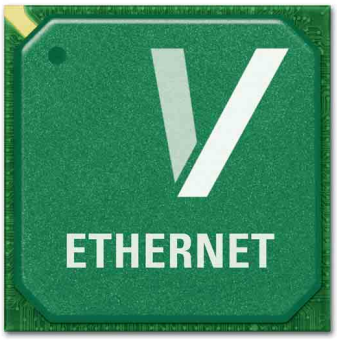
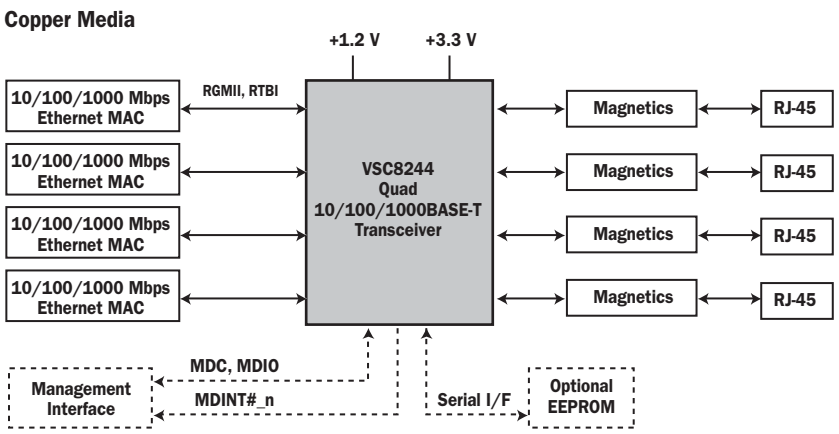
ETHERNET PRODUCTS

VSC8244

VITESSE

Quad Port 10/100/1000BASE-T PHY with RGMII / RTBI MAC Interfaces





FEATURES:	BENEFITS:
Lowest Power Consumption in the Industry at Less Than 640m W/port (1000BASE-T mode)	Eliminates Heatsinks and Fans for Gigabit to the Desktop LAN Switches
Patented, Low EMI Line Driver with Integrated Line Side Termination Resistors	Removes 576 Passive Components in 48-port Switch Applications
Supports RGMII v1.3 (2.5V & 3.3V) & v2.0 (1.5V HSTL), 1.8V (SSTL Compatible)	Compatible with a Wide Variety of Parallel I/F Switch ICs
User-programmable RGMII Timing Compensation	Simplifies PCB Layout; Eliminates PCB Trombones
Compliant with IEEE 802.3 (10BASE-T, 100BASE-TX, 1000BASE-T) Specifications	Ensures Seamless Deployment Throughout Copper Networks with Industry's Highest Tolerance to Noise and Substandard Cable Plants
>10kB Jumbo Frame Support with Programmable Synchronization FIFOs	Provides for Maximum Jumbo Frame Sizes in Custom SAN and LAN Systems
Five Direct Drive LEDs with On-chip Filtering Interface Option Serial LED Interface Option	Eliminates External Components and EMI Issues Provides Maximum System Design Flexibility
Three User Configuration Options: 1) Optional Serial EEPROM, 2) Hardware Configuration Pins, or 3) Serial Management Interface (SMI)	Offers Design Engineer a Solution to Fit any Unmanaged or Managed System Requirement
Full Suite of BIST, MAC, and Far-end Loopback Modes	Simplifies Comprehensive In-system Test to Ensure the Highest Product Quality
VeriPHY™ Link Cable Diagnostics Software Suite	Enables Network Manufacturers to Simplify Deployment and Improve Network Management Capabilities of Gigabit Ethernet Links
Automatic Detection and Correction of Cable Pair Swaps, Pair Skew and Pair Polarity, Along with HP Auto MDI/MDI-X Crossover Function	Compatible with 1st Generation 1000BASE-T PHYs; Supports Auto MDI/MDI-X Even when Autonegotiation is Disabled
Manufactured in Advanced 0.13µm, 3.3V/1.2V Digital CMOS Process	Most Cost Effective Technology Eliminates More Expensive Analog Process Variants

APPLICATIONS:

- High Density 10/100/100BASE-T LAN & MAN Switches and Routers
- Workgroup LAN Switches and Routers
- PICMG 2.16 and 3.0 Backplane Applications
- Gigabit Ethernet-based SAN, NAS, and MAN Systems
- High Performance Workstations and Multi-port Server NICs

VSC8244

Quad Port 10/100/1000BASE-T PHY with RGMII / RTBI MAC Interfaces

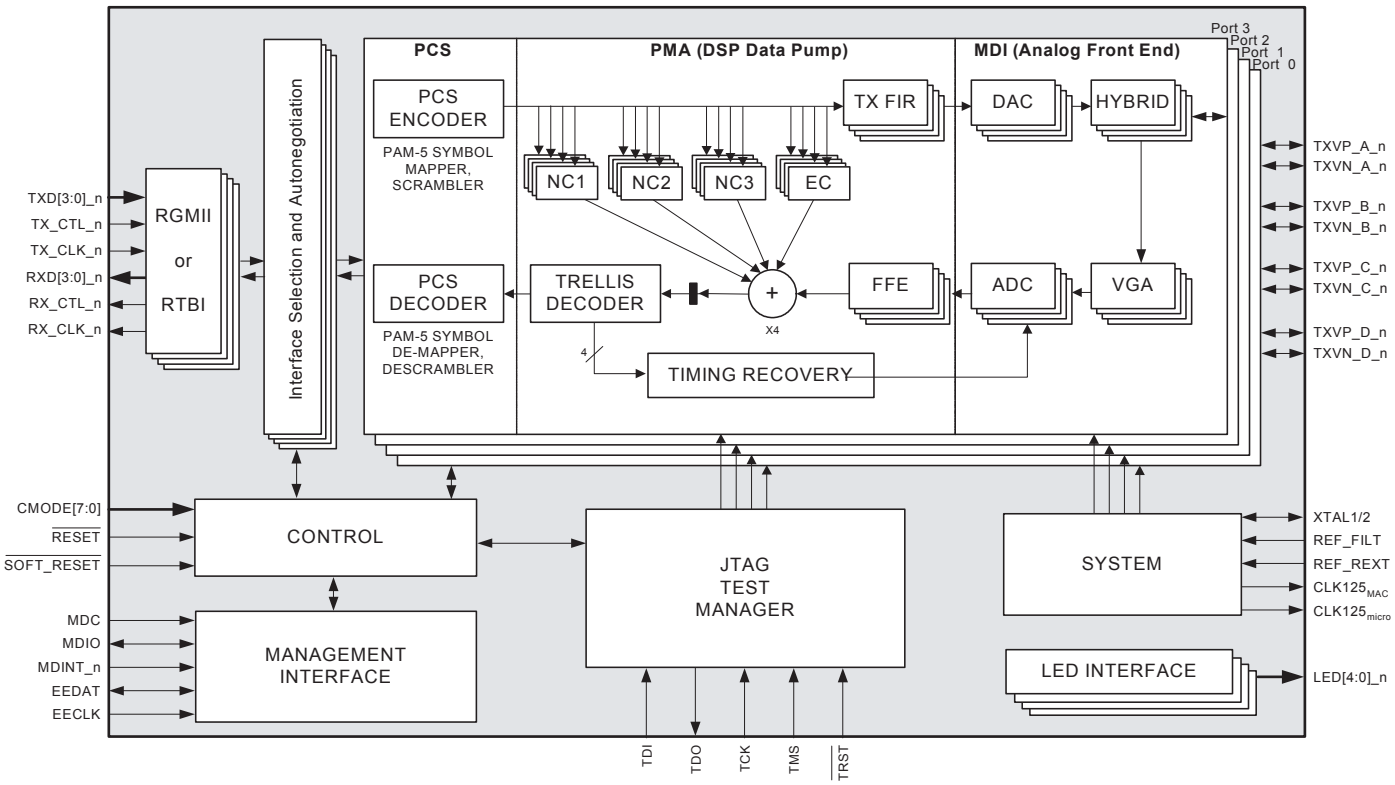
GENERAL DESCRIPTION:

The VSC8244 is the industry's smallest, lowest power quad port Gigabit Ethernet transceiver for low-cost RGMII and RTBI switch and router applications. In 1000BASE-T mode, the VSC8244's power consumption is 30% lower than the next best competitor. The device's compact 19mm x 19mm BGA package is ideal for high-density switch applications. Vitesse's mixed signal and DSP architecture yields 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.

SPECIFICATIONS:

PARAMETER	TYP	UNIT	COMMENTS
P_D	<640	mW	Steady state power consumption per port
VDD I/O	3.3, 2.5, 1.5	V	I/O power supply voltage options
VDDA	3.3	V	Analog supply voltage
VDDDIG	1.2	V	Core power supply voltage
$F_{TOL\ (REFERENCE)}$	25	MHz	Crystal parallel resonant frequency (+/- 100ppm tolerance)

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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