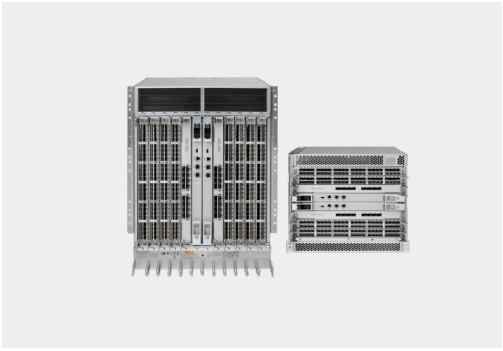
SPECIFICATION SHEET



CONNECTRIX ED-DCX8510B ENTERPRISE

The Dell EMC Connecrix B-Series ED-DCX-8510B director series support up to 16 Gigabit per second (Gb/s) Fibre Channel performance which accommodates mission-critical applications and today's all flash storage systems.

Connectrix B-Series Enterprise Director Models

There are two Connectrix ED-DCX8510B models to address all of your storage networking requirements. Both models support the same switching blades. 16Gb/s switching blades available for the ED-DCX8510B Directors include a 32-port, 48-port and 64-port models. In addition, there's a SAN extension blade that supports FCiP. Both directors can be managed by Connectrix Manager Converged Network Edition (CMCNE).

ED-DCX8510-8B - the 14U chassis supports eight vertical switching blades that accommodate. In addition, the director supports up to 10 64Gb/s Inter-chassis Link (ICL) ports for high-speed connections to other ED-DCX8510B Directors.

ED-DCX8510-4B - the 8U chassis supports four horizontal switching blades. In addition, the director supports up to 10 additional 64Gb/s Inter-chassis Link (ICL) ports for high-speed connections to other ED-DCX8510B Directors.

Connectrix B-Series Optional Licensed Key Features

For optimal flexibility, there are optional licensed features for the Connectrix ED-DCX8510B Directors. The The Enterprise software package includes Fabric Vision, ISL Trunking, for port aggregation and Extended Fabric, for distance extension. There is also an optional license for FICON Control Unit Port (CUP) for mainframe environments.

Fabric Vision provides monitoring, management and diagnostic capabilities which enable administrators to avoid problems before they impact operations. Fabric Vision provides dashboards, diagnostic tools and Flow Vision which enables administrators to monitor and analyze specific application flows. Fabric Vision capabilities also include:

- ClearLink Diagnostics: D_Ports to ensure optical and signal integrity for 16G optics and cables, simplifying deployment and support of high-performance fabrics. Monitoring and Alerting Policy Suite (MAPS) – leverages pre-built policy-based templates to simplify fabric-wide threshold configuration, monitoring and alerting
- Fabric Performance Impact (FPI) Monitoring - leverages predefined MAPS policies to automatically detect and alert administrators to different latency severity levels to identify slow drain devices that could impact network performance.

Specifications

System Architecture		
Features	ED-DCX8510-8B	ED-DCX8510-4B
Fibre Channel Ports	Up to 512 ports	Up to 256 ports
Performance	4.25 Gb/s line speed, full duplex 8.50 Gb/s line speed full duplex 10.53 Gb/s line speed, full duplex 16Gb/s line speed, full duplex	4.25 Gb/s line speed, full duplex 8.50 Gb/s line speed full duplex 10.53 Gb/s line speed, full duplex 16Gb/s line speed, full duplex
Aggregate chassis bandwidth	8.2 Tb/s per chassis 384 ports x 16Gb/s data rate + 2.048 Tb/s ICL bandwidth	4.1 Tb/s per chassis 192 ports x 16Gb/s data rate + 1.024 Tb/s ICL bandwidth
Bandwidth per slot	512 Gb/s	512 Gb/s
Aggregate ICL bandwidth	2.048 Tb/s; 32 ICL ports provide the equivalent of 128 Gb/s ports. Each ICL port provides 64 Gb/s bandwidth over QSFP (4x16 Gb/s) link Frame-based trunking is enabled between four ICSs, DPS distributes exchanges across all frame trunks	1.024 Tb/s; 32 ICL ports provide the equivalent of 64 Gb/s ports. Each ICL port provides 64 Gb/s bandwidth over QSFP (4x16 Gb/s) link Frame-based trunking is enabled between four ICSs, DPS distributes exchanges across all frame trunks
Fabric Services	Name Server, Registered State Change Notification (RSCN), Login Services, Fabric Configuration Server (FCS), Public Loop, Broadcast, In-order delivery	Name Server, Registered State Change Notification (RSCN), Login Services, Fabric Configuration Server (FCS), Public Loop, Broadcast, In-order delivery
Fabric latency	Locally switched ports 700 ns; blade-to-blade latency is 2:1 µsec	Locally switched ports 700 ns; blade-to-blade latency is 2:1 µsec
Maximum frame size	2,112-byte payload	2,112-byte payload
Frame buffers	8192 per 16-port group on 32-port blades and up to 8192 per 24-port group on 48-port blades dynamically allocated	8192 per 16-port group on 32-port blades and up to 8192 per 24-port group on 48-port blades dynamically allocated

System Architecture - continued		
Features	ED-DCX8510-8B	ED-DCX8510-4B
Class of Service	Class 2,3,F (Inter-switch frames)	Class 2,3,F (Inter-switch frames)
Port types	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
Media types	Small Form-factor Pluggable (SFP) LC Connector Short Wavelength Laser (SWL) up to 500 meters (1,640 feet) Long Wavelength Laser (LWL) up to 10km (6.2 miles) 10Gb/s FC support via optional 10Gb FC SFP for connection to 10Gb DWDM devices as well as support for in-flight compression and encryption on these links with an optional license. Distance depends on fiber-optic cable and port speeds.	Small Form-factor Pluggable (SFP) LC Connector Short Wavelength Laser (SWL) up to 500 meters (1,640 feet) Long Wavelength Laser (LWL) up to 10km (6.2 miles) 10Gb/s FC support via optional 10Gb FC SFP for connection to 10Gb DWDM devices as well as support for in-flight compression and encryption on these links with an optional license. Distance depends on fiber-optic cable and port speeds.

System Architecture - continued		
Features	ED-DCX8510-8B	ED-DCX8510-4B
Fabric services	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 (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
Distance extension	Supports DWDM, CWDM and FC-SONET devices; FCiP, in-flight compression and encryption, Fast Write, Tape Write and Read pipelining, QoS and BB Credit recovery	Supports DWDM, CWDM and FC-SONET devices; FCiP, in-flight compression and encryption, Fast Write, Tape Write and Read pipelining, QoS and BB Credit recovery
Hot swappable components	2N redundancy, hot swappable power supplies and cooling fans Redundant (active/standby) control processors Hot swappable port blades Hot swappable optics	2N redundancy, hot swappable power supplies and cooling fans Redundant (active/standby) control processors Hot swappable port blades Hot swappable optics
Optional features	FCiP for SAN Extension, ICL Kit, FIPS Compliance Kit	FCiP for SAN Extension, ICL Kit, FIPS Compliance Kit
Installation options	Connectrix EC-1700 cabinet or customer-supplied 19-inch EIA 310 standard cabinet	Connectrix EC-1700 cabinet or customer-supplied 19-inch EIA 310 standard cabinet

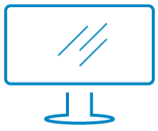
Connectivity Management		
Features	ED-DCX8510-8B	ED-DCX8510-4B
Interface	Connectrix Manager Converged Network Edition 11.x or higher Fabric Operating System (FOS) 7.0.0a or higher Advanced Web Tools, SSH, HTTP=, RADIUS, SNMP v3(FE MIB, FC Management MIB), SMI-S Compliant	Connectrix Manager Converged Network Edition 11.x or higher Fabric Operating System (FOS) 7.0.0a or higher Advanced Web Tools, SSH, HTTP=, RADIUS, SNMP v3(FE MIB, FC Management MIB), SMI-S Compliant
Management access	Call-home integration with Connectrix Manager Converged Network Edition 10/100/100 Ethernet (RJ-45) per control processor; serial port (RJ-45) and one USB per control processor module	Call-home integration with Connectrix Manager Converged Network Edition 10/100/100 Ethernet (RJ-45) per control processor; serial port (RJ-45) and one USB per control processor module
Firmware upgrades	Non-disruptive download and activation	Non- disruptive download and activation
Compatibiulity	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, FC ping and Pathinfo (FC trace route)	D_port offline diagnostics, POST and embedded online/offline diagnostics, including extensive RAS features, RAS trace logging, FC ping and Pathinfo (FC trace route)

Physical Specifications - Enclosure		
Features	ED-DCX8510-8B	ED-DCX8510-4B
Width	43.74 cm (17.22 inches)	43.74 cm (17.22 inches)
Height	61.24 cm (24.11 inches, 14U)	35.00 cm (13.78 inches, 8U) plus 4.37 cm exhaust shelf (1.72 inches, 1U)
Depth without door	61.19 cm (24.09 inches)	61.19 cm (24.09 inches)
Depth with door	73.20 cm (28.82 inches)	73.20 cm (28.82 inches)
Weight	103.50 kg (228.20 pounds) for 384 port configuration fully populated; 39.55 kg (82.20 pounds) for chassis	68.04 kg (150 pounds) for 192 port configuration fully populated; 25.76 kg (56.80 pounds) for chassis

Environmental Specifications		
Features	ED-DCX8510-8B	ED-DCX8510-8B
Temperature	Operating: 0° to 40° C (32 F to 104° F) Non-operating: -25° C to 70° C (-13 F° to 158 F°)	Operating: 0° to 40° C (32 F to 104° F) Non-operating: -25° C to 70° C (-13 F° to 158 F°)
Relative humidity	Operating: 20% to 80% RH non-condensing at 40° C (104° F) Non-operating and storage (non condensing): 10% to 93% at 70° C (158° F)	Operating: 20% to 80% RH non-condensing at 40° C (104° F) Non-operating and storage (non condensing): 10% to 93% at 70° C (158° F)
Altitude	Up to 3000 meters (9,842 feet)	Up to 3000 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: 33 g, 11 ms, half sine
Vibration	Operating: 0.5 g p-p, 5 to 500 to 5Hz Non-operating: 2.0 g p-p, 5 to 500 Hz	Operating: 0.5 g p-p, 5 to 500 to 5Hz Non-operating: 2.0 g p-p, 5 to 500 Hz
Heat dissipation	512-port configuration 7,462 BTU/hr	256-port configuration 4,182 BTU/hr
CO^2 emissions	7.8 metric tonnes per year with 384 ports at 0.42 kg/kWh 0,95 kg per Gb/s per year	4.3 metric tonnes per year with 256 ports at 0.42 kg/kWh 1.04 kg per Gb/s per year

Power Requirements – Supported Power Range		
Features	ED-DCX8510-8B	ED-DCX8510-4B
Voltage range	180 to 264 VAC Auto-volt	180 to 264 VAC Auto-volt
Nominal	200 to 240 VAC	200 to 240 VAC
Power	180 to 264 VAC; 2,000 W	180 to 264 VAC; 2,000 W
In rush current	60 Amps maximum, peak	60 Amps maximum, peak
Frequency	47 to 63 Hz	47 to 63 Hz

Regulatory Requirements – Safety EMI		
Features	ED-DCX8510-8B	ED-DCX8510-4B
United States	UL/CSA 60950-1 2nd Ed or latest FCC Part 15 Sub-part B	UL/CSA 60950-1 2nd Ed or latest FCC Part 15 Sub-part B
Canada	CSA No. 60950-1 2nd Edition or latest ICES-003 Class A	CSA No. 60950-1 2nd Edition or latest ICES-003 Class A
Australia, New Zealand	EN550022 or CISPR22 or AS/NZS CISPR22	EN550022 or CISPR22 or AS/NZS CISPR22
Japan	CISPR22 and JEIDA (Harmonics)	CISPR22 and JEIDA (Harmonics)
International	IEC 60950 CSPR22 Class A	IEC 60950 CSPR22 Class A
European Community	EN60950-1:2006+A11:2009 EN55022 and EN55024	EN60950-1:2006+A11:2009 EN55022 and EN55024
Taiwan	(PS only) CNS 14336(94) or latest, CNS 13438(95) or latest	(PS only) CNS 14336(94) or latest, CNS 13438(95) or latest



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