



Broadcom Introduces World's Broadest Automotive Ethernet Product Portfolio – Ushers in Next Generation Connected Car

Dramatically Reduces Connectivity Cost and Cabling Weight

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News Highlights:

- World's first Ethernet automotive solution to deliver 100Mbps over unshielded single twisted pair cable
- Delivers high-bandwidth connectivity for in-vehicle network applications (driver assist, diagnostics, infotainment)
- Enables migration from multiple closed applications to single open, scalable Ethernet-based network

Broadcom Corporation (NASDAQ: BRCM), a global innovation leader in semiconductor solutions for wired and wireless communications, today announced the world's broadest automotive Ethernet portfolio, engineered to meet the rigorous qualifications and demands of the automotive semiconductor market. Broadcom's BroadR-Reach® automotive portfolio delivers high-performance bandwidth of 100Mbps and beyond while dramatically reducing connectivity costs up to 80 percent¹ and cabling weight as much as 30 percent². Visit go.Broadcom.com/Automotive to learn more.

Enabling the Next-Generation Connected Car

As consumer demand for in-vehicle connectivity continues to grow, automotive manufacturers are under pressure to deliver competitive, innovative features while minimizing cost. Broadcom's BroadR-Reach automotive solutions allow multiple in-vehicle systems (such as infotainment and automated driver assistance) to simultaneously access information over unshielded single twisted pair cable. By eliminating cumbersome, shielded cabling, automotive manufacturers can significantly reduce connectivity costs and cabling weight.

The [Broadcom automotive Ethernet product portfolio](#) consists of five devices including three highly integrated switches with embedded PHYs, and two stand-alone PHY solutions. Each device in the automotive portfolio is designed to meet in-car EMC requirements and extreme automotive temperature grades. Broadcom is TS16949 compliant and AEC-Q100 qualification is currently under way.

Proliferation of Automotive Ethernet Connectivity

This announcement follows the [recent introduction](#) of the OPEN (One-Pair Ether-Net) Alliance Special Interest Group (SIG). Established to drive wide scale adoption of Ethernet-based automotive connectivity as the standard in automotive connectivity, the SIG will address industry requirements for improving in-vehicle safety, comfort, and infotainment, while significantly reducing network complexity and cabling costs. Members include Broadcom, NXP Semiconductors N.V., Freescale Semiconductor, Harman International, BMW, Hyundai Motor Company and Jaguar Land Rover. License to specification for BroadR-Reach is available to all interested OPEN Alliance members under RAND terms via a license from Broadcom. Visit www.opensig.org to learn more.

Market Drivers:

- Consumer demand for automotive connectivity increasing at a rapid pace³

- Prevalence of in-vehicle electronics has nearly doubled in the last decade⁴
- New devices & solutions require higher bandwidth and convergence⁵
- In-vehicle electronics growing in volume and complexity³
 - In-dash display consoles becoming computerized nerve centers for driver/passenger control
 - Increase in number of cameras, sensors, diagnostics, ADAS, infotainment, etc.
 - Ongoing migration from analog electromechanical systems in cars to digital
- Automotive manufacturers require open, scalable, in-vehicle connectivity⁴
 - Need for a common network that supports multiple electronic systems and devices

Product Portfolio Key Facts:

- BCM89500**
 - 7-port, layer 2 switch with four integrated BroadR-Reach PHYs
 - Designed to support IEEE 1588 and IEEE 802.1AS timing functions
 - Deep sleep and ultra-low power modes for reduced power consumption
- BCM89501**
 - 7-port, layer 2 switch with five integrated BroadR-Reach PHYs
 - Designed to support IEEE 1588 and IEEE 802.1AS timing functions
 - Deep sleep and ultra-low power modes for reduced power consumption
- BCM89200**
 - 4-port, layer 2 switch with two integrated BroadR-Reach PHYs
 - Supports various uplink ports for connectivity to external devices
 - Designed to support IEEE 1588 and IEEE 802.1AS timing functions
 - Deep sleep and ultra-low power modes for reduced power consumption
- BCM89610**
 - Single-port, 10/100/1000BASE-T PHY
 - Optimized for in-vehicle diagnostic applications for when vehicle is powered off
 - Supports variety of connectivity options for external devices
- [BCM89810](#)
 - Single-port, 100Mbps BroadR-Reach PHY
 - Optimized for multiple in-car network applications for when vehicle is powered on
 - Supports variety of connectivity options for external devices

All devices (with exception to BCM89610) are compliant with OPEN Alliance specifications.

Availability

Devices are now sampling with production volume slated for the second half of 2012.

Quotes:

Dr. Ali Abaye, Senior Director, Product Marketing, Broadcom

"The increasing amount of gadgetry used in vehicles today rivals that of the consumer electronics segment. Broadcom is on the forefront of engineering innovative technologies that enable people to connect virtually everything in the home, hand and infrastructure. Automotive connectivity a great fit and a natural next step for Ethernet technology, and we intend to lead the way in simplifying in-vehicle connectivity while dramatically reducing costs for automotive manufacturers."

Thilo Koslowski, Automotive Practice Leader, Gartner

"Network connectivity in automobiles represents a crucial opportunity for new product and business innovation the automotive industry. By 2016, the majority of consumers in mature markets will consider in-vehicle Web access a key criterion in their automobile purchase. Connected vehicle technologies will enable automotive companies to address key industry trends: sustainability requirements, digital lifestyle convergence, changing market demographics, emerging transportation policies and new mobility innovations. The connected vehicle represents the start of a new era for the automotive industry where the partnership principle of "controlled openness" will lead to new customer experiences and successful business strategies."

Resources:

Automotive Portfolio Featured Product Page

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About Broadcom

Broadcom Corporation (NASDAQ: BRCM), a FORTUNE 500® company, is a global leader and innovator in semiconductor solutions for wired and wireless communications. Broadcom® products seamlessly deliver voice, video, data and multimedia connectivity in the home, office and mobile environments. With the industry's broadest portfolio of state-of-the-art system-on-a-chip and embedded software solutions, Broadcom is changing the world by Connecting everything®. For more information, go to www.broadcom.com.

¹ Based on current market prices for unshielded single twisted pair FlexRay cables and weight of two-meter twisted, single-pair FlexRay cables and connectors

² Based on combined weight of 2-meter twisted, single-pair FlexRay cables and connectors versus 2-meter LVDS cables with LVDS connectors'

³ Gartner - The Automotive Industry Accelerates Innovations; Published: 16 November 2010 ID:G00209090

⁴ 2011ABI Semiconductor Forecast 2011

⁵ IEEE 802.1 AVB Task Force Meeting, March 2011

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