CONNECTRIX DS-6600B SWITCHES

The Connectrix DS-6600B series switches deliver up to 32 Gigabits per second (32Gb/s) Fibre Channel (FC) performance. The DS-6600B switches scale from eight to 128 ports.

DS-6600B 32Gb/s Fibre Channel Switch Models

There are three switch models in the DS-6600B series. All models can function at 4, 8, 16 or 32 Gb/s speeds depending on the installed optic. All switch models can be managed by Connectrix Manager Converged Network Edition (CMCNE).

DS-6610B - Designed to support the SAN requirements of small-to-medium-sized environments, the Connectrix DS-6610B is a 24-port switch that offers high performance and economy. The 1U base chassis of the DS-6610B is prepopulated with eight 16Gb/s Fibre Channel Small Form Factor Pluggable (SFP+) shortwave optics. The ports on demand (PoD) kits allow expansion in 8-port increments.

DS-6620B - Designed to support the SAN requirements of medium-to large sized workgroups as well as that of large enterprises, the Connectrix DS-6620B is a 64-port switch offering forty-eight 32 Gigabit per second (Gb/s) SFP+ ports and four 32Gb/s QSFP ports in a 1U form factor. With its speed and port density the DS-6620B can be deployed in any Fibre Channel Storage Area Network (SAN) to enable very dense fabrics in a relatively small package.

DS-6630B – This model has a total of 128 ports. There are 96 standard SFP 32Gb/s capable ports and eight Quad Small Form-factor Pluggable (QSFP) ports which support an additional 32 ports. The DS-6630B will be a good choice for mid-size customers who aren't quite ready to make the added investment into a 4-slot director class product, but need more ports than the typical 48-port departmental switch. The DS-6630B will also be a good fit for large enterprise class customer who need more ports at the edge, but don't necessarily need a director class product at the edge of a large SAN.

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-6600B product family there are "-EP" or "Enterprise Package" switch models which include the Enterprise Package.

Specifications			
Features	DS-6610B	DS-6620B	DS-6630B
Fibre Channel Ports	There are two DS-6610B chassis models. The base chassis model includes eight active 32Gb/s capable ports that are populated with eight 16Gb/s SFPs. The 8-port port-on-demand (PoD) model allows the switch to support additional 16 ports reaching a maximum of 24 ports. The other DS-6610B model which ends in "-EP" comes fully populated with 24 16Gb/s SFPs and includes the Enterprise Package.	The DS-6620B features 48 32Gb/s Fibre Channel ports and four 32Gb QSFP ports. The base model has 24 active 32Gb/s ports, populated with 32Gb shortwave SFPs. The 32Gb Ports on Demand (PoD) license activates 12 additional ports and includes 12 32Gb/s shortwave SFPs. The QSFP Ports On Demand license activates the four QSFP ports and contains four shortwave QSFPs. Open ports can also be configured with 16- Gb/s shortwave or long wave SFPs. The enterprise switch model provides a fully populated 32G/s 64-port switch with forty-eight 32Gb/s shortwave SFPs and four shortwave QSFPs.	The DS-6630B switch model supports up to 128 ports. There are 96 standard SFP 32Gb/s capable ports and eight Quad Small Form-factor Pluggable (QSFP) ports which support an additional 32 ports.
Performance	32Gb/s SFPs can operate at 32, 16 or 8Gb/s. 16Gb/s SFPs will operate at 16, 8 and 4Gb/s.	The 32Gb/s SFPs can operate at 32, 16 or 8Gb/s. The QSFPs can only operate at 32Gb/s. 16Gb/s SFPs will operate at 16, 8 and 4Gb/s. Up to 64 Gb/s of in-flight compression and/or encryption provide efficient link utilization and security.	32Gb/s SFPs can operate at 32, 16 or 8Gb/s. 16Gb/s SFPs will operate at 16, 8 and 4Gb/s.
Frame Buffers	2K dynamically allocated	15,360 dynamically allocated	15,360 dynamically allocated
Aggregate Bandwidth	768 Gb/s	2Tb/s	4Tb/s
Class of Service	Class 2, Class 3, Class F (Inter-switch Frames)	Class 2, Class 3, Class F (Inter-switch Frames)	Class 2, Class 3, Class F (Inter-switch Frames)
Port Types	D_PORT (ClearLink Diagnostic Port), E_PORT, EX_PORT, F_PORT, AE_PORT, Optional Port-type Control	D_PORT (ClearLink Diagnostic Port), E_PORT, EX_PORT, F_PORT, AE_PORT, Optional Port-type Control	D_PORT (ClearLink Diagnostic Port), E_PORT, EX_PORT, F_PORT, AE_PORT, Optional Port-type Control
Fabric Services	Monitoring and Alerting Policy suite (MAPS), Flow Vision, adaptive Networking (Ingress Rate Limiting, Traffic Isolation, QoS), Fabric Performance Impact (FPI) monitoring, Slow Drain Device Quarantine, (SDDQ), Advanced Zoning ((default zoning, port/WWW zoning, broadcast zoning, target-driven zoning); Dynamic Fabric Provisioning (DFP), Dynamic Path Selection (DPS), Extended Fabrics, Enhanced BB Credit Recovery, FDMI, Frame Redirection, Frame-based Trunking; FSPF, No Integrated Routing; IPoFC, ISL Trunking; Management Server; NPIV, Time Server; Registered State Change Notification (RSCN); Reliable Commit Service (RCS); Simple Name Server (SNS); Virtual Fabrics (Logical Switch, Logical Fabric); Read Diagnostics Parameter (RDP) Note: Some fabric services do not apply or are unavailable in Access Gateway mode.	Monitoring and Alerting Policy suite (MAPS), Flow Vision, adaptive Networking (Ingress Rate Limiting, Traffic Isolation, QoS), Fabric Performance Impact (FPI) monitoring, Slow Drain Device Quarantine, (SDDQ), Advanced Zoning ((default zoning, port/WWW zoning, broadcast zoning, target-driven zoning); Dynamic Fabric Provisioning (DFP), Dynamic Path Selection (DPS), Extended Fabrics, Enhanced BB Credit Recovery, FDMI, Frame Redirection, Frame-based Trunking; FSPF, Integrated Routing; IPoFC, ISL Trunking; Management Server; NPIV, Time Server; Registered State Change Notification (RSCN); Reliable Commit Service (RCS); Simple Name Server (SNS); Virtual Fabrics (Logical Switch, Logical Fabric); Read Diagnostics Parameter (RDP) Note: Some fabric services do not apply or are unavailable in Access Gateway mode.	Monitoring and Alerting Policy suite (MAPS), Flow Vision, adaptive Networking (Ingress Rate Limiting, Traffic Isolation, QoS), Fabric Performance Impact (FPI) monitoring, Slow Drain Device Quarantine, (SDDQ), Advanced Zoning ((default zoning, port/WWW zoning, broadcast zoning, target-driven zoning); Dynamic Fabric Provisioning (DFP), Dynamic Path Selection (DPS), Extended Fabrics, Enhanced BB Credit Recovery, FDMI, Frame Redirection, Frame-based Trunking; FSPF, Integrated Routing; IPoFC, ISL Trunking; Management Server; NPIV, Time Server; Registered State Change Notification (RSCN); Reliable Commit Service (RCS); Simple Name Server (SNS); Virtual Fabrics (Logical Switch, Logical Fabric); Read Diagnostics Parameter (RDP) Note: Some fabric services do not apply or are unavailable in Access Gateway mode.

Hot Swappable Components	SFPs Note: The DS-6610B has an embedded power supply / fan and it is non-replaceable. The entire switch is a Field Replaceable Unit (FRU). The only FRU's on the DS-6610B are the SFP's. The DS-6610B will support in-service firmware upgrades.	Dual power supplies with three embedded cooling fan FRUs, SFPs and QSFP optics Note: The fans are connected to the power supplies and are not themselves replaceable.	Dual power supplies, three fan FRUs, SFPs and QSFPs
Installation Options	The DS-6610B can be installed in a standard, customer-supplied, 19-inch Electronic Industries Alliance (EIA) rack.	The DS-6620B can be installed in a standard, customer-supplied, 19-inch Electronic Industries Alliance (EIA) rack.	The DS-6620B can be installed in a standard, customer-supplied, 19-inch Electronic Industries Alliance (EIA) rack
Scalability	Refer to the Support Matrix (ESM) or E-Lab Navigator.	Refer to the EMC Support Matrix (ESM) or the E-Lab Navigator.	Refer to the EMC Support Matrix (ESM) on emc.com or the E-Lab Navigator.
Maximum Frame Size	2,112-byte payload	2,112-byte payload	2,112-byte payload

Connectivity Management			
Features	DS-6610B	DS-6620B	DS-6630B
Interface	Connectrix Manager Converged Network Edition (CMCNE) version 14.2.0 or higher. Fabric Operating System (FOS) 8.1.0a or higher. Advanced Web Tools. SSH, Auditing,Syslog NTP v3, CLI, SMI-S compliant; REST API, HTTP, SNMP v1/v3 (FE MIB, FC Management MIB)	Connectrix Manager Converged Network Edition (CMCNE) version 14.0.0 or higher. Fabric Operating System (FOS) 8.0.0 or higher. Advanced Web Tools. SSH, Auditing,Syslog NTP v3, CLI, SMI-S compliant; REST API, HTTP, SNMP v1/v3 (FE MIB, FC Management MIB)	Connectrix Manager Converged Network Edition (CMCNE) version 14.4.1 or higher. Fabric Operating System (FOS) 8.0.0 or higher. Advanced Web Tools. SSH, Auditing,Syslog NTP v3, CLI, SMI-S compliant; REST API, HTTP, SNMP v1/v3 (FE MIB, FC Management MIB)
Management Access	Call home integration with Connectrix Manager Converged Network Edition. 10/100/1000 Mb/s Ethernet (R3-45), In-band over Fibre Channel, Serial port (RJ-45), and one USB port	Call home integration with EMC Connectrix Manager Converged Network Edition. 10/100/1000 Mb/s Ethernet (R3-45), In-band over Fibre Channel, Serial port (RJ-45), and one USB port.	Call home integration with EMC Connectrix Manager Converged Network Edition. 10/100/1000 Mb/s Ethernet (R3-45), 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
Security	DH-CHAP (between switches and end devices), FCAP switch authentication; HTTPS, IPsec, IP filtering, LDAP with IPv6, Open LDAR, Port Binding, RADIUS, TACACS+, user-defined Role-based Access Control (RBAC), Secure Copy (SCP), Secure RPC, Secure Syslog, SSH v2, SSL, Switch Binding, Trusted Switch	AES-GCM-256 encryption on ISLs; DH-CHAP (between switches and end devices), FCAP switch aurthentication; HTTPS, IPsec, IP filtering, LDAPwith IPv6, OpenLDAR, Port Binding, RADIUS, TACACS+, user-defined Role-based Access Control (RBAC), Secure Copy (SCP), Secure RPC, Secure Syslog, SSH v2, SSL, Switch Binding, Trusted Switch	AES-GCM-256encryption on ISLs; DH-CHAP (between switches and end devices), FCAP switch aurthentication; HTTPS, IPsec, IP filtering, LDAPwith IPv6, OpenLDAR, Port Binding, RADIUS, TACACS+, user-defined Role-based Access Control (RBAC), Secure Copy (SCP), Secure RPC, Secure Syslog, SSH v2, SSL, Switch Binding, Trusted Switch
Diagnostics	ClearLink optics and cable diagnostics, including electrical/optical loopback, link traffic/latency/distance, flow mirroring; built-in flow generator, POST and embedded online/offline diagnostics, including environmental monitoring, FC ping and Pathinfo (FC traceroute), frame viewer, non-disruptive daemon restart, optics health monitoring, power monitoring, RAStrace logging, and Rolling Reboot Detection (RRD)	ClearLink optics and cable diagnostics, including electrical/optical loopback, link traffic/latency/distance, flow mirroring; built-in flow generator, POSTand embedded online/offlinediagnostics, including environmental monitoring, FCping and Pathinfo (FC traceroute), frame viewer, non-disruptive daemon restart, optics health monitoring,power monitoring, RAStrace logging, and Rolling Reboot Detection (RRD)	ClearLink optics and cable diagnostics, including electrical/optical loopback, link traffic/latency/distance, flow mirroring; built-in flow generator, POSTand embedded online/offlinediagnostics, including environmental monitoring, FCping and Pathinfo (FC traceroute), frame viewer, non-disruptive daemon restart, optics health monitoring,power monitoring, RAStrace logging, and Rolling Reboot Detection (RRD)

| Comptibility, Programmability, and Extensibility | Connectrix B-Series Switches and Directors
There are no API interfaces required. Connectrix Manager Converged Network Edition provides an API interface for EMC ViPR®. SNMP capabilities are available but are not required for normal operation. | Connectrix B-Series Switches and Directors
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Physical Specifications

Features	DS-6610B	DS-6620B	DS-6630B
Enclosure	The chassis supports rear-to-front (RTF) airflow	There are two air flow options: front-to-rear (FTR) and rear-to-front (RTF)	There are two air flow options: front-to-rear (FTR) and rear-to-front (RTF
Dimensions and Weight	Height x Width x Depth: 1.69 x 16.88 x 12.07 inches, (42.9 x 428.8 x 306 mm) , 1 RU Weight fully populated: 13 lbs (5.76 kg)	Dimensions (HxWxD): 1.73x17.32x14.0 inches (43.9mmx440mmx355.6mm), 1RU Weight with 2 power supplies and no transceivers: 17lbs (7.73kg)	Dimensions (HxWxD): 3.41x17.32x24.0 inches (86.7mmx440mmx609.6mm), 2RU Weight with 2 power supplies and no transceivers: 42lbs (19.05kg)

Power Requirements

Features	DS-6610B	DS-6620B	DS-6630B
Power Supply	Switch chassis includes one fixed power supply	Switch chassis includes dual, hot-swappable power supplies with integrated cooling system	Switch chassis includes dual, hot-swappable power supplies with integrated cooling system
AC Input	90 V to 264 V ~2.2A	90 V to 264 V ~3.5A	90 V to 264 V ~12A
Input Line Frequency	47-63 Hz	47-63 Hz	47-63 Hz
Power Consumption	77 WATTS with all 24-ports populated	206 WATTS with all 64 ports populated	942 Watts with all 128-ports

Regulatory Requirements

Country	Safety	EMI/EMC
United States	Bi-Nat UL/CSA 60950-1	FCC Part 15, Subpart B
Canada	Bi-Nat UL/CSA 60950-1	ICES-3 (A)/NMB-3(A)
Japan		CISPR22 and JEIDA (Harmonics)
European Union	EN60950-1 or latest	EN55022 and EN55024
Australia/New Zealand	EN60950-1 or latest or IEC 60950-1	EN55022 or CISPR22 or AS/NZS CISPR22
Russian Federation	IEC60950-1 or latest	51318.22-99 and 51318.24.99 or latest
Korea		KN22 and KN24
China	GB 4943.1	GB 9254, YD/T993
Taiwan	CNS 14336-1 or latest	CNS 13438 or latest

Agency Certifications and Markings

Country		
United States	cCSAus	FCC Part 15, Subpart B
Canada	cCSAus	ICES-3 (A)/NMB-3(A)
Japan		CISPR22 and JEIDA (Harmonics)
European Union	TUV-GS, N	CE Marking
Australia/New Zealand		C-Tick Mark, RCM Mark
Russian	EAC Mark	
Korea		KCC Mark Class A
China (PS only)	CCC logo	
Taiwan (PS only)	BSMI mark	BSMI mark
Ukraine	UkrSEPRO	
Serbia	Safety Kvalitet	EMC Kvalitet
Vietnam		ICTQC
Brazil		ANATEL
Argentina	"S" Mark	

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