



CONNECTRIX DS-6500B SWITCHES

The Connectrix DS-6500B series switches deliver up to 16 Gigabits per second (16Gb/s) Fibre Channel (FC) performance. The DS-6500B switches scale from twelve to ninety-six ports.

DS-6500B 16Gb/s Fibre Channel Switch Models

There are three switch models in the DS-6500B series. All models can function at 2, 4, 8 or 16 Gb/s speeds depending on the installed optic. All switches can be managed by Connectrix Manager Converged Network Edition (CMCNE).

DS-6505B - The Connectrix DS-6505B Switch provides exceptional price/performance value, combining flexibility, simplicity, and enterprise-class functionality in an entry-level switch. Designed to enable maximum flexibility and reliability, the Connectrix DS-6505B is configurable in 12 or 24 ports in an efficiently designed 1U package. It comes standard with a single power supply with integrated fans. A second, optional power supply provides additional redundancy for increased resiliency.

DS-6510B - The Connectrix DS-6510B is a 1U 48-port Fibre Channel (FC) Switch. With ports-on-demand the DS-6510B can scale from 24 to 36 or 48 ports. The model has two hot-swappable, redundant integrated power supplies and fan FRUs. There are two options for these PS/FAN FRU's; one for front-to-back airflow and the other for back-to-front airflow. The DS-6510B features 10Gb FC SFPs that will allow for easy integration with 10GB DWDM devices. The DS-6510B can also provide in flight compression and encryption for ISL connections.

DS-6520B - The Connectrix DS-6520B is a powerful, scalable enterprise-class SAN switch. The DS-6520B meets the demands of growing, dynamic workloads and all flash storage environments. The DS-6520B is configurable in 48, 72, and 96 ports in an efficient 2U form factor. Simplified deployment and a point-and-click user interface make the DS-6520B both powerful and easy to use. The DS-6520B can also provide in flight compression and encryption for ISL connections.

Optional Licence Key Features

The Dell EMC Connectrix B-Series optional software license key features provide the flexibility to choose just the features you need for your environment.

- **Fabric Vision** – provides advance monitoring, management and diagnostics.
- **Extended Fabric** – provides greater than 10 kilometers of switched fabric connectivity at full bandwidth over long distances depending on the platform this can be up to 3000 kilometers.
- **ISL Trunking** –provides the ability to aggregate multiple physical links to one logical link for enhanced network performance and fault tolerance.
- **Enterprise Package** –The Enterprise package includes Fabric Vision, Extended Fabric and ISL Trunking.

Note: For the DS-6500B product family there are “-EP” or “Enterprise Package” switch models which include the Enterprise Package.

System Architecture

Features	DS-6505B	DS-6510B	DS-6520B
Fibre Channel Ports	The switch comes standard with 12 16 Gb/s or 8 Gb/s ports, upgradable to 24 ports via the Ports On Demand (POD) license; ports are auto-sensing 4, 8, and 16 Gb/s	48 universal (E, F, M, FL, or N) ports; 24-port base with 12-port increments; Switch comes with twenty-four 16Gb/s or 8Gb/s ports	Switch comes standard with 48 16 Gbps or 8 Gbps ports, upgradable to 72 or 96 ports via Ports On Demand (POD) upgrade kits. Ports are auto-sensing at 4, 8, 10, and 16 Gbps.
Performance	Full line-speed switching at: 2.125 Gbps line speed, full duplex (8 Gb switch only) 4.25 Gbps line speed, full duplex 8.50 Gbps line speed, full duplex 14.025 Gbps line speed, full duplex Auto-sensing of 2, 4, 8, and 16 Gb/s port speeds	Full line-speed switching at: 2.125 Gbps line speed, full duplex 4.25 Gbps line speed, full duplex 8.50 Gbps line speed, full duplex 10.53 Gbps line speed, full duplex with optional 10Gb FC optics and license 14.025 Gbps line speed, full duplex Auto-sensing of 2, 4, 8, and 16Gb/s ports	Full line-speed switching at: 2.125 Gbps line speed, full duplex 4.25 Gbps line speed, full duplex 8.50 Gbps line speed, full duplex 10.53 Gbps line speed, full duplex with optional 10Gb FC optics and license 14.025 Gbps line speed, full duplex Auto-sensing of 2, 4, 8, and 16Gb/s ports
Frame Buffers	8,192 per 24-port group, dynamically allocated	8,192 per 24-port group; dynamically allocated Fibre Channel performance	8,192 per 24-port group, dynamically allocated
Port types	D_Port (Diagnostic Port), E_Port, F_Port, M_Port (Mirror Port); self-discovery based on switch type (U_Port); optional port type control	D_Port (Diagnostic Port), E_Port, EX_Port, F_Port, M_Port (Mirror Port); self-discovery based on switch type (U_Port); optional port type control	D_Port (Diagnostic Port), E_Port, EX_Port, F_Port, M_Port (Mirror Port); self-discovery based on switch type (U_Port); optional port type control
Fabric services	Simple Name Server, Registered State Change Notification (RSCN), NTP, RADIUS, LDAP, Switch and Port Binding, Reliable Commit Service (RCS), Advanced Zoning, Advanced Web Tools, Fabric Watch, Extended Fabrics, ISL Trunking, DPS, QoS, Advanced Performance Monitoring, and Adaptive Networking Services with QoS	Simple Name Server (SNS); Registered State Change Notification (RSCN); NTP, RADIUS, LDAP, Switch and port binding, Reliable Commit Service (RCS), Advanced Zoning, Advanced Web Tools, Fabric Watch, Extended Fabrics, ISL Trunking, DPS, QoS, Advanced Performance Monitoring, Adaptive Networking Services with QoS	Simple Name Server, Registered State Change Notification (RSCN), NTP, RADIUS, LDAP, Switch and Port binding, Reliable Commit Service (RCS), Advanced Zoning, Advanced Web Tools, Fabric Watch, Extended Fabrics, ISL Trunking, DPS, QoS, Advanced Performance Monitoring, Adaptive Networking Services with QoS.
Hot swappable components	Base switch includes a single, hot-swappable power supply with integrated system cooling fans; optional dual redundant hot-swappable power supply	Base switch includes dual hot-swappable power supply with integrated system cooling fans.	Base switch includes dual hot-swappable power supply with integrated system cooling fans.
Media types	Hot-pluggable, industry-standard Small Form-Factor Pluggable (SFP+), LC connector; Short-Wavelength (SWL), Long-Wavelength (LWL); Extended Long-Wavelength (ELWL); distance depends on fiber optic cable and port speed. Supports SFP+ (2, 4, 8, 10, 16 Gbps) optical transceivers.	Hot-pluggable, industry-standard Small Form-Factor Pluggable (SFP+), LC connector; Short-Wavelength (SWL), Long-Wavelength (LWL); Extended Long-Wavelength (ELWL); distance depends on fiber optic cable and port speed. Supports SFP+ (2, 4, 8, 10, 16 Gbps) optical transceivers.	Hot-pluggable, industry-standard Small Form-Factor Pluggable (SFP+), LC connector; Short-Wavelength (SWL), Long-Wavelength (LWL); Extended Long-Wavelength (ELWL); distance depends on fiber optic cable and port speed. Supports SFP+ (2, 4, 8, 10, 16 Gbps) optical transceivers.
Installation Options	The DS-6505B can be mounted within a customer supplied 19-inch cabinet that conforms to the EIA 310 standard	The DS-6510B can be installed within a customer-supplied 19-inch that conforms to the EIA 310 standard.	The DS-6520B can be mounted within a customer supplied 19-inch cabinet that conforms to the EIA 310 standard.
Aggregate bandwidth	384 Gb/s end-to-end full duplex	768 Gb/s: 48 ports x 16 Gb/s (line rate) x 2 (full duplex)	1,536 Gb/s end-to-end full duplex
Maximum Frame Size	2,112-byte payload	2,112-byte payload	2,112-byte payload

System Architecture - continued

Features	DS-6505B	DS-6510B	DS-6520B
Data traffic types	Fabric switches supporting unicast		
Classes of service	Class 2, Class 3, Class F (inter-switch frames)	Class 2, Class 3, Class F (Interswitch Frames) ISL Trunking	Class 2, Class 3, Class F (inter-switch frames)

Connectivity Management

Features	DS-6505B	DS-6510B	DS-6520B
Interface	EMC Connectrix Manager Converged Network Edition 11.1.4 with Fabric Operating System 7.0.1 or higher Advanced Web Tools SSH, HTTPS, RADIUS SNMP v3 (FE MIB, FC Management MIB) SMI-S compliant	HTTP, SNMP v1/v3 (FE MIB, FC Management MIB), SSH; Auditing, Syslog; Advanced Web Tools, APM, Fabric Watch; Connectrix Manager Converged Network Edition, Command Line Interface (CLI); SMI-S compliant; Administrative Domains; trial licenses for add-on capabilities	EMC Connectrix Manager Converged Network Edition 12.0 or higher Fabric Operating System 7.1.0a or higher Advanced Web Tools SSH, HTTPS, RADIUS SNMP v3 (FE MIB, FC Management MIB) MI-S compliant
Management Access	Call-home integration with Connectrix Manager Converged Network Edition 10/100 Mbps Ethernet (RJ-45), in-band over Fibre Channel, serial port (RJ-45), and one USB port	10/100 Mbps Ethernet (RJ-45), in-band over Fibre Channel, serial port (RJ-45), and one USB port	Call-home integration with Connectrix Manager Converged Network Edition 10/100 Mbps Ethernet (RJ-45), in-band over Fibre Channel, serial port (RJ-45), and one USB port.
Firmware Upgrades	Non-disruptive download and activation	Non-disruptive download and activation	Non-disruptive download and activation
Compatibility	Connectrix B Series switches and directors	Connectrix B Series switches and directors	Connectrix B Series switches and directors
Diagnostics	D_Port offline diagnostics; POST and embedded online/offline diagnostics including extensive RAS features, RAS trace logging, FCping, and Pathinfo (FCtracroute)	D_Port offline diagnostics, POST and embedded online/offline diagnostics, including extensive RAS features, RAS trace logging, FCping, and Pathinfo (FCtracroute)	D_Port offline diagnostics, POST and embedded online/offline diagnostics, including extensive RAS features, RAS trace logging, FCping, and Pathinfo (FCtracroute)

Physical Specifications			
Features	DS-6505B	DS-6510B	DS-6520B
Enclosure	Back-to-front airflow (port side exhaust); power from back, 1U Width: 437.64 mm (17.23 in) Height 43.18 (1.7 in) Depth: 443.23 (17.45 in)	Front-to-back airflow; power from back, 1U Back-to-front airflow; power from back, 1U Width: 437.6 mm (17.23 in.) Height: 43.18mm (1.7 in.) Depth: 443.23 mm (17.45 in.)	Back-to-front airflow (port side exhaust); power from back, 2U Optional front-to-back airflow chassis (power supply side exhaust); power from back, 2U Width: 429.25 mm (16.90 in.) Height 86.74 mm (3.42 in.) Depth: 609.75 mm (24.01 in.)
System Weight	7.82 kg (17.25 lb) with one power supply, without transceivers 9.16 kg (20.19 lb) with two power supply FRUs, without transceivers	9.16 kg (20.20 lb) with two power supply FRUs, without transceivers	37.3 lb (16.92 kg) with two power supply FRUs, without transceivers

Environmental Specifications			
Features	DS-6505B	DS-6510B	DS-6520B
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)	Operating: 0°C to 40°C (32°F to 104°F) Non-operating: -25° C to 70°C (-13°F to 158°F)
Relative Humidity	Operating: 10% to 85% non-condensing at 40°C (104°F) Non-operating and storage (non-condensing): 10% to 90% at 70°C (158°F)	Operating: 10% to 85% non-condensing Non-operating and storage (non-condensing): 10% to 90% non-condensing	Operating: 10% to 85% non-condensing at 40°C (104°F) Non-operating and storage (non-condensing): 10% to 90% at 70°C (158°F)
Altitude	Up to 3,000 meters (9,842 feet)	Up to 3,000 meters (9,842 feet)	Up to 3,000 meters (9,842 feet)
Shock	Operating: 20 G, 6 ms, half sine Non-operating: 33 G, 11 ms, half sine	Operating: 20 G, 6 ms, half-sine Non-operating: Half-sine, 33 G 11 ms, 3/leg Axis	Operating: 20 G, 6 ms, half sine Non-operating: 33 G, 11 ms, half sine
Vibration	Operating: 0.5 G p-p, 5 to 500 to 5 Hz Non-operating: 2.0 G p-p, 5 to 500 to 5 Hz	Operating: 0.5 G sine, 0.4 grms random, 5 to 500 Hz Non-operating: 2.0 G sine, 1.1 grms random, 5 to 500 Hz	Operating: 0.5 G p-p, 5 to 500 Hz Non-operating: 2.0 G p-p, 5 to 500 to 5 Hz
Heat dissipation	24 ports at 338 BTU/hr	48 ports at 338 BTU/hr	96 ports at 1,582 BTU/hr

Power Requirements

Features	DS-6505B	DS-6510B	DS-6520B
AC Input	85 V to 264 V ~5 A to 2.5 A	85 to 264 ~5 A to 2.5 A	85 V to 264 V ~5 A to 2.5 A
Input line frequency	47 Hz to 63 Hz	47 to 63 Hz	47 to 63 Hz
Power consumption	80 watts with all 24 ports populated with 16 Gb/s optics, 60 watts for empty chassis with no optics	110 watts with all 48 ports populated with 16 Gbps SWL optics 72 watts for empty chassis with no optics	450 watts with all 96 ports populated with 16 Gbps SWL optics 350 watts for empty chassis with no optics

Regulatory Requirements

Features	DS-6505B	DS-6510B	DS-6520B
United States	UL/CSA 60950-1 2nd Ed or latest FCC Part 15 Subpart B	UL 60950 FCC Part 15 Class A	UL/CSA 60950-1 2nd Ed or latest FCC Part 15 Subpart B
Canada	CSA No. 60950-1 2nd Ed or latest ICES-003 Class A	CSA No. 60950 ICES-003 Class A	CSA No. 60950-1 2nd Ed or latest ICES-003 Class A
Australia/New Zealand	EN550022 or CISPR22 or AS/NZS CISPR22	EN550022 Level A	EN550022 or CISPR22 or AS/NZS CISPR22
Japan	CISPR22 and JEIDA (Harmonics)	IEC 60950 VCCI Class A	CISPR22 and JEIDA (Harmonics)
International	IEC 60950 CSPR22 Class A	IEC 60950 CSPR22 Class A	IEC 60950 CSPR22 Class A
European Community	EN60950-1: 2006+A11: 2209 EN55022 and EN55024 Taiwan (PS Only) CNS 14336(94) or latest, CNS 13438(95) or latest	EN60950 EN55022 Level A TUV, NEMKO EN55024 Taiwan CNS 13438 Class A	EN60950-1: 2006+A11: 2209 EN55022 and EN55024 Taiwan (PS Only) CNS 14336(94) or latest, CNS 13438(95) or latest



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