

# VSC8504

## Quad Port QSGMII Dual Media PHY with EEE Support

### Best-in-Class Power Consumption

- Lowest power quad port GbE PHY in the industry
- EcoEthernet 2.0 green energy efficiency modes including ActiPHY, PerfectReach, and IEEE 802.3az
- Integrated temperature monitoring and LED brightness control
- Fully optimized power consumption for all link speeds

### Superior PHY and Interface Technology

- Four integrated 10/100/1000BASE-T Ethernet copper transceivers (IEEE 802.3ab compliant) with VeriPHY™ cable diagnostics
- Four dual media copper/fiber ports with unidirectional IEEE 802.3ah support
- QSGMII SerDes MAC interfaces
- Patented line driver with low EMI voltage mode and integrated line side termination resistors
- HP Auto-MDIX support
- Integrated AC-coupling capacitor
- Jumbo frame support up to 16 kB with programmable synchronization FIFOs

### Superior PHY and Interface Technology

- Recovered clock outputs with programmable clock squelch control and fast link failure indication (<1 ms) for G.8261 SyncE applications
- 1000BASE-T ring resiliency for switching between master/slave timing while maintaining link up integrity
- Integrated quad I2C mux to control SFP and PoE modules
- Supports IEEE 802.3bf timing and synchronization

### Key Specifications

- 1.0 V core and 2.5 V I/O power supplies
- 3.3 V-tolerant 2.5 V inputs
- 17 mm × 17 mm ball grid array package
- Supports QSGMII v1.3, IEEE 1149.1 JTAG boundary scan, and IEEE 1149.6 AC-JTAG
- Compliant with IEEE 802.3 (10/1000BASE-T, 100BASE-TX, 100BASE-FX, and 1000BASE-X)

### Related Products

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

- 1 GbE Carrier Ethernet switches, PHYs, and MACs
- 10/40/100G PHY solutions
- Electronic dispersion compensation CDRs and backplane signal conditioners



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