

# Brocade G620 Technical Specifications

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# Brocade G620 Technical Specifications

This document highlights the features and specifications for the Brocade G620 switch.

## System specifications

System component	Description
Enclosure	1U, nonport-side front-to-back exhaust airflow, power from back
Power inlet	C14
Power supplies	Dual, hot-swappable redundant power supplies with integrated system cooling fans
Fans	Three fans per power supply and fan assembly unit
Cooling	Port side to the nonport-side of the switch (nonport-side exhaust) and nonport-side to the port side (port-side exhaust)
System architecture	Nonblocking shared memory switch
System processors	Freescale T1022 CPU
Port-to-port latency	<700 nanoseconds with no contention (destination port is free)

## Fibre Channel

System component	Description
Fibre Channel ports	<p>48 SFP+ ports that support any combination of Short Wavelength (SWL) and Long Wavelength (LWL) or Extended Long Wavelength (ELWL) optical media.</p> <p>4 QSFP ports that support 32-Gbps QSFP transceivers.</p> <p>The SFP+ ports are capable of auto-negotiating to 4, 8, 16, or 32 Gbps speed depending on the SFP+ model and the minimum supported speed of the optical transceiver at the other end of the link.</p> <ul style="list-style-type: none"><li>4-, 8-, and 16-Gbps performance is enabled by 16-Gbps SFP+ transceivers provided the other end of the connection is minimum of 4 Gbps speed.</li><li>8-, 16-, and 32-Gbps performance is enabled by 32-Gbps SFP+ transceivers provided the other end of the connection is minimum of 8 Gbps speed.</li></ul> <p><b>NOTE</b> 2- and 4-Gbps transceivers are not supported.</p>
ANSI Fibre Channel protocol	FC-PH (Fibre Channel Physical and Signaling Interface standard)
Modes of operation	Fibre Channel Class 2 and Class 3
Fabric initialization	Complies with FC-SW-3 Rev. 6.6
FCIP (IP over Fibre Channel)	Complies with FC-IP 2.3 of FCA profile
Port Status	Bicolor LED (amber/green)

## Other

System component	Description
Serial console port	One three-wire (Tx, Rx, Gnd) UART serial port
Ethernet management port	One 1000Base-X / 100Base-TX port / 10Base-T
USB port	One external USB port

## LEDs

System component	Description
System power LED	One green system power status LED (upper) on the port side.
System status LED	One bicolor (green/amber) system status LED (lower) on the port side.
Ethernet port link LED	One link LED on the left of the RJ45 connector. Glows green for 1000 Mbps and amber for 100/10 Mbps.
Ethernet port activity LED	One activity LED on the right of the RJ45 connector.
Serial console port LED	The serial console port LEDs remain off at all times, even when a cable is inserted and the link is active.
FC port status LED	64 bicolor (green/amber) port status LEDs. One for each SFP+ port and four for each QSFP port on the switch.
Power supply and fan assembly status LED	One green power supply and fan assembly status LED on each power supply and fan assembly on the nonport-side of the switch.

## Other

System component	Description
Serial cable	RJ-45 console cable
RJ-45 to DB9 adapter	RJ-45 to DB9 for console cable
RJ-45 connector	Uses an RJ-45 connector for the serial port

## Weight and physical dimensions

Empty weight refers to the device with two power supply and fan assemblies installed but no SFP+ or QSFP transceivers.

Model	Height	Width	Depth	Weight (empty)	Weight (fully loaded)
Brocade G620 switch	4.39 cm	44.00 cm	35.56 cm	7.71 kg	8.53 kg
	1.73 inches	17.32 inches	14.00 inches	17.00 lb	18.80 lb

## Environmental requirements

Condition	Operational	Non-operational
Ambient temperature	0°C to 40°C (32°F to 104°F)	-25°C to 70°C (-13°F to 158°F)
Relative humidity (non-condensing)	10% to 85% at 40°C (104°F)	10% to 90% non-condensing
Altitude (above sea level)	0 to 3000 m (9,842 feet)	0 to 12000 m (39,370 feet)
Shock	20.0 G, 6 ms, half-sine wave	33.0 G, 11 ms, half-sine wave, 3G Axis
Vibration	0.5 G sine, 0.4 gms random, 5 - 500 Hz	2.0 G sine, 1.1 gms random, 5 - 500 Hz
Airflow	Maximum: 71.36 cmh (42 cfm) Nominal: 59.47 cmh (35 cfm)	N/A
Heat dissipation	Refer to the Power consumption table	N/A
Operating noise	Maximum: 65 dB	N/A

### Power supply specifications (per PSU)

Power supply model	Maximum output power rating (DC)	Input voltage	Input line frequency	Maximum input current	Input line protection	Maximum inrush current
XBR-G250WPSAC-F	250 W	100 - 240 VAC (nominal) 90 - 264 VAC (range)	50/60 Hz (nominal) 47 - 63 Hz (range)	3.5 A	Line fused	50 A peak @ 240 VAC for <10 ms, 10 ms - 150 ms, <15 A peak. 50 A peak @ 240 VAC at cold start for <10 ms. 15 A peak for cycles 10 ms - 150 ms, <3.5 A peak for >150 ms
XBR-G250WPSAC-R	250 W	100 - 240 VAC (nominal) 90 - 264 VAC (range)	50/60 Hz (nominal) 47 - 63 Hz (range)	3.5 A	Line Fused	50 A peak @ 240 VAC for <10 ms, 10 ms - 150 ms, <15 A peak. 50 A peak @ 240 VAC at cold start for <10 ms. 15 A peak for cycles 10 ms - 150 ms, <3.5 A peak for >150 ms

### Power consumption (typical configuration)

Model name	@100 VAC input	@200 VAC input	@48 VDC input	Minimum number of power supplies	Notes
Brocade G620 switch	1.93 A 192 W 655 BTU/hr	0.97 A 190 W 649 BTU/hr	N/A	1 (But, input current is for 1 PSU. Watts and BTUs/hr are with 2 PSUs).	Fully configured all ports with 25% traffic rate, fans at high speed, and input power +/- 5% tolerance.

### Power consumption (maximum configuration)

Model name	@100 VAC input	@200 VAC input	@48 VDC input	Minimum number of power supplies	Notes
Brocade G620 switch	2.07 A 204 W 696 BTU/hr	1.03 A 202 W 690 BTU/hr	N/A	2 (But, input current is for 1 PSU. Watts and BTUs/hr are with 2 PSUs).	Fully configured all ports with 100% traffic rate, fans at high speed, and input power +/- 5% tolerance.

### Power consumption (idle configuration)

Model name	@100 VAC input	@200 VAC input	@48 VDC input	Minimum number of power supplies	Notes
Brocade G620 switch	1.54 A 155 W 529 BTU/hr	0.77 A 154 W 526 BTU/hr	N/A	1 (But, input current is for 1 PSU. Watts and BTUs/hr are with 2 PSUs).	All optics loaded but not initialized and the system completed boot up, fans at nominal speed, and input power +/- 5% tolerance.

### Data port specifications (Fibre Channel)

Name	Port Numbers	Media Type	Description
Brocade G620 switch	0 to 47	10-, 16-, or 32-Gbps SFP+ optical ports	Can be an F_Port, N_Port, E_Port, or EX_Port

Name	Port Numbers	Media Type	Description
	48 to 63	4 x 16-Gbps (64 Gbps) or 4 x 32-Gbps (128 Gbps) QSFP optical ports	Can be an E_Port or EX_Port

## Fibre Channel data transmission ranges

Port speed (Gbps)	Cable size (microns)	Short wavelength (SWL)	Long wavelength (LWL)	Extended long wavelength (ELWL)
4	50	150 m (492 ft) (OM2) 380 m (1,264 ft) (OM3) 400 m (1,312 ft) (OM4)	N/A	N/A
	62.5	70 m (229 ft)	N/A	N/A
	9	N/A	30 km (18.6 miles)	N/A
8	50	50 m (164 ft) (OM2) 150 m (492 ft) (OM3) 190 m (623 ft) (OM4)	N/A	N/A
	62.5	21 m (68 ft)	N/A	N/A
	9	N/A	10 km (6.2 miles)	N/A
10	50	82 m (269 ft) (OM2) 300 m (984 ft) (OM3) 550 m (1,804 ft) (OM4)	N/A	N/A
	62.5	33 m (108 ft)	N/A	N/A
	9	N/A	10 km (6.2 miles)	N/A
16	50	35 m (115 ft) (OM2) 100 m (328 ft) (OM3) 125 m (410 ft) (OM4)	N/A	N/A
	62.5	15 m (49 ft)	N/A	N/A
	9	N/A	10 km (6.2 miles)	N/A
32	50	70 m (230 ft) (OM3) 100 m (328 ft) (OM4)	N/A	N/A
	62.5	N/A	N/A	N/A
	9	N/A	10 km (6.2 miles)	N/A

## Serial port specifications (pinout RJ-45)

Pin	Signal	Description
1	Not supported	N/A
2	Not supported	N/A
3	UART1_RXD	Receive data
4	GND	Logic ground
5	GND	Logic ground
6	UART2_TXD	Transmit data
7	Not supported	N/A

Pin	Signal	Description
8	Not supported	N/A

**NOTE**

These specifications are for connector on Brocade platform only.

## Serial port specifications (protocol)

Parameter	Value
Baud	9600
Data bits	8
Parity	None
Flow control	None
Stop bits	1

## Memory specifications

Memory	Type	Size
Main Memory	DDR3L SDRAM with 8-bit ECC, SODIMM package, operating at 1200 MT/s	4 GB, 64-bit
Boot Flash	Parallel NOR flash embedded memory	8 MB
eUSB Module	-	2 GB

## Regulatory compliance (EMC)

- FCC Part 15, Subpart B (Class A)
- EN 55022 (CE mark) (Class A)
- EN 55024 (CE mark) (Immunity) for Information Technology Equipment
- ICES-003 (Canada) (Class A)
- AS/NZ 55022 (Australia) (Class A)
- VCCI (Japan) (Class A)
- EN 61000-3-2
- EN 61000-3-3
- EN 61000-6-1

## Regulatory compliance (safety)

- CAN/CSA-C22.2 No. 60950/UL 60950
- EN 60825 Safety of Laser Products
- EN 60950/IEC 60950 Safety of Information Technology Equipment

## Regulatory compliance (environmental)

- 2014/35/EU and 2014/30/EU
- 2011/65/EU - Restriction of the use of certain hazardous substance in electrical and electronic equipment (EU RoHS).



- 2012/19/EU - Waste electrical and electronic equipment (EU WEEE).
- 94/62/EC - packaging and packaging waste (EU).
- 2006/66/EC - batteries and accumulators and waste batteries and accumulators (EU battery directive).
- 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (EU REACH).
- Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 - U.S. Conflict Minerals.
- 30/2011/TT-BCT - Vietnam circular.
- SJ/T 11363-2006 Requirements for Concentration Limits for Certain Hazardous Substances in EIPs (China).
- SJ/T 11364-2006 Marking for the Control of Pollution Caused by EIPs (China).