

News Release



MACOM and Sumitomo Electric to Showcase 100G PAM-4 over Single Wavelength at OFC 2017 in Los Angeles

OFC, Los Angeles, CA – March 21, 2017 – MACOM Technology Solutions Inc. (“MACOM”) and Sumitomo Electric Industries, Ltd. will showcase a joint 100 Gbps PAM-4 single wavelength (λ) demonstration at OFC 2017, March 21 – 23 at the Los Angeles Convention Center, Los Angeles, CA, USA.

Cloud Data Centers need to maximize the data throughput in a cost-efficient manner to cope with bandwidth demands. Advanced modulation schemes, such as PAM-4, are efficient to implement in silicon and increase the amount of data transmitted over a fiber connection while reducing the cost per bit significantly. This reinforces the importance of PAM-4 as a key technology in next generation Data Centers.

The joint solution features MACOM’s 100 Gbps, [16nm FinFET, PAM-4 PHY](#), linear driver and high bandwidth, low noise transimpedance amplifier (TIA), and Sumitomo Electric’s high bandwidth Electro-Absorption Modulated Laser (EML) driving a 53Gbaud PAM-4 modulated signal over single mode fiber.

It is anticipated that the combination of these technologies will pave the way for serial 100Gbps and 400Gbps transmission enabling lower cost and higher density optical modules required by data center operators and access networks. The industry is moving quickly to implement 100G interconnects to accommodate the massive growth of IP traffic. Single wavelength 100Gbps is transforming the industry and will enable accelerated deployment of the lowest cost 100Gbps QSFP28 and 400Gbps QSFP-DD and OSFP modules.

“Reducing cost per bit for Cloud Data Center OEMs was a key driver for this demonstration, which marks the onset of a new generation of 100G and 400G modules. Single Lambda PAM-4 highlights the significant value MACOM brings to Cloud Data Centers delivering the requisite density, reliability and economics needed for data center deployment,” said Omar Hassen, Vice President, Connectivity, at MACOM. “We are looking forward to continuing to collaborate with Sumitomo to solve our customers’ cost, size and density challenges.”

PAM-4, adopted by the IEEE, is expected to be the most cost-effective and efficient enabler of 100G and 400G in the data center. In a 100G application, not only does the technology reduce the number of lasers to one, it eliminates optical multiplexing, and allows single λ 100G optical modules to work in existing switch and server line cards with QSFP cages. PAM-4 makes more efficient use of electronic and optical components by packing two bits for every symbol sent over the fiber. Single- λ 100G PAM-4 offers the simplest architecture, lowest component count, the most streamlined data path, higher reliability and an easy upgrade path to 400G Ethernet and beyond.

This live demonstration will be held at OFC 2017 in MACOM’s booth #1736 and in Sumitomo Electric’s booth #2703.

Sumitomo Electric Industries, Ltd. Sumitomo Electric Industries, Ltd. was established in 1897. With our history in electric wire and cable manufacturing technologies, Sumitomo Electric has invested heavily over the years in research and development to expand and establish new businesses. These efforts have allowed us to create new products and new technologies, as well as diversify our business fields. Currently, we operate our businesses on a global basis in the following five segments: Automotive; InfoCommunications; Electronics; Environment & Energy; and Industrial Materials. We have been contributing to society through environmental friendly and fair business activities globally.

For more information, visit <http://global-sei.com>

ABOUT MACOM:

[MACOM](#) is a new breed of analog semiconductor company—one that delivers a unique combination of high growth, diversification and high profitability. We are enabling a better-connected and safer world by delivering breakthrough semiconductor technologies for optical, wireless and satellite networks that satisfy society's insatiable demand for information. As a pillar of the semiconductor industry, MACOM has been thriving for more than 60 years, daring to change the world for the better, through bold technological strokes that deliver true competitive advantage to customers and superior value to investors.

For more information about MACOM, please visit www.macom.com.

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