

EMC CONNECTRIX ED-DCX8510-8B BACKBONE DIRECTOR

The EMC® Connectrix® ED-DCX8510-8B Backbone is designed to unleash the full potential of private cloud storage. With unmatched scalability, 16 Gbps performance, and reliability, it is a strategic platform for transforming current SAN fabrics into cloud-optimized SANs. The EMC Connectrix ED-DCX8510-8B enables organizations to meet their most pressing business requirements with a future-proof solution built on proven data center technology.



SYSTEM ARCHITECTURE

Fibre Channel Ports

Choice of two to eight 32-port or 48-port blades for up to 384 auto-sensing 4, 8, 10, and 16 Gb/s ports; 64-port 8 Gb/s blades are also available

Performance

Full line-speed switching at:

- 4.25 Gb/s line speed, full duplex
- 8.50 Gb/s line speed, full duplex
- 10.53 Gb/s line speed, full duplex
- 16 Gb/s line speed, full duplex
- Auto-sensing of 4, 8, and 16 Gb/s port speeds
- Optionally programmable 10 Gb/s and fixed port speeds

Aggregate Chassis Bandwidth

8.2 Tb/s per chassis (384 ports x 16 Gb/s line rate + 2.048 Tb/s ICL bandwidth)

Bandwidth per Slot

512 Gb/s

Aggregate ICL Bandwidth

2.048 Tb/s; 32 ICL ports provide the equivalent of 128 16 Gb/s ports. Each ICL port provides 64 Gb/s bandwidth over a QSFP (4 x 16 Gb/s) link. Frame-based trunking is enabled between four ICLs. DPS distributes exchanges across all frame trunks.

Fabric Latency

Locally switched ports 700 ns; blade-to-blade latency is 2.1 µsec

Maximum Frame Size

2,112-byte payload

Frame Buffers

8,192 per 16-port group on 32-port blades and up to 8,192 per 24-port group on 48-port blades, dynamically allocated

Classes of Service

Class 2, Class 3, Class 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

Media Types

Requires Connectrix hot-pluggable, Small Form-factor Pluggable (SFP), LC connector
Short-Wavelength Laser (SWL) up to 500 meters (1,640 feet)

Long-Wavelength Laser (LWL) up to 10 km (6.2 mi)
Distance depends on fiber-optic cable and port speed

Fabric Services

Simple Name Server, Registered State Change Notification (RSCN), NTP, RADIUS, LDAP, Switch and Port binding, Reliable Commit Service (RCS), Brocade Advanced Zoning, Brocade Advanced Web Tools™, Fabric Watch™, Extended Fabrics, ISL Trunking, DPS, QoS, Advanced Performance Monitoring, Adaptive Networking Services with QoS

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

Hot-swappable Components

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

Installation Options

The ED-DCX8510-8B can be mounted within an EMC Connectrix EC-1700-B cabinet or a customer-supplied 19-inch cabinet that conforms to the EIA 310 standard

CONNECTIVITY MANAGEMENT

Interface

EMC Connectrix Manager Converged Network Edition 11.x
Fabric Operating System s/b 7.0.0a or higher
Advanced Web Tools
SSH, HTTPS, RADIUS
SNMP v3 (FE MIB, FC Management MIB)
SMI-S compliant

Management Access

Call-home integration with Connectrix Manager Converged Network Edition
10/100/1000 Ethernet (RJ-45) per control processor, serial port (RJ-45) and one USB per control processor module

Firmware Upgrades

Non-disruptive download and activation

Compatibility

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)

PHYSICAL SPECIFICATIONS

Enclosure

43.74 cm (17.22 in) width
61.24 cm (24.11 in, 14U) height
61.19 cm (24.09 in) depth without door
73.20 cm (28.82 in) depth with door
103.50 kg (228.20 lb) for 384-port configuration fully populated
39.55 kg (82.20 lb) for chassis

ENVIRONMENTAL SPECIFICATIONS

Temperature

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: 20% to 85% non-condensing at 40° C (104° F)

Non-operating and storage (non-condensing): 10% to 93% at 70° C (158° F)

Altitude

Up to 9,842 feet (3,000 meters)

Shock

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

Heat Dissipation

Min: 32-port configuration (no QSFP), 873 W, 2,982 BTU/hr

Max: 384-port configuration (fully-loaded w/QSFPs), 2,242 W, 7,654 BTU/hr

CO2 Emissions

7.8 metric tonnes per year (with 384 ports at 0.42 kg/kWh)

0.95kg per Gb/s per year

POWER REQUIREMENTS

Supported Power Range

Range: 180-264 VAC Auto-volt

Nominal: 200 to 240 VAC

Operating: 180 to 264 VAC: 2000W

Frequency: 47 to 63 Hz

In-rush Current: 60 Amps maximum, peak

REGULATORY REQUIREMENTS

Safety EMI

United States 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

Australia/New Zealand-EN55022 or CISPR22 or AS/NZS CISPR22

Japan CISPR22 and JEIDA (Harmonics)

International IEC 60950 C5PR22 Class A

European Community EN60950-1: 2006+A11:2009 EN55022 and EN55024Taiwan (PS only) CNS 14336(94) or latest, CNS 13438(95) or latest

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