MACOM Demonstrates TIA Interoperability with Broadcom PAM-4 DSP for Data Center Applications

LOWELL, Mass., September 15, 2021 – MACOM Technology Solutions Inc. ("MACOM"), a leading supplier of semiconductor products, today announced a collaboration that demonstrates interoperability of Broadcom's PAM-4 DSP and MACOM's transimpedance amplifiers (TIAs) for 53 Gbps per lane VCSEL based short reach and 100 Gbps per lane EML based long reach data center applications.

The pairing for single-mode long reach solutions includes Broadcom's 7nm Centenario DSP (BCM874xx) with MACOM's four-channel 4x106 Gbps PAM-4 linear transimpedance amplifiers (TIAs) optimized for use in 400G and 800G DR4 and FR4 optical modules. The MATA-03819, MATA-03820 and MATA-03821 are available in flip chip and wire bonding options, respectively, for fast, flexible deployment of QSFP-DD and OSFP optical modules.

The pairing for multi-mode short reach solutions includes Broadcom's 7nm Estoque DSP (BCM875xx) with MACOM's two-chip analog solution for 200 Gbps and 400 Gbps short reach SR4 and SR8 modules (QSFP, OSFP, QSFP-DD) and Active Optical Cable (AOC) applications in the data center. The MACOM chipset consists of two devices, the MATA-38434 4x53 Gbps PAM-4 TIA and MATA-38435 4x53 Gbps PAM-4 VCSEL driver, that deliver IEEE standard specified performance and are compliant with Open Eye MSA eye mask specifications.

"Our customers require high-performance solutions to enable their data center applications," said Marek Tlalka, Senior Director, High-Performance Analog, MACOM. "This collaboration offers the industry another proof point towards the interoperability of DSPs to MACOM's TIA portfolio, and a path to shorter design cycle for 400G and 800G module manufacturers."

"Broadcom's 7nm DSPs along with MACOM's TIAs provides industry leading performance at the lowest power for 200G/400G/800G optical modules," said Khushrow Machhi, Senior Director of Marketing, Physical Layer Products Division, Broadcom. "Additionally these various modules show the interoperability of Broadcom's DSP with various components needed to develop industry leading optical modules."

About MACOM
MACOM designs and manufactures semiconductor products for Telecommunications, Industrial and Defense and Datacenter applications. Headquartered in Lowell, Massachusetts, MACOM has design centers and sales offices throughout North America, Europe and Asia. MACOM is certified to the ISO9001 international quality standard and ISO14001 environmental management standard. MACOM, MACOM Technology Solutions and related logos are trademarks of MACOM Technology Solutions Holdings, Inc. All other trademarks are the property of their respective owners.

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