Broadcom Extends Technology and Volume Leadership on AI Optical Components

March 13, 2024

Industry-leading VCSEL, EML and CW laser technologies enable terabit connectivity and drive large-scale AI infrastructure

PALO ALTO, Calif., March 13, 2024 (GLOBE NEWSWIRE) -- Broadcom Inc. (NASDAQ: AVGO), the world's leading provider of fiber optic components for optical networking and communications, today announced several major accomplishments extending its market leadership with an expanded portfolio of optical interconnect solutions for artificial intelligence (AI) and machine learning (ML) applications. Broadcom's state-of-the-art optics technologies facilitate high speed interconnects for front-end and back-end networks of large-scale generative AI compute clusters.

Key Announcement Highlights:

- Production release of 200-Gbps per lane (200G/lane) electro-absorption modulated laser (EML) to pair with next generation GPUs
- Demonstration of the industry's first 200G/lane vertical-cavity surface-emitting laser (VCSEL)
- Demonstration of continuous wave (CW) laser with high efficiency and high linearity for silicon photonics (SiPh) modulation at 200G
- Shipment of more than 20 million channels of 100G/lane high speed optical components used in AI/ML systems

VCSEL and EML technologies play a crucial role in enabling high-speed interconnects for AI and ML systems. Broadcom's 200G VCSEL and EML products follow up on successful deployment of 100G/lane VCSEL and EML chips into first-generation generative AI networks and will provide unrivaled bandwidth and interconnect density for next generation interconnects. Both product families from Broadcom represent trusted and reliable technologies that will enable integration partners to use existing capacity as end users progress to 1.6T optical transceivers and usher in the era of terabit connectivity.

"Generative AI has unleashed a network transformation necessitating an order of magnitude increase in high-speed optical links compared to standard network requirements," said Near Margalit, Ph. D., vice president and general manager of the Optical Systems Division at Broadcom. "We will continue to invest in VCSEL, EML and CW laser technologies to deliver disruptive innovation in bandwidth, power and latency for optical interconnects in next generation AI links."

"We expect shipments of 8x100G optical transceivers to exceed 5 million units in 2024 and first 8x200G modules delivered to customers by the end of the year," commented Dr. Vladimir Kozlov, founder and CEO of LightCounting Market Research. "Google and Nvidia will be the first adopters of 200G per lane optics for interconnecting GPUs and TPUs in AI Clusters – the hottest area of the market now. Broadcom is once again among the first suppliers of components enabling the next generation of optical transceivers."

"Enterprises continue to demand larger AI clusters, elevating the importance of cutting-edge optical interconnects," said Craig Thompson, vice president of LinkX products at NVIDIA. "NVIDIA is at the forefront of photonics innovation, and Broadcom has been an important optical-component partner, matching the pace and scale required as we advance our HPC and AI optical-interconnect technology."

"At Innolight, we have been deploying leading-edge optical interconnect solutions for AI, ML and HPC applications," said Osa Mok, chief marketing officer (CMO) at Innolight Technology. "We are excited to continue our partnership with Broadcom to develop advanced terabit optical modules for generative AI, enabling AI clusters to scale and support the next generation of LLMs."

"Eoptolink is deeply invested in AI/ML optical transceiver technologies with a broad portfolio of advanced high-speed module offerings," said Sean Davies, vice president of sales at Eoptolink Technology. "We are excited to partner with Broadcom to bring to market state-of-the-art solutions to enable terabit connectivity and drive new generative AI architectures."

Demo Showcase at OFC 2024

Broadcom will showcase the following products and technologies:

- 200G VCSEL technology demonstration
- 200G EML product demonstration
- 200G SiPh modulation with CW lasers
- 100G VCSELs for emerging applications including server interconnect, PCIe interconnect and next generation Fibre Channel

These demonstrations will be in the Broadcom Booth 5325 at the Optical Fiber Communication (OFC) 2024 exhibition in San Diego, California from March 26th to 28th.

About Broadcom

Broadcom Inc. (NASDAQ: AVGO) is a global technology leader that designs, develops, and supplies a broad range of semiconductor, enterprise software and security solutions. Broadcom's category-leading product portfolio serves critical markets including cloud, data center, networking, broadband, wireless, storage, industrial, and enterprise software. Our solutions include service provider and enterprise networking and storage, mobile device and broadband connectivity, mainframe, cybersecurity, and private and hybrid cloud infrastructure. Broadcom is a Delaware corporation headquartered in Palo Alto, CA. For more information, go to www.broadcom.com.

Broadcom, the pulse logo, and Connecting everything are among the trademarks of Broadcom. The term "Broadcom" refers to Broadcom Inc., and/or its subsidiaries. Other trademarks are the property of their respective owners.

Press Contact:
Khanh Lam

Corporate Communications
press.relations@broadcom.com

Telephone: +1 408 433 8649



Source: Broadcom Inc.