

# VSC3316

## 11.5 Gbps 16 × 16 Crosspoint Switch

Microsemi's multichannel 11.5 Gbps crosspoint switch provides a cost-effective solution for high-speed copper interconnects.

The VSC3316 is an advanced signal conditioning crosspoint switch solution uniquely capable of addressing a wide array of asynchronous, physical layer switching, and routing applications across storage, server, video, communications, and other industries. Featuring a 16 × 16 non-blocking, multicasting switch core with ports running at any rate up to 11.5 Gbps, the VSC3316 architecture provides protocol-transparent operation, allowing each channel to run independently. VSC3316 supports virtually all standard and proprietary data protocols up to the maximum data rate.

The device incorporates Microsemi's fourth-generation input equalization and pre-emphasis I/O capability engineered to overcome channel impairments experienced in today's high-density systems at multi-gigabit data rates. It can perform signal fanout, loopback, and protection switching. It can also regenerate signals compromised by losses in the transmission medium. Microsemi's equalization works independently of the data rate, providing highly effective compensation for deterministic jitter across a wide range of high-speed interconnect applications.

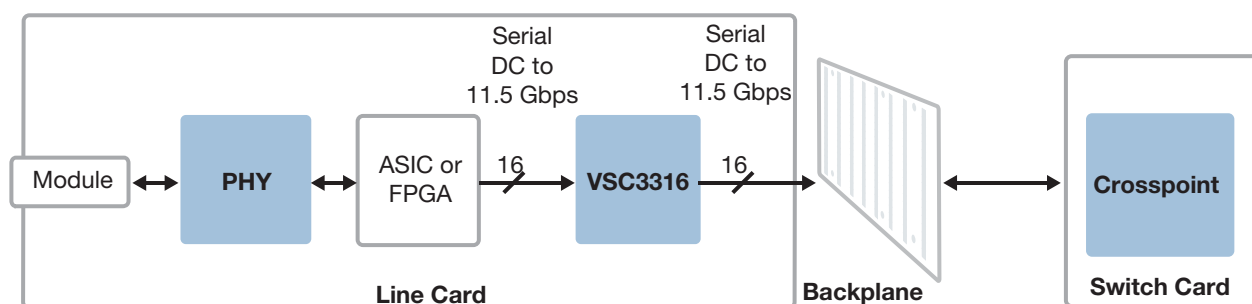
### Highlights

- DC to 11.5 Gbps operation
- 16 × 16 fully non-blocking switch capability
- Protocol-transparent operation
- Advanced input equalization and output pre-emphasis

### Applications

- Servers
- Storage
- Telecom
- Broadcast video switching/routing
- HDMI/DVI/DisplayPort switching/routing
- Test and measurement

### VSC3316 Line Card Application



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### Key Specifications

- 11.5 Gbps NRZ per channel data rate
- 2.5 V power supply
- 15 mm × 15 mm flip chip ball grid array package

### Speed and Protocol Support

- 11.5 Gbps non-return-to-zero (NRZ) data bandwidth
- Protocol-transparent

### Architecture

- Fully non-blocking and multicasting switch core
- LOS detection and forwarding (supports out-of-band signaling)
- Fully asynchronous operation with <1 ns latency
- 16 × 16 switch core enables signal fanout, loopback, and protection switching

### Signal Integrity

- Multiple time-constant programmable input and output equalization
- Wide equalization adjustment range
- Input EQ of 26 dB
- 9 dB of pre-emphasis

### Related Products

Visit [www.microsemi.com](http://www.microsemi.com) for information about these related products:

- Crosspoint switches
- Ethernet MACs
- Mux, demux, and transceivers
- Electronic dispersion compensation CDRs

