InfiniScale IV

32-port 20 and 40Gb/s InfiniBand Switch Blades for HP BladeSystem c-Class

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The InfiniScale® IV 20 and 40Gb/s InfiniBand Blade Switch Blades for HP BladeSystem c-Class provides a high bandwidth, low latency fabric for Enterprise Data Center and High-Performance Computing environments. Based on the fourth generation InfiniScale IV InfiniBand switch device, the switch modules deliver up to 40Gb/s full bisectional bandwidth per port. When used in conjunction with ConnectX® InfiniBand dual port mezzanine HCAs, clustered data bases, parallelized applications and transactional services applications will achieve significant performance improvements resulting in reduced completion time and lower cost per operation.

Sustained Network Performance

The switch blades are fully non-blocking to maximize I/O utilization in between server blades or between server and storage. Twenty or 40Gb/s of bandwidth is available to each node regardless of the traffic on any other port. QoS per port for high priority traffic ensures the best performance for mission critical applications. Whether used for parallel computation or as a converged fabric, the switch blades provide the industry's best traffic carrying capacity.

Server Throughput and Redundancy

The switch blades deliver director-class availability required for mission-critical applications environ¬ments. When fully populated the HP BladeSystem c-Class chassis can support up to two switch blades for maximum server throughput and redundancy. The switch blades are hot-swap-pable, enabling expansion without server interruption.

Easy Management

The switch blades are easily managed through any IBTA compliant subnet manager. Mellanox recommends installing and running on each server blade the Mellanox OpenFabrics software stack. Any server can then run the subnet manager along with the switch management tools. Port configuration and data paths can be set up automatically or customized to meet the needs of the application. Firmware can be updated in-band for simple network maintenance.

Mellanox Advantage

Mellanox is the leading supplier of industry standard InfiniBand adapters and switch products. Our products have been deployed in clusters scaling to thousands-of-nodes and are being deployed end-to-end in data centers and Top500 systems around the world.

BENEFITS

– Industry-leading server switch blade in performance and power
– Full cross-sectional bandwidth from server blades to fabric
– Reliable transport
– I/O consolidation
– Virtualization acceleration

KEY FEATURES

– 1.28 or 2.56Tb/s switching capacity
– Adaptive routing
– Congestion control
– Quality of Service enforcement
– Hot pluggable

SPECIFICATIONS

INFINIBAND
– IBTA Specification 1.2 compliant
– Integrated subnet manager agent
– Hardware-based congestion control
– Adaptive routing
– Fine grained end-to-end QoS
– 2.56Tb/s total switching bandwidth
– 256 to 4Kbyte MTU
– 9 virtual lanes: 8 data + 1 management
– 48K entry linear forwarding data base

MANAGEMENT
– Supports OpenSM or third-party subnet managers
– Port mirroring
– Diagnostic and debug tools

HARDWARE

INFINIBAND SWITCH
– 32 ports (16 internal, 16 external)
– up to 40Gb/s per port
– Fully non-blocking architecture

CONNECTORS AND CABLING
– QSFP connectors
– Passive copper cable
– Optical media adapter and active cable support

INDICATORS
– Per port status LEDs: Link, Activity
– System status LEDs: System status, power

COMPLIANCE

SAFETY
– US/Canada: cTUVus
– EU: IEC60950
– International: CB

EMC (EMISSIONS)
– USA: FCC, Class A
– Canada: ICES, Class A
– EU: CE Mark (EN55022 Class A, EN55024, EN61000-3-2, EN61000-3-3)
– Japan: VCCI, Class A
– Korea: RRL (MIC), Class A
– Australia/New Zealand: C-Tick Class A

ENVIRONMENTAL
– EU: IEC 60068-2-64: Random Vibration
– EU: IEC 60068-2-29: Shocks, Type I / II
– EU: IEC 60068-2-32: Fall Test

OPERATING CONDITIONS
– Operating temperature: 0 to 40° C
– Humidity: 10-90% non-condensing

Visit http://www.hp.com for more information

InfiniBand Switch Blade

Ordering Part Number	InfiniBand Ports
489183-B21	16+16 4X 20Gb/s InfiniBand
489184-B21	16+16 4X 40Gb/s InfiniBand

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