Luxtera Ships Industry's First 2x100G PSM4 Silicon Photonics Embedded Optical Modules

OptoPHY™ Embedded Optical Transceivers Provide Unmatched Price, Performance, Density and Reach

LOS ANGELES, March 21, 2017 – [OFC 2017](#) – Luxtera, the global leader in Silicon Photonics, today announced it is now shipping in volume the industry's first 2x100G-PSM4 (Parallel Single Mode fiber 4-lane) embedded optical transceiver, designed for cloud data center, enterprise, and telecom networking applications. The LUX62608 OptoPHY™ module was developed using Luxtera's patented and market proven Silicon Photonics integration platform, demonstrating its leadership and commitment to data center and mobile infrastructure networking innovation and excellence.

With its compact size and high-level of optoelectronic integration, the OptoPHY 2x100G-PSM4 embedded optical module can deliver high density, long reach optics at a fraction of the cost of two 100G front panel pluggable QSFP modules. As the prices of optical modules have come to dominate the interconnect equation, cost effective single mode optics have become increasingly important in the market.

The OptoPHY 2x100G-PSM4 optical transceiver has been selected by Ericsson as the optical interconnect for its industry leading Hyperscale Datacenter System HDS 8000. The HDS 8000 is the latest generation of cloud computing systems that uses a disaggregated architecture to improve efficiency, utilization, automation and total cost of ownership. OptoPHY functions as the optical interconnect for the HDS 8000's compute, networking, and storage sleds, allowing the system designers to avoid tradeoffs between reach and cost that constrain other disaggregated hardware solutions. This enables a more efficient pooling of key resources, improving performance, latency, utilization and energy consumption.

"With the growing demands of the hyperscale datacenter, Ericsson has seen single mode optics become an increasingly critical part of the system network and PSM4 is a critical element in the design of our HDS 8000 optical interconnect," said Jason Hoffman, Global Head of Product Area, Cloud Infrastructure with Ericsson. "As data rates and reaches have increased, the limitations of contemporary optics have become more apparent, forcing end users to choose between low cost and long reach, placing hard constraints on datacenter architects. Luxtera's 200G silicon photonics solution changes this paradigm, by allowing long reach and low cost with best in class performance."

"Hyperscale datacenters are undergoing a tectonic shift as the industry moves to 100G infrastructure and single mode photonics become the mainstream interconnect," said Greg Young, president and CEO of Luxtera. "With the introduction of OptoPHY, we continue to lead the industry transition by delivering the only optical transceiver technology that can deliver 200G aggregate bandwidth with up to 2km of reach at the aggressive cost points needed for high volume deployments."

LUX62608 OptoPHY Product Details

Each Luxtera OptoPHY includes eight independently operating transmitter and receiver channels, integrating high-speed phase modulators, photodetectors, waveguides, grating couplers, high-speed electrical retimers, and integrated control circuitry, powered by a single integrated laser. These components combine into a fully integrated silicon photonics chipset with no additional external elements required.

Key Features:

- 200Gbps aggregate bandwidth optical transceiver
- 2x100G PSM4 compliant
- Eight 26 Gbps independently operating channels, full-duplex operation
- Embedded optical module form-factor
- Multirate: 1 – 25.78 Gbps (per channel)
- Proven light source and packaging technology
- Extended reach up to 2000 meters
- Less than 5W typical power

Luxtera is the trusted market leader in Silicon Photonics and continues to invest and innovate in the industry's leading product portfolio. With a 15-year history delivering high quality silicon, advanced firmware and software, innovative board design, and extensive validation processes, Luxtera has now shipped over one million PSM4 transceiver products. Luxtera has a broad and growing customer base including major cloud datacenter operators, system OEMs, HPC operators, and many other enterprise networking customers.

Availability

The LUX62608 2x100G PSM4 OptoPHY is available now in volume production.

About Luxtera

Luxtera, Inc. is the world leader in silicon photonics. Silicon photonics refers to the use of a standard semiconductor wafer foundry to produce optical-electrical transceiver products which can move large amounts of data at high speeds and over long distances. Headquartered in Carlsbad, California, Luxtera was founded in 2001 and is led by a team of industry-renowned researchers and seasoned executives drawn from the communications and semiconductor industries. Luxtera is backed with investment from NEA, August Capital, Sevin Rosen Funds, Lux Capital, and Industry Ventures. The company also has received significant strategic investment and project funding from some of the most successful corporate players in the networking, computing, and semiconductor industries. The company has invested over $250 million in silicon phonics R&D. Luxtera has over 197 worldwide patent filing, including 127 issued US patents, covering fundamental aspects of silicon photonics core technologies, system design, integration, and package assembly. Luxtera has one of the industry's strongest IP portfolios. www.luxtera.com.

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