

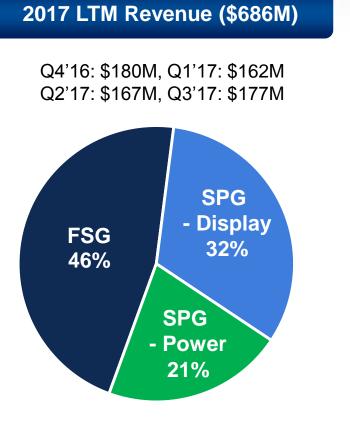
## MagnaChip Semiconductor Presentation - OLED Everywhere -January 2018

#### **Forward-Looking Statements**

Information in this presentation regarding MagnaChip's forecasts, business outlook, expectations and beliefs are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that involve risks and uncertainties. All forward-looking statements included or incorporated by reference in this presentation, including expectations about estimated historical or future operating results, business strategies and plans, future growth and revenue opportunities from new and existing products and customers, expectations on capital expenditures, the timing and extent of future revenue contributions by our products and businesses, and on our the expected timing and adequacy of improvements to, and remediation of material weaknesses in, the Company's internal control environment and corporate culture, are based upon information available to MagnaChip as of the date of this report, which may change, and we assume no obligation to update any such forward-looking statements. These statements are not guarantees of future performance and actual results could differ materially from our current expectations. Factors that could cause or contribute to such differences include general economic conditions, the impact of competitive products and pricing, timely design acceptance by our customers, timely introduction of new products and technologies, ability to ramp new products into volume production, industry wide shifts in supply and demand for semiconductor products, industry and/or company overcapacity, effective and cost efficient utilization of manufacturing capacity, financial stability in foreign markets and the impact of foreign exchange rates, unanticipated costs and expenses or the inability to identify expenses which can be eliminated, compliance with U.S. and international trade and export laws and regulations by us and our distributors, and other risks detailed from time to time in MagnaChip's filings with the SEC, including our Form 10-K filed on February 21, 2017 and subsequent registration statements, amendments or other reports that we may file from time to time with the SEC and/or make available on our website. MagnaChip assumes no obligation and does not intend to update the forward-looking statements provided, whether as a result of new information, future events or otherwise.

This presentation also includes references to certain non-GAAP financial measures. Management believes that non-GAAP financial measures, when viewed in conjunction with GAAP results, can provide a meaningful understanding of the factors and trends affecting MagnaChip's business and operations and assist in evaluating our core operating performance. However, such non-GAAP financial measures have limitations and should not be considered as a substitute for net income or as a better indicator of our operating performance than measures that are presented in accordance with GAAP. A reconciliation of GAAP results to non-GAAP results is included in this presentation.

## A balanced portfolio of products and services with growth opportunities



- Over 2,000 products
- Approximately 3,300 registered patents and pending applications

#### **Business Lines**

## R

#### Display Solutions: 32%

- Global #2 in OLED display drivers for mobile devices and Virtual Reality headsets
- Leading player in UHD 4K TVs



#### **Power Solutions: 21%**

- Power IC and discretes for mobile, consumer electronics and industrial applications
- Leading provider of battery protection discretes for a global smartphone maker



#### **Specialized Foundry: 46%**

- Specialized analog and mixed signal foundry services
- High voltage, embedded memory and hybrid technology offerings, including BCD with highdensity EEPROM in a single process node at 0.13 micron

#### MagnaChip: an OLED leader

#### Leadership in evolution of OLED market

Business opportunity and MX's competitiveness

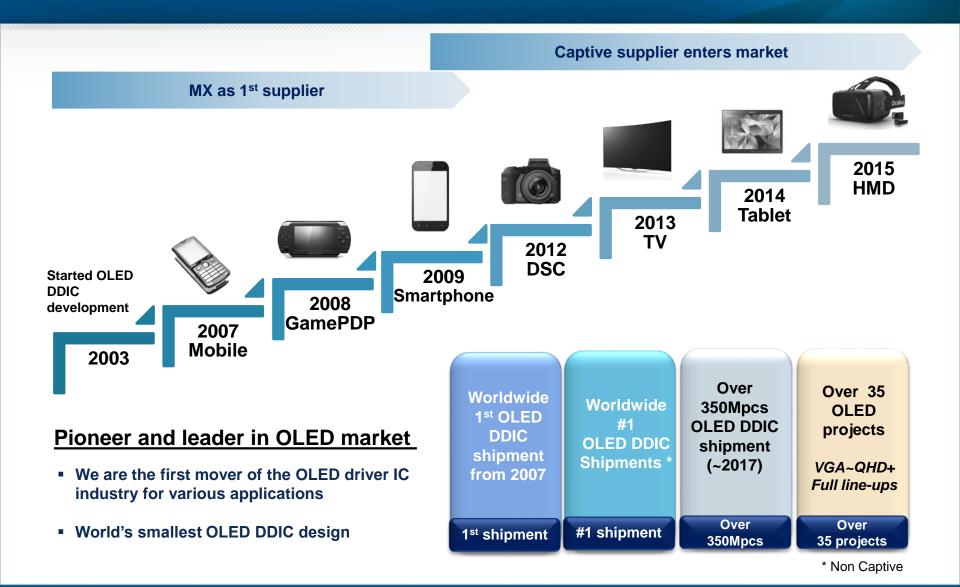
Key takeaways

#### **OLED** is everywhere and evolves over time

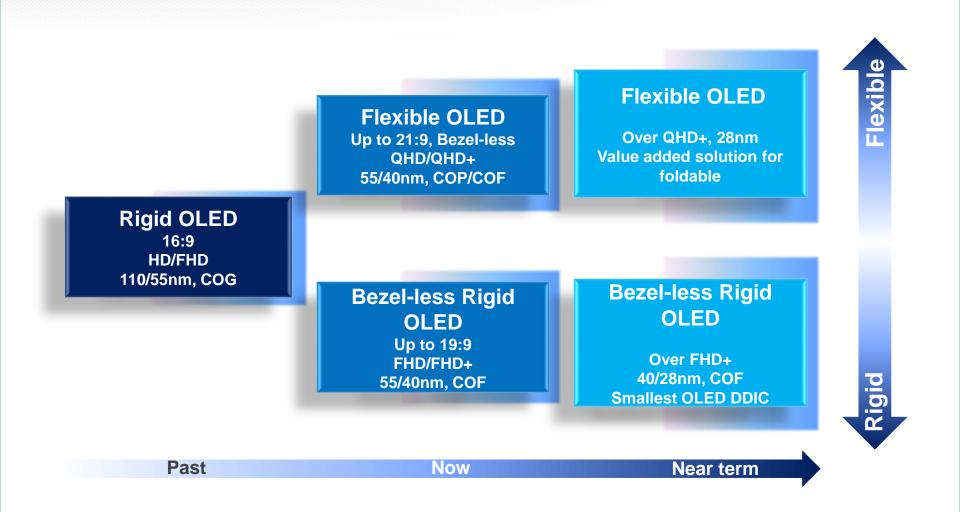




## MagnaChip: First adopter and non-captive OLED leader

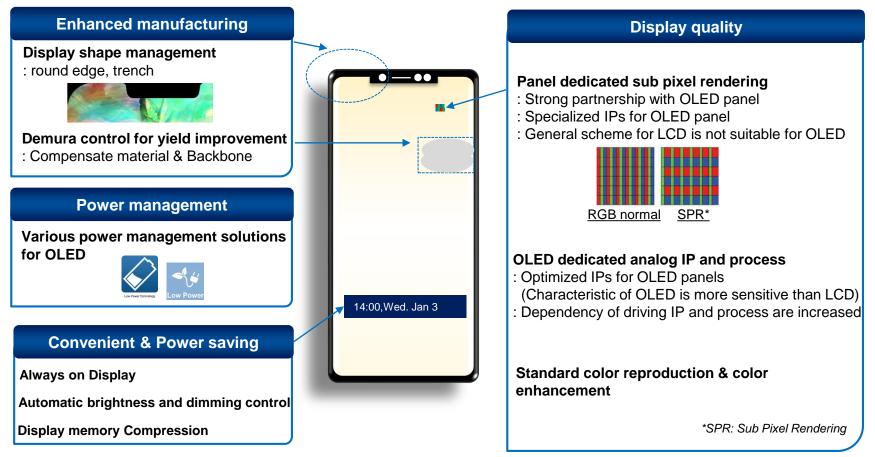


#### MX's innovative product portfolio



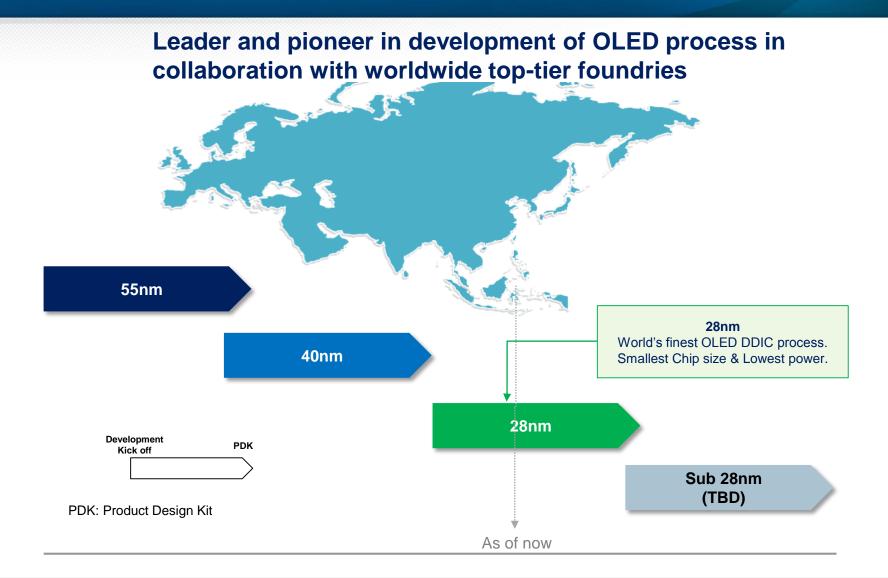
### MX supports all specialized IPs for OLED Display

 MX's all IPs are optimized for OLED display panel, unlike TFT-LCD panel based IPs



✓ We have a lot of registered OLED related patents and pending patent applications.

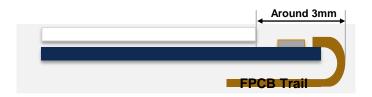
#### **Pioneer in advanced OLED process technology**

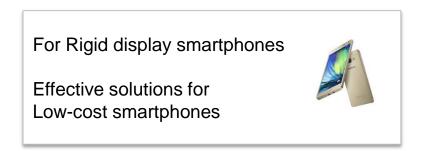


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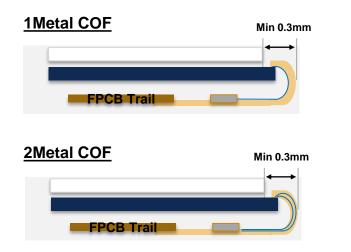
### Leader in OLED COF technology for bezel-less design

## **Chip-On-Glass**





## **Chip-On-Film**



Supports any form factors (Rigid, Flexible)

Effective solutions for Bezel-less and slim design

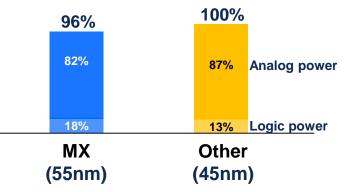
- FHD+ display: 1Metal COF
- Over QHD display: 2Metal COF



#### Innovative Design Competitiveness of MX's OLED DDICs

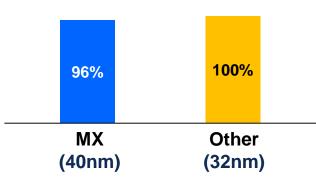


Lower power consumption



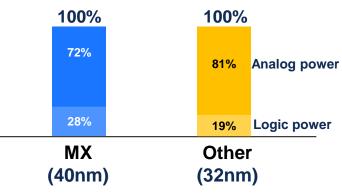
\* FHD+ w/ 1/3 ram Comparison(2nd Gen.)





\* FHD+ w/ <sup>1</sup>/<sub>3</sub>ram Comparison(3<sup>rd</sup> Gen.)

#### Same level power consumption



\* FHD+ w/ 1/3 ram Comparison(3rd Gen.)

#### **OLED** business opportunities

#### Leadership in evolution of OLED

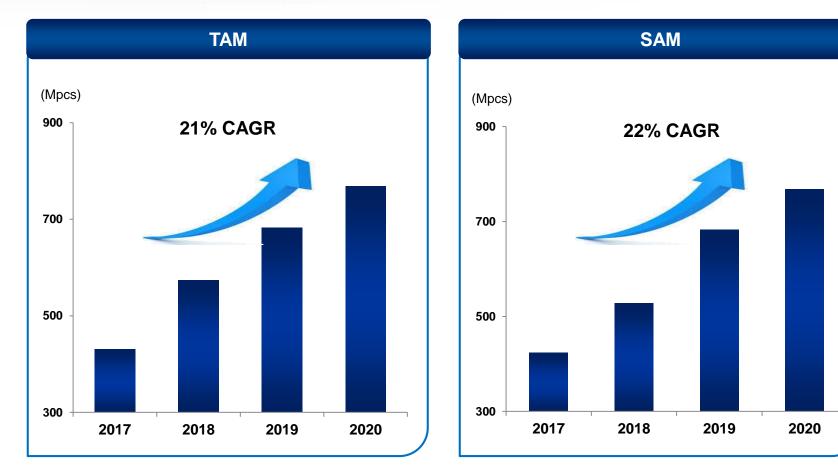
Business opportunity and MX's Competitiveness

Key takeaways

#### MX focuses on high-growth OLED market

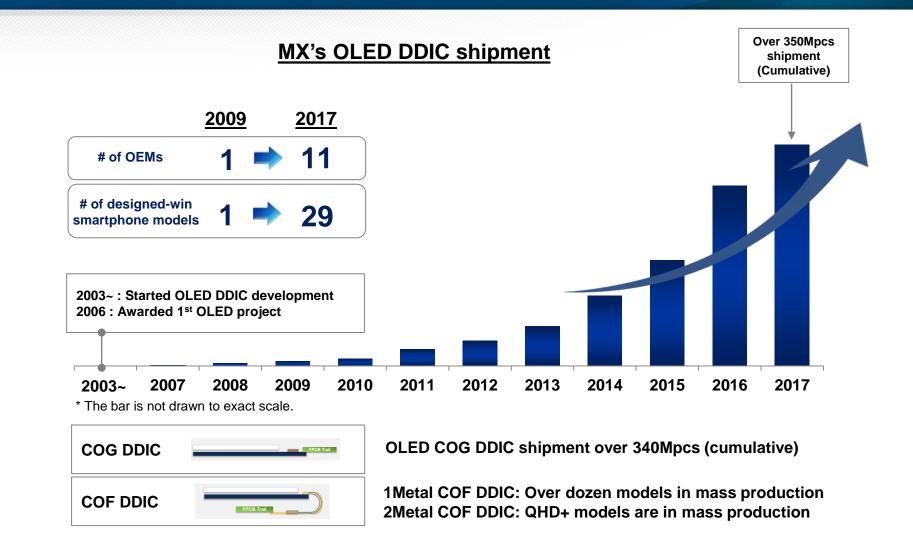
#### **OLED Display panel shipment forecast OLED Display panel capacity share** Strong relationship with Korea panel customers Unit:Mpcs MX is in #1 market share \* CAGR: 17% (2016~2021) 900 800 700 Korea **Panel makers** 600 over 70% 500 Korea 2019 **Panel makers** 400 around 90% \* Non captive market 300 <u>2017</u> 2017 2018 2019 2020 2021 2016 Source: MX estimates Source: IHS, Q4 2017

## Growth opportunity: OLED DDIC TAM and SAM



Source: IHS, MX estimates

#### Leader in OLED Display Driver IC shipment



#### MX's differentiation & advantages in OLED market

	Differentiation	Advantage
Process	<ul> <li>Various OLED process development experience (110nm ~ 28nm)</li> <li>MX own specialized OLED proprietary IP (nEDMOS, ESD, LOTP, etc.)</li> </ul>	<ul> <li>Provide high quality, small die and low power DDIC</li> <li>Simplify &amp; reduce process layers and higher yields</li> </ul>
Design	<ul> <li>Over 15 years design know-how and proprietary OLED IPs</li> <li>Proven design capability for various OLED form factors and display resolutions.</li> </ul>	<ul> <li>Support for various form factors (Round, notch, flexible, foldable displays)</li> <li>Simplify customer's development TAT</li> </ul>
Test	<ul> <li>OLED optimized test algorithms and methodologies</li> </ul>	<ul> <li>World wide best quality for OLED display (Zero-defective products)</li> </ul>
Packaging	<ul> <li>Various packaging R&amp;D and mass production experience</li> <li>: COG, 1Metal COF, 2Metal COF</li> <li>Optimized solutions for thermal and EMI</li> </ul>	<ul><li>Support for various form factors</li><li>Good EMI and thermal characteristics</li></ul>
		nership with tphone OEMs Korea views MX's OLED technology as a national treasure

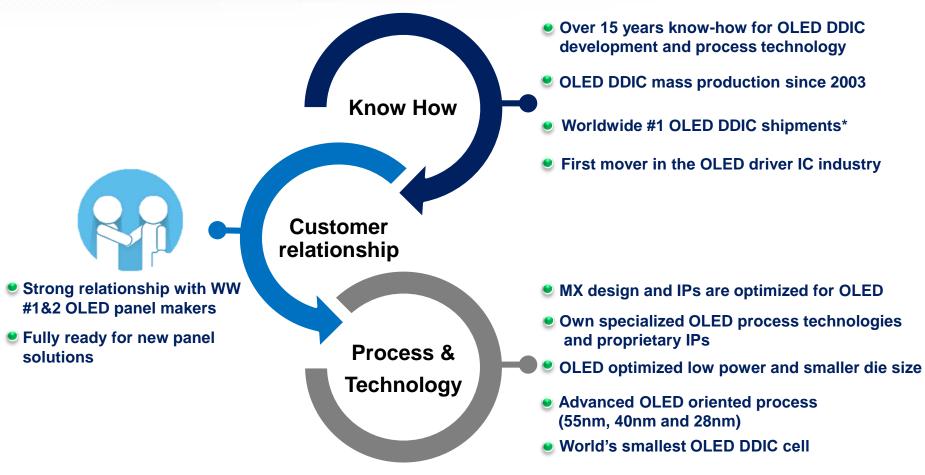
#### MagnaChip: key OLED takeaways

#### Leadership in evolution of OLED

Business opportunity and MX's Competitiveness

Key takeaways

#### Key takeaways



\* Non Captive

# Thank you