



QUAD-PORT GIGABIT COPPER TRANSCEIVER WITH COPPER/FIBER MEDIA INTERFACE

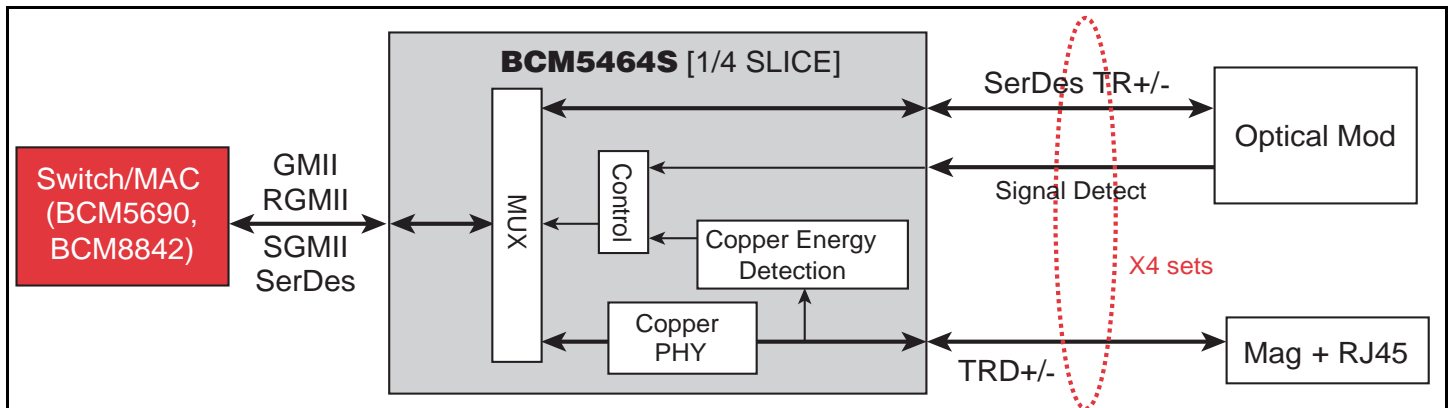
FEATURES

- Four fully integrated 10BASE-T/100BASE-TX/1000BASE-T Gigabit Ethernet transceivers
- GMII, RGMII, SGMII, and SerDes MAC interface options
- Copper or SerDes line interface options
- Fully compliant with IEEE 802.3, 802.3u, and 802.3ab standards
- 0.13-micron CMOS—low-power and cost
- Low-power
 - 750 mW per port
 - Advanced power management
- Trace matched output impedance
- Line-side loopback
- Low EMI emissions
- Cable plant diagnostic
 - Cable plant analyzer function detects cable plant impairments
 - Link-quality indication LED
 - Automatic detection and correction of wiring pair swaps, pair skew, and pair polarity
 - Automatic MDI/MDIX crossover at all speeds
- Robust cable-sourced electrostatic discharge (CESD) tolerance
- Support for jumbo packets up to 10 KB
- IEEE 1149.1 (JTAG) boundary scan
- Package: 354-pin BGA

SUMMARY OF BENEFITS

- Low-power quad-port integration enables single-row, high port density switches
 - Lowers system costs by eliminating PCB layers required for routing high density solutions
 - Reduced I/O pin requirements with RGMII (over 50%), SGMII (over 75%), and SerDes (over 80%)
 - Clock timing can be adjusted to eliminate board trace delays required by the RGMII specification
 - Lowers MAC/switch costs by reducing the number of pins required to interface to the PHY
- Flexibility for copper or fiber applications
- Provides compatibility with IEEE standard devices operating at 10, 100, and 1000 Mbps at half-duplex and full-duplex
- Requires no air flow or heat sink
- Eases system level debug
- Enables use of low cost magnetics, even in high density (48+) designs
- Cable diagnostic function characterizes cable plant condition and immediately indicates cabling issues
 - Prevents erroneous equipment return due to bad cable plants
 - Prevents manufacturing fall-out due to bad cable plants
- Over 4kV of CESD tolerance prevents equipment damage and return
- Operates with larger packets for wider range of packet protocol support and improved efficiency
- Ease of manufacturing with JTAG support, simplified power supply, and multiple MAC interfaces

BCM5464S System Diagram



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Broadcom Limited:](#)

[BCM5464SA1KRBG](#)