Credo Demonstrates 56G PAM-4, 56G NRZ and 28G NRZ SerDes Technology at DesignCon

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Robust Solutions Drive Error-Free Connectivity in Backplanes and Copper Cables

Milpitas, Calif., January 19, 2016 – Credo Semiconductor, a global innovation leader in Serializer-Deserializer (SerDes) technology, today announced it will conduct multiple demonstrations of its 56 Gbps(G) PAM-4, 56GNRZ and 28G NRZ SerDes technologies at DesignCon 2016. The conference starts today at the Santa Clara Convention Center in Santa Clara, Calif., with exhibits taking place Jan. 20-21.

‘’New innovation in enterprise, data center and HPC environments require faster, denser, and longer reach connectivity solutions to improve network, computing, and storage throughput,” said Rajan Pai, vice president of system applications at Credo. “These demonstrations with high-profile cable and connector manufacturers using our latest Credo 56G PAM-4 and MUX solutions, as well as our proven 28G and 56G NRZ solutions, unleash new opportunities in cable, connector and optical component offerings for quick adoption within existing data center infrastructures.”

Demonstrations with Amphenol (Booth #635), Amphenol FCI (Booth #533) and Molex (Booth #817) leverage Credo’s 56G NRZ SerDes IP evaluation platform and Credo’s recently announced 100G CMX12520 multiplexer (MUX)/retimer chip—enabled by Credo’s 56G PAM-4 SerDes—to drive error-free connectivityover copper cables, orthogonal backplanes,and cable backplanes. The 56G NRZ demonstrations highlight the fact that high performance computing (HPC) environments have the ability to deploy low latency, error-free systems without the need for forward-error correction (FEC). Additionally, Credo is demonstrating long-reach 28G technology with Lorom (Booth #502), showcasing highly malleable 3-meter and 5-meter copper cables for datacenter connectivity.

DEMONSTRATIONS WITH AMPHENOL FCI

Credo will conduct two demonstrations with Amphenol FCI. The first will show 56G NRZ transport over FCI’s ExaMAX® direct-mate orthogonal interconnect system. The second demonstration will show 56G PAM-4 transport over the same architecture.

“Now that FCI is a member of the Amphenol family, we can collaborate with our sister divisions to offer an unmatched portfolio of high-speed interconnect solutions,” said Dana Bergey, signal integrity manager at Amphenol FCI. “ExaMAX® connectors have become a very popular choice for 28G applications around the globe, including standard backplane, midplane, mezzanine, coplanar, and direct-mate orthogonal versions. We are excited to work with Credo to show how ExaMAX products can successfully pass 56GB signals—error-free—with all the popular encoding techniques.”

DEMONSTRATION WITH LOROM

Credo will conduct two demonstrations with Lorom. In addition to driving error-free 28G signals across standard Lorom Emaxx cables at lengths up to eight meters, the Credo 28G SerDes IP evaluation platform will be leveraged to demonstrate error-free transmission acrossLorom’s light-weight and highly flexible three-meter and five-metercables in both SFP and QSFP form factors.

Lorom’s bulk cable performance utilizes low-loss foamed dielectric, low surface roughness foils and proprietary manufacturing processes to achieve among the lowest insertion loss per meter in the industry. In addition to having this low insertion loss performance, Lorom’s well-balanced cables exhibit nominal mode conversion below 30dB. This further minimizes insertion loss and provides consistent pair-to-pair performance.

“The combination of Lorom’s advanced cabling technology and Credo’s industry leading SerDes technology enables signals to be pushed farther in length, across cables with smaller outer diameters, without the need for FEC,” said Henning Hansen, chief operating officer of The Lorom Group. “The small size, light weight and extreme malleability of these cables should have a profound impact on front-panel datacenter rack connectivity.

DEMONSTRATIONS WITH MOLEX

Credo will conduct two demonstrations withMolex. For the first demonstration,Credo will supply transmitting and receiving electronics, showing error-free 56G NRZ and 56G PAM-4 live serial traffic on the zQSFP+™form factor using a high-speed copper cable. The second demonstration will highlight the Molex Impel™ backplane cable assembly driving 56G speeds in both NRZ and PAM-4 applications.

“This demonstration will highlight the feasibility of running extremely high, next-generation data rates, even on form factors that are already in use,” said Joe Dambach, product manager, Molex. “By pairing our advanced cabling solutions with Credo SerDes technology, we can show groundbreaking signal integrity performance at very high speeds.”

ABOUT CREDO SEMICONDUCTOR

Credo is a leading provider of high performance, mixed-signal semiconductor solutions for the data center, enterprise networking and high performance computing markets. Credo's advanced Serializer-Deserializer (SerDes) technology delivers the bandwidth scalability and end-to-end signal integrity for next generation platforms requiring single-lane 25G, 50G, and 100G connectivity. The company makes its SerDes available in the form of Intellectual Property (IP) licensing on the most advanced processing nodes and with complementary product families focused on extending reach and multiplexing to higher data rates. Credo is headquartered in Milpitas, California and has offices in Shanghai and Hong Kong. For more information: www.credosemi.com

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