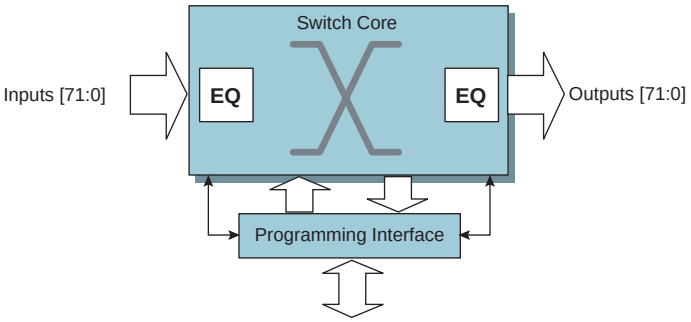
DATA INTERCONNECT

VSC3172

VITESSE®

6.5 Gbps 72 × 72 Asynchronous Crosspoint Switch

BLOCK DIAGRAM:



FEATURES:	BENEFITS:
6.5 Gbps 72 × 72 strictly nonblocking switch matrix with multicast and output striping programming modes	468-Gbps aggregate bandwidth in a single chip for high-density network storage, FC, blade server, and Ethernet systems
Fourth-generation input signal equalization (ISE) with programmable control globally or on a per-channel basis	Addresses system-level and board-level signal integrity (SI) and intersymbol interface (ISI) jitter issues
Adjustable output pre-emphasis EQ	EQ and drive flexibility for driving boards, cables, and circuit traces
Differential current mode logic (CML) data output driver	Convenient I/O flexibility for interfacing with multiple standards
Protocol-independent switching and data transmission	Can be used with latest storage, Ethernet, and networking standards
10-W typical power dissipation	Low 140-mW per-channel power dissipation
33 mm × 33 mm, 1.27 mm pin pitch, 613-pin FCBGA package	Layout-friendly package and pinout for easier PCB design
Parallel and serial programming modes for configuration and monitoring	Programming and control convenience
Software control to optimize power dissipation	Controlled power reduction for unused ports

APPLICATIONS:

- Core and metro transport
- Enterprise
- Blade servers
- High-speed automated test equipment
- Broadcast video systems
- Storage, Ethernet, and networking equipment

VPPD-01586
Revision 1.0

VSC3172

6.5 Gbps 72 × 72 Asynchronous Crosspoint Switch

GENERAL DESCRIPTION:

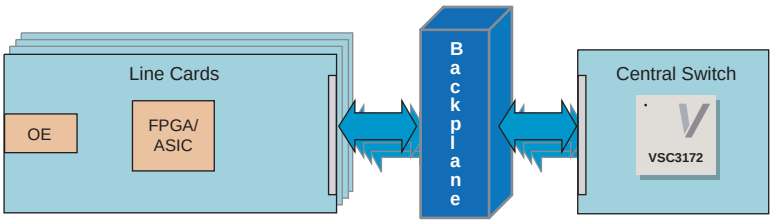
The VSC3172 is a 72 × 72 asynchronous crosspoint switch, designed to carry broadband data streams. The fully nonblocking switch core is programmed through a multimode port interface that allows random access programming of each input and output port.

A high degree of signal integrity is maintained throughout the device by fully differential signal paths. Programmable input EQ and output pre-emphasis settings enable maximum customization for the application. Each data output can be programmed to connect to one of the inputs. The signal path is unregistered and fully asynchronous, so there are no restrictions on the phase, frequency, or signal pattern on any input.

Each high-speed output is a fully differential switched current driver with on-die terminations for maximum signal integrity. Its multimode programming interface allows commands to be sent as serial data or as multiplexed parallel data. Core programming can be sequential on a port-by-port basis, or multiple program assignments can be queued and issued simultaneously.

Unused channels may be powered down to allow efficient use of the switch in applications that require only a subset of the channels. Power-down is enabled in software by programming individual unused outputs with a power-down code.

BACKPLANE APPLICATION:



SPECIFICATIONS:

- 6.5-Gbps NRZ per-channel data rate
- 2.5-V power supply (2.5-V or 3.3-V program port power supply)
- 2.5-V or 3.3-V CMOS TTL-compatible I/O
- Differential CML I/O with integrated termination impedance
- 0 °C to 85 °C operating temperature range

741 Calle Plano
Camarillo, CA 93012, USA
Tel: +1 805.388.3700
Fax: +1 805.987.5896
www.vitesse.com
sales@vitesse.com