VSC8575

Quad-Port 10/100/1000BASE-T PHY with Synchronous Ethernet, VeriTime™, and QSGMII/SGMII MAC

Best-in-Class Power Consumption

- Voltage-mode quad port GbE PHY
- EcoEthernet 2.0 green energy efficiency modes with ActiPHY™ automatic link power down, PerfectReach™ intelligent cable algorithm, and IEEE 802.3az (including support for legacy MACs not supporting IEEE 802.3az)
- 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
- SGMII and QSGMII SerDes MAC interface
- Patented line driver with low EMI voltage mode and integrated line side termination resistors
- HP Auto-MDIX support
- Integrated AC-coupling capacitors for SGMII interface
- Jumbo frame support up to 16 kB with programmable synchronization FIFOs

Advanced Carrier Ethernet Support

- Recovered clock outputs with programmable clock squelch control and fast link failure indication (<1 ms) for G.8261 SyncE applications

- Supports IEEE 1588v2 time stamp packet correction
- Flexible transmit and receive frequency timing per PHY port
- 1000BASE-T ring resiliency for switching between master/slave timing while maintaining linkup integrity
- Integrated quad I2C MUX to control SFP and PoE modules
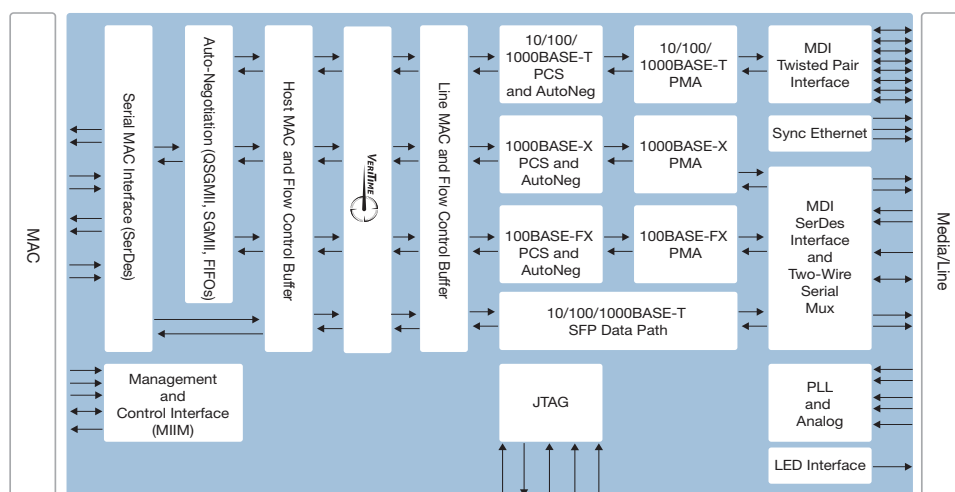- Supports IEEE 802.3bf timing and synchronization

Key Specifications

- 1.0 V core and 2.5 V I/O power supplies
- 3.3 V-tolerant 2.5 V inputs
- Supports QSGMII v1.3, SGMII v1.9, IEEE 1149.1 JTAG boundary scan, and IEEE 1149.6 AC-JTAG
- Compliant with IEEE 802.3 (10/1000 BASE-T, 10BASE-Te, 100BASE-TX, 100BASE-FX, and 1000BASE-X)
- Operating temperature range for VSC8575XKS-11 is 0 °C ambient to 125 °C junction. Operating temperature range for VSC8575XKS-14 is –40 °C ambient to 125 °C junction

Related Products

Visit www.microsemi.com for information about these related products:
- 1 GbE PHYs
- 10 GbE PHYs

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