



MagnaChip Introduces First Power Management IC for Laptops with UHD Display Panels

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SEOUL, South Korea, Dec. 17, 2020 /PRNewswire/ -- MagnaChip Semiconductor Corporation ("MagnaChip") (NYSE: MX), announced today a new line of power management integrated circuit (PMIC) by introducing its first UHD display panel PMIC for laptops.



PMICs are integrated circuits that include multiple power management functions within a single chip, and they are frequently used to power space-constrained devices where high-efficient and compact form factors are required. They are essential for battery-operated devices since the battery life depends on the efficiency of the PMIC's power management capabilities.

MagnaChip entered the market ten years ago, and since then it has developed and delivered industry-leading PMIC products for a variety of applications, including BLU drivers for TVs and AC Directs for LED lighting. Today, MagnaChip's PMICs are widely recognized in the industry for their advanced technology and outstanding quality. The newly released UHD display panel PMIC for laptops incorporates the company's latest PMIC technologies.

For instance, the new PMIC controls electricity consumption through I²C (Inter-Integrated Circuit) technology, which ensures that functions such as dynamic voltage management, on/off block, protection circuit fault flag and switching frequency transition in UHD display panels are performed seamlessly.

The new PMIC is a monolithic IC which includes one boost regulator for the power supply to source and gate drivers, three high-current buck regulators for power supply to a timing controller, two Op-Amp for gamma buffer and one each positive and negative charge pumps. This level of integration results in smaller and faster electronic circuits. Other features include fast transient response and enhanced circuit protection measures.

Therefore, the new PMIC can help address changes in current consumption and protects devices from damage with functions such as: over voltage protection, short circuit protection, under voltage lockout, over current detection, over current limit and thermal shutdown. In addition, the new PMIC also offers constant current mode and dynamic switching frequency, which gives product designers more flexibility in meeting specific requirements of application.

"PMIC design requires sophisticated technologies and we are proud to unveil our new PMIC for laptops, which incorporates our 10 years' experience and technology leadership in the industry," said YJ Kim, CEO of MagnaChip. "Our product roadmap will include possible expansion of our portfolio to address specialized display requirements from the tablet and OLED TV manufacturers, both of which are high growth potential markets."

About MagnaChip Semiconductor

MagnaChip is a designer and manufacturer of analog and mixed-signal semiconductor platform solutions for communications, IoT, consumer, industrial and automotive applications. The Company provides a broad range of standard products to customers worldwide. With more than 40 years of operating history, MagnaChip owns a portfolio of approximately 1,200 registered patents and pending applications, and has extensive engineering, design and manufacturing process expertise. Please visit www.magnachip.com for more information. Information on or accessible from MagnaChip's website is not a part of, and is not incorporated into, this release.

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