Broadcom Delivers 7nm 8x100G PAM4 PHYs for Hyperscale Data Center and AI Networks

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Industry's first end-to-end 800G platform solution with 112-Gbps PAM-4 optical and copper PHY extends Broadcom's leadership and accelerates deployment of high bandwidth 800G infrastructure

SAN JOSE, Calif., Dec. 03, 2020 (GLOBE NEWSWIRE) -- Broadcom Inc. (NASDAQ: AVGO) today announced the availability of its expanded portfolio of high-performance 7nm 800G PAM-4 PHY devices for data center, cloud and AI networks. The portfolio includes a new family of 800G optical PHY devices, the BCM8780X, optimized for QSFP-DD800 and OSFP transceiver module applications and an 800G 8:8 retimer PHY device, the BCM87360, designed for line card applications. Extending Broadcom's leadership position using 7nm process technology from the best-in-class Centenario™ PHY platform shipping in production, these new 8x100G PHYs provide industry leading performance along with the lowest power per bit. Combined with Broadcom's 100G single-lambda optics for both MMF and SMF fiber optics and leading-edge 25.6T switch that integrates 100G I/Os, this new PHY portfolio completes all the critical blocks needed for data center and cloud providers to develop and build out their 800G infrastructure networks.

100G and 400G deployments are ramping across data center and cloud networks while global data demands continue to rise with advances in technology. 800G is the next evolution in high-speed optical connectivity which will be essential in meeting bandwidth needs by enabling ultra-high density network equipment. As 5G and AI become more prevalent, coupled with recent upward trends in video conferencing and live streaming, data center providers and cloud companies will need more network bandwidth to keep up with data demands. The BCM8780X optical PHY and the BCM87360 retimer PHY solutions will ensure a smooth migration to new network architectures.

800G PHY Portfolio Highlights

BCM87800/BCM87802 – Ultra-low power 7nm 800G optical PHYs for transceiver modules

- Monolithic integrated 112Gbps laser driver with direct-drive PAM-4 output capability for EML and Silicon Photonics
- Industry leading DSP performance and power efficiency

BCM87360 – Industry's first 7nm 800G 8:8 retimer PHY for line cards

- High performance PAM-4 SerDes @ host and line side with link training and auto-negotiation
- Interoperable with Broadcom switch merchant silicon and ASIC
- Compliant to IEEE and OIF standards

"Continuing Broadcom's strategy of building best-in-class PHYs, the two new 8x100G PHY families being sampled today expands our industry leading 7nm PAM4 product line," said Lorenzo Longo, senior vice president and general manager of the Physical Layer Products Division at Broadcom. "Broadcom provides optimized solutions for a wide range of optical and line card applications at both 50G and 100G. No other company offers the same portfolio breadth with an equivalent level of investment and IP availability to enable the next level of network expansion."

"The data center industry has begun gearing up for 800G optical connectivity in 2020," commented Dr. Vladimir Kozlov, CEO and founder of LightCounting Market Research. "Broadcom is the driving force behind it, offering switching ICs, optics and now PHY chips designed for 25.6T 1RU switches with 32 of 800G optical ports. It's certain that one major hyperscaler will be using these products next year and other Cloud companies may be adding it to their plans."

"100G PAM-4 DSP is one of the most important building blocks for data center networking this decade. Cloud Providers need to build networks to enable next-generation applications and compute like AI and ML," said Alan Weckel, founder and technology analyst at 650 Group. "Broadcom is leading the market towards 100G based products in 2021, and it is also laying the groundwork towards co-packaging and photonics as the network becomes a more important part of data center buildouts in the future."

For more information on how Broadcom's 800G optical platform solutions drive next generation data center connectivity, read our blog here.

Availability

Samples of the BCM87800, BCM87802 and BCM87360 are available now. Please contact your local Broadcom sales representative for samples and pricing.

Further product information can be found online at:

https://www.broadcom.com/products/ethernet-connectivity/phy-and-poe/optical/bcm87800
https://www.broadcom.com/products/ethernet-connectivity/phy-and-poe/optical/bcm87802
https://www.broadcom.com/products/ethernet-connectivity/phy-and-poe/optical/bcm87360

About Broadcom

Broadcom Inc. (NASDAQ: AVGO) is a global technology leader that designs, develops and supplies a broad range of semiconductor and infrastructure software solutions. Broadcom's category-leading product portfolio serves critical markets including data center, networking, enterprise software, broadband, wireless, storage and industrial. Our solutions include data center networking and storage, enterprise, mainframe and cyber security software focused on automation, monitoring and security, smartphone components, telecoms and factory automation. For more information, go to www.broadcom.com.

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