SilverStorm 9024 (SDR/DDR) InfiniBand Edge Switches

10 Gb/s to 60 Gb/s Cluster Computing Interconnect

DATA SHEET

The SilverStorm 9024 series is a family of high performance, 24-port, compact, 1U InfiniBand switches. The 9024 family enables the construction of high-speed, low latency, cluster networks for powering today's compute intensive applications found in:

- Academic and Government Research
- Industrial Engineering
- Geosciences and Bioscience Research
- Media and Entertainment
- Financial Services
- Database Clustering
- Grid and Utility Computing

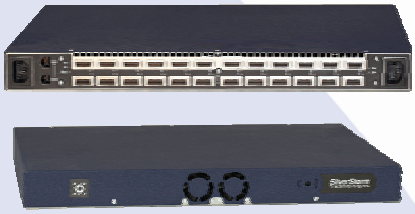
By utilizing the high bandwidth and low latency characteristics of InfiniBand, businesses can drive competitive advantage by constructing larger and higher performing compute clusters which result in reductions in time to results and more fine-grained data analysis.

The 9024 products come in both internally managed and externally managed single data rate (SDR) or double data rate (DDR) configurations and support an industry unique software configurable 12x capability that enables link bandwidths and switching support of up to 60Gb/s.

The 9024 products are ideal for building small single switch InfiniBand fabrics or for use as edge or leaf switches together with SilverStorm 9000 series Fabric Directors in constructing large multi-tier fabrics. All SilverStorm 9024 Edge Switch and 9000 Fabric Director products support non-blocking, Full Bisectional Bandwidth (FBB) architectures for satisfying the most demanding cluster computing applications.

INTERNALLY MANAGED 9024

Internally managed 9024 units are designed for clusters with 24 or less host nodes and for large networks that require maximum edge switch configuration flexibility. Internally managed 9024 models feature an onboard management CPU capable of acting as a primary or backup fabric and subnet manager for the InfiniBand network, and support optional redundant, hot swappable power and cooling elements.



EXTERNALLY MANAGED 9024

Externally managed 9024 units are designed for edge switch applications in large multi-tier fabrics. Externally managed units come in fixed configurations and are remotely managed in-band over the InfiniBand fabric from an external management host running SilverStorm QuickSilver fabric management software. The 9024 externally managed units are SilverStorm's most cost effective edge switching solution and are ideal for constructing extremely large cluster computing fabrics that can scale to thousands of hosts.

SILVERSTORM 9024

Benefits

- A high performance switching platform for High Performance Computing (HPC), Database Clustering, and Grid Computing networks
- Industry leading bandwidth performance of up to 60G/ps per link
- Industry leading price/performance cluster interconnect solution
- Support extremely low end-to-end latency fabrics
- Can be used as a small single switch fabric or as an edge device for large networks

Key Features

- 24-ports (4X) in a 1U form factor
- Software definable 12x support
- Both SDR and DDR configurations
- Latency less than 140nsec
- Up to 960Gb/s of fabric bandwidth available in each switch
- Internally or externally managed configurations
- Integrates seamlessly with all SilverStorm 9000 series Multi-Protocol Fabric Director products for Fibre Channel and Ethernet connectivity
- Fully redundant power and cooling configurations

SilverStorm TECHNOLOGIES™

SilverStorm 9024 (SDR/DDR) InfiniBand Edge Switches

SilverStorm 9024 Specifications

Internally Managed (IM) 9024 Models

Description		Part Number
SilverStorm 9024 (SDR)	24 ports @ 10Gb/s (4X), software definable 12x	9024-CU24-ST2
SilverStorm 9024 (DDR)	24 ports @ 10/20Gb/s (4X), software definable 12x	9024-CU24-ST2-DDR

IM Model Switch Functionality

Peak System Bandwidth (SDR/DDR): 480Gbps/960Gbps full duplex

1x, 4x, and 12x cut-through switching with < 140 ns latency

Virtual Lanes: 8 plus 1 management

MTU size: up to 4096

Unicast table: 48K entries

Multicast table: 1024 entries

IM Model Availability

Optional redundant power (AC/DC) and cooling

Two independent IEC 320 AC power connectors

Non-disruptive code load/activation

IM Model Management

Embedded chassis, fabric and subnet management CPU module

1 Ethernet port & 1 RS-232 port

SNMP management support

IM Model Physical Specifications

(H x W x D): 1.7 x 17.32 x 26.75 inches, 43.2 x 440 x 679.4 mm

Weight: 16 lbs, (7.27 kg)

IM Model Environmental

Temperature

Operating / (Non-Operating): 5° to 45°C / (-35° to 65°C)

Humidity

Operating / (Non-Operating): 5 to 85% / (5 to 90%) non-condensing

Power Dissipation (Watts)

65 Watts maximum

Power Range

100 to 240 VAC (50-60 Hz)

IM Model Agency and Interoperability Compliance

Safety: UL/CSA/EN

EMI: FCC/VCCI/EN

Marking: UL/TUV/VCCI/CE

IBTA 1.0a, 1.1 and 1.2 compliant

Externally Managed (EM) 9024 Models

Description		Part Number
SilverStorm 9024 (SDR)	24 ports @ 10Gb/s (4X), software definable 12x	9024-FC24-ST1
SilverStorm 9024 (DDR)	24 ports @ 10/20Gb/s (4X), software definable 12x	9024-FC24-ST1-DDR

EM Model Switch Functionality

Peak System Bandwidth (SDR/DDR): 480Gbps/960Gbps full duplex

1x, 4x, and 12x cut-through switching with < 140 ns latency

Virtual Lanes: 8 plus 1 management

MTU size: up to 4096

Unicast table: 48K entries

Multicast table: 1024 entries

EM Model Management

In-band chassis management via external QuickSilver software host

SNMP management support

EM Model Physical Specifications

(H x W x D): 1.7 x 17.32 x 11.5 inches, 43 x 440 x 292 mm

Weight: 10 lbs, (4.5 kg)

EM Model Environmental

Temperature

Operating / (Non-Operating): 5° to 45°C / (-35° to 65°C)

Humidity

Operating / (Non-Operating): 5 to 85% / (5 to 90%) non-condensing

Power Dissipation (Watts)

65 Watts maximum

Power Range

100 to 240 VAC (50-60 Hz)

EM Model Agency and Interoperability Compliance

Safety: UL/CSA/EN

EMI: FCC/VCCI/EN

Marking: UL/TUV/VCCI/CE

IBTA 1.0a, 1.1 and 1.2 compliant