

# RackSwitch G8000

## Rackable 1/10G Aggregation Switch

### Product Brief

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The Trusted Name in Blade Server Networking

*The Blade Network Technologies' RackSwitch™ G8000 is an Ethernet switch specifically designed for the data center, providing a Virtual, Cooler and Easier network solution.*

*The RackSwitch G8000 is "Virtual"- for the first time providing rack-level virtualization of networking interfaces for a rack full of server and storage systems – decoupling the scaling of networking and computing capacity via on-switch SmartConnect™ software. VMReady™ extensions enable movement of virtual machines—providing matching movement of VLAN assignments, ACLs, and other networking and security settings. Using patent-pending VMReady technology, the trusted zone for the virtual machine is never compromised.*

*The RackSwitch G8000 is "Cooler"- implementing server-like directional cooling to maximize datacenter layout and provisioning. Its superior airflow design complements the hot-aisle and cold-aisle data center cooling model.*

*The RackSwitch G8000 is "Easier" with server-oriented provisioning via point-and-click management interfaces, along with BladeHarmony™ Manager for updating large groups of switches.*

*The RackSwitch G8000 offers 48 Gigabit Ethernet ports and up to four 10 Gigabit Ethernet ports in a 1 RU footprint. Designed with top performance in mind, the RackSwitch G8000 provides line-rate, high-bandwidth switching, filtering, and traffic queuing without delaying data, and large data-center grade buffers to keep traffic moving. Redundant power and fans along with numerous high availability features ensure that the RackSwitch G8000 is always available for business-sensitive traffic.*



Figure 1 RackSwitch G8000

## Product Benefits

- 44 x 1GbE RJ45 ports, four 1G SFP ports and up to four optional 10GbE SFP+ or CX4 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 RackSwitch G8000 has front-to-rear or rear-to-front airflow which allows for flexible mounting of the switch in a server rack or datacom rack.
- Variable speed fans automatically reduce power consumption.
- Simplified configuration with ISCLI (Cisco®-like CLI).
- Seamless, standards-based integration into existing Cisco and other networks helps reduce downtime and learning curve.
- Cluster virtualization and single IP allow system administrators to configure multiple switches as one, saving valuable time, IP addresses, and resources.



For More Information:  
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## Business Benefits

- **Reduced TCO** - Small and medium business customers as well as large enterprises can lower their overall TCO with affordable 1Gb and 10Gb Ethernet networking at an affordable price.
- **Unique airflow design** improves cooling efficiency which helps air conditioning costs by reducing the need for overcooling that is frequently required by the recirculation and heat issues associated with side-cooled switches.
- **Interoperability**—Software is based on Internet standards for optimal interoperability with Cisco or other vendors' networks.
- **Availability** – Built-in (standard) redundant fans, redundant power supplies, and HA software features.
- **Easy Server Provisioning**— ServerMobility™ enables simple bare-metal provisioning of servers and repurposing of standby servers.

## RackSwitch G8000 at a Glance

### Performance

- Full Line rate performance
- 176Gbps (full duplex) switching architecture

### Hardware Features

#### Models

- RackSwitch G8000F (for front-to-rear cooling)
- RackSwitch G8000R (for rear-to-front cooling)

#### Interface Options

- 44 10/100/1000 + 4 1G SFP ports
- Up to 4 10GbE SFP+ (dual port modules)
- Up to 4 10GbE CX-4 ports (dual port modules)
- 1 fixed mini USB console port

#### Dimensions

- 17.3" wide, 15" deep, 1 RU high

#### Rack Installation Kit

- Versatile 4-post mounting options for both server rack and datacom rack
- Can be mounted vertically or horizontally

\* Available with optional future software release

### 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 to reduce power draw

### Power

- Dual redundant power supplies
- 124W, 50-60Hz, 100-240 VAC auto switching per module

### Cable Management

- Intuitive LEDs for port identification and cable management
- Server-like port orientations enables short and simple cabling

### Software Features

#### Security

- Port-X Security based on 802.1x
- RADIUS
- TACACS+
- Wire Speed Filtering
- Flexible ACL combinations– L2-L4 criteria: Source and Destination MAC, IP, TCP/UDP Ports
- SSH v1, v2
- HTTPS Secure BBI
- Port Mirroring
- MAC Address move notification

#### VLANs

- Port-based VLAN
- 4096 VLAN ids supported
- 1024 Active VLANs (802.1Q)
- PVRST+
- Private VLAN Edge

#### Trunking

- LACP
- Static Trunks (EtherChannel)
- Configurable Trunk Hash algorithm

#### Spanning Tree

- Multiple Spanning Tree (802.1s)
- Rapid Spanning Tree (802.1w)
- Fast Uplink Convergence

## Quality of Service

- QoS 802.1p
- DSCP
- Weighted Round Robin
- Metering\*
- 4MB Buffers for Queuing

## Routing Protocols

- 128 Static Routes
- RIP v1/v2\*
- OSPF\*
- BGP\*
- IPv6\*

## High Availability

- Uplink Failover Detection
- Virtual Router Redundancy support (VRRP)\*

## Virtualization

- Server Mobility™ with adaptive network\*
- Virtual switch stacking with up to 8 switches\*

## Clients

- BLADEHarmony Manager
- isCLI (Cisco-like)
- Browser-based client, SSH, or Telnet

## Standard protocols

- SNMP v1-3
- RMON
- Secondary NTP Support
- Accept DHCP
- LLDP\*
- IGMP v1, v2, v3 Snooping
- 16K MAC Table
- 9K Jumbo Frames
- 802.3X Flow Control

## Upgrades

- Upgrade firmware via serial or TFTP
- Dual software images

\* Available with optional future software release

## Ordering Information

Model Number	Description
<b>Switches</b>	
BN-8000F-BDL	G8000 48-port GbE Switch with Front-to-Rear airflow with: Two power cords Rack mount ears Serial cable
BN-8000R-BDL	G8000 48-port GbE Switch with Rear-to-Front airflow with: Two power cords Rack mount ears Serial cable
<b>Uplink Modules</b>	
BN-8000-XGE-CX4	G8000 10GbE CX-4 Module
BN-8000-XGE-SFPP	G8000 XGE SFP+ Module
<b>Pluggable Optics</b>	
BN-CKM-S-T	SFP 1000Base-T Copper Transceiver
BN-CKM-S-SX	SFP 1000Base-SX Short Range Fiber Transceiver
BN-CKM-S-LX	SFP 1000Base-LX Long Range Fiber Transceiver
BN-CKM-SP-SR	SFP+ 10GBase-SR Short Range Transceiver
<b>Rail Kits</b>	
BN-4POST-RLS	19" EIA 4-Post Rail Kit

## Regulatory Compliance

Country	Agency
Austria	CE
Belgium	CE
Canada	CSA, ICES-003
China	CCC
Denmark	CE
Finland	CE
France	CE
Germany	TUV-GS, CE
Italy	CE
Japan	VCCI (A)
Korea	MIC (RRL)
Luxembourg	CE
Mexico	NOM-NYCE
Netherlands	CE
Poland	CE
Portugal	CE
Slovakia	CE
Slovenia	CE
Spain	CE
Sweden	CE
Switzerland	CE
U.K., Ireland	CE
United States	FCC (A), UL

## Services

BLADE Network Technologies' BLADEHarmony suite of services provides operational support and consulting for planning, deploying and managing your datacenter networking infrastructure. Service and support are available through certified partners. Contact [services@bladenetwork.net](mailto:services@bladenetwork.net) or visit <http://www.bladenetwork.net/services>

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