

Product Brief VSC8173

9.953 Gbit/sec SONET/SDH
16:1 Multiplexer with Clock Generator

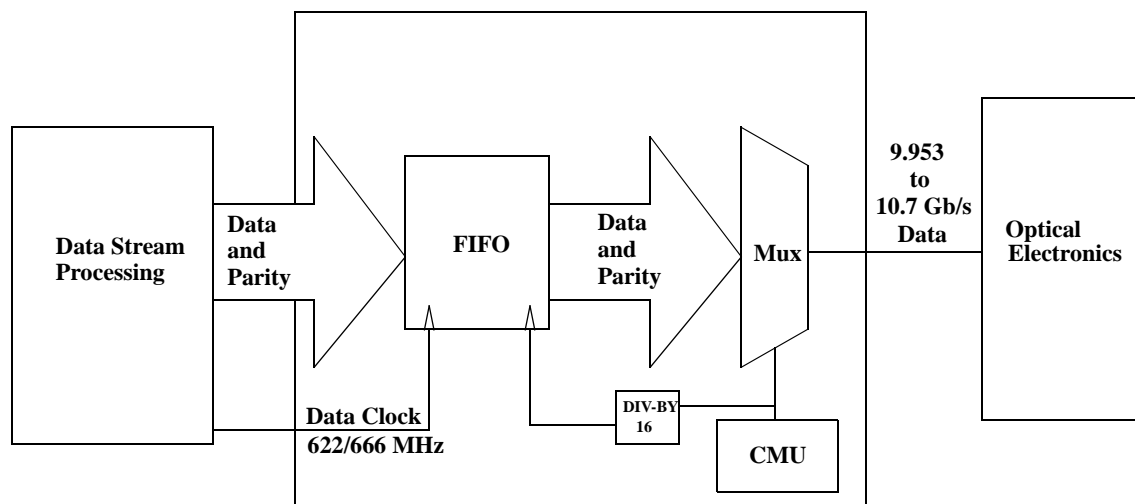
Features

- 16:1 SONET/SDH Mux with Clock Generator
- Input FIFO to Simplify Parallel Interface Timing
- Operation at 9.953 to 10.66 Gb/s rates
- LVDS Parallel Data Inputs
- Parallel Data Parity Checking
- Data Polarity Invert
- Bit Order Swap
- Lock Error Detect
- Divide-by-16 and Ref Clock Outputs
- Low Power Dissipation
- Single +3.3V Supply
- Integrated PLL Based Clock Generator
- Meets SONET OC-192 and SDH STM-64 Jitter

General Description

The VSC8173 consists of a 16:1 multiplexer and a clock generator for use in SONET STS-192 / SDH STM-64 systems. The 16:1 multiplexer accepts 16 parallel low voltage differential swing (LVDS) inputs (D[0:15]_±) at a data rate of 622.08 to 666.51 Mb/s. This parallel data stream is then serialized into a 9.953 to 10.66 Gb/s output (DOUT_±). The clock generator creates the 9.953 to 10.66 GHz clock signal used to re-time the transmitted serialized data. The clock generator requires a 622.08 to 666.51 MHz LVDS/PECL reference clock input (REFCLK_±). To ease timing constraints on the parallel interface, a 17 bit wide FIFO is included. A high speed clock output (COUT_±) is provided for jitter measurements and synchronization of the high speed serial output. A divide-by-16 LVDS clock output (CK16_±) is available for use as a clock input to the data source of the parallel inputs (D[0:15]_±). A parity checking of a parity bit (PARITY_±) is clocked in with the 16 bit parallel data. To assist in monitoring device operation a Loss of Lock (LOL) alarm and internal temperature diode are included. The device is packaged in a 100 pin thermally enhanced Quad Flat Pack (PQFP) and a 96 ball, Ball Grid Array (BGA).

VSC8173 Block Diagram



Ordering Information

The order number for this product is formed by a combination of the device number and package type.
Part Numbering Scheme:

VSC8173 XX

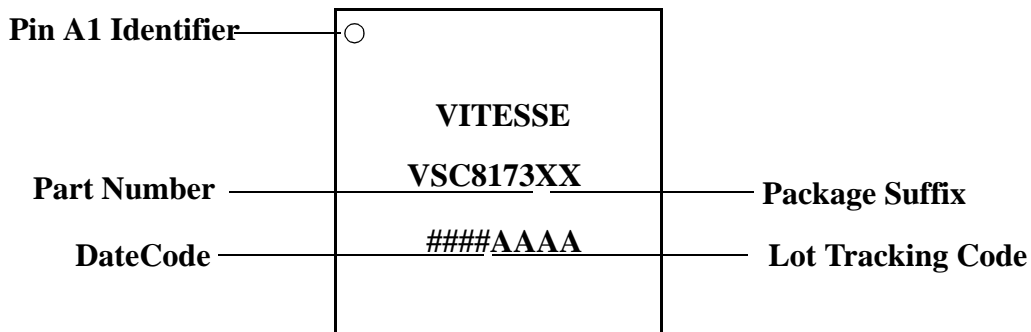
Part Number (**VSC8173**)
9.953 Gbit/sec SONET/SDH, 16:1 Multiplexer with Clock Generator

Package Suffix (**XX**)
QQ = 100 PQFP 14x14mm
UH = 96BGA 15x15mm

Marking Information

The package is marked with three lines of text as shown below.

Figure 1: Package Marking Information



Notice

This document contains preliminary information about a new product in the preproduction phase of development. The information in this document is based on initial product characterization. Vitesse reserves the right to alter specifications, features, capabilities, functions, manufacturing release dates, and even general availability of the product at any time. The reader is cautioned to confirm this datasheet is current prior to using it for design.

Warning

Vitesse Semiconductor Corporation's product are not intended for use in life support appliances, devices or systems. Use of a Vitesse product in such applications without written consent is prohibited.

Contact Information

To obtain device samples, eval-boards, application notes, or detailed technical product data sheets on the above product, please email prodinfo@vitesse.com.