McDATA® | Networking the World's Business Data®

Eclipse™ 2640 SAN Router

Effective Scalability for Fibre Channel Applications

The McDATA Eclipse™ 2640 is a multi-protocol SAN router with unprecedented scalability and interoperability.

The Eclipse™ 2640 offers:

Unbeatable flexibility
- Blended Fabric™: FC, GE, iSCSI and iFCP connectivity on demand
- Support for full fabric, private and public loop FC devices

Lower cost of ownership
- Compression to lower WAN bandwidth costs
- E_Port for integration into existing FC fabrics

Scalability and interoperability
- SAN routing to build large, stable FC fabrics
- Integration of multi-vendor FC fabrics

Superior functionality
- Fast Write™ for maximizing throughput across long distances
- Quality of Service (QoS): bandwidth management

Today's enterprise must implement secure business protection solutions and meet growing data storage and management demands. Yet with a large investment of diverse, multi-protocol equipment already in place, they are looking for routing solutions that will allow them to leverage those investments while delivering a high level of flexibility, speed, performance and stability.

The Eclipse™ 2640 SAN Router is the ideal multi-protocol, multi-vendor interoperability solution. A part of McDATA's family of open storage networking products, Eclipse™ SAN Routers use standards-based IP, Gigabit Ethernet (GE) and Fibre Channel (FC) for heterogeneous storage fabric connectivity.

With support for standard protocols such as iSCSI, iFCP and E_Port, the Eclipse™ 2640 can connect to IP backbones, FC fabrics and a wide variety of end systems, including FC, NAS and iSCSI initiators. Flexible, user-configurable interface types allow the Eclipse™ 2640 to be deployed for multiple, concurrent applications, including SAN routing, disaster recovery and iSCSI access to FC storage. It enables tiered storage infrastructures, which map the cost/reliability of the storage resource to the criticality of the application's data. And the Eclipse™ 2640 delivers a unique degree of fault isolation within these complex tiered environments, protecting the integrity of your data.

SAN routing enables customers to build very large, stable FC fabrics – faults in one part of the network do not impact traffic in other parts. With McDATA's patent-pending Fast Write technology and wire-speed operation, the Eclipse™ 2640 is uniquely able to connect very distant data centers at a sustained wire-speed throughput to enable secure disaster recovery scenarios. The same ports on the Eclipse™ 2640 can also concurrently support iSCSI access to FC storage. McDATA's iSCSI solutions have been demonstrated to be the best-performing solutions in the industry.

Providing distance independence, the highly reliable and manageable multi-protocol storage fabric extends seamlessly from the data center to the metro area and beyond. McDATA's products are fully compatible with the millions of IP-based LAN, MAN and WAN routers and switches already installed and mastered by IT professionals. McDATA's multi-protocol SAN routers are qualified with all major storage platforms, including EMC, HDS, HP, IBM, XIOtech, Sun, StorageTek and LSI Logic.

Eclipse™ 2640 SAN Router

Model Descriptions

Eclipse™ 2640:	Multi-Protocol SAN router with GE and FC switching support for 12 FC routing and four intelligent/TCP ports. FC ports configurable to 1 Gb/s or 2 Gb/s data rates. Out of band 10/100 Ethernet and serial management ports. Four intelligent ports provide TCP/IP support for connecting to IP campus or WAN backbones.

Protocol Support

Ethernet:	Full duplex IEEE 802.3 Gigabit Ethernet standard on each port (1,000 Mb/s each direction); 802.3x symmetric flow control; 802.1Q VLAN support; 802.3ad active failover within link aggregated trunks; Spanning Tree Protocol (STP)
Transport Protocol (IP):	TCP, UDP
Fibre Channel:	FC-AL, FC-AL-2, FC-FLA, FC-GS-2, FC-GS-3, FC-FG, FC-PH, FC-PH-2, FC-PH-3, FC-PLDA, FC-SW, FCSW-2, FCP and E_Port
IP Storage:	iSCSI, iFCP, iSNS
QoS:	802.1p marking, rate limiting, bandwidth management
Performance:	Wire-rate performance on all ports; exclusive Fast Write technology for improved write performance over long distances; support for jumbo frames; compression

Physical Media

Multi-service interfaces use small form factor plug (SFP) modules. Modules are available for both FC and GE supporting multi-mode fiber (MMF), single-mode fiber (SMF) and copper cables.

1000Base-SX:	550m over MMF
1000Base-LX:	10Km over SMF
100-M5-SN-I:	550m over MMF (1Gb FC)
100-SM-LL-L:	10Km over SMF (1Gb FC)
100-TW-EL-S:	33m over shielded twisted-pair (1Gb FC)

LED Indicators

CPU heartbeat, GE/FC link, port activity, port fault, 10/100 Ethernet management port

Management

SANvergence® Manager	Centralized Java-based graphical user interface (GUI) for network-wide management such as zoning, E_Port configuration, iSCSI LUN virtualization and device discovery for all SANs in the enterprise.
Element Manager™	Web-based Java applet for configuring, monitoring and troubleshooting individual SAN routers.
Management Interface:	In-band management through GE ports Out-of-band 10/100 Ethernet management port Standard SNMP Fibre Alliance MIB v3.0, MIB-II, RMON groups 1 (statistics), 2 (history), 3 (alarms) and 9 (events), McDATA MIBs Full Command Line Interface (CLI) via telnet and/or console port

Internet Storage Name Service (iSNS)

Directory services for storage devices
Interoperates with existing Fibre Channel SNS
SNMP Support

Power Requirements

U.S./Japan:	nominal 100/120 VAC, 50 to 60 Hz
Europe/Australia:	nominal 220/240 VAC, 50 to 60 Hz

Power Consumption

Dual redundant power supplies and fans, each with maximum power consumption of 250 watts

Power:	190 watts

Environmental Requirements

Temperature:	41¡ to 104¡ F (5¡ to 40¡C)
Humidity:	20% to 85% non-condensing
Heat Output:	650 BTU/hr

Size and Weight

Height:	1.66 in (42.2 mm)
Width:	16.9 in (429.3 mm)
Depth:	25.425 in (645.8 mm)
Weight:	25 lb (11.4 Kg)

Regulatory Compliance

Meets safety and emissions requirements
CB, CE, ULcUL, UL AR +S, GS, GOST, NOM / NYCE, AUS/NZ, FCCA, IECS 003, MIC, VCCI, CCC, BSMI

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