



New 400G MACOM PURE DRIVE™ Chipset Enables Linear Architectures

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LOWELL, Mass.--(BUSINESS WIRE)--Sep. 19, 2022-- MACOM Technology Solutions Inc. ("MACOM"), a leading supplier of semiconductor solutions, today announced at the European Conference on Optical Communication ("ECOC") that it has introduced a new 400G chipset comprising linear drivers and transimpedance amplifiers (TIAs) that target single mode and multi-mode optical interconnects. MACOM will brand these new linear drivers and TIAs as *MACOM PURE DRIVE™*. These devices target linear architectures where the optical transceiver replaces digital signal processors (DSPs) with an analog integrated circuit (IC) to provide linear signal recovery at the electro-optical interface.

The deployment of 400G PAM-4 connectivity within the datacenter is causing a dramatic increase in overall power consumption for cloud service providers, in part due to PAM-4 DSPs which are often used to maintain signal integrity at each hop within the overall link. In many cases, this can result in multiple DSPs within a single datacenter link. MACOM's new linear architecture can remove this DSP redundancy within the link by optimizing the linear performance of the electro-optical interface, which can enable the application-specific integrated circuit (ASIC) at the end points to recover the signal.

Expected key benefits of *MACOM PURE DRIVE™* solutions compared to standard DSP-based architectures include:

- Reduction of optical interconnect power consumption upwards of 50%
- Minimized link latency critical for machine learning and artificial intelligence applications
- Eliminates costly, redundant signal retiming
- Solves thermal issues associated with discrete DSP
- Simplified module implementation allowing for greater flexibility
- Reduces footprint to meet space-constrained designs
- Scalable up to 1.6TB

The *MACOM PURE DRIVE™* chipset has been designed to support broad dynamic ranges, linear equalization and low noise amplification to enable direct connection to switch and server ASICs. Working together, these linear links can support leading edge throughput while, at the same time, enable specialized functionality of each component in the data path such that power, cost and latency can be minimized.

The *MACOM PURE DRIVE™* chipset includes a 4x100G multi-mode fiber VCSEL driver and a 4x100G single mode fiber EML/silicon photonics driver (die or packaged). Corresponding TIAs are also available as part of the chipset.

For more information about these products, please reach out to sales@macom.com or visit www.macom.com.

About MACOM

MACOM designs and manufactures high-performance semiconductor products for the Telecommunications, Industrial and Defense and Datacenter industries. MACOM services over 6,000 customers annually with a broad product portfolio that incorporates RF, Microwave, Analog and Mixed Signal and Optical semiconductor technologies. MACOM has achieved certification to the IATF16949 automotive standard, the ISO9001 international quality standard and the ISO14001 environmental management standard. MACOM operates facilities across the United States, Europe, Asia and is headquartered in Lowell, Massachusetts. To learn more visit www.macom.com.

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