VSC8479
9.95 Gbps to 11.3 Gbps 16-bit Transceiver

Features

- 16:1 Mux/Demux Transceiver With Integrated Clock Multiplier Unit, and Clock and Data Recovery Unit with Limiting Amplifier
- 0.13 μm CMOS Process Technology
- XFI Output Compliance Mode for XFP Modules
- Programmable Input Signal Bandwidth Equalization (EQ): Enhanced Optical Performance, Enhanced XFI Stressed Eye Performance
- Built-in Self-test Generation and Error Detection: Industry Standard PRBS Generation and Detection, User Defined Patterns
- Full Support for 300-Pin MSA Transponder Modules: Multiple Reference Clock Source Inputs and Selectable Frequencies, Facility and Equipment Loopback Modes, Support for Line Timing Mode with Clock Clean-up, Loss of Lock (LOL) and FIFO Alarm Outputs, Adjustable Loss of Signal (LOS) Alarm
- Two-wire or SPI Micro-controller Serial Interface Port (selectable): Programmable Registers for Access to All Control/Status Signals
- TxRef Clock, RxRef Clock and ExRef Clock Sources: Flexible Reference Clock Routing, Reference Clock "Clean-up" Phase Detector
- Selectable Duobinary Modulation Pre-Coder
- Programmable High-speed Input Voltage Offset Adjust
- High-speed Data Inversion and Low-Speed Bit Order Swap
- High-speed CML Clock Output with Power Down Mode

Key Specifications

- Continuous Frequency of Operation: 9.95 Gbps to 11.3 Gbps
- Exceeds SONET Band Jitter Generation Performance (35 mUI)
- Better than 2x Margin to the OC-192 Jitter Tolerance SONET Mask
- Excellent Crosstalk Immunity and Asynchronous Tx and Rx Operation
- 10 mV Input Data Sensitivity (differential)
- OIF 99.102.8 LVDS Compatible Parallel Data Inputs and Outputs
- 1.8 V Single Power Supply with Optional 3.3 V LVTTL I/O
- 1.15 Watt Typical Power
- -5 °C Ambient to 90 °C Case Temperature
- 17 mm x 17 mm, 244-Ball, CBGA Package
- 12 x 12, 195 pin FCBGA Package

Benefits

- Proven XFP/SFP+ Module Inter-operability
- Low Power, Full Featured CMOS Transceiver
- Single Chip Mux/Demux Solution: Provides Complete Set of 300 Pin MSA Transponder Functions Including all Loopback and Clocking Modes
- Robust Asynchronous Operation and High Immunity to Cross-talk
- Multiple Reference Clock Source and Clean up Schemes

Applications

- SFP+ SR/LR Module to Host SERDES Applications
- XFP Module XFI to Host SERDES Applications
- 300 Pin MSA Transponder Modules
- 10GE and Fibre Channel to SFI-4 SERDES Applications
- SONET/SDH and DWDM Systems

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