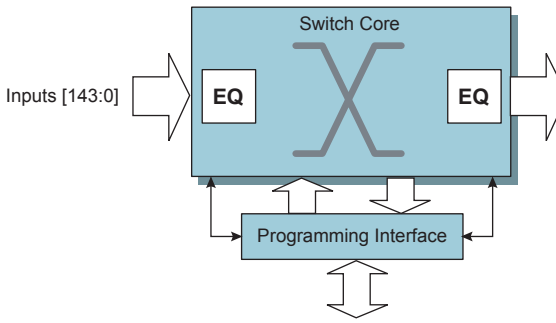
BLOCK DIAGRAM:



FEATURES:	BENEFITS:
11 Gbps 144 × 144 strictly nonblocking switch matrix with multicast and output striping programming modes	1.584 Tbps aggregate bandwidth in a single chip for network switching and video systems
Input signal equalization (ISE) with programmable control globally or on a per-channel basis	Addresses system-level and board-level signal integ intersymbol interface (ISI) jitter issues
Adjustable output pre-emphasis EQ	EQ and drive flexibility for driving boards, backplane
Differential current mode logic (CML) data output driver	Convenient I/O flexibility for interfacing with multiple
Protocol-independent switching and data transmission	Can be used with latest storage, Ethernet, and netw
45 mm × 45 mm, 1.27 mm pin pitch, 1072-pin BGA package	Layout-friendly package and pinout for easier PCB d
Parallel and serial programming modes for configuration and monitoring	Programming and control convenience
Software control to optimize power dissipation	Control and lower overall power when ports are not

APPLICATIONS:

- High-definition digital broadcast video systems
- Multi-service provisioning platforms (MSPPs)
- Mixed TDM/packet switching systems
- High-speed storage, Ethernet, and networking equipment
- DWDM switching systems
- High-speed automated test equipment

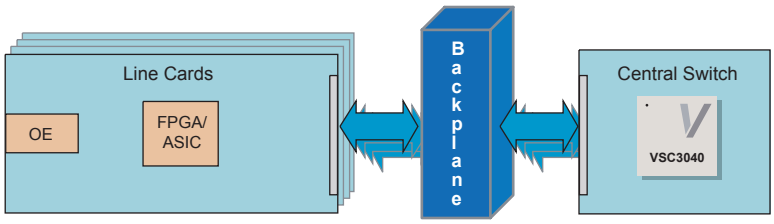
equipment applications. Combining the 11 Gbps per port bandwidth and 144 × 144 switch matrix enables a breakthrough 1.5 Tbps capacity in a single device.

The VSC3040 fully non-blocking switch core is programmed using a multimode port interface that allows random access programming of each I/O port. Each VSC3040 data output can be programmed to connect to any of its inputs. The signal path through the device is fully asynchronous, eliminating restrictions on the phase, frequency, or signal pattern of any input.

switched-current driver with on-die termin
terminated on-die, using 100 Ω resistors betwe
inputs with a common connection to an inte
facilitates AC-coupling to the switch inputs.

Core programming for the VSC3040 device
port-by-port basis, or multiple program assignm
issued simultaneously. The entire device
straight-through, multicast, or other configuratio
be powered down to allow efficient use of the
require only a subset of the available I/O c
enabled in the software by programming individ
power-down code.

BACKPLANE APPLICATION:



SPECIFICATIONS:

- 11 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

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