Broadcom Announces Industry Leading Automotive Multilayer Ethernet Switches and Production Availability of Industry's First IEEE Compliant 1000BASE-T1 PHY

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First automotive multilayer switch with integrated PCIe connectivity, hardware accelerated Layer 3 routing capability and advanced multilevel security; Industry leading automotive Gigabit PHY passes critical IEEE 802.3bp PHY compliance requirements test by UNH-IOL

SAN JOSE, Calif., March 21, 2019 (GLOBE NEWSWIRE) -- Broadcom Inc. (NASDAQ: AVGO) today launched the BCM8956X, a family of automotive multilayer Ethernet switches, designed to address the growing need for bandwidth, flexibility, security and time-sensitive networking (TSN) for autonomous and connected vehicles. In addition, Broadcom has begun shipping production quantities of its automotive 1000BASE-T1 PHY transceiver device, the BCM8988X, enabling automotive OEMs to immediately deploy Gigabit Ethernet on single-pair UTP cables for in-car networking applications.

With the rapid adoption of in-vehicle electronics and increasing bandwidth demands from data-intensive applications, Gigabit Ethernet is quickly becoming the de-facto networking technology for supporting high-bandwidth communications in automotive applications. As vehicles become increasingly connected, Gigabit Ethernet PHYs and multilayer Ethernet switches are essential in handling the increased data traffic while being able to transfer large amounts of critical data across the network for accurate real time decision making.

The BCM8956X includes highly-optimized switches in various port configurations with integrated 100BASE-T1 and 1000BASE-T1 PHYs, allowing customers to have scalable and cost-effective designs for automotive gateway, ADAS and infotainment applications. The integrated PCIe interface provides high bandwidth connectivity to the host processor, while the on-chip Layer 3 flow accelerator offloads the host processor from compute intensive routing operations. Furthermore, the BCM8956X is packed with advanced multilevel security features including dedicated hardware security module (HSM) block for line rate encryption, L2 anti-hack, deep packet inspection, and intrusion prevention reporting.

The BCM8988X is the industry's first 1000BASE-T1 PHY with integrated BroadR-Secure ^{TM} functionality. Broadcom's BroadR-Secure enables customers to authenticate each packet transmitted and received on either end of the link using secure keys. The BCM8988X has undergone rigorous IEEE 802.3bp compliance testing by the University of New Hampshire InterOperability Laboratory (UNH-IOL). The device has passed critical IEEE 802.3bp PHY compliance requirements test for which Broadcom is sharing the test reports with its lead customers. The BCM8988x is a highly integrated 1000BASE-T1 PHY that incorporates state-of-the-art DSP and AFE technology, enabling superior EMC and EMI performance, fast link-up time, low power consumption and robust signal integrity over UTP cables.

"With the availability of Broadcom's industry leading secure multilayer switch and Gigabit PHY, automotive manufacturers can now design and build a gamut of Gigabit Ethernet systems to address high speed secure networking applications," said Ali Abaye, senior director of marketing for the Physical Layer Products Division at Broadcom. "As vehicles become increasingly advanced, Broadcom continues to spearhead high speed Automotive Ethernet developments to support secure networks to proliferate new applications such as 5G, artificial intelligence (AI) and autonomous driving."

"UNH-IOL and Broadcom have been collaborating from the early days of formation of OPEN Alliance to test automotive Ethernet products for IEEE conformance," said Curtis Donahue, senior manager of Automotive Ethernet Technologies at UNH-IOL. "On the latest IEEE 802.3bp PHY requirements, we are excited to have demonstrated testing feasibility and continually extend our capabilities to fully address the 1000BASE-T1 PHY specifications for automotive applications."

"The consolidation of multiple ECUs into domain controllers, in tandem with the separation of sensors and high-compute processing to enable highly automated driving, will mandate a radical overhaul of the vehicle's data backbone. Ethernet can satisfy the future requirements of high throughput and low-latency in a cost-effective and open way," said James Hodgson, senior analyst for Smart Mobility and Automotive at ABI Research. "The availability of the world's first truly secure multilayer switches and 1000BASE-T1 PHY represents an important step in the much-needed overhaul of the automotive computing architecture."

Availability

Broadcom is currently sampling the BCM8956X and shipping the BCM8988X to selected automotive OEMs and Tier 1 suppliers. **Please contact your local Broadcom sales representative for samples and pricing.**

Further information on the BCM8956X and BCM8988X **can be found online at:**

https://www.broadcom.com/products/ethernet-connectivity/automotive-switches/bcm8956x
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