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Brocade ICX 7250 Switch

Technical Specifications

BROCADE 

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Brocade ICX 7250 Switch Technical Specifications

This content highlights the features and specifications for the Brocade ICX 7250 switch.

System specifications

System component	Description
Enclosure	1U; 19-inch rack-mountable; desktop- or wall-mountable
Power inlet	C14 for AC power Custom connector for DC power from EPS4000 (not available on the ICX 7250-24G)
Power supplies	Integrated AC power supply for system and PoE power External AC power supply (EPS4000) for redundant system power and extended PoE/PoE+ power (not applicable to the ICX 7250-24G). DC power supplied to the switches depends on the EPS4000 configuration.
Fans	ICX 7250-24G: One fan per device ICX 7250-24 : One fan per device ICX 7250-24P: Two fans per device ICX 7250-48: Two fans per device ICX 7250-48P: Three fans per device
Cooling	Forced air circulation ICX 7250-24G: front-to-back airflow All other models: sides-to-back airflow
System architecture	Edge Ethernet switches ICX 7250-24G: SFP uplink ports ICX 7250-24, ICX 7250-24P, ICX 7250-48, ICX 7250-48P: SFP+ uplink and stacking ports ICX 7250-24P, ICX 7250-48P: PoE/PoE+ ports

Ethernet

System component	Description
Ethernet ports	ICX 7250-24G: 24 RJ-45 GbE, 4 SFP GbE ICX 7250-24: 24 RJ-45 GbE, 8 SFP+ 10 GbE ICX 7250-24P: 24 RJ-45 GbE with PoE/PoE+, 8 SFP+ 10 GbE ICX 7250-48: 48 RJ-45 GbE, 8 SFP+ 10 GbE ICX 7250-48P: 48 RJ-45 GbE with PoE/PoE+, 8 SFP+ 10 GbE
Management interface	One 10/100/1000 Ethernet, out-of-band management interface (RJ-45 port)

LEDs

System component	Description
Port status LEDs	RJ-45: Indicates Ethernet link status and speed PoE/PoE+: Indicates if a port is providing PoE or PoE+ power to a connected device SFP/SFP+: Indicates link status and speed for SFP or SFP+ ports Out-of-band management port: Two single-color LEDs indicate out-of-band management port link status and speed
System status LEDs	PWR: Bicolor LED (green/amber) indicates the internal power status DIAG: Bicolor LED (green/amber) controlled by software to indicate the system is in diagnostic mode

NOTE

The following LEDs are not available on the ICX 7250-24G.

EPS1: Bicolor LED (green/amber) indicates if the external power supply (EPS1) is operating normally

EPS2 (available only on the ICX 7250-48P): Bicolor LED (green/amber) indicates if the external power supply (EPS2) is operating normally

MS: Bicolor LED (green/amber) controlled by software to indicate master/slave status in stacking mode

UPLINK: Software-controlled LED (green) to indicate stacking uplink port status

DOWNLINK: Software-controlled LED (green) to indicate stacking uplink port status

(Stack) ID: Ten LEDs (green) to display stacking ID from 1 to 19. The LED marked 10+ is used in conjunction with the others (1 through 9) to indicate stacking IDs 11 to 19.

NOTE

For those devices that support stacking, the maximum stack size is 12 units.

Other

System component	Description
RESET	Reset button for hardware reset without power cycling. There is a hole in the front panel to allow access.
Mini-USB port	Console port for serial access to the device for management
USB port	Standard type-A USB connector for removable media
Serial cable	Mini-USB to RJ-45 console cable: BPN 50-1000122-01
RJ-45 connector	2x6 stacked RJ-45 connectors for GbE data ports

Weight and physical dimensions

Model	Height	Width	Depth	Weight
ICX 7250-24G	4.37 cm	44.0 cm	28 cm	3.6 kg
	1.72 in	17.32 in	11 in	7.9 lb
ICX 7250-24	4.37 cm	44.0 cm	28 cm	3.8 kg
	1.72 in	17.32 in	11 in	8.4 lb
ICX 7250-24P	4.37 cm	44.0 cm	28 cm	4.7 kg
	1.72 in	17.32 in	11 in	10.3 lb
ICX 7250-48	4.37 cm	44.0 cm	37 cm	4.8 kg
	1.72 in	17.32 in	14.6 in	10.6 lb
ICX 7250-48P	4.37 cm	44.0 cm	37 cm	5.9 kg
	1.72 in	17.32 in	14.6 in	13.0 lb

Environmental requirements

Condition	Operational	Non-operational
Ambient temperature	-5°C to 50°C (23°F to 122°F)	-25°C to 70°C (-13°F to 158°F)
Relative humidity (non-condensing)	5% to 95% at 50°C (122°F)	5% to 95% at 70°C (158°F)

Condition	Operational	Non-operational
Altitude (above sea level)	0 to 3,000 m (10,000 feet)	0 to 12,000 m (39,000 feet)
Shock	20 G, 11 ms, half-sine wave	33 G, 11 ms, half-sine wave
Vibration	1 G sine, 0.4 gms random, 5-500 Hz	2.4 G sine, 1.1 gms random, 5-500 Hz
Airflow	ICX 7250-24G: 14.3 CFM (Maximum), 5.7 CFM (Typical) ICX 7250-24 : 14.0 CFM (Maximum), 5.7 CFM (Typical) ICX 7250-24P: 34.4 CFM (Maximum), 13.7 CFM (Typical) ICX 7250-48: 34.8 CFM (Maximum), 13.8 CFM (Typical) ICX 7250-48P: 45.2 CFM (Maximum), 21.4 CFM (Typical)	N/A
Heat dissipation	Refer to Power Consumption specification sections	N/A
Operating noise	ICX 7250-24G: 40 dBA ICX 7250-24: 41.9 dBA ICX 7250-24P: 44.7 dBA ICX 7250-48: 44.5 dBA ICX 7250-48P: 45.9 dBA	N/A

Power supply specifications (per PSU)

The EPS4000 and its power supply modules (RPS17) are field-replaceable. All other Brocade ICX 7250 power supply units (PSUs) are fixed and internal to the devices. All the PSUs use a C14 inlet and connect to standard AC power.

NOTE

The EPS4000 must have at least one RPS17 installed to provide power to the supported Brocade ICX 7250 devices.

Device	Maximum output power rating (DC)	Input voltage	Input line frequency	Maximum input current	Input line protection	Maximum inrush current
ICX 7250-24G	65 W	100 - 240 VAC	50/60 Hz	1.5 A (rms)	Line fused	40 A at 115 VAC
ICX 7250-24		(nominal)	(nominal)			80 A at 230 VAC
		90 - 264 VAC	47 - 63 Hz			Cold start @ 25°C
		(range)	(range)			
ICX 7250-24P	525 W	100 - 240 VAC	50/60 Hz	6 A (rms)	Line fused	30 A at 115 VAC
		(nominal)	(nominal)			60 A at 230 VAC
		90 - 264 VAC	47 - 63 Hz			Cold start @ 25°C
		(range)	(range)			
ICX 7250-48	100 W	100 - 240 VAC	50/60 Hz	2.0 A (rms)	Line fused	65 A at 115 VAC
		(nominal)	(nominal)			130 A at 230 VAC
		90 - 264 VAC	47 - 63 Hz			Cold start @ 25°C
		(range)	(range)			
ICX 7250-48P	880 W	100 - 240 VAC	50/60 Hz	10.8 A (rms)	Line and neutral fused	60 A at 115 VAC
		(nominal)	(nominal)			120 A at 230 VAC
		90 - 264 VAC	47 - 63 Hz			Cold start @ 25°C
		(range)	(range)			
EPS4000	920 W (per installed PSU)	100 - 240 VAC	50/60 Hz	13 A (rms)	Line and neutral fused	75 A at 230 VAC
		(nominal)	(nominal)			Cold start @ 25°C
		90 - 264 VAC	47 - 63 Hz			
		(range)	(range)			

Power consumption (idle configuration)

Idle: No optics or connections to ports installed and system booted up. Fans at nominal speed.

NOTE

The Brocade ICX 7250 does not support -48 VDC input power.

Model name	@100 VAC input	@200 VAC input	@-48 VDC input	Minimum number of power supplies	Notes
ICX 7250-24G	0.56 A	0.35 A	N/A	1	All ports down, no optics or cables connected. No Load (traffic)
	33.6 W	33.3 W			
	114.7 BTU/hr	113.5 BTU/hr			
ICX 7250-24	0.71 A	0.41 A	N/A	1	All ports down, no optics or cables connected. No Load (traffic)
	42.6 W	39.0 W			
	145.4 BTU/hr	132.9 BTU/hr			
ICX 7250-24P	0.5 A	0.36 A	N/A	1	All ports down, no optics or cables connected. No Load (traffic)
	48.0 W	48.0 W			
	163.8 BTU/hr	163.8 BTU/hr			
ICX 7250-48	0.51 A	0.28 A	N/A	1	All ports down, no optics or cables connected. No Load (traffic)
	50.6 W	51.1 W			
	172.8 BTU/hr	174.3 BTU/hr			
ICX 7250-48P	0.73 A	0.46 A	N/A	1	All ports down, no optics or cables connected. No Load (traffic)
	70.8 W	70.8 W			
	241.6 BTU/hr	241.6 BTU/hr			

Power consumption (typical configuration)

Typical: 10% traffic rate on all ports with 64-byte packet size and random payload at room temperature. All ports fully configured. Fans at nominal speed.

NOTE

The Brocade ICX 7250 does not support -48 VDC input power.

Model name	@100 VAC input	@200 VAC input	@-48 VDC input	Minimum number of power supplies	Notes
ICX 7250-24G	0.71 A	0.42 A	N/A	1	24 1-GbE and 4 10-GbE ports are linked UP ONLY. 10% traffic.
	42.6 W	39.9 W			
	216.9 BTU/hr	136.2 BTU/hr			
ICX 7250-24	0.86 A	0.52 A	N/A	1	24 1-GbE and 8 10-GbE ports are linked UP ONLY. 10% traffic.
	51.6 W	49.4 W			
	176.1 BTU/hr	168.6 BTU/hr			
ICX 7250-24P	4.46 A	2.18 A	N/A	1	24 1-GbE and 8 10-GbE ports are linked UP ONLY. 10% traffic. 100% PoE Load @ Class 3 (15.4 W/port)
	441.0 W	428.0 W			
	1505.2 BTU/hr	1460.8 BTU/hr			
ICX 7250-48	0.64 A	0.34 A	N/A	1	48 1-GbE and 8 10-GbE ports are linked UP ONLY. 10% traffic.
	63.6 W	61.1 W			
	216.9 BTU/hr	208.6 BTU/hr			
ICX 7250-48P	9.23 A	4.43 A	N/A	1	48 1-GbE and 8 10-GbE ports are linked UP ONLY. 10% traffic. 100% PoE Load @ Class 3 (15.4 W/port)
	920.0 W	862.0 W			
	3140.0 BTU/hr	2942.1 BTU/hr			

Power consumption (maximum configuration)

Maximum: All ports fully configured with connection and traffic at maximum throughput. Fans at high speed.

NOTE

The Brocade ICX 7250 does not support -48 VDC input power.

Model name	@100 VAC input	@200 VAC input	@-48 VDC input	Minimum number of power supplies	Notes
ICX 7250-24G	0.74 A	0.45 A	N/A	1	24 1-GbE and 4 10-GbE ports are linked UP ONLY. 100% traffic.
	44.4 W	42.3 W			
	151.5 BTU/hr	144.3 BTU/hr			
ICX 7250-24	0.96 A	0.57 A	N/A	1	24 1-GbE and 8 10-GbE ports are linked UP ONLY. 100% traffic.
	57.6 W	54.2 W			
	196.6 BTU/hr	184.8 BTU/hr			
ICX 7250-24P	4.56 A	2.24 A	N/A	1	24 1-GbE and 8 10-GbE ports are linked UP ONLY. 100% traffic. 100% PoE Load @ Class 3 (15.4 W/port)
	454.0 W	439.0 W			
	1549.5 BTU/hr	1498.3 BTU/hr			
ICX 7250-48	0.70 A	0.38 A	N/A	1	48 1-GbE and 8 10-GbE ports are linked UP ONLY. 10% traffic.
	69.5 W	69.3 W			
	237.2 BTU/hr	236.6 BTU/hr			
ICX 7250-48P	9.45 A	4.49 A	N/A	1	48 1-GbE and 8 10-GbE ports are linked UP ONLY. 10% traffic. 100% PoE Load @ Class 3 (15.4 W/port)
	942.0 W	880.0 W			
	3215.1 BTU/hr	3003.5 BTU/hr			

Data port specifications (Ethernet)

Model	Port type	Number of ports	Description
ICX 7250-24G	GbE (copper)	24	RJ-45 10/100/1000 ports
	GbE (optical)	4	SFP uplink ports
ICX 7250-24	GbE (copper)	24	RJ-45 10/100/1000 ports
	10 GbE (optical)	8	Uplink or stacking SFP+ ports

Model	Port type	Number of ports	Description
ICX 7250-24P	GbE (copper)	24	RJ-45 10/100/1000 ports
	10 GbE (optical)	8	Uplink or stacking SFP+ ports
ICX 7250-48	GbE (copper)	48	RJ-45 10/100/1000 ports
	10 GbE (optical)	8	Uplink or stacking SFP+ ports
ICX 7250-48P	GbE (copper)	48	RJ-45 10/100/1000 ports
	10 GbE (optical)	8	Uplink or stacking SFP+ ports

Serial port specifications (pinout mini-USB)

Pin	Signal	Description
1	Reserved	Not used
2	UART_RX	Receive data by Brocade ICX 7250
3	UART_TX	Transmit data by Brocade ICX 7250
4	Reserved	Not used
5	GND	Logic ground

Serial port specifications (protocol)

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

Memory specifications

Memory	Type	Size
Boot	SPI Flash	2 x 8 MB
Compact Flash	NAND	2 GB
Main	DDR3 (onboard IC)	ICX 7250-24G: 1 GB ICX 7250-24: 2 GB ICX 7250-24P: 2 GB ICX 7250-48: 2 GB ICX 7250-48P: 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. 60950-1-07/UL60950-1 - Safety of Information Technology Equipment
- EN 60825-1 Safety of Laser Products - Part 1: Equipment Classification, Requirements and User's Guide
- EN 60825-2 Safety of Laser Products - Part 2: Safety of Optical Fibre Communications Systems
- EN 60950-1, IEC 60950-1 Safety of Information Technology Equipment

Regulatory compliance (environmental)

- 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)

