

BCM54382

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Octal-Port QSGMII Copper Gigabit/IEEE1588v2/MACsec Ethernet Transceiver

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Supports QSGMII to eight 10/100/1000BASE-T Gigabit Ethernet transceivers, fully integrated on a single 40 nm CMOS chip.

Using advanced 40 nm process node technology, the BCM54382 enables cost-effective deployment of a new class of lower-power, high-performance and higher-density switches for enterprise and data center applications. The BCM54382 is designed to comply with the QSGMII industry standard. With full compliance to IEEE 802.3az Energy Efficient Ethernet standard, the BCM54382 substantially lower power consumption during periods of low-link utilization. In addition, with Broadcom's AutogrEEEn® technology, the BCM54382 can be in EEE mode when interfacing with non-EEE-enabled MAC switches, allowing system designers to take advantage of EEE technology and realize power savings today. This power savings translates to lower energy costs for organizations that deploy networking equipment using the BCM54382 with EEE and AutogrEEEn technology. For applications that require precise and accurate synchronization of nodes in the network, such as industrial and power smart-grid automation, the BCM54382 includes support for 1588 Precision Time Protocol (PTP) and is fully compliant to IEEE 1588-2008 (version 2) standard. With IEEE 802.1AE MACsec functionality integrated, the BCM54382 safeguards communication between nodes in enterprise networks and secures the data from being compromised.

Features

- Eight 10BASE-T/100BASE-TX/1000BASE-T Ethernet transceivers in low-power 40 nm CMOS process technology
- QSGMII MAC interface
- IEEE 802.3az compliant — Supports Native EEE MACs — Supports Not Recommended for New Design non-EEE MACs using AutogrEEEn® mode
- IEEE standard 1588-2008 (version 2) support
- IEEE 802.1AE MACsec compliant with AES-GCM encryption/decryption
- Synchronous Ethernet support

Lifecycle Status

Active

Previously viewed

BCM84756
10-GbE Quad SFI-XFI PHY with IEEE MACsec/1588

BCM54220
Dual-Copper Gigabit Ethernet Transceiver

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