



THE DATASHEET OF VSC8538XHJ

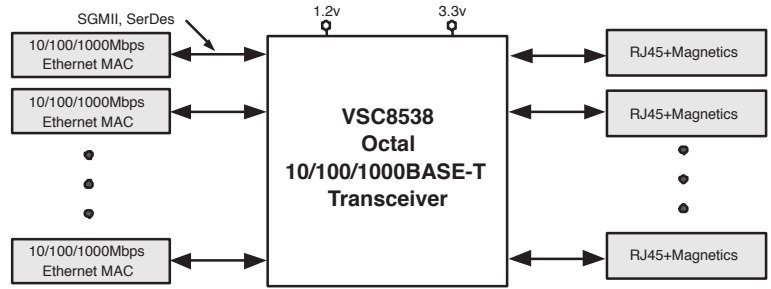


VSC8538

Octal Port 10/100/1000BASE-T PHY



APPLICATION DIAGRAM:



FEATURES:	BENEFITS:
▶ Extremely Low Power Consumption of 650mW / port (1000BASE-T mode) Enables Use of 27mm, 444-pin HS-BGA Package	▶ Lowers System Cost, Simplifies System Design, and Enables Single Row, High Port Density Switches
▶ Patented, Low EMI Line Driver with Integrated Line Side Termination Resistors	▶ Removes 384 Passive Components in 48-port Switch Applications
▶ Compliant with IEEE 802.3 (10BASE-T, 100BASE-TX, 1000BASE-T, 1000BASE-X) Specifications	▶ Ensures Seamless Deployment Throughout Copper Networks with Industry's Highest Tolerance to Noise and Substandard Cabling
▶ >16kB Jumbo Frame Support In All Speeds with Programmable Synchronization FIFOs	▶ Provides for Maximum Jumbo Frame Sizes in Custom SAN and LAN Systems
▶ Four Programmable Direct Drive LEDs per Port with On-chip Filtering and Bi-Color LED Support	▶ Eliminates External Components and Reduces EMI
▶ Serial LED Interface Option	▶ Provides Maximum System Design Flexibility
▶ Extensive Testability Features (Including Near End, Far End, and Connector Loopback, and Ethernet Packet Generator with CRC Error Counter)	▶ Decrease System Development Costs and System Deployment Costs, and Improve Time-to-Market
▶ Supports Cisco SGMII v1.7 and 1000BASE-X MACs, IEEE 1149.1 JTAG Boundary Scan, and IEEE 1149.6 AC-JTAG	▶ Multiple MAC Interfaces and Extensive JTAG Support Ease Manufacturing
▶ VeriPHY™ Cable Diagnostiscs	▶ Enable Network Manufacturers to Simplify Deployment and Improve Network Management Capabilities of Gigabit Ethernet Links

APPLICATIONS:

- ▶ 10/100/1000BASE-T Switches
- ▶ Gigabit Ethernet-based SAN, NAS, and MAN Systems
- ▶ ATCA™ 3.0 and PICMG™ 2.16 Ethernet Backplane Applications
- ▶ Multi-port Fiber to CAT-5 Media Converters

Octal Port 10/100/1000BASE-T PHY

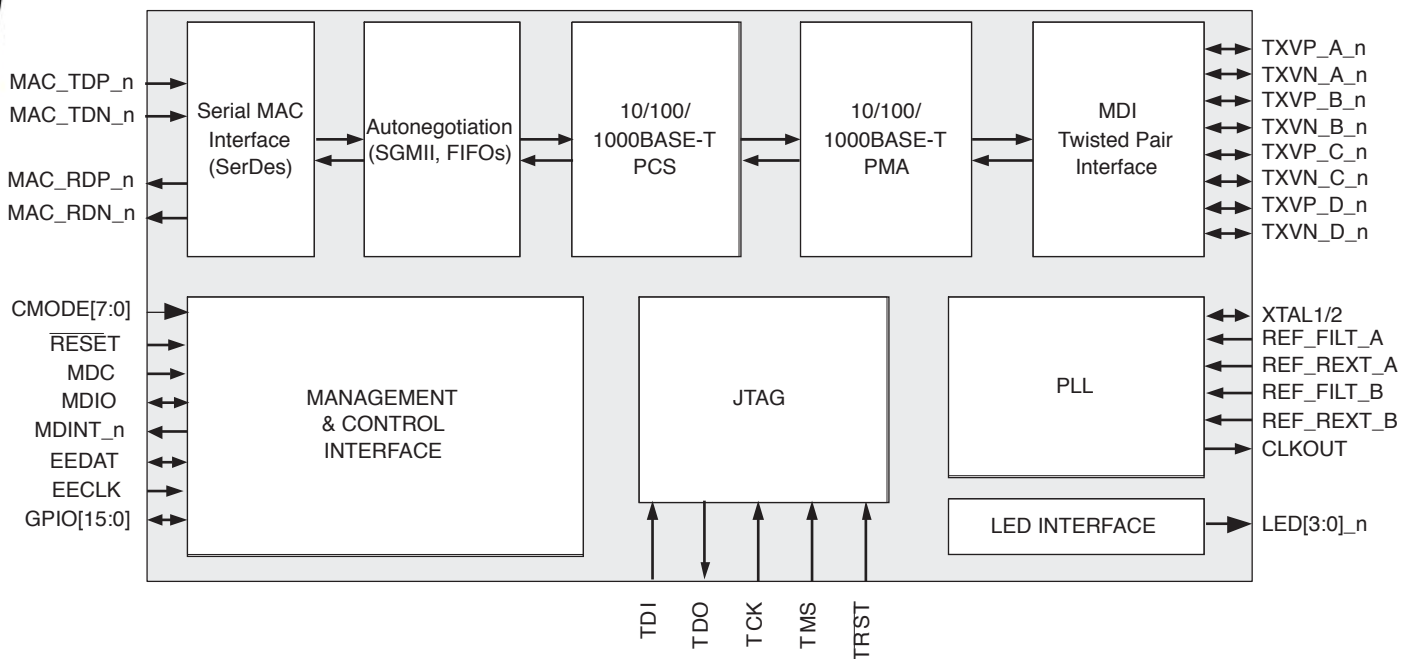
GENERAL DESCRIPTION:



The VSC8538 is a low power octal Gigabit Ethernet transceiver ideal for multi-port switch and router applications. The device's compact BGA package is optimal for high-density switch applications. Vitesse's mixed signal and

DSP architecture yield robust performance, supporting both full and half duplex 10BASE-T, 100BASE-TX, and 1000BASE-T over >140m of Category 5, unshielded twisted pair (UTP) cable, with industry leading tolerance to NEXT, FEXT, Echo, and system noise.

BLOCK DIAGRAM:



For more information on Vitesse Products visit the Vitesse web site at www.vitesse.com or contact Vitesse Sales at (800) VITESSE or sales@vitesse.com

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