New Brocade 10-port and 20-port 8Gb SAN Switch Modules, and Brocade 8Gb SFP+ SW Optical Transceiver for IBM BladeCenter

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At a glance

The Brocade 10-port and 20-port 8Gb SAN Switch Modules for IBM® BladeCenter® deliver embedded Fibre Channel switching with the industry's fastest Fibre Channel throughput performance (8 Gb).

The 8Gb SFP+ SW Optical Transceiver is a new high-speed device to support IBM BladeCenter systems.

Overview

Blades have made inroads into enterprise data centers by delivering higher density with a lower footprint and reduced costs for power and cooling compared to traditional rack servers. Now with multicore environments, there is an increased need for faster I/O such as 8 Gb Fibre Channel.

Brocade 10-port and 20-port 8Gb SAN Switch Modules for IBM BladeCenter

The Brocade 10-port and 20-port 8Gb SAN Switch Modules for IBM BladeCenter deliver embedded Fibre Channel switching with the industry's fastest Fibre Channel throughput performance (8 Gb). This latest iteration of Fibre Channel speeds can deliver business benefits in virtually any server / storage workload, such as e-mail and database. The switches can be hot-plugged into the BladeCenter chassis, thereby helping keep your operations running. Because the switches are integrated, they free up rack space, reduce cabling, and have no need for SFP modules on the host side. The resulting savings is enough to cover much of your infrastructure cost, for example the BladeCenter chassis. The accompanying management application enables you to set up and deploy the switches quickly, while integration into IBM Director ensures that your management costs are kept optimized.

Brocade Enterprise 20-port 8Gb SAN Switch Module

The Brocade Enterprise 20-port 8Gb SAN Switch Module comes with Brocade's latest SAN management software to improve your SAN fabric management at a lower cost. This switch with included software will greatly benefit those customers who have Brocade SANs and are planning to upgrade their networks to the higher performance capability. The Brocade tool set includes Server Application Optimization, Adaptive Networking, Enterprise Group Management, Fabric Watch, ISL Trunking, Advanced Performance Monitoring, and Extended Fabric.

Function benefits:
• Server Application Optimization -- Allows Virtual Machine QoS, Authentication, and Monitoring from adapter through SAN to allow greater utilization of VMs per server blades
• Adaptive Networking -- Leverages device-to-device QoS bandwidth, Ingress Rate Limiting for slow storage devices, and Traffic Isolation to manage performance across interswitch links
• Enterprise Group Management -- Enables centralized group management of Brocade fabrics (downloads, configurations ...) when using Brocade Data Center Fabric Manager (DCFM) software
• Fabric Watch -- Monitors and creates alerts based on the health of switch and SAN fabric elements such as link failure, CRC, and performance thresholds
• ISL Trunking -- Combines up to six ISLs into a single, logical 96 Gbps full duplex trunk with greater performance and reliability
• Advanced Performance Monitoring -- Provides end-to-end visibility into fabric performance for simplified SAN planning, tuning, and management
• Extended Fabric -- Extends Fibre Channel links beyond traditional distance limitations to over 400 km for business continuity solutions

**Brocade 8Gb SFP+ SW Optical Transceiver**

This 8 Gb Fibre Channel SFP+ optical transceiver is a new high-speed device for IBM BladeCenter systems.

**Warranty:**

One year, Customer Replaceable Unit (CRU), limited warranty

**Key prerequisites**

IBM BladeCenter E, BladeCenter H, or BladeCenter HT chassis

**Planned availability date**

- September 18, 2009
  - Brocade 20-port 8Gb SAN Switch Module for IBM BladeCenter (44X1920)
  - Brocade 10-port 8Gb SAN Switch Module for IBM BladeCenter (44X1921)
  - Brocade 8Gb SFP+ SW Optical Transceiver (44X1962)
- October 15, 2009
  - Brocade Enterprise 20-port 8Gb SAN Switch Module for IBM BladeCenter (42C1828)

**Description**

BladeCenter continues to be a leader in the industry in delivering high levels of function and integration.

**Brocade 10-port and 20-port 8Gb SAN Switch Modules**

The Brocade 10- and 20-port 8Gb SAN Switch Modules for IBM BladeCenter deliver embedded Fibre Channel switching with the industry's fastest Fibre Channel throughput performance (8 Gb). This latest iteration of Fibre Channel speeds can deliver business benefits in virtually any server / storage workload, such as e-mail and database. The switches can be hot-plugged into the BladeCenter chassis, thereby helping keep your operations running. Because the switches are integrated, they free up rack space, reduce cabling, and have no need for SFP modules on the host side. The resulting savings is enough to cover much of your infrastructure cost, for example the BladeCenter chassis. The accompanying management application
enables you to set up and deploy switches quickly, while integration into IBM Director ensures that your management costs are kept optimized.

**Brocade Enterprise 20-port 8Gb SAN Switch Module**

The Brocade Enterprise 8Gb 20-port SAN Switch Module comes with Brocade's latest SAN management software to improve your SAN fabric management at a lower cost. This switch with included software will greatly benefit those customers who have Brocade SANs and are planning to upgrade their networks to the higher performance capability. The Brocade tool set includes Server Application Optimization, Adaptive Networking, Enterprise Group Management, Fabric Watch, ISL Trunking, Advanced Performance Monitoring, and Extended Fabric.

Function benefits:

- **Server Application Optimization** -- Allows Virtual Machine QoS, Authentication, and Monitoring from adapter through SAN to allow greater utilization of VM's per server blades
- **Adaptive Networking** -- Leverages device-to-device QoS bandwidth, Ingress Rate Limiting for slow storage devices, and Traffic Isolation to manage performance across interswitch links
- **Enterprise Group Management** -- Enables centralized group management of Brocade fabrics (downloads, configurations ...) when using Brocade Data Center Fabric Manager (DCFM) software
- **Fabric Watch** -- Monitors and creates alerts based on the health of switch and SAN fabric elements such as link failure, CRC, and performance thresholds
- **ISL Trunking** -- Combines up to six ISLs into a single, logical 96 Gbps full duplex trunk with greater performance and reliability
- **Advanced Performance Monitoring** -- Provides end-to-end visibility into fabric performance for simplified SAN planning, tuning, and management
- **Extended Fabric** -- Extends Fibre Channel links beyond traditional distance limitations to over 400 km for business continuity solutions

**Brocade 8Gb SFP+ SW Optical Transceiver**

This new 8 Gb high-speed Fibre Channel device supports BladeCenter servers.

<table>
<thead>
<tr>
<th>Product number</th>
<th>Description</th>
<th>Part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brocade 20-port 8Gb SAN Switch Module for IBM BladeCenter</td>
<td>44X1920</td>
<td></td>
</tr>
<tr>
<td>Brocade 10-port 8Gb SAN Switch Module for IBM BladeCenter</td>
<td>44X1921</td>
<td></td>
</tr>
<tr>
<td>Brocade 8Gb SFP+ SW Optical Transceiver</td>
<td>44X1962</td>
<td></td>
</tr>
<tr>
<td>Brocade Enterprise 20-port 8Gb SAN Switch Module for IBM BladeCenter</td>
<td>42C1828</td>
<td></td>
</tr>
</tbody>
</table>

**Terms and conditions**

This product is available from IBM under the terms and conditions for purchase.
Technical information

Physical specifications
Brocade 10-port (44X1921), 20-port (44X1920), and Enterprise 20-port (42C1828)
8Gb SAN Switch Modules:

- Approximate height: 29.5 mm (1.16 in)
- Approximate width: 118.1 mm (4.65 in)
- Approximate depth: 276.4 mm (10.88 in)

Brocade 8Gb SFP+ SW Optical Transceiver (44X1962):

- Approximate height: 9 mm (0.35 in)
- Approximate width: 14 mm (0.55 in)
- Approximate depth: 57 mm (2.44 in)

Operating environment

- Temperature and altitude:
  - Operating:
    -- 10 to 52 degrees C (50 to 125.6 F) at an altitude of 0 to 914 m (0 to 3,000 ft)
    -- 10 to 49 degrees C (50 to 120.2 F) at an altitude of 0 to 3,000 m (0 to 10,000 ft)
  - Non-operating:
    -- 40 to 65 degrees C (-40 to 149 F) at an altitude of 0 to 12,000 m (0 to 39,370 ft)
- Humidity:
  - Operating: 8% to 80%, noncondensing
  - Non-operating: 5% to 80%, noncondensing

Agency approvals
Safety certifications

- US: UL 60950-1 Listed Accessory Report
- Canada: CAN/CSA C22.2 No. 60950-1-03
- IEC 60950-1/EN 60950-1 CB Report and Certificate
- GOST R IEC 60950-2002 is voluntary and routinely requested by IBM-Russia to facilitate importation.

EMC/EMI Certifications

- FCC - Title 47 CFR Part 15 Subpart B
- Canada - ICES-003
- Australia/New Zealand - C-Tick - AS/NZS CISPR 22
- VCCI - Japan VCCI April 2003
- MIC Notice No. 2001-115 and No. 2001-116 (Korea)
- GOST 29216-91 (Russia)
- CISPR 22 Class A
- Taiwan BSMI " CNS 13438
- Turkey Communiqué No. 2004/9 and No. 2004/22
- Saudi Arabia - EMC.CVG, 28 October 2002
• China - GB 9524:1998

Energy Star compliance
Is this product Energy Star Compliant? No

Note: The Energy Star emblem does not represent EPA endorsement of any product or service.

Hardware requirements
IBM systems: These products are supported on the following IBM platforms.

<table>
<thead>
<tr>
<th>System name</th>
<th>Machine type</th>
</tr>
</thead>
<tbody>
<tr>
<td>BladeCenter E</td>
<td>8677</td>
</tr>
<tr>
<td>BladeCenter H</td>
<td>8852</td>
</tr>
<tr>
<td>BladeCenter HT</td>
<td>8740, 8750</td>
</tr>
</tbody>
</table>

Non-IBM systems: None.

Software requirements
None; uses the BC operating system.

Compatibility
Use with BladeCenter Blade Server systems. Supported with 8677, 8740, 8750, and 8852 blade systems.

Note: Some configurations may not be compatible.

Limitations
None

Planning information
Additional cable orders required: No
Approximate installation time: 10 minutes

Packaging
One box
Brocade 10-port (44X1921), 20-port (44X1920), and Enterprise 20-port (42C1828) 8Gb SAN Switch Modules:
• Single box (HxDxW): 121 mm (4.75 in) x 349 mm (13.75 in) x 171 mm (6.75 in)
• Weight: 1.81 kg (4 lb)

Shipment group
• Brocade 10- or 20-port 8Gb SAN Switch Module
• Support CD
• Important Notices flyer

Brocade 8Gb SFP+ SW Optical Transceiver (44X1962)
• Single box (HxDxW): 229 mm (9.0 in) x 127 mm (5.0 in) x 31.8 mm (1.25 in)
• Weight: 0.04 kg (0.1 lb)
Shipment group

- Brocade 8 Gb SFP+ SW Optical Transceiver

Security, auditability, and control

This product uses the security and auditability features of the host hardware, software, and application software.

Terms and conditions

Features and options only

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Installable</td>
<td>Yes</td>
</tr>
<tr>
<td>Customer Setup</td>
<td>Yes</td>
</tr>
<tr>
<td>Warranty Period*</td>
<td>1 year*</td>
</tr>
<tr>
<td>Service Type (CCE/CCR/CRU)</td>
<td>CRU</td>
</tr>
<tr>
<td>Maintenance Agreement</td>
<td>No</td>
</tr>
<tr>
<td>Optional Upgrade</td>
<td>No</td>
</tr>
<tr>
<td>Licensed Programs</td>
<td>No</td>
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</tbody>
</table>

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IBM may release changes to the machine code. IBM plans to make the machine code changes available for download from the IBM BladeCenter technical support Web site

http://www-304.ibm.com/systems/support/

If the machine does not function as warranted and your problem can be resolved through your application of downloadable machine code, you are responsible for downloading and installing these designated machine code changes as IBM specifies. If you would prefer, you may request IBM to install downloadable machine code changes; however, you may be charged for that service.

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Announcement countries

All European, Middle Eastern, and African countries.

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