IBM System Networking RackSwitch G8316

40 Gb 16-port Ethernet aggregation switch designed for the data center

Highlights

- Optimized for applications requiring high bandwidth and low latency
- Sixteen 40 Gb QSFP+ ports in a 1U form factor
- Up to 64 10 Gb SFP+ ports to form a high-density 10 Gb cluster
- Powerful control plane providing higher performance to aggregate multiple racks of servers
- 1.28 Tbps nonblocking throughput

The IBM System Networking RackSwitch G8316 is a 40 Gigabit Ethernet (GbE) aggregation switch designed for the data center, providing speed, intelligence and interoperability on a proven platform.

The RackSwitch G8316 offers up to 16×40 GbE ports, which can also be used as a high-density 10 GbE switch, with 1.28 Tbps—in a 1U footprint. The G8316 provides a cost-efficient way to aggregate multiple racks of servers compared to other expensive core switches, while allowing massive scalability for your data center network. It is an ideal aggregation layer switch when used with the 10/40 GbE RackSwitch G8264 at the access layer.

Designed with top performance in mind, the RackSwitch G8316 provides line-rate, high-bandwidth switching, filtering, and traffic queuing without delaying data. Large data center grade buffers keep traffic moving. Hot-swappable, redundant power and fans along with numerous high availability features enable the RackSwitch G8316 to be available for business-sensitive traffic.

The low latency offered by the RackSwitch G8316 makes it ideal for latency-sensitive applications such as high performance computing clusters and financial applications. The G8316 supports the newest protocols—including Data Center Bridging/Converged Enhanced Ethernet (DCB/CEE) for support of Fibre Channel over Ethernet (FCoE)[1].

IBM System Networking RackSwitch G8316 at a glance

Performance	100% line rate performance, less than 1us latency 1.28 Tbps nonblocking switching throughput (full duplex) 960 Mpps
Hardware features	
Models	RackSwitch G8316R [rear-to-front airflow] (8036ARX) RackSwitch G8316F [front-to-rear airflow] (8036AFX)
Interface options	16x40 Gb QSFP+ ports Up to 64x10 Gb SFP+ ports with optional breakout cables
Dimensions	17.3 in. wide, 19.0 in. deep, 1U high
Weight	9.98 kg (22 lb)
Power	Dual load-sharing hot-swap internal power modules, 50 - 60 Hz, 100 - 240 V ac autoswitching per module. Typical power consumption of 330 W
Warranty	One-year next business day replacement with phone support and software upgrades Service upgrades and extensions available
Environmental specifications	
Temperature	Ambient operating: 0ºC to + 40ºC
Relative humidity	Noncondensing, operating 10% to 90%
Altitude	Operating 3,050 m (10,000 ft)
Heat dissipation	1127 BTU/hour (typical)
Mean time between failures (MTBF)	165,990 hours @ 40°C[2]
Software features: For details on the G8316 comprehensive software feature list, refer to the IBM System Networking Operating System datasheet at **ibm.com**/systems/networking/software/index.html	
Associated Options	
Software	IBM RackSwitch G8316 1-year software upgrade (90Y9476)
QSFP+ Options	IBM BNT QSFP+ 40GBASE-SR4 Transceiver (49Y7884) 1m IBM Passive QSFP+ DAC Breakout Cable (49Y7886) 3m IBM Passive QSFP+ DAC Breakout Cable (49Y7887) 5m IBM Passive QSFP+ DAC Breakout Cable (49Y7889) 1m IBM Passive QSFP+ to QSFP+ Cable (49Y7890) 3m IBM Passive QSFP+ to QSFP+ Cable (49Y7891)
Optical cables	10m IBM Passive QSFP+ MTP Optical Cable (90Y3519) 30m IBM Passive QSFP+ MTP Optical Cable (90Y3521)
Rack kit	IBM BNT 19-inch flexible 4 Post Rail Kit (49Y4284)

For more information

To learn more about the IBM System Networking RackSwitch G8316, visit: **ibm.com**/systems/x/hardware/options or **ibm.com**/systems/networking/switches/rack.html, or contact your IBM marketing representative or IBM Business Partner.

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[1] FCoE currently available on 10 G ports

[2] MTBF is calculated using the Telcordia Technologies Reliability Prediction Procedure for Electronic Equipment, (SR-332 issue 2) Parts Count (method 1 case 1) failure rate data.

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