

Features:

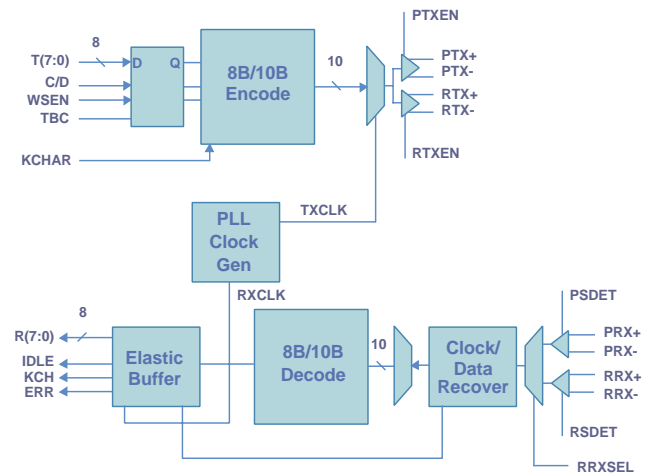
- Dual Speed Operation:
 - Fibre Channel: 1.06/2.12 Gb/s
 - Gigabit Ethernet: 1.25 Gb/s
 - 10G Ethernet: 3.125 Gb/s
 - InfiniBand™: 2.5 Gb/s
- Redundant XAUI Compliant Serial Links
- Half-Rate Operation for Compatibility with Legacy 1Gb/s Systems
- XGMII Compliant Parallel Data Inputs/Outputs
- Rate Matching Between Up-stream/Downstream VSC7226's
- Selectable High Speed Input Termination
- 2 Channel or 4 Channel Aggregation Capability
- Serial Output Swing Reduction Control
- Parallel Data Squelching Option
- Transmitter Pre-Distortion and Receiver Equalization
- Multiple Dual Data Rate (DDR) Clocking Options
- Extensive Per-Channel Configuration Control Through MDIO Interface
- Internal Serial and Parallel Loopback Modes
- JTAG and BIST Enabled
- Optional 8B/10B Encoder/Decoder



General Description

The VSC7226-01 and VSC7226-02 are quad channel parallel-to-serial and serial-to-parallel transceiver chips designed for use in high bandwidth data transmission between busses, backplanes and other subsystems. Each channel's transmitter section contains parallel 8-bit or 10-bit SSTL_2 input circuitry, an 8B/10B encoder, serializer and a pair of serial PECL output drivers and additional control inputs. Each channel's receiver section contains a pair of PECL inputs, clock and data recovery circuitry, a deserializer, an 8B/10B decoder, elastic buffers, 8-bit or 10-bit SSTL_2 output drivers and additional control outputs. Each transmitter may be supplied 8-bit data which will be encoded into 10-

VSC7226 Block Diagram (Single Channel Shown)



bit characters for transmission, or may be supplied pre-encoded 10-bit data in which case the internal encoder is bypassed. The four channels may operate independently or in a synchronized mode transferring data that is word-aligned across 16 or 32 data inputs

Quad 10Gb/s Backplane Transceiver

Product Brief

VSC7226

Gigabit
Products

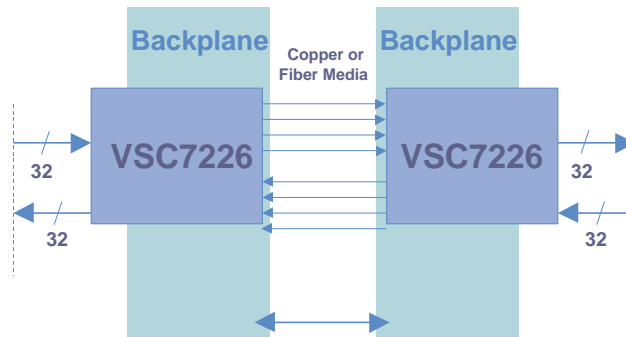
Specifications:

- REFCLK: 24.5 - 312.5 MHz
- Tx/Rx REFCLK Offset: 200 ppm
- Serial Input Differential Terminations Adjustable Between 100Ω and 150Ω
- Fast Lock CRU: <300 Data Transitions
- Up to 90 Bit Periods of Inter-channel Deskew
- Tolerates +/- 10 Bit Times of Clock Drift Between Resynchronizations
- 2.5V Supply
- 2.1W Power Dissipation (Typ.)
- 21mm x 21mm, 256-pin Thermally Enhanced Ball Grid Array (TBGA)
- Maximum Case Temperature: 100°C

Applications:

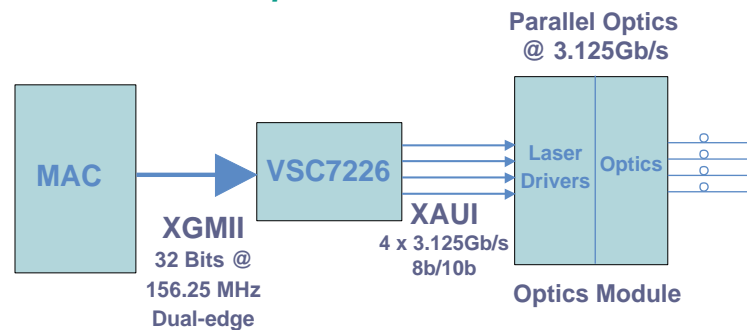
- Backplane Interconnect for Data Communications Requiring 20 Gigabits Duplex of Throughput
- Serial Bus Extension
- 10 Gigabit Ethernet XAUI Transceiver
- InfiniBand
 - Host Channel Adapters
 - Target Channel Adapters
 - Switches

VSC7226 Applications: Backplane

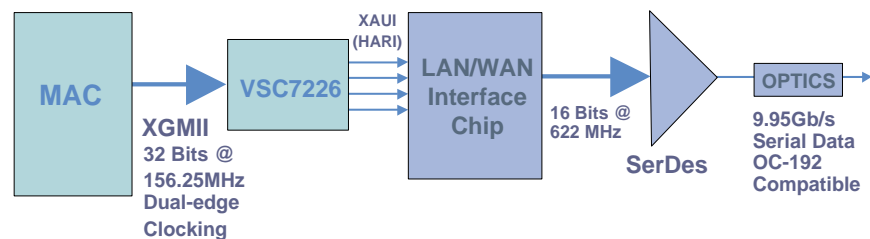


20G encoded duplex throughput

10GbE Parallel Optics Interface



LAN/WAN Serial Interface



Serial Data Transfer Rates for Each Channel

	Full Rate Mode	Half Rate Mode
■ VSC7226-01	■ 2.4–3.125 Gb/s	■ 1.2–1.56 Gb/s
■ VSC7226-02	■ 1.9–2.4 Gb/s	■ 0.95–1.2 Gb/s

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