



Connectrix MP-7810B and MP-7850B Switches

Multi-protocol SAN Extension Switches

Connectrix B-Series SAN Extension Switch Family

MP-7810B – The 1RU MP-7810B model combines Fibre Channel switching and routing capabilities with powerful hardware-assisted IP Extension and Fibre Channel over Internet Protocol (FCiP) traffic and forwarding over IP wide area networks (WAN). The MP-7810B is a lower cost, lower end offering in the Connectrix B-Series extension portfolio. The MP-7810B has twelve 32 Gigabit per second (Gb/s) capable Fibre Channel ports and six 1/10 Gigabit Ethernet (GbE) SFP+ ports. Maximum WAN bandwidth for the MP-7810B is 2.5Gbps.

MP-7850B - The MP-7850B was purpose-built to handle the replication demands of large enterprise customers. This switch is designed to deliver the most outstanding data protection and performance regardless of distance. With twenty-four 64Gb/s Fibre Channel ports, sixteen 1/10/25GbE ports, and two 100GbE ports, data centers can achieve the bandwidth, port density, and throughput needed for maximum replication performance over WAN connections. Industry leading port density and performance packed into a 1U form factor enables organizations to consolidate high-speed Fibre Channel, FICON, and IP storage replication traffic between data centers while ensuring plenty of headroom for future growth. The Connectrix MP-7850B comes unlocked with full bandwidth and all ports enabled, leaving no limitations on throughput. In addition, it includes an innovative collection of software capabilities that optimize WAN utilization and protect data from WAN disruptions and outages, including Fabric Vision® technology, Extension Trunking, Adaptive Rate Limiting (ARL), encryption (IPsec) and integrated routing. There’s a version for mainframe customers that is fully populated with long wave optics.

Specifications

Features	MP-7810B	MP-7850B
Fibre Channel Ports	12 32Gb/s Fibre Channel Ports	24 64Gb/s Fibre Channel Ports
Ethernet ports	Six 1/10GbE SFP+ ports	16 1/10/25GbE ports, and two 100GbE
Scalability	Refer to the Dell Support Matrix	Refer to the Dell Support Matrix
Fibre Channel Performance	Auto-sensing of 4, 8, 16 and 32 Gbps port speeds	Auto-sensing of 16, 32, and 64Gbps port speeds
FCIP Performance	2.5Gbps maximum WAN bandwidth	Max FCIP replication throughput is approx. 160Gbps
ISL Trunking	Included with the -EP model and upgrade license	Up to eight 64Gb/s ports per Trunk; up to 512 Gb/s per trunk. There is no limit to how many trunk groups can be configured in the switch.

Fabric Latency	Non-blocking shared memory, 900 ns with no contention, cut-through switching at 32 Gb/s	460 ns with no contention, cut-through routing at 64Gb/s
Maximum MTU Size	Jumbo Frames 1280 bytes to 9216 byte	Jumbo Frames at 9216 bytes
Classes of Service	Class 2, Class 3, Class F (inter-switch frames)	Class 2, Class 3, Class F (inter-switch frames)
Port Types	F_Port, E_Port, EX_Port, (FCR E_Port), D_Port (Diagnostic), M_Port (Mirror), and selfdiscovery based on switch type (U_Port); VE_Port (FCIP and IP extension)	F_Port, E_Port, EX_Port, FCR E_Port, D_Port (Diagnostic), M_Port (Mirror), and self-discovery based on switch type (U_Port); VE_Port (FCIP and IP)
Data Traffic Types	Fibre Channel, FCIP, and IP extension	Fabric switches supporting unicast, multicast (255 groups), and broadcast
USB	One USB port for system log file downloads or firmware upgrades	One USB port for system log file downloads or firmware upgrades
Media Types	Fibre Channel hot-pluggable Small FormFactor Pluggable (SFP) and SFP+, short wavelength (SWL), and long wavelength (LWL) transceivers (available wavelength options vary for 8, 16, and 32 Gb/s SFPs) Ethernet: Brocade hot-pluggable SFP and SFP+, short-reach wavelength (SRWL), longreach wavelength (LRWL), and copper SFP/SFP+ transceivers	Fibre Channel: 64G FC SFP+ LC connector (supports 16/32/64G): SWL, LWL, ELWL 32G FC SFP+ LC connector (supports 8/16/32G): SWL, LWL 2x64G FC SFP-DD SN connector (supports 16/32/64G): SWL Ethernet: 10GbE SFP/SFP+ LC connector (supports 1/10GbE): SR 25GbE SFP/SFP+ LC connector (supports 10/25GbE): SR, LR 100GbE QSFP MPO connector (supports 100GbE): SR4 40GbE connectivity can be supported through 4x10GbE breakout using four 10GbE ports on the MP-7850B platform All transceivers are PC/UPC compatible

System Architecture - continued		
Features	MP-7810B	MP-7850B
Fabric Services	Simple Name Server (SNS); Registered State Change Notification (RSCN), NTP, RADIUS, RCS (Reliable Commit Service), Dynamic Path Selection (DPS), Exchange based routing, device-based routing, port-based routing, lossless, Advanced Zoning, Web Tools, Trunking, Extended Fabrics, Fabric Vision, SDDQ	Name Server; Registered State Change Notification (RSCN); NTP; RADIUS; RCS (Reliable Commit Service); Dynamic Path Selection (DPS); Exchange-based routing; Device-based routing; Port-based routing; Lossless; Advanced Zoning; Web Tools; Trunking; Extended Fabrics; Fabric Vision; Traffic Optimizer; SDDQ; Integrated Routing (FCR); FICON CUP; FICON Management Server (FMS)

Licensing Options	The following optional extension features can be enabled on the MP-7810B base configuration via the upgrade license: • Enable WAN-side throughput from 1 Gb/s to 2.5 Gb/s • Enable 10 GbE port speed on the Ethernet ports • Turn on additional 8 Fibre Channel ports, includes 16 Gb/s SFPs • Enable advanced software features, including Fabric Vision technology, Extension Trunking, Fibre Channel Trunking, and Integrated Routing	MP-7850B includes IPsec and the Gen 7 integrated security features with no additional cost or license required.
Fibre Channel Aggregate Bandwidth	8.5 Gb/s line speed, full duplex; 14.025 Gb/s line speed, full duplex; 28.05 Gb/s line speed, full duplex; auto-sensing of 8, 16, and 32 Gb/s port speeds	1.536 TBps
FCIP Aggregate Bandwidth	2.5 Gbps maximum WAN bandwidth	Max WAN bandwidth is 100Gbps

Connectivity Management

Features	MP-7810B	MP-7850B
Supported Management Software	Serial port (9600, 8, 1, no parity, no flow), Command Line Interface (CLI): SSHv2 or Telnet, Web Tools: HTTP/HTTPS, SNMPv1/v3 (FE MIB, FC Management MIB), SMI-S, RADIUS, LDAP	SSH v2, HTTP/HTTPS, SNMP v1/v3, Telnet; SNMP (FE MIB, FC Management MIB); Brocade Web Tools; Brocade SANnav Management Portal and SANnav Global View; Command Line Interface (CLI); LDAP
Security	AES-GCM-256 encryption on FC ISLs (E_Port), DH-CHAP (between switch and enddevice), FCAP switch authentication; FIPS 140-2 L2-compliant, HTTPS, IP filtering, LDAP with IPv6, OpenLDAP, Port Binding, RADIUS, TACACS+, Role Based Access Control (RBAC), Secure Copy (SCP), Secure RPC, SFTP, SSHv2, SSL, Switch Binding, Trusted Switch	AES-GCM-256 encryption on FC ISLs (E_Port), AES-GCM-256 IPsec encryption (VE_Port), PKI, IKEv2, DH CHAP (between switches and end devices), FCAP switch authentication; HTTPS, IP filter, AAA, Audit Logging, LDAP, Port Binding, RADIUS, TACACS+, Role-Based Access Control (RBAC), Secure Copy (SCP), Secure RPC, SFTP, SSH v2, TLS 1.3, Switch Binding, Trusted Switch, Login Banners, Secure Syslog
Management Access	10/100/1000 Ethernet (RJ-45); serial port (RJ-45) and one USB port	1000Mb/s Ethernet (RJ-45); serial port (RJ-45) and one USB port
Diagnostics	POST and embedded online/offline diagnostics, including D_Port, WAN Test Tool, FCIP ping, FCIP traceroute, FCping, Pathinfo (FCtraceroute), SupportSave, RAS Log, Syslog, MAPS, SDDQ, Flow Vision, and Ftrace	POST and embedded online/offline diagnostics including D_Port, ping, traceroute, FC ping, Pathinfo (FCtraceroute), Wtool, and Ftrace

Physical Specifications

Features	MP-7810B	MP-7850B
Enclosure	Back-to-front airflow/non-port-side air intake and power, 1 RU, 19-in., EIA-compliant.	Back-to-front airflow/non-port-side intake; 1U, 19 in., EIA-compliant, power from back
Size	Width: 44.0 cm (17.32 in.) Height: 4.4 cm (1.73 in.) Depth: 45.7 cm (17.74 in.)	Width: 44 cm (17.32 in.) Height: 4.4 cm (1.73 in.) Depth: 59.03 cm (23.24 in.)
System Weight	7.98 kg (17.6 lb.) empty 8.35 kg (18.4 lb.) fully loaded	12 kg (26.5 lbs) with two power supplies and six fans installed, without SFP+ or SFP-DD transceivers

Environmental Specifications		
Features	MP-7810B	MP-7850B
Temperature	Operating: 0°C to 40°C (32°F to 104°F) Non-operating: -25°C to 70°C (-13°F to 158°F)	Operating: 0°C to 40°C (32°F to 104°F) Non-operating: -25°C to 70°C (-13°F to 158°F)
Humidity	Operating: 10% to 85% at 40°C (104°F) Non-operating: 10% to 90%	Operating: 10% to 85% (non-condensing) Non-operating: 10% to 90% (non-condensing)
Altitude	Operating: 0 to 3000m (9842 ft) Storage: 0 to 12 km (39,370 ft)	Operating: Up to 3000m (9842 ft) Storage: Up to 12 km (39,370 ft)
Shock	Operating: 10G, 10 ms, half-sine wave non-operating: 33G, 11 ms, half-sine wave, 3G Axis	Operating: 20g, 6 ms, half-sine wave Non-operating: 33g, 11 ms, half-sine wave, 3G Axis
Vibration	Operating: 0.25g sine, 0.4 grms random, 5 Hz to 500 Hz Non-operating: 5 Hz at 0.5 grms, 10 Hz to 500 Hz at 1.0 grms (sine vibration), 3 Hz to 500 Hz at 1.12 grms (random vibration)	Operating: 0.5 Grms sine, 0.4 Grms random, 5 Hz to 500 Hz Non-operating: 2.0 Grms sine, 1.1 Grms random, 5 Hz to 500 Hz
Heat Dissipation		42 ports at 2,167 BTU/hr
Airflow	Maximum: 45.0 CFM Nominal: 22.4 CFM	Maximum: 100 CFM
Carbon Footprint Reports	MP-7810B (Report created and maintained by Broadcom, Inc.)	MP-7850B (Report created and maintained by Broadcom, Inc.)

Power Specifications		
Features	MP-7810B	MP-7850B
Power Supply	Dual, hot-swappable, redundant, AC input power supplies with integrated system cooling fans	Dual hot-swappable redundant AC power supplies
Input Voltage	100 VAC to 240 VAC (nominal), 90 VAC to 264 VAC (range)	90 VAC to 264 VAC nominal
Input Line Frequency	50/60 Hz (nominal), 47 Hz to 63 Hz (range)	47 Hz to 63 Hz nominal

Inrush Current	50A peak at 240 VAC for <10 ms to 150 ms, <15A peak 50A peak at 240 VAC at cold start for <10 ms 15A peak for cycles 10 ms to 150 ms, <3.5A peak for >150 ms	Maximum of 40 amps for period of 10 ms to 150 ms
Power	100 VAC: 1.29A, 130W, 444 BTU/hr, 135 VA (max config) 200 VAC: 0.65A, 132W, 449 BTU/hr, 146 VA (max config)	Maximum power draw: <ul style="list-style-type: none"> 585W with all ports operating at full line-rate (8 Fibre Channel ports populated with 64G SWL transceivers, 16 Fibre Channel ports populated with 8x 64G SFP-DD SWL transceivers, 16 Ethernet ports populated with 25GE SWL transceivers, and 2 Ethernet ports populated with 100GE SWL transceivers) Minimum power draw: <ul style="list-style-type: none"> 315W for an empty chassis with no transceivers Typical power draw: 366W with 50% populated ports running at 50% traffic rate 450W with 100% populated ports running at 50% traffic rate
Power Inlet	C14; requires C13 plug	C14; requires C13 plug

Regulatory Requirements

MP-7810B	
EMC	2014/30/EU, AS/NZS CISPR 55032 (Australia) (Class A), CISPR 32, CNS 13438, EN 300 386, EN 55032/55024 (CE Mark) (Class A), EN 61000-3-2, EN 61000-3-3, FCC Part 15 (Subpart B) (Class A), GB 9254, ICES-003 (Canada), KN 32, KN 35, TCVN 7189, VCCI-32 (Japan)
Safety	2014/35/EU, CNS 14336-1, EN/UL 60825, EN/UL/CSA/IEC 60950-1, GB 4943.1
Environmental	
2011/65/EU	Restriction of the use of certain hazardous substances in electronic equipment (EU RoHS)
2012/19/EU	Waste electrical and electronic equipment (EU WEEE)
2006/66/EC	Batteries and accumulators and waste batteries and accumulators (EU battery directive)
30/2011/TT-BCT	Vietnam circular
1907/2006	Of the European Parliament and if the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization, and Restriction of Chemicals (EU REACH)
Section 1502	Of the Dodd-Frank Wall Street Reform and Consumer Protection Act 2010 – U.S. Conflict Minerals.
94/62/EC	Packaging and packaging waste (EU)
SU/T 11364	2006 marking for Control Pollution Caused by EIPs (China)
SU/T 11363	2006 Requirements for Concentration Limits for Certain Hazardous substances in EIPs (China)

MP-7850B	Safety	EMI
United States	UL/CSA 62368-1	FCC Part 15, Subpart B, Class A
Canada	UL/CSA 62368-1	ICES-3 (A) / NMB-3(A)
Australia/New Zealand	IEC 60950-1, 62368-1	AS/NZS CISPR 32
Japan		VCCI-CISPR 32
International	IEC 60950-1, 62368-1	CISPR32, CISPR 24
European Community	EN 60950-1, 62368-1	EN 55032 and EN 55024
Argentina	IEC 60950-1	

Russian Federation	IEC 60950-1	CISPR32, CISPR 24
Korea		KN32 and KN35
China	GB 4943.1	GB/T 9254, YD/T 993
Taiwan	CNS 14336-1	CNS 13438



[Learn more](#) about Dell
Connectrix



[Contact](#) a Dell Expert



[View more](#) resources



Join the conversation
with #DellTech