VSC9195, VSC9192

VITESSE

340 Gb/s and 170 Gb/s OC-48 STS-1 Time-Slot Interchange Switches

VSC9195

FEATURES:

▸ 136 x 136 TSI Switch with Non-blocking 6528 x 6528 STS-1 Switch Matrix (340G Aggregate Bandwidth)

▸ Bit-sliced Switching Mode Provides 13056 x 13056 Connectivity at Half Bandwidth (68x68 ports) Enabling a One-stage 680G Fabric with Four Switch Chips

▸ Serial TFI-5 2.488 Gb/s High-speed Interface with EQ and Pre-emphasis

▸ Hitless Reconfiguration of TSI Mapping

▸ Split Frame Domain Support (2 Domains per Chip)

▸ Two Overhead Ports to Drop and Add OH Bytes for Automatic Protection Switching Support and In-band Messaging

▸ Cross-connect Program Memory Integrity Monitoring

▸ LOS Detection, Input Parity Checking and Output Parity Insertion, Scrambling and Descrambling

▸ Transparent Mode Enables Switching Among Complete Ports Independent of Rate and Protocol, at 2.125, and 2.488-2.67 Gb/s

▸ Can Act as a Static Slice/Merge Device to Support other VSC9195 Devices in a Bit-sliced Fabric

APPLICATIONS:

▸ Central Switch in 170 Gb/s to 340 Gb/s STS-1 Grooming Fabric

▸ Switch Element for 680 Gb/s to 1.36 Tb/s STS-1 Grooming Fabric

▸ Bit-slicing Engine for 680 Gb/s to 1.36 Tb/s STS-1 Grooming Fabric

▸ Ingress/Egress Device for Multi-terabit STS-1 Grooming Clos Fabric

▸ Synchronous Transparent Crosspoint Switch for Generic Circuit or Packet Switching

BENEFITS:

▸ Enables High Capacity Switching with a Small Number of ICs, Reducing Cost and Power

▸ Easy Diagnostic and Monitoring Capability

▸ Scalability: Using VSC9192 and VSC9195, Customer can Economically Create Products from 80G to 680G Aggregate Bandwidth Using the same Software and Hardware Interfaces, with Capability to Scale to 1.36Tb Without Requiring Specialized Clos Programming Algorithms. Clos Fabrics for Larger Throughput can be Implemented with Fewer ICs.

▸ Flexibility: can be Used as a Monolithic Switch, as an Element in a 680G Bit-sliced Fabric, as a Bit-slicing Engine for a 680G Bit-sliced Fabric or an Ingress/Egress Device for a Large Clos Fabric.

SPECIFICATIONS:

▸ 340 Gb/s Aggregate Bandwidth

▸ TFI-5 Compliant 2.5 Gb/s High-speed Interfaces

▸ Dual +2.5V/1.2V Power Supply

▸ 45.0mm 1072 fcBGA Package

▸ Power Dissipation 25W (typ), 32W (max when fully utilized) with Power-down for Unused Channels

▸ 0 to 110ºC (case) Temperature Range

▸ 53 MHz 16-bit CPU Interface

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340 Gb/s and 170 Gb/s OC-48 STS-1 Time-Slot Interchange Switches

GENERAL DESCRIPTION:

VSC9195

The VSC9195 is a 136 x 136 Time Slot Interchange (TSI) Switch IC supporting TFI-5 (STS-48 like frame) data on every input and output. All inputs and outputs are differential serial signals running at 2.488 Gb/s for TDM signals, or 2.125 Gb/s, or 2.488-2.67 Gb/s for signals to be routed transparently.

The device contains a fully non-blocking STS-1 switching matrix surrounded by serial back plane interfaces that incorporate fully integrated clock recovery and synthesis, input equalization, output pre-emphasis, TFI-5/SONET/SDH compliant scrambling, framing, de-skew and alarms. Ports to drop and insert overhead bytes are included. A multi-mode CPU interface is used for device configuration and status monitoring.
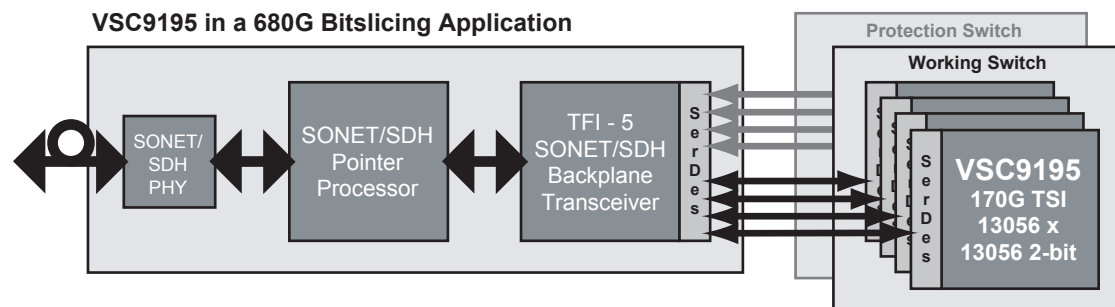
VSC9192 in a 170G Application
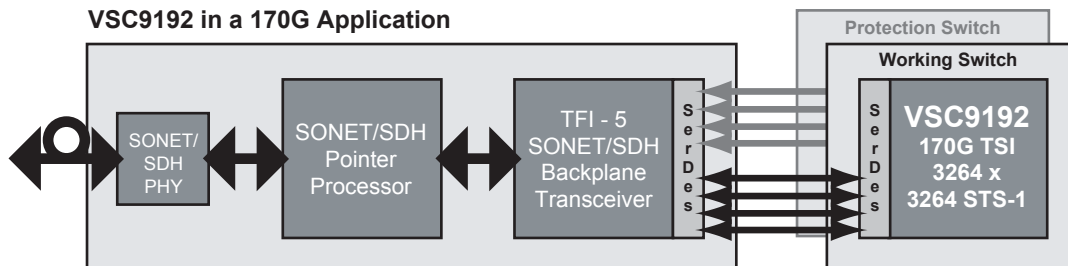
VSC9195 in a 340G Application
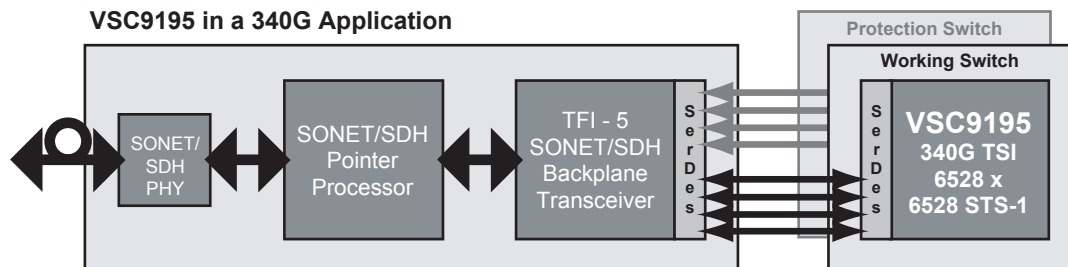
VSC9195 in a 680G Bitslicing Application

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

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