Broadcom Launches New Energy Efficient Ethernet (EEE) Solutions

EEE PHYs Deliver 40 Percent Lower Power to Enterprise, SMB and Service Provider Networks

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News Highlights:

- Lowers operating power by more than 40 percent(1) and up to 70 percent or more through the use of EEE(2)
- Enables significant reduction in energy consumption and carbon footprint
- Includes on-chip 1588 precision timing protocol and Y.1731 delay measurement

Broadcom Corporation (NASDAQ: BRCM), a global innovation leader in semiconductor solutions for wired and wireless communications, today announced the addition of four energy efficient devices to its Energy Efficient Ethernet (EEE) portfolio. Optimized for use in power-intensive Ethernet network applications, the 10/100/1000BASE-T physical layer transceivers (PHYs) lower operating power by more than 40 percent(1), and up to 70 percent or more through the implementation of EEE(2). See the technology in action at INTEROP 2012 or visit http://go.broadcom.com/interop12 to learn more.

Broadcom's new energy efficient PHYs — the BCM54240, BCM54280, BCM54282 and BCM54285 implement the IEEE 802.3 EEE standard directly into the physical layer, while Broadcom's AutoGrEEEn™ technology enables systems with legacy MACs to leverage the power savings of EEE in periods of low link utilization, thus reducing time-to-market. This innovation allows customers to transform existing network equipment to EEE-compliance simply by changing the PHY device.

In addition to reducing power consumption and energy costs, the new PHYs provide integrated on chip 1588 PTP and Y.1731 delay measurement to deliver the most complete set of features in their class for timing synchronization and latency measurement — critical features for service provider and industrial Ethernet applications. With the emergence of 'all Ethernet'-based service provider networks, packet-based timing synchronization and latency measurement are now of fundamental importance to ensure maximum network performance as more demanding technologies and applications are deployed, while industrial Ethernet networks rely on time synchronization to synchronize actions across networks in real-time.

The BCM54280 40nm multi-port Gigabit PHY family consists of the following four devices:

- BCM54280: Octal-port SGMII 10/100/1000BASE-T PHY
- BCM54282: Octal-port SGMII 10/100/1000BASE-T PHY
- BCM54285: Octal-port QSGMII 10/100/1000BASE-T PHY with Copper/Fiber Dual Media Interface
- BCM54240: Quad-port SGMII 10/100/1000BASE-T PHY with Copper/Fiber Dual Media Interface

Market Drivers:

- More than 150 million metric tons of carbon dioxide (CO2) are used to power IT equipment with a global price tag of approximately $16 billion per year(3)
- "Business-as-usual" projections foresee a 130 percent rise in CO2 emissions by 2050(3)
- Increasing pressure on network managers to adopt and implement more energy efficient technologies(4)
- Nearly half of all network energy is wasted by "always on" electronics that lack adequate power management capabilities (5)
- Carrier and industrial Ethernet markets require precise synchronization and accurate latency management(6)

Key Features:

- IEEE Std 802.3az™ 2010 EEE capacity for 1000BASE and 100BASE-TX
- Broadcom® AutoGrEEEn technology extends EEE power savings to legacy MACs
- IEEE 1588v2 PTP and ITU-T Y.1731 delay measurement support
- Enhanced cable plant diagnostics that detect cable plant impairments
Availability:

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

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Quote:

Kevin Brown, Broadcom's Vice President and General Manager, PHY

"Network operators of all types can benefit from lower power consumption, which reduces energy costs and lowers overall operating costs for IT organizations. Broadcom is a leader in the innovation and delivery of products that dramatically reduce power consumption while increasing bandwidth. Our latest PHYs are an extension of that leadership, and provide IT professionals with an easy and effective way to maximize the benefits of EEE technology."

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.

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Resources:
(1) 40 percent reduction as compared to previous generation Broadcom 65nm PHYs
(2) 70 percent power saving via EEE during periods of low link utilization
(3) IEEE 802.3az: The Road to Energy Efficient Ethernet - Published November 2010
(4) ITU World Summit on the Information Society
(5) www.EPA.gov
(6) Carrier Ethernet Equipment Biannual Worldwide and Regional Market Share, Size, and Forecasts, 2011 by Infonetics Research, Inc

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