**Silicon Creations' PMA technology part of**
**Microsemi award-winning FPGA**

SUWANEE, Ga. – March 15, 2018 – Silicon Creations, a leading supplier of high-performance analog and mixed-signal intellectual property (IP), announced that its multi-protocol serializer/deserializer (SerDes) transceiver Physical Medium Attachment (PMA) intellectual property (IP) was part of Microsemi Corporation's PolarFire field programmable gate array (FPGA), named 2017 "Product of the Year" by Electronics Products magazine, as well as the Electronic Products China/21ic.com 2017 "Product of the Year."

The cost-optimized PolarFire FPGAs deliver the industry's lowest power at mid-range densities with exceptional security and highest reliability. They target a wide range of applications within wireline access networks and cellular infrastructure, defense and commercial aviation markets, as well as industry 4.0 which includes the industrial automation and internet of things (IoT) markets.

As the PolarFire devices are intended to support a wide range of protocols, SerDes transceiver selection became key. In fact, the transceivers are one of the main selection criteria for the FPGA customers in these target application segments. The verstatility, power and performance of the PMA are some of the most important aspects of the transceiver architecture.

"We are very proud to have made a significant contribution to the success of Microsemi's PolarFire FPGA and to have our PMA technology be a part of this product of the year," said Jeff Galloway, CTO and co-founder of Silicon Creations. "We look forward to seeing many Microsemi customers' lower battery and power system costs in their products when they use the FPGAs with our flexible transceiver."

Silicon Creations' SerDes PMA can support more than 30 protocols over a continuous range, from 250Mbps to 12.7Gbps per lane. The transceivers consist of the company's PMA, the analog high-speed SerDes part, hard-coded logic from Microsemi (the physical coding sublayer, or "link layer") and controllers that can be programmed into the FPGA fabric.

Silicon Creations' PMA has a very fast burst mode – capable of clock data recovery

(tCDR) of less than 160UI. This unmatched feature of the PMA allows the FPGA to be used to increase the internet bandwidth or lower the cost of services offered to end customers in the passive optical network (PON) market. Silicon Creations' PMA also uses comparatively little power.

"PolarFire transceivers consume half the power that competing FPGAs do, contributing to an overall total power reduction of between 30-50% over other mid-range FPGAs. This is a key advantage for us," said Atul Ghia, vice president of product development engineering at Microsemi. "Many FPGA customers care about power, and lower power means higher thermal and power efficiency in a system, resulting in lower OPEX, CAPEX and BOM costs."

For more information on Silicon Creations' SerDes PMA technologies, please visit https://www.siliconcr.com/images/documents/MPPMA_Flyer_US_170530.pdf.

**About Silicon Creations**

Silicon Creations is focused on providing world-class silicon intellectual property (IP) for precision and general-purpose timing (PLLs), SerDes and high-speed differential I/Os. Silicon Creations' IP is proven from 7- to 180-nanometer process technologies. With a complete commitment to customer success, its IP has an excellent record of first silicon to mass production in customer designs. Silicon Creations, founded in 2006, is self-funded and growing. The company has development centers in Atlanta, Ga., and Krakow, Poland, and worldwide sales representation. For more information, visit www.siliconcr.com.



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