New IBM BNT RackSwitch models and associated options

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At a glance

IBM® BNT RackSwitch G8000F (7309-CFC)
IBM BNT RackSwitch G8000DC (7309-CD8)
• Forty-eight 1 Gb ports and up to four 10 Gb SFP+ port switch optional uplink modules
• Redundant power supplies and fans
• Available front-to-rear cooling (Model CFC) or with DC power supplies (Model CD8)
IBM BNT RackSwitch G8124F (7309-BF9)
IBM BNT RackSwitch G8124DC (7309-BD5)
IBM BNT RackSwitch G8124ER (7309-BR6)
IBM BNT RackSwitch G8124EF (7309-BF7)
• Twenty-four 10 Gb SFP+ ports in a 1 RU form factor
• Redundant power supplies and fans
• Available rear-to-front cooling (Model BR6) or front-to-rear cooling (Models-BF9, BD5, and BF7)
• Select models available with DC power supplies (Model BD5)
• Select models with enhanced processor and system memory (Models BR6 and BF7)

Overview

IBM BNT RackSwitch G8000

The G8000 RackSwitch is a 1 Gb/10 Gb Ethernet switch specifically designed for the data center, providing speed, intelligence, and interoperability on a proven platform. The G8000 RackSwitch offers forty-eight Gigabit Ethernet ports and up to four 10 Gigabit Ethernet ports in a 1 RU footprint. Designed with top performance in mind, the G8000 RackSwitch provides line-rate, high-bandwidth switching, filtering, and traffic queuing without delaying data, and large data-center-grade buffers to keep traffic moving.
IBM BNT RackSwitch G8124

The G8124 RackSwitch offers twenty-four 10 Gigabit Ethernet ports in a 1 RU footprint. Similar to the G8000, the G8124 RackSwitch is designed with top performance in mind, providing line-rate, high-bandwidth switching, filtering, and traffic queuing without delaying data, and featuring large data-center-grade buffers to keep traffic moving. Redundant power and fans along with numerous high-availability features ensure that the G8124 RackSwitch is always available for business-sensitive traffic. The G8124E RackSwitch comes standard with enhanced processors and additional memory.

Planned availability date

May 2, 2011

Note: Some products may not be available in your country.

Description

Benefits of IBM RackSwitch G8000

- Forty-eight 1 GbE ports and up to four 10 GbE SFP+ ports in an aggregation switch with unmatched line-rate Layer 2/3 performance at a very attractive price.
- Unlike most rack equipment that cools from side to side, the G8000 RackSwitch has rear-to-front or front-to-rear airflow, which allows for flexible mounting of the switch in a server rack or datacom rack.
- Redundant fans and power supplies ensure high availability.
- Variable speed fans automatically reduce power consumption.
- For network virtualization, VMready software on the switch simplifies configuration and improves security in virtualized environments. VMready automatically detects VM movement and reconfigures VM network policies across VLANs to keep the network up and running without impacting traffic or performance. It works with all leading VM providers such as VMware, Citrix Xen, and Microsoft®.
- Seamless, standards-based integration into existing Cisco and other networks reduces downtime and learning curve.

Performance

- Single-switch ASIC design
- Full line-rate performance
- 176 Gbps (full duplex) switching architecture

Hardware features

Interfaces

- Forty-four 10/100/1000 RJ45 ports
- Four 1 GbE SFP ports
- Up to four 10 GbE SFP+ ports with optional uplink modules
- One fixed mini-USB console port for configuration and code changes via thumb drive, or boot from USB drive with new code

Model-specific features

7309-CFC 48-port 1 GbE/10 GbE switch with front-to-rear airflow while 7309-CD8 G8000 comes standard with dc power and front-to-rear airflow include:

- Redundant power and fans (dc power in 7309-CD8)
• Rack mount ears (iDataPlex rack mount kit option available for Model CFC)
• Cable set

Benefits of IBM BNT RackSwitch G8124

• The G8124 offers twenty-four SFP+ ports that operate at 10 GbE or 1 GbE speeds.
• All ports are nonblocking 10 GbE with low deterministic latency of less than 0.7 microseconds.
• Unlike most rack equipment that cools from side to side, the G8124 RackSwitch has two airflow options (front-to-rear or rear-to-front), which allow for flexible mounting of the switch in a server rack or datacom rack.
• Variable speed fans automatically reduce power consumption.
• Seamless, standards-based integration into existing Cisco and other networks helps reduce downtime and learning curve.
• For network virtualization, VMready software on the switch helps reduce configuration complexity while significantly improving security levels in virtualized environments.
  – Automatically detects VM movement from one physical server to another.
  – Instantly reconfigures each VM’s network policies across VLANs to keep the network up and running without interrupting traffic or impacting performance.
  – Works with all leading VM providers such as VMware, Citrix Xen, and Microsoft.

Performance

• 100% line-rate performance
• 480 Gbps nonblocking switching throughput (full duplex)

G8124ER and G8124EF have an enhanced processor and additional system memory.

Hardware features

Interface options

• Twenty-four SFP+ ports
• Two 10/100/1000 Ethernet RJ45 ports for management
• One mini-USB console port for serial access
• Server-like port orientations that enable short and simple cabling

Model-specific features

7309-BF9 and 7309-BF7 G8124 24-port 10 GbE switches with front-to-rear airflow include:

• Rack mount ears (iDataPlex rack mount kit option for Model BF7 and BF9)
• Serial cable

7309-BD5 G8124DC 24-port 10 GbE switch with front-to-rear airflow includes:

• Rack ears
• Serial cable

7309-BR6 G8124 24-port 10 GbE switch with rear-to-front airflow includes:

• Rack mount ears
• Serial cable
### Product number

Note: All models are MTMs.

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### Publications

None

### Services

**Global Technology Services**

IBM services include business consulting, outsourcing, hosting services, applications, and other technology management.

These services help you learn about, plan, install, manage, or optimize your IT infrastructure to be an on-demand business. They can help you integrate your high-speed networks, storage systems, application servers, wireless protocols, and an array of platforms, middleware, and communications software for IBM and many non-IBM offerings. IBM is your one-stop shop for IT support needs.

For details on available services, contact your IBM representative or visit

http://www.ibm.com/services/

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http://www.ibm.com/services/continuity

For details on education offerings related to specific products, visit

Select your country, and then select the product as the category.

**Technical information**

**Physical specifications**

**IBM BNT RackSwitch G8000**

Dimensions

- Height: 1.75 in (4.45 cm); 1U
- Width: 17.3 in (43.9 cm)
- Depth: 15.0 in (44.5 cm)
- Weight: 11.99 lb (5.45 kg)

Rack installation kit

- iDataPlex rack mount kit option available with F models
- Two-post rack ears included with F and DC models

LEDs

- System LEDs to indicate status
- Stacking LEDs to indicate Master/Member

Airflow

- Front-to-rear cooling
- Redundant fans with variable speed to reduce power draw

Power

- Redundant power supply modules, operating at 120 W, 50-60 Hz, 100-240 V ac auto switching per module.
- DC power supply modules operating at 120 W, input voltage ranging from 42 V dc to 60 V dc per module

**IBM BNT RackSwitch G8124**

Dimensions

- Height: 1.75 in (4.45 cm); 1U
- Width: 17.3 in (43.9 cm)
- Depth: 15.0 in (38.1 cm)
- Weight: 14.08 lb (6.40 kg)

Rack installation kit

- Two-post rack ears included with R, F, and dc models
- Rack kit for iDataPlex Option available with F models

LEDs

- System LEDs to indicate status
- Stacking LEDs to indicate Master/Member

Airflow

- Front-to-rear or rear-to-front cooling
• Redundant variable speed fans for reduced power draw

Power
• Dual load-sharing hot swap internal power modules, 50-60 Hz, 100-240 V ac auto-switching per module.
• The dc-powered G8124 has dual load-sharing internal dc-dc power modules, input voltage ranging from 42 V dc to 60 V dc per module.
• Typical power consumption of 116 - 170 W

Operating environment
• Operating temperature: 32° F to 113° F (0° C to 45° C)
• Storage temperature: -40° F to 158° F (-40° C to 70° C)
• Operating altitude: up to 10,000 ft (3,049 m)
• Non-operating altitude: up to 16,000 ft (4,877 m)
• Relative humidity operating: 10% to 85% (noncondensing)
• Relative humidity nonoperating: 0% to 95% (noncondensing)

Acoustic noise - Less than 65 dB

Standards

Safety Certifications
• UL60950-1
• CAN/CSA 22.2 No.60950-1
• EN 60950-1
• IEC60950-1
• NOM NYCE 019
• GOST R MEK 60950-1
• GB4943-2001

Electromagnetic Compatibility Certifications
• FCC 47CFR Part 15 Class A
• EN 55022 Class A
• ICES-003 Class A
• VCCI Class A
• AS/NZS CISPR 22 Class A
• CISPR 22 Class A
• EN 55024
• EN 300386
• CE

Environmental
• Reduction of Hazardous Substances (ROHS) 6

The IBM Ethernet products in this announcement are not approved to be sold for connecting to the public telecommunication networks in all countries.

Homologation certificates and telecommunication certificates and approvals are in place, or are not required, for some countries. For any country listed below, IBM is not currently in a position to ship to that country due to homologation and or telecommunication activities not being completed for that country. IBM continues
working to obtain approval to connect to public telecommunication networks in the currently restricted countries. Availability will be published in the future.

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**Note:** This product may not be certified in your country for connection by any means whatsoever to interfaces of public telecommunications networks. Further certification may be required by law prior to making any such connection. Contact IBM for additional information.

**Supported servers**

The IBM BNT RackSwitches are designed to support network connectivity for the following servers:

- IBM Power Systems™
- IBM System p® servers
- IBM System i® servers
- IBM System x® servers

**Planning information**

**Customer responsibilities**

Upgrades

- Upgrade firmware via serial or TFTP
- Dual software images

These switches are designated as customer setup (CSU). CSU allowance is one day.

**Cable orders**

None

**Security, auditability, and control**

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communications facilities.

**Global Technology Services**

Contact your IBM representative for the list of selected services available in your country, either as standard or customized offerings, for the efficient installation, implementation, and/or integration of this product.

**Terms and conditions**

To obtain copies of the IBM Statement of Limited Warranty, contact your reseller or IBM.
Warranty period

- Three years - Customer Replaceable Unit (CRU)

An IBM part or feature installed during the initial installation of an IBM machine is subject to a full warranty effective on the date of installation of the machine. An IBM part or feature which replaces a previously installed part or feature assumes the remainder of the warranty period for the replaced part or feature. An IBM part or feature added to a machine without replacing a previously installed part or feature is subject to a full warranty effective on its date of installation. Unless specified otherwise, the warranty period, type of warranty service, and service level of a part or feature is the same as the machine it is installed.

Warranty service

If required, IBM provides repair or exchange service, depending on the type of warranty service specified below for the machine. IBM will attempt to resolve your problem over the telephone or electronically by access to an IBM website. Certain machines contain remote support capabilities for direct problem reporting, remote problem determination, and resolution with IBM. You must follow the problem determination and resolution procedures that IBM specifies. Contact your local IBM representative or your reseller for country- and location-specific information.

The type of service is Customer Replaceable Unit (for example, keyboard, mouse, speaker, memory, or hard disk drive) Service and On-site Service.

Customer Replaceable Unit (CRU) Service

IBM provides a replacement CRU to you for you to install. CRU information and replacement instructions are shipped with your machine and are available from IBM at any time on your request. A CRU is designated as being either a Tier 1 (mandatory) or a Tier 2 (optional) CRU. Installation of Tier 1 CRUs, as specified in this announcement, is your responsibility. If IBM installs a Tier 1 CRU at your request, you will be charged for the installation. You may install a Tier 2 CRU yourself or request IBM to install it, at no additional charge, under the type of warranty service designated for your Machine.

Based upon availability, a CRU will be shipped for next-business-day (NBD) delivery. IBM specifies in the materials shipped with a replacement CRU whether a defective CRU must be returned to IBM. When return is required, return instructions and a container are shipped with the replacement CRU, and you may be charged for the replacement CRU if IBM does not receive the defective CRU within 15 days of your receipt of the replacement.

The following parts or features have been designated as Tier 1 CRUs:

- Switch chassis
- Serial cable
- Transceivers
- Rail kit plus options

International Warranty Service (IWS)

IWS is available in selected countries or regions.

The warranty service type and the service level provided in the servicing country may be different from that provided in the country in which the machine was purchased.

Under IWS, warranty service will be provided with the prevailing warranty service type and service level available for the IWS-eligible machine type in the servicing country, and the warranty period observed will be that of the country in which the machine was purchased.
To determine the eligibility of your machine and to view a list of countries where service is available, visit


For more information on IWS, refer to Services Announcement ZS01-0168, dated September 25, 2001.

**Licensing**

Programs included with this product are licensed under the terms and conditions of the License Agreements that are shipped with the system.

**IBM hourly service rate classification**

Two

**Field-installable features**

Yes

**Model conversions**

No

**Machine installation**

Customer setup. Customers are responsible for installation according to the instructions IBM provides with the machine.

**Licensed Machine Code**

IBM Machine Code is licensed for use by a customer on the IBM machine for which it was provided by IBM under the terms and conditions of the IBM License Agreement for Machine Code, to enable the machine to function in accordance with its specifications, and only for the capacity authorized by IBM and acquired by the customer. You can obtain the agreement by contacting your IBM representative or visiting


IBM may release changes to the Machine Code. IBM plans to make the Machine Code changes available for download from the IBM System x technical support website

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.

**Prices**

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**Announcement countries**

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**Corrections**

*(Corrected on October 13, 2011)*
Availability information for Brazil was revised.

*(Corrected on April 6, 2011)*
Safety Certification information revised.