

Voltaire® Grid Switch™ ISR 6000

Breakthrough Switching Performance for Database Clusters and Grids with Powerful Multiprotocol Capabilities for SAN/LAN Connectivity

Overview

The Voltaire Grid Switch ISR 6000 is a 10 Gbps InfiniBand switching platform for building extremely high performance database and HPC clusters and interconnecting them with TCP/IP and Fibre Channel (FC) networks. By facilitating the integration of compute, storage and network resources, the Grid Switch ISR 6000 is an ideal solution for enterprise grid computing and I/O for high performance computing.

High Performance Non-Blocking Switching

The Grid Switch ISR 6000 sets the new standard for cluster performance by providing unparalleled bandwidth and the lowest latency. The Grid Switch ISR 6000 enables cost effective high performance InfiniBand clusters through its three-blade modular design. Installed with up to 3 switch modules (each module is an high performance non-blocking 6-port switch blade), the Grid Switch ISR 6000 can provide as many as 18 InfiniBand ports.

Multiprotocol Connectivity

In addition to fast switching, the Grid Switch ISR 6000 is the first InfiniBand solution to offer connectivity to IP and Fibre Channel networks in a modular 1U chassis. The chassis hosts the Voltaire router blades providing seamless connectivity between server clusters, FC SANs, NAS appliances, IP SANs and TCP/IP networks (LANs). Up to two IP or FC routers may be installed in a single chassis providing as many as 8 IP or FC connections between an InfiniBand cluster and a SAN or LAN.

Comprehensive Management

The Grid Switch ISR 6000 provides comprehensive and powerful management capabilities through GridVision™ InfiniBand Fabric Management Software. The management capabilities are enabled in the

switch independent of any external management platform and can be accessed via CLI, GUI or SNMP managers. GridVision delivers real-time proactive management by providing: aggregated fabric and resource views, access to a suite of fabric and switch diagnostics, the ability to manage fail-over on all levels, and provisioning of InfiniBand fabrics and the attached server, networking and storage resources.

High Availability

The Grid Switch ISR 6000 delivers the reliability and availability required in mission-critical enterprise applications including redundant hot swappable power supplies and fans. The switch also features system pooling, a unique capability that protects applications from failures at a port, module or the system level.

Voltaire Grid Backbone™ Family

Voltaire is the worldwide leader in grid backbone solutions for networked computing in the next generation data center. Voltaire's integrated Grid Backbone Family of multi-service switching solutions and network virtualization software delivers the highest performance, intelligent backbone for grid computing architectures. Leveraging the InfiniBand standard, Voltaire solutions offer improved performance, utilization and scalability across compute clusters, storage and IP networks.

- ▶ **Unbeatable 10 Gbps performance for clusters and grids**
- ▶ **Ultra-low latency under 4 microseconds**
- ▶ **Seamless SAN and LAN connectivity**
- ▶ **Modular 3-slot chassis supports up to 18 InfiniBand 4X ports**
- ▶ **Optional multiprotocol connectivity with up to 8 GbE ports and up to 8 FC ports**
- ▶ **High availability features for enterprise systems**



TECHNICAL SPECIFICATIONS

Voltaire Grid Switch ISR 6000

- 3-slot, 19" rack mountable chassis, 1U height, includes power supply and fans. Optional redundant power supply

Router Modules

Voltaire IP Router

- Up to 2 TCP/IP Router modules may be installed per chassis
- Connectors: 4 Gigabit Ethernet mini-GBIC (SMF)

Voltaire FC Router

- Up to 2 FC Router modules may be installed per chassis
- Connectors: 4 Fibre Channel external small form factor LC pluggable

Managed Switch Module

- Up to 3 Switch modules may be installed per chassis
- 6 auto-sensing 1X/4X InfiniBand ports (2.5/10 Gbps) and two 4X backplane connections
- Onboard processor runs GridVision and Voltaire's subnet management software
- Aggregate Data Throughput: 160 Gbps
- Port-to-port Latency: 200 nanoseconds (max.)
- Linear Forwarding Table: 48K entries
- Multicast Table Size: 1K entries
- Data Virtual Lanes: 8
- Management Virtual Lanes: 1
- MTU: 4096 Bytes, max
- SNMP MIB II
- Connectors: 6, 8-pair MicroGigaCN; EIA/TIA-232 console RJ-45

Mechanical

- 19-inch rack-mountable
- Secure stacking with optional feet
- Optional front or rear rack mounting
- Height: 1.75 in. (44.5mm), Width 18.94 in. (481mm), Depth: 18.84 in. (480 mm)
- Weight: 26lb (12kg)

Environmental

Operating

- Temperature: 32° to 104° F (0° to 45° C)
- Humidity: 10 to 95%, non-condensing
- Altitude: 0 to 10,000ft (3048m)

Storage

- Temperature: -40° to 185° F (-40° to 85° C)
- Humidity: 10 to 95% non-condensing
- Altitude: 0 to 10,000 ft (3048m)

Electrical

- Operating voltage: 100 to 120 VAC, 200 to 240 VAC, 50 to 60 Hz auto-sensing
- System Power consumption: 150 W max



Contact Voltaire to Learn More

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