

# VSC8502

## Dual Port GbE Copper PHY with Synchronous Ethernet and RGMII/GMII Interface

### Superior PHY and Interface Technology

- Two integrated 10/100/1000BASE-T Ethernet copper transceivers (IEEE 802.3ab compliant) with VeriPHY™ cable diagnostics software
- Patented line driver with low EMI voltage mode and integrated line-side termination resistors
- Wake-on-LAN using magic packets
- HP Auto-MDIX and manual MDI/MDIX support
- RGMII/GMII MAC interface
- Jumbo frame support up to 16 kilobytes with programmable synchronization FIFOs

### Synchronous Ethernet Support

- Recovered clock outputs with programmable clock squelch control and fast link failure indication (<1 ms typical) for ITU-T G.8261/Y.1361 compliant Synchronous Ethernet (SyncE) applications
- 1000BASE-T Ring Resiliency to switch between master and slave timing without dropping link
- Clock output squelch to inhibit clocks during auto-negotiation and no link status

### Best-in-Class Power Consumption

- EcoEthernet™ 2.0 green energy efficiency with ActiPHY™, PerfectReach™, and IEEE 802.3az Energy Efficient Ethernet
- Fully optimized power consumption for all link speeds
- Clause 45 registers to support IEEE 802.3az Energy Efficient Ethernet and IEEE 802.3bf

### Key Specifications

- Compliant with IEEE 802.3 (10BASE-T, 100BASE-TX, and 1000BASE-T)
- Supports GMII
- Supports RGMII version 1.3, and 2.5 V and 3.3 V CMOS for RGMII version 2.0
- Devices support operating temperatures of -40 °C ambient to 125 °C junction or 0 °C ambient to 125 °C junction
- Optionally reports if a link partner is requesting inline Power over Ethernet (PoE and PoE+)
- Available in 12 mm x 12 mm, 135-pin multi-row QFN package

### Related Products

Visit [www.microsemi.com](http://www.microsemi.com) for information about these related products:

- VSC8501
- VSC8514



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