SPECIFICATION SHEET

EMC Connectrix DS-5300B

The EMC® Connectrix® DS-5300B offers best-in-class port density and scalability for midrange enterprise SAN switches along with redundant, hot-pluggable components and non-disruptive software upgrades. As the value and volume of business data continue to rise, organizations need technology solutions that are easy to implement and manage, and that can grow and change with minimal disruption. The DS-5300B switch is designed for rapidly growing storage requirements in mission-critical environments—combining 4 and 8 Gb/s Fibre Channel technology in configurations of 48, 64, or 80 ports in an efficiently designed 2 U package. As a result, it provides low-cost access to industry-leading SAN technology as well as "pay-as-you-grow" scalability for consolidating storage and maximizing the value of virtual server deployments. The evolutionary design makes it very efficient in power, cooling, and rack density to help enable medium and large-scale server and storage consolidation.

Specifications

System Architecture

Fibre Channel Standards
FC-PH, FC-PH-2, FC-PH-3, FC-GS-2, FC-FLA, FC-FG, FC-SW3

Fibre Channel ports
80 universal (E, F, M, FL, or N) ports; 48-port base with 16-port increments

Certified Maximum
Single FOS fabric: 56 domains, 19 hops

Single M-EOS fabric: 31 domains, 3 hops

Performance
Full line-speed switching at:

- 2.125 Gb/s line speed, full duplex
- 4.25 Gb/s line speed, full duplex
- 8.50 Gb/s line speed, full duplex

Auto-sensing of 2, 4, and 8 Gb/s port speeds

Optionally programmable to fixed port speed

Speed matching between 2, 4, and 8 Gb/s ports

ISL Trunking
Frame-based trunking with up to eight 8 Gb/s ports per ISL trunk with optional license; up to 68 Gb/s per ISL trunk (8 ports × 8.5 Gb/s (line rate))

Exchange-based load balancing across ISLs with DPS included in Fabric OS

Aggregate Bandwidth
1360 Gb/s: 80 ports × 8.5 Gb/s (line rate) × 2 (full duplex)

Maximum Fabric latency
Locally switched ports 700 ns with no contention, cut-through routing at 8 Gb/s between locally switched groups

Maximum frame size
2,112-byte payload

Frame Buffers
1,460 dynamically allocated, 268 maximum per port

Classes of Service
Class 2, Class 3, Class F (Interswitch Frames)

Port Types
FL_Port, F_Port, M_Port (Mirror Port), E_Port, EX_Port (Fibre Channel Integrated Routing); self-discovery based on switch type (U_Port); optional port type control

Data Traffic Types
Fabric switches supporting unicast, multicast (255 groups), and broadcast

Media Types
4 Gb/s: Requires Connectrix hot-pluggable, Small Form-factor-Pluggable (SFP), LC connector; 4 Gb/s Short-Wavelength Laser (SWL); 4 Gb/s Long-Wavelength Laser (LWL); 4 Gb/s Extended Long-Wavelength Laser (ELWL); distance depends on fiber-optic cable and port speed

8 Gb/s: Requires Connectrix hot-pluggable SFP+, LC connector; Short-Wavelength Laser (SWL); distance depends on fiber-optic cable and port speed

USB
1 USB port for firmware download, support save, and configuration upload/download

Fabric Services
Simple Name Server (SNS); Registered State Change Notification (RSCN); NTP v3; Reliable Commit Service (RCS); Dynamic Path Selection (DPS); Brocade Advanced Zoning (default zoning, port/WWN zoning, broadcast zoning); NPIV; N_Port Trunking; FDMI; Management Server; FSPF; Fabric Watch; Extended Fabrics; ISL Trunking; Advanced Performance Monitoring; Adaptive Networking (per data flow QoS, Ingress Rate Limiting, Traffic Isolation, Top Talkers; licensing varies); IPoFC, Frame Redirection; Port Fencing; BB credit recovery

FICON
FICON, FICON cascading (FOS and M-EOS), and FICON CUP

Connectivity Management

Interface
Telnet, HTTP, SNMP v1/v3 (FE MIB, FC Management MIB); Auditing, Syslog, Change Management tracking; EZSwitchSetup wizard; Web Tools; EMC Connectrix Manager Standard/Enterprise 9.x (optional); Fabric Manager (optional: FOS environments only); SMI-S compliant, SMI-S scripting toolkit, Administrative Domains; trial licenses for select add-on capabilities

Management Access
Call home integration

10/100 Ethernet (RJ-45), in-band over Fibre Channel; serial port (RJ-45); USB; call-home integration enabled through Connectrix Manager and Fabric Manager

Security
SSL, SSH v2, HTTPS, LDAP, RADIUS, Role-Based Access Control (RBAC), DHCHAP (between switches and end devices), Port Binding, Switch Binding, Secure RPC, Secure Copy (SCP), Trusted Switch, IPSec, IP Filtering

Compatibility
All Connectrix B Series switches and directors

Diagnostics
POST and embedded online/offline diagnostics, including RAStrace logging, environmental monitoring, non-disruptive daemon restart, FCping and Pathinfo (FC traceroute), port mirroring (SPAN port)

Physical Specifications

Enclosure
Non-port to port-side airflow; 2 U, 19-inch EIA-compliant, power from non-port side

Size
Width: 42.88 cm (16.88 in)

Height: 8.60 cm (3.4 in)

Depth: 61.05cm (24.00 in)

System Weight: 15.6 kg (34.4 lb) with dual power supplies, without SFP/SFP+ media

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: 10% to 85% non-condensing

Non-operating and storage (non-condensing): 10% to 95% non-condensing

Altitude (feet/meters)
Operating: Up to 3,000 meters (9,842 feet)

Storage: Up to 12 kilometers (39,370 feet)

Shock
Operating: 20 G, 6 ms, half-sine

Non-operating: Half-sine, 33G 11 ms, 3/eg Axis

Vibration
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

Heat Dissipation
Maximum 80 ports: 939 BTU/hr

CO2 Emissions
1,012 kg per year (with 8 ports at 0.42 kg/kWh)

1.58 kg per Gb/s per year

Airflow
Maximum 609 CFM (cu. ft./min); nominal 44 CFM

Power Requirements

Power Inlet
C13

Input Voltage
85 to 264 VAC nominal

Frequency
47 to 63 Hz

Inrush Current
Maximum of 38 amps for period between 10 to 150 ms at 50° C (122° F)

Power Consumption
Nominal 260 watts; maximum 275 watts with 80 ports at 8 Gb/s

Regulatory Requirements

	Safety	EMI
United States	UL 60950	FCC Part 15 Class A
Canada	CSA No. 60950	ICES-003 Class A
Australia/New Zealand	–	EN550022 Level A
Japan	IEC 60950	VCCI Class A
International	IEC 60950	CSPR22 Class A
European Community	EN60950	EN55022 Level A
	TUV, NEMKO	EN55024
Taiwan	CNS	13438 Class A

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