



12400 InfiniBand Gateway

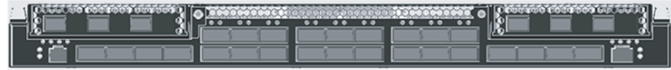
26-Port, 40Gbps InfiniBand Switch with Integrated Ethernet Gateway

Benefits

- Comprehensive, flexible InfiniBand® network building block with cost effective 10 Gigabit Ethernet (GbE) port density
- Provides Ethernet connectivity for InfiniBand attached servers
- Performance optimized to meet time-to-solution challenges
- Protects investments in legacy Ethernet networks and file systems
- Readily integrates into existing InfiniBand and Ethernet environments with a standards compliant design
- Simple turnkey installation and management
- Highly reliable and available

Features

- 26 InfiniBand QDR (40Gbps) performance ports with support for DDR and SDR
- Six line-rate capable 10GbE ports
- 2.2Tbps of aggregate bandwidth
- Virtual fabrics provide optimal performance by segregating Ethernet and Infiniband traffic.
- IPv6 and IPv4 capable
- TrueScale™ architecture providing linear scale of performance
- Small data center footprint with minimal power and cooling requirements
- Optional InfiniBand Fabric Suite (IFS)™ management solution providing an expanded set of fabric views and fabric tools
- Complies with InfiniBand Trade Association (IBTA) v1.2.1 specification
- Redundant and hot-swappable power/cooling



Organizations are continually evolving their computing environments to facilitate transparency and improve their time-to-solution capabilities. The QLogic 12400 is a 26-port, 40Gbps InfiniBand switch with an integrated, cost-effective 6-port, 10GbE gateway that provides seamless connectivity between an organization's High Performance Computing (HPC) resources and its Ethernet infrastructure. The QLogic 12400 is part of QLogic's InfiniBand product portfolio that delivers an unmatched set of high speed networking features and functions.

Performance Optimized. The QLogic 12400 hardware implementation maximizes Ethernet bandwidth and message rate while delivering low end-to-end latency. The QLogic 12400 supports QDR InfiniBand at 40Gbps per port (4 x 10Gbps), providing the necessary bandwidth for high-throughput applications. With an internal fabric capacity of 2.2Tbps, the QLogic 12400 provides superior performance for even the most difficult problems.

Cost Effective 10GbE Port Density. The QLogic 12400 is a one rack unit (RU) device that provides six 10GbE ports along with scalable, predictable performance for all ports.

Comprehensive InfiniBand / Ethernet Gateway Functionality. A complete set of InfiniBand and Ethernet gateway features provide InfiniBand-attached servers access to a wide range of Ethernet system and storage resources, including seamless access to a broad set of Ethernet-based file systems.

IPv6 capable. The QLogic 12400 supports both IPv4 and IPv6 standards.

Investment Protection. The QLogic 12400 supports a wide range of Ethernet-based storage devices, enabling customers to protect their infrastructure investments. The QLogic 12000 series of switch products adhere to the IBTA v1.2.1 specification, ensuring the ability to interoperate with all other IBTA-compliant devices.

Highly Reliable. The QLogic 12400 design has enhanced availability and serviceability through redundant and hot-swappable power/cooling modules.

Easy to Manage. Customers can manage the QLogic 12400 by utilizing an integrated capability to set up gateway functions, and by taking advantage of QLogic's advanced IFS software to facilitate quicker installation and configuration. IFS has advanced tools to verify fabric configuration, topology, and performance. Faults are automatically isolated to the component level and reported.

Small Energy Foot Print. Maximum performance is delivered with the minimal power and cooling requirements as part of QLogic's StarPower™ commitment to developing green solutions for the data center.

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InfiniBand Port and Switch Specifications

- 40/20/10Gbps auto-negotiation links
- Twenty-six 4x QDR ports, or thirteen 8x QDR ports
- Fabric capacity: 2.2Tbps
- Virtual lanes: eight plus one management
- Maximum MTU size: 4096 bytes
- Maximum multicast table size: 1024 entries
- Supports quad small form factor pluggable (QSFP) optical and copper cable specifications

InfiniBand Interoperability

- Compliant with IBTA 1.0a, 1.1, 1.2, and 1.2.1

Ethernet and IP Gateway Specifications

- Six IEEE 802.3ae 10 GbE ports
- IEEE 802.1Q VLAN Tagging
- IEEE 802.3x Flow Control
- 1K vNICs per Ethernet port
- Jumbo frames support (up to 9600 bytes)
- InfiniBand to Ethernet Latency: < 2uS
- IPv4 /IPv6 support
- Supports SFP+ optical cable specifications

Supported SFP Types

- Hot-pluggable 10 GbE SFP+ transceivers, short-range (up to 300m), 850nm; QLogic part number 10000566

Management**Management Methods**

- Command line interface (CLI)
- Graphical User Interface (GUI)
- Optional external server-based InfiniBand compliant subnet manager
- Optional embedded fabric management
- SNMP support

Access Methods

- 10/100 Ethernet Base T (RJ45)
- Serial Port (RS-232 with RJ11)

LEDs

- One per InfiniBand port
- Two per 10GbE port
- Two for the 10/100 management Ethernet interface
- Two for Chassis Status

Physical**Dimensions**

- H x W x D: 43.2 x 439.6 x 637.5mm (1.7 x 17.3 x 27.2 in)

Weight

- 12 kg (26.5lbs)

Environmental**Temperature**

- Operating: 5°–40°C
- Non-Operating: –40°–65°C

Humidity

- Relative: 5–85% non-condensing
- Non-Operating: 5–90% non-condensing

Altitude

- Operating: 0–10,000 feet
- Non-Operating: 0–40,000 feet

Power Dissipation

- Voltage: 100–240VAC; 50–60Hz
- Power consumption:
 - 245W with 1W active optical InfiniBand cables

Airflow

- Front-to-back, back-to-front for selected OEMs

Agency Approvals

- Safety: UL/CSA/IEC/EN 60950-1
- EMI: FCC/VCC/EN/IEC ClassA
- Marking: TUV/CE/VCCI/C-Tic/KCC
- RoHS 6



Corporate Headquarters QLogic Corporation 26650 Aliso Viejo Parkway Aliso Viejo, CA 92656 949.389.6000
 International Offices UK | Ireland | Germany | India | Japan | China | Hong Kong | Singapore | Taiwan

www.qlogic.com