



12800 Director Class Series

40 Gb/s (QDR) InfiniBand Switch

Key Features

- InfiniBand QDR (40Gb) operation
- Customer configurable
- Highest rackmountable port density
- Highest rackmountable port count
- Scalable low latency
- Adaptive routing
- Virtual fabrics
- Fully-redundant power supplies, fans and management cards
- Optional InfiniBand Fabric Suite (IFS)
 - FastFabric Toolset
 - Fabric Manager
 - Fabric Viewer
- Lowest per-port power requirements

Benefits

- Allows for custom switch configuration
- Smallest quad data rate (QDR) data center footprint
- Lowest power and cooling requirements



The 12800 series Director Class InfiniBand switch is the next evolution in InfiniBand switches. The 12800s are a completely modular family of switches allowing complete flexibility of design.

Units can be populated with Ultra High Density (UHD) leafs for maximum connectivity or Ultra High Performance (UHP) leafs for maximum performance.

Integrated Cluster Computing Interconnect Solution. The QLogic 12000 Multi-Protocol Fabric Directors support High Performance Computing (HPC), database clustering and grid utility computing applications; they maximize cluster and grid computing interconnect performance while simplifying and reducing data center costs.

Virtual I/O Integration. The 12800 family incorporates the innovative Virtual I/O Controller (VIC) technology. VIC modules installed in a 12000 system enable hosts on InfiniBand fabrics to transparently access either Fibre Channel or Ethernet networks or both.

Advanced Features. All major components are field replaceable and hot pluggable. Other advanced features include non-disruptive firmware upgrade, port-to-port and module-to-module failover, component level diagnostics and alarming, and both in-band and out-of-band remote management. When combined with the QLogic InfiniBand Fabric Suite, the 12800 family of Fabric Directors supports the most demanding cluster computing interconnect requirements.

The 12800 series switches are also part of QLogic's Star Power commitment to developing green solutions for the data center. By providing the highest port density and lowest per-port power rating, QLogic is furthering its commitment to decreasing the data center footprint and reducing power and cooling requirements.

QLogic 12800 Director Class Series 40 Gb/s (QDR) InfiniBand Switching

Switch Specifications

Chassis System Model Options

- 12800-360: 18 to 864 ports
 - 51.8 Tb/s capacity
 - Holds up to 36 leaf modules
- 12800-180: 18 to 432 ports
 - 25.9 Tb/s capacity
 - Holds up to 18 leaf modules
- 12800-120: 18 to 288 ports
 - 17.2 Tb/s capacity
 - Holds up to 12 leaf modules
- 12800-060: 18 to 144 ports
 - 8.64 Tb/s capacity
 - Holds up to 6 leaf modules
- 12800-040: 18 to 96 ports
 - 5.76 Tb/s capacity
 - Holds up to 4 leaf modules

Leaf Module Options

- UHP Module: 18 4x QDR IB ports
- UHD Module: 24 4x QDR IB ports
- 8Gb FC: 14 4x QDR IB ports, 4 FC ports
- 14 4x QDR IB ports, 4 Ethernet ports

InfiniBand Switch Modules

- Virtual Lanes: 8 plus 1 management
- MTU size: Up to 4096
- Unicast table: 48K entries
- Multicast table: 1024 entries
- Switching latency: <140 ns to < 420 ns

Switch Specifications

Fibre Channel VIC Module

- Supports up to 128 Virtual HBA ports per module
- Automatic sensing of port type: 1/2/4 Gb/s
- Automatic port and module fail-over
- Supports load balancing
- LUN mapping and masking features
- SCSI-SRP, SCSI-FCP, and FC-PH-3 compliant

Ethernet VIC Module

- Supports up to 250 Virtual NIC ports per module
- Automatic port and module fail-over
- Port aggregation
- TCP/UDP and IP header checksum offload
- Jumbo frames supported
- 802.1Q VLAN support
- 802.1p Priority Queuing/Scheduling (802.1p)

Physical Specifications

Model H(in) x W(in) x D(in) weight

- 360 chassis: 50.7 x 17.3 x 26 180 lbs
- 180 chassis: 24.5 x 17.3 x 26 110 lbs
- 120 chassis: 17.5 x 17.3 x 26 90 lbs
- 060 chassis: 10.5 x 17.3 x 26 70 lbs
- 040 chassis : 8.7 x 17.3 x 26 40lbs

Agency Approval

- Safety: UL/CSA/IEC/EN 60950-1
- EMI:FCC/VCCI/EN/IEC Class A
- Marking: cUL/TUV/CE/VCCI/C-Tic

Tools and Utilities

Management

- Optional redundant chassis management processor
- Optional embedded Fabric Management (SM,, PM, and BM)
- Optional server-based InfiniBand compliant Subnet Manager
- SNMP management support

Environment and Equipment Specifications

Power Consumption

- 85 to 6749 WAC

Operating

- Temperature: 0 to 43 C
- Humidity: 5% to 95% non-condensing
- Altitude:0 to 10,000 ft

Non-Operating

- Temperature: -40 to 70 c
- Humidity:5% to 95% non-condensing
- Altitude:0 to 30,000 ft



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