such court in such action. You hereby acknowledge that the terms of this Section 3 are reasonable in terms of duration, scope and area restrictions and are necessary to protect the goodwill of the Company. You hereby authorize the Company to inform any future employer or prospective employer of the existence and terms of this Section 3 without liability for interference with your employment or prospective employment.

(h) The parties to this Separation Agreement intend for the provisions in Section 3 above to be severable from this Separation Agreement and enforced to the fullest extent permissible under applicable law. Should any part of the covenants in Sections 3 be found to be unenforceable, it is the intent of the parties to this Separation Agreement that the remaining provisions of this Separation Agreement be enforced to the fullest extent of the law to effectuate the intent of this Section 3.

4. Entire Agreement. This Separation Agreement, the Severance Agreement (and, except as noted in the Severance Agreement, the Employment Offer Letter, the Confidentiality Agreement and the Proprietary Information and Invention Assignment Agreement referenced in Section 4 of the Severance Agreement) constitute the entire agreement and understanding between you and the Company with respect to the subject matter hereof and supersede all prior agreements, policies and understandings (whether written or oral), between you and the Company, relating to such subject matter (including, without limitation, any oral promise to retain you as a consultant for any period following your termination of employment and provide payments or benefits in connection therewith).

*[Remainder of page internationally left blank, Signature page follows.]*

Please confirm your agreement with the foregoing by signing and returning one copy of this Separation Agreement to the undersigned, whereupon this Separation Agreement shall become a binding agreement between you and the Company.

Very truly yours,

MAGNACHIP SEMICONDUCTOR CORPORATION

By: /s/ Theodore Kim

Name: Theodore S. Kim

Title: Executive Vice President and  
General Counsel

MAGNACHIP SEMICONDUCTOR, LTD.

By: /s/ Theodore Kim

Name: Theodore S. Kim

Title: General Counsel

Accepted and agreed as of  
the date first written above:

Tae Jong Lee

By: /s/ Tae Jong Lee

Name: Tae Jong Lee

**EXHIBIT A**

**RELEASE**

As used in this Release of Claims (this "Release"), the term "claims" will include all claims, covenants, warranties, promises, undertakings, actions, suits, causes of action, proceedings, obligations, debts, accounts, attorneys' fees, judgments, losses, and liabilities, of whatsoever kind or nature, in law, in equity, or otherwise. Capitalized terms used but not defined in this Release will have the meanings given to them in the Separation Agreement dated January 9, 2019, among MagnaChip Semiconductor Corporation ("Parent"), MagnaChip Semiconductor, Ltd. (the "Company") and Tae Jong Lee (the "Agreement").

For and in consideration of the Severance Benefit, including the Separation Payment, and other good and valuable consideration, I, for and on behalf of myself and my executors, heirs, administrators, representatives, and assigns, hereby agree to release and forever discharge the Company, Parent and all of their respective predecessors, successors, and past, current, and future parent entities, affiliates, subsidiary entities, investors, directors, shareholders, members, officers, general or limited partners, employees, attorneys, agents, and representatives, and the employee benefit plans in which I am or have been a participant by virtue of my employment with or service to the Company (collectively, the "Company Releasees"), from any and all claims that I have or may have had against the Company Releasees based on any events or circumstances arising or occurring on or prior to the date hereof and arising directly or indirectly out of, relating to, or in any other way involving in any manner whatsoever my employment by or service to the Company or the termination thereof, including without limitation any and all claims arising under national, federal, provincial, state, or local laws relating to employment, including without limitation claims of wrongful discharge, breach of express or implied contract, fraud, misrepresentation, defamation, intentional infliction of emotional distress, whistleblowing, or liability in tort, and claims of any kind that may be brought in any court or administrative agency, and any related claims for attorneys' fees and costs, including, without limitation, claims under Title VII of the Civil Rights Act of 1964, as amended, 42 U.S.C. Section 2000, et seq.; the Americans with Disabilities Act, as amended, 42 U.S.C. § 12101 et seq.; the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 701 et seq.; the Civil Rights Act of 1866, and the Civil Rights Act of 1991; 42 U.S.C. Section 1981, et seq.; the Age Discrimination in Employment Act, as amended, 29 U.S.C. Section 621, et seq. (the "ADEA"); the Equal Pay Act, as amended, 29 U.S.C. Section 206(d); regulations of the Office of Federal Contract Compliance, 41 C.F.R. Section 60, et seq.; the Family and Medical Leave Act, as amended, 29 U.S.C. § 2601 et seq.; the Fair Labor Standards Act of 1938, as amended, 29 U.S.C. § 201 et seq.; the Employee Retirement Income Security Act, as amended, 29 U.S.C. § 1001 et seq.; and any similar national, provincial, state, or local laws of the United States, the Republic of Korea or any other jurisdiction. I agree further that this Release may be pleaded as a full defense to any action, suit, arbitration, or other proceeding covered by the terms hereof that is or may be initiated, prosecuted, or maintained by me or my descendants, dependents, heirs, executors, administrators, or assigns. By signing this Release, I acknowledge that I intend to waive and release all rights known or unknown that I may have against the Company Releasees under these and any other laws.

I acknowledge and agree that as of the date I execute this Release, I have no knowledge of any facts or circumstances that give rise or could give rise to any claims under any of the laws listed in the preceding paragraph and that I have not filed any claim against any of the Releasees before any local, state, federal, or foreign agency, court, arbitrator, mediator, arbitration or mediation panel, or other body (each individually a "Proceeding"). I (i) acknowledge that I will not initiate or cause to be initiated on my behalf any Proceeding and will not participate in any Proceeding, in each case, except as required by law; and (ii) waive any right that I may have to benefit in any manner from any relief (whether monetary or otherwise) arising out of any Proceeding, including any Proceeding conducted by the Equal Employment Opportunity Commission ("EEOC"). Further, I understand that, by executing this Release, I will be limiting the availability of certain remedies that I may have against the Company and limiting also my ability to pursue certain claims against the Company Releasees.

By executing this Release, I specifically release all claims relating to my employment and its termination under ADEA, a federal statute that, among other things, prohibits discrimination on the basis of age in employment and employee benefit plans.

Notwithstanding the generality of the foregoing, I do not release (i) claims to receive the Severance Benefit, including the Separation Payment, in accordance with the Agreement, (ii) claims for indemnification arising under any applicable indemnification obligation of the Company or (iii) claims that cannot be waived by law. Further, nothing in this Release shall prevent me from (a) initiating or causing to be initiated on my behalf any claim against the Company before any local, state, or federal agency, court, or other body challenging the validity of the waiver of my claims under the ADEA (but no other portion of such waiver) or (b) initiating or participating in an investigation or proceeding conducted by the EEOC.

I acknowledge that I have been given at least 21 days in which to consider this Release. I acknowledge further that the Company has advised me to consult with an attorney of my choice before signing this Release, and I have had sufficient time to consider the terms of this Release. I represent and acknowledge that, if I execute this Release before 21 days have elapsed, I do so knowingly, voluntarily, and upon the advice and with the approval of my legal counsel (if any), and that I voluntarily waive any remaining consideration period.

I understand that after executing this Release, I have the right to revoke it within 7 days after its execution. I understand that this Release will not become effective and enforceable unless the 7-day revocation period passes and I do not revoke the Release in writing. I understand that this Release may not be revoked after the 7-day revocation period has passed. I understand also that any revocation of this Release must be made in writing and delivered to the Company at its principal place of business within the 7-day period.

This Release will become effective, irrevocable and binding on the 8th day after its execution, so long as I have not timely revoked it as set forth above. I understand and acknowledge that I will not be entitled to the continuation of the Severance Benefit, including the Separation Payment, unless this Release is continuously effective through the date that is one (1) year after the Resignation Date.

I hereby agree to waive any and all claims to re-employment with the Company or any of its affiliates and affirmatively agree not to seek further employment with the Company or any of its affiliates.

The provisions of this Release will be binding upon my heirs, executors, administrators, legal representatives, and assigns. If any provision of this Release will be held by any court of competent jurisdiction to be illegal, void, or unenforceable, such provision will be of no force or effect. The illegality or unenforceability of such provision, however, will have no effect upon and will not impair the enforceability of any other provision of this Release.

This Release will be governed in accordance with the laws of the State of Delaware, without reference to the principles of conflicts of law. Any dispute or claim arising out of or relating to this Release or claim of breach hereof will be brought exclusively in the United States District Court for the District of Delaware to the extent that federal jurisdiction exists, and in the Delaware Chancery Court to the extent that federal jurisdiction does not exist. By execution of this Release, I am waiving any right to trial by jury in connection with any suit, action, or proceeding under or in connection with this Release.

---

Tae Jong Lee

---

Date



MagnaChip Semiconductor Corporation  
c/o MagnaChip Semiconductor, Ltd.  
501, Teheran-ro, Gangnam-gu  
Seoul 06168, Korea  
Office +82-2-6903-3666  
Fax +82-2-6903-5093  
Theodore.Kim@MagnaChip.com

September 3, 2018

Young Joon Kim  
[address omitted]

Dear Mr. Kim:

The purpose of this Letter (this "Letter") is to clarify our understanding with respect to certain provisions of the Employment Agreement between you, MagnaChip Semiconductor Corporation ("Parent"), and MagnaChip Semiconductor, Ltd. (together with Parent, the "Company"), dated as of April 26, 2018 (the "Employment Agreement"). When fully executed, this Letter will constitute an amendment to the Employment Agreement. Any capitalized term not otherwise defined in this Letter shall have the meaning ascribed to such term in the Employment Agreement.

Notwithstanding anything to the contrary in the Employment Agreement, you and the Company hereby agree as follows: (i) the Expatriate Benefits will include gross tuition, including bus fees, as applicable from time to time, for your children; and (ii) the Housing Support section of Exhibit A is hereby amended to provide that you will receive housing support/reimbursement from the Company, not to exceed KRW 186,346,200 per calendar year (whether paid as rent or on an equivalent basis if paid as key money deposit), which amount shall be prorated as appropriate if the housing support/reimbursement commences or is modified during any calendar year, whether or not you remain in the same housing as you maintain as of the Effective Date.

This Letter and the Employment Agreement contain the entire understanding between the parties on the subjects covered herein and supersede all prior agreements, arrangements and understandings, whether written or oral, regarding the subjects covered herein. The Employment Agreement and this Letter may not be changed, nor may any of their provisions be waived, orally, but may only be changed in writing signed by both parties. The Employment Agreement shall be amended hereby to the extent set forth herein. However, except as specifically amended or otherwise clarified by this Letter, the Employment Agreement shall remain in full force and effect in accordance with its terms.

[Remainder of Page Intentionally Left Blank]

Please sign and return this Letter to confirm your receipt, understanding and agreement with the terms of this Letter, and the immediate impact of this Letter upon the Employment Agreement.

Yours sincerely,

MAGNACHIP SEMICONDUCTOR, LTD.

By: /s/ Theodore Kim  
Name: Theodore Kim  
Title: Executive Vice President

MAGNACHIP SEMICONDUCTOR CORPORATION

By: /s/ Theodore Kim  
Name: Theodore Kim  
Title: Chief Compliance Officer, Executive Vice President  
and General Counsel

I confirm my receipt, understanding and agreement with the terms of this Letter.

/s/ Young Joon Kim  
Young Joon Kim

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No. 333-172864, 333-180696, 333-186789, 333-202120, 333-209756, 333-216204 and 333-223155) of MagnaChip Semiconductor Corporation of our report dated February 22, 2019 relating to the consolidated financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ Samil PricewaterhouseCoopers  
Seoul, Korea  
February 22, 2019

**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER  
PURSUANT TO  
SECTION 302 OF THE  
SARBANES-OXLEY ACT OF 2002**

I, Young-Joon Kim, certify that:

1. I have reviewed this annual report on Form 10-K of MagnaChip Semiconductor Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: February 22, 2019

/s/ Young-Joon Kim

Young-Joon Kim  
Chief Executive Officer  
(Principal Executive Officer)

**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER  
PURSUANT TO  
SECTION 302 OF THE  
SARBANES-OXLEY ACT OF 2002**

I, Jonathan W. Kim, certify that:

1. I have reviewed this annual report on Form 10-K of MagnaChip Semiconductor Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: February 22, 2019

/s/ Jonathan W. Kim

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Jonathan W. Kim  
Chief Financial Officer  
(Principal Financial and Accounting Officer)

**CERTIFICATION OF CHIEF EXECUTIVE OFFICER  
PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

Pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned officer of MagnaChip Semiconductor Corporation (the "Company") hereby certifies, to such officer's knowledge, that:

(i) the Annual Report on Form 10-K of the Company for the year ended December 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

(ii) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

Dated: February 22, 2019

/s/ Young-Joon Kim  
Young-Joon Kim  
Chief Executive Officer  
(Principal Executive Officer)

The foregoing certification is being furnished solely pursuant to 18 U.S.C. § 1350 and shall not be deemed filed by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended or incorporated by reference in any registration statement of the Company filed under the Securities Act of 1933, as amended.

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

**CERTIFICATION OF CHIEF FINANCIAL OFFICER  
PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

Pursuant to 18 U.S.C. § 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned officer of MagnaChip Semiconductor Corporation (the "Company") hereby certifies, to such officer's knowledge, that:

(i) the Annual Report on Form 10-K of the Company for the year ended December 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the "Report") fully complies with the requirements of Section 13(a) or Section 15(d), as applicable, of the Securities Exchange Act of 1934, as amended; and

(ii) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

Dated: February 22, 2019

/s/ Jonathan W. Kim  
Jonathan W. Kim  
Chief Financial Officer  
(Principal Financial and Accounting Officer)

The foregoing certification is being furnished solely pursuant to 18 U.S.C. § 1350 and shall not be deemed filed by the Company for purposes of Section 18 of the Securities Exchange Act of 1934, as amended or incorporated by reference in any registration statement of the Company filed under the Securities Act of 1933, as amended.

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.