

VSC8512

12-Port 10/100/1000BASE-T PHY with SGMII and QSGMII MAC Interface

Best-in-Class Power Consumption

- Lowest power GbE PHY in the industry, using Microsemi's 65 nm SimpliPHY™ technology
- Green energy efficiency modes including ActiPHY™, Perfect-Reach™, and Draft IEEE 802.3az
- Programmable direct drive LEDs with adjustable brightness levels
- Optimal power consumption for all link speeds

Features

- 12 integrated 10/100/1000BASE-T full and half duplex Ethernet transceivers with VeriPHY™ cable diagnostics
- SGMII and QSGMII SerDes MAC interfaces
- Four dual media copper/fiber ports with unidirectional IEEE 802.3ah support
- Patented line driver with low EMI voltage mode and integrated line side termination resistors
- Integrated quad I2C mux to control SFP and PoE modules
- Recovered clock outputs with programmable clock squelch control and fast link failure indication (<1 ms) for G.8261 SyncE applications
- Jumbo frame support up to 16 kB with programmable synchronization FIFOs
- Integrated AC-coupling capacitors on the MAC interface
- Extensive test features including loopbacks, packet generators, and CRC counters
- HP auto-MDIX support

Key Specifications

- 1.0 V core power supply
- 2.5 V I/O power supplies
- 3.3 V-tolerant 2.5 V inputs
- 27 mm × 27 mm ball grid array package
- Supports SGMII v1.9 and QSGMII v1.3, 1000BASE-X MACs, IEEE 1149.1 JTAG boundary scan, and IEEE 1149.6 AC-JTAG
- Compliant with IEEE 802.3 (10BASE-T, 10BASE-Te, 100BASE-TX, 1000BASE-T, 100BASE-FX, and 1000BASE-X)

Related Products

Visit www.microsemi.com for information about these related products:

- Ethernet switches and MACs
- 10G PHY solutions
- Electronic Dispersion Compensation CDRs



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