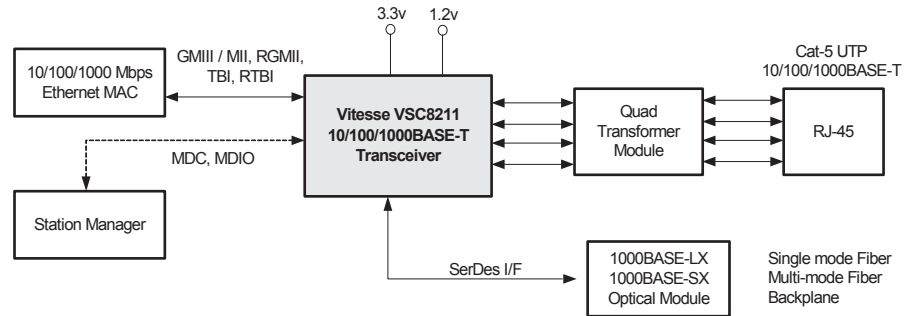
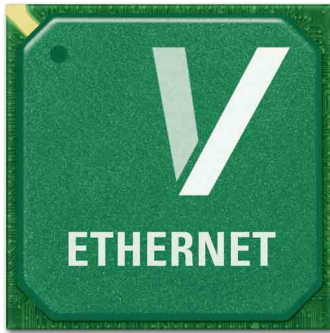


VSC8211

VITESSE

Single Port 10/100/1000BASE-T PHY and 1000BASE-X PHY with SGMII, SerDes, GMII, MII, TBI, RGMII / RTBI MAC Interfaces



FEATURES:

- ▶ Very Low Power Consumption at < 700mW
- ▶ Patented, Low EMI Line Driver with Integrated Line Side Termination Resistors
- ▶ Supports PICMG 2.16 and 3.0 Ethernet Backplanes at Approximately 500mW
- ▶ Supports Cisco SGMII v 1.7 and 1000BASE-X MACs
- ▶ Supports RGMII and RTBI v 1.3 & v 2.0 (2.5V & 3.3V)
- ▶ User-programmable RGMII Timing Compensation
- ▶ High Performance 1.25 Gbps SerDes
- ▶ Auto-media Sense Feature Detects and Configures to Support Either Copper or Fiber Media
- ▶ Compliant with IEEE 802.3 (10BASE-T, 100BASE-TX, 1000BASE-T, 1000BASE-X) and SFP MSA Specifications
- ▶ Full Suite of BIST, MAC, Far-end, and Connector Loopback Modes
- ▶ Over 150m of Category-5 Reach with Industry's Highest Noise Tolerance
- ▶ VeriPHY™ Cable Diagnostics Software Suite
- ▶ Automatic Detection and Correction of Cable Pair Swaps, Pair Skew and Pair Polarity, Along with Auto MDI/MDI-X Crossover Function

BENEFITS:

- ▶ Reduces Power Supply Costs
- ▶ Removes 12 Passive Components, Reducing PCB Area and Cost by 50%
- ▶ Lowest Power Mode Reduces Power Supply Costs
- ▶ Connects to Virtually any MAC or Optical Module and can be Used to Design Copper GBIC/SFP Modules and 100BASE-FX Modules
- ▶ Simplifies PCB Layout, Eliminating the Need for On-board Delay Lines
- ▶ Supports Category-5 Copper, Fiber Optic, and Backplane Interfaces From a Single Device
- ▶ Single Chip Solution for Flexible Media Support
- ▶ Ensures Seamless Deployment Throughout Copper and Optical Networks with Industry's Highest Tolerance to Noise and Substandard Cabling Infrastructures
- ▶ Simplifies Comprehensive In-system Test to Ensure the Highest Product Quality
- ▶ Ensures Trouble-free Deployment in Real World Ethernet Networks
- ▶ Enables Network Manufacturers to Simplify Deployment and Improve Network Management Capabilities of Gigabit Ethernet Links
- ▶ Compatible with 1st Generation 1000BASE-T PHYs, Minimizing Common Interoperability Problems

APPLICATIONS:

- ▶ Media Converters
- ▶ Triple Speed Copper GBIC/SFP Modules
- ▶ Dual Media Switch Ports
- ▶ 100BASE-FX Switch Ports and Modules
- ▶ iSCSI and TOE LOM
- ▶ Backplanes

PB-VSC8211-002

Single Port 10/100/1000BASE-T PHY and 1000BASE-X PHY with SGMII, SerDes, GMII, MII, TBI, RGMII / RTBI MAC Interfaces

GENERAL DESCRIPTION:

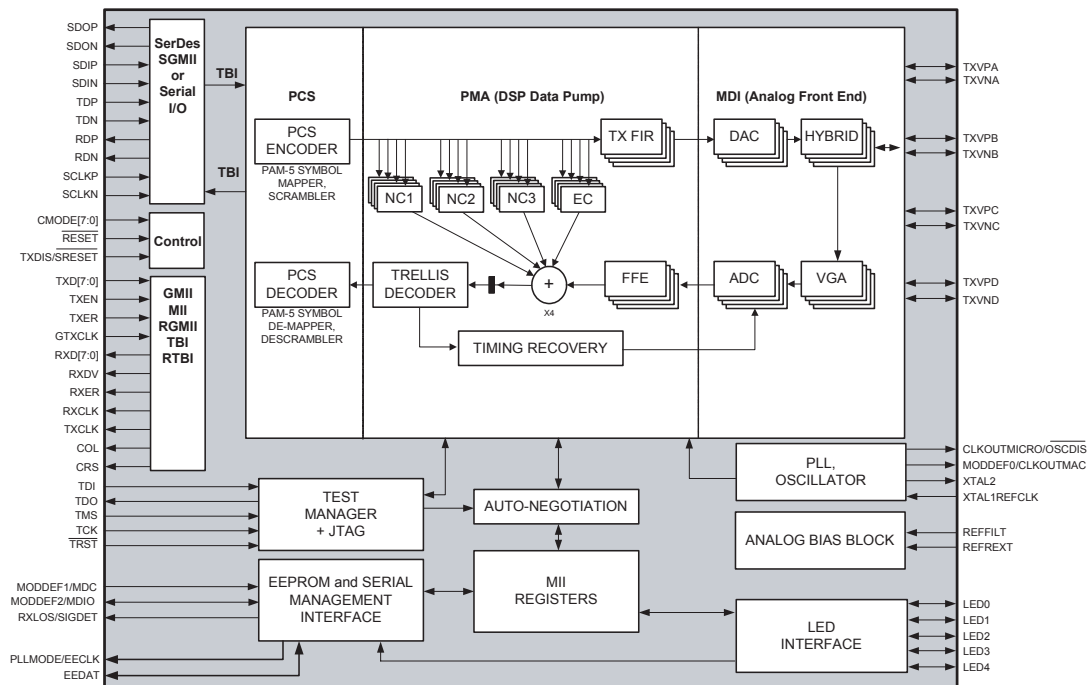


The VSC8211 is ideal for Media Converter and 100BASE-FX applications. Its low power consumption and patented line driver technology reduce the cost and complexity of Gigabit Ethernet system designs. The VSC8211's integrated 1.25 Gbps SerDes and Auto-Media Sense™ feature allow system designers to support Category-5 twisted pair, fiber optic, and backplane interfaces from a single device. 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	700	mW	Steady state power consumption (1000BASE-T) including SerDes
P _{DQ}	<100	mW	Power consumption in ActiPHY™ Low Power State
L _{1G} , L _{100M}	150	m	Cable link length supported in 1000BASE-T & 100BASE-TX modes, over Category 5 cable
L _{10M}	230	m	Cable link length supported in 10BASE-T mode, over Category 3 cable
Serial Data Rate	1.25	Gbps	SerDes, SGMII interface data rate
V _{DDA}	3.3	V	DC power supply voltage range
V _{DDDIG}	1.2	V	Core supply voltage
F _{TOL (REFERENCE)}	25	MHz	Crystal parallel resonant frequency (+/- 100 ppm 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

Vitesse, ASIC-Friendly, FibreTimer, TimeStream and Snoop Loop are trademarks of Vitesse Semiconductor Corporation. All other trademarks or registered trademarks mentioned herein are the property of their respective holders. Vitesse Semiconductor Corporation ("Vitesse") retains the right to make changes to its products or specifications to improve performance, reliability or manufacturability. All information in this document, including descriptions of features, functions, performance, technical specifications and availability, is subject to change without notice at any time.

741 Calle Plano
Camarillo, CA 93012, USA
Tel: +1 805.388.3700
Fax: +1 805.987.5896
www.vitesse.com