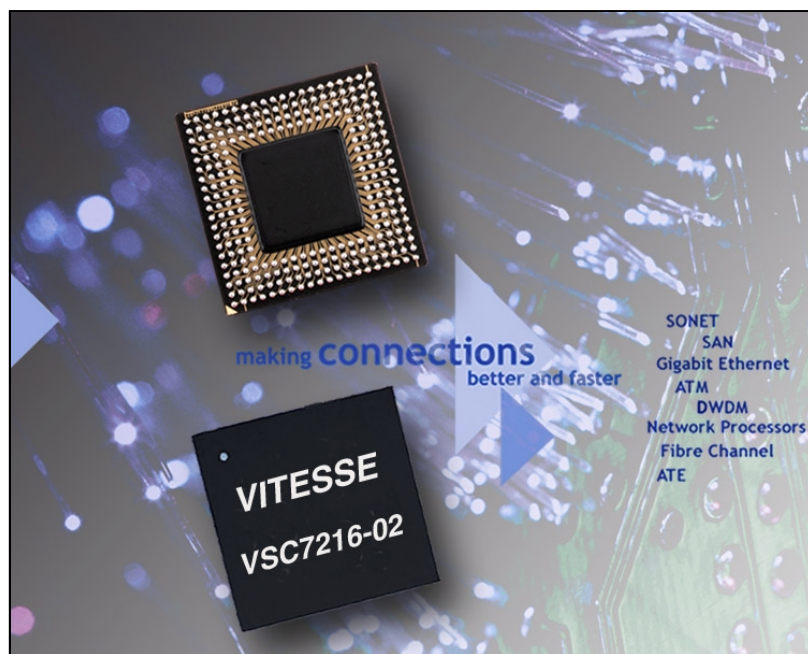


Serial Interconnect Products

Features:

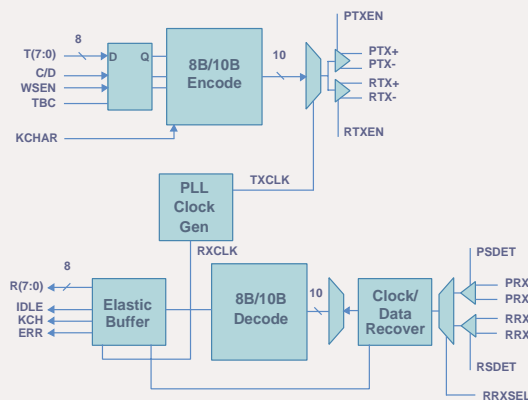
- Compatible to Industry Standard VSC7216-01
- Redundant Transmit and Receive Serial I/O's
- LVTTTL Parallel Data I/O
- Rate Matching Between Upstream/Downstream VSC7216-02's
- Selectable High Speed Input Termination
- Multi-channel and Multi-chip Aggregation Capability
- Serial Output Swing Reduction Control
- Transmitter Pre-Distortion and Receiver Equalization
- Multiple Clocking Options
- Internal Serial and Parallel Loopback Modes
- JTAG and BIST Enabled
- Optional 8B/10B Encoder/Decoder
- Fast Lock for use in Asynchronous Switching Applications
- Adjustable Latency and Deskewing for Varied System Environments
- Analog Signal Detect for each PECL Input



General Description

The VSC7216-02 is a quad channel parallel-to-serial and serial-to-parallel transceiver chip 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 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 output drivers and additional control outputs. Each transmitter may be supplied 8-bit data which will be encoded into 10-bit characters for transmission, or may be supplied pre-encoded 10-bit

VSC7216-02 Block Diagram
(Single Channel Shown)



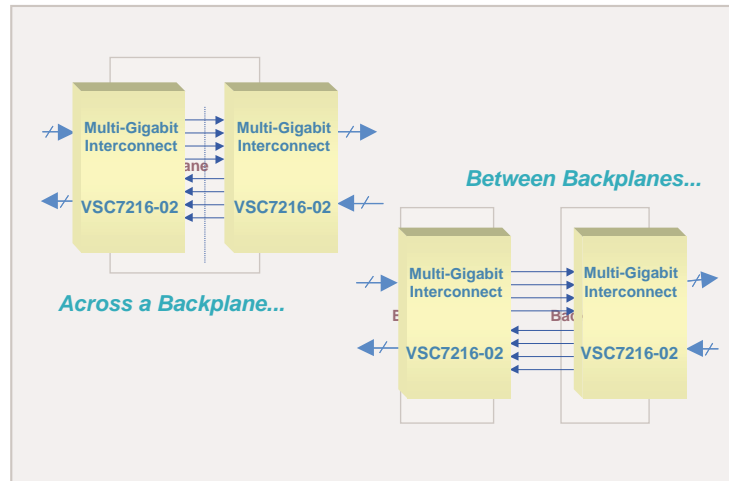
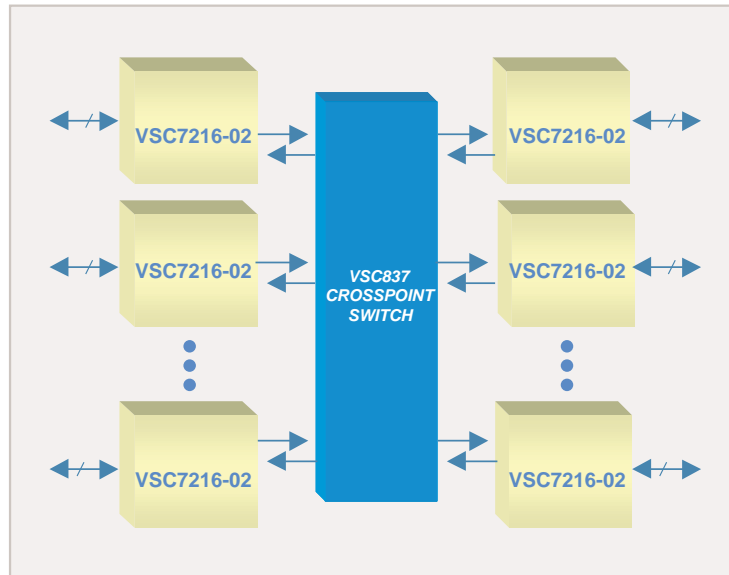
data in which case the internal encoder is bypassed. The four channels may operate independently or in a synchronized mode transferring data that is word-aligned across 16 or 32 data inputs.

Specifications:

- REFCLK: 24.5 - 136 MHz
- Tx/Rx REFCLK Offset: 200 ppm
- Serial Input Differential Terminations Adjustable Between 100Ω and 150Ω
- Fast Lock CRU: <128 Data Transitions
- Up to 90 Bit Periods of Inter-channel Deskew
- Tolerates +/- 5 Bit Times of Clock Drift Between Resynchronizations
- 2.5V Supply, Internal 1.8V Regulator
- 700 mW Power Dissipation
- 21 x 21mm, or 27 x 27mm 256-pin Thermally Enhanced Ball Grid Array (TBGA)
- Maximum Case Temperature: 110°C

Applications:

- Backplane Interconnect for Data Communications
- Serial Bus Extension
- Gigabit Ethernet Transceiver
- Fibre Channel Transceiver
- Serial Link Redundancy

VSC7216-02 Two Applications**Connection to Vitesse's Crosspoint Products****Serial Data Transfer Rates for Each Channel**

	Full Rate Mode	Half Rate Mode
VSC7216-02	0.98 – 1.36 Gb/s	0.49 – 0.68 Gb/s