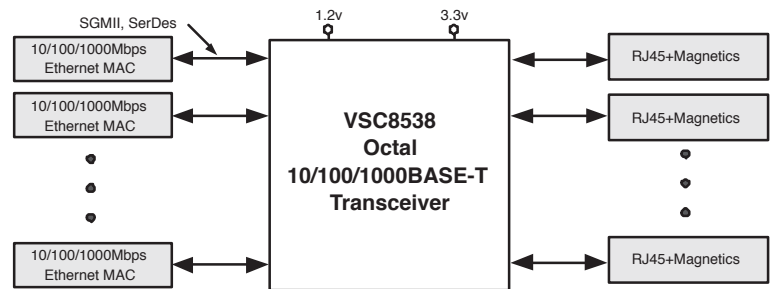


# VSC8538

## Octal Port 10/100/1000BASE-T PHY



### APPLICATION DIAGRAM:



### FEATURES:

- ▶ Extremely Low Power Consumption of 650mW / port (1000BASE-T mode) Enables Use of 27mm, 444-pin HS-BGA Package
- ▶ Patented, Low EMI Line Driver with Integrated Line Side Termination Resistors
- ▶ Compliant with IEEE 802.3 (10BASE-T, 100BASE-TX, 1000BASE-T, 1000BASE-X) Specifications
- ▶ >16kB Jumbo Frame Support In All Speeds with Programmable Synchronization FIFOs
- ▶ Four Programmable Direct Drive LEDs per Port with On-chip Filtering and Bi-Color LED Support
- ▶ Serial LED Interface Option
- ▶ Extensive Testability Features (Including Near End, Far End, and Connector Loopback, and Ethernet Packet Generator with CRC Error Counter)
- ▶ Supports Cisco SGMII v1.7 and 1000BASE-X MACs, IEEE 1149.1 JTAG Boundary Scan, and IEEE 1149.6 AC-JTAG
- ▶ VeriPHY™ Cable Diagnosticts

### BENEFITS:

- ▶ Lowers System Cost, Simplifies System Design, and Enables Single Row, High Port Density Switches
- ▶ Removes 384 Passive Components in 48-port Switch Applications
- ▶ Ensures Seamless Deployment Throughout Copper Networks with Industry's Highest Tolerance to Noise and Substandard Cabling
- ▶ Provides for Maximum Jumbo Frame Sizes in Custom SAN and LAN Systems
- ▶ Eliminates External Components and Reduces EMI
- ▶ Provides Maximum System Design Flexibility
- ▶ Decrease System Development Costs and System Deployment Costs, and Improve Time-to-Market
- ▶ Multiple MAC Interfaces and Extensive JTAG Support Ease Manufacturing
- ▶ 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

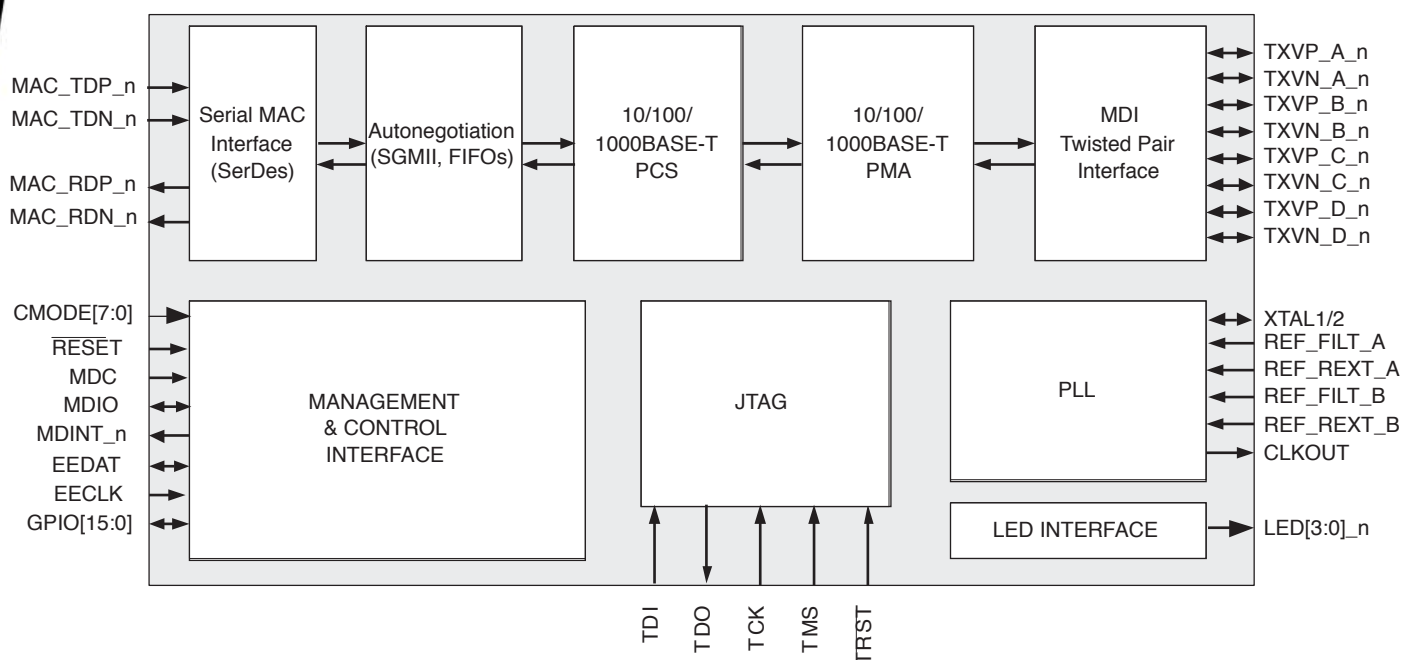
### GENERAL DESCRIPTION:



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](http://www.vitesse.com) or contact Vitesse Sales at (800) VITESSE or [sales@vitesse.com](mailto:sales@vitesse.com)

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