DATACOM

DM4770

100GE CORE & AGGREGATION SWITCHES

DATASHEET

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IP/MPLS SWITCH POWERED BY DMOS NETWORK OPERATION SYSTEM, WITH 100GE INTERFACES FOR HIGH CAPACITY AND VALUE ADDED METRO EHTERNET APPLICATIONS.

The DM4770 switches provides high switching capacity to meet the growing demands for IP traffic on Metro Ethernet access and aggregation networks, high capacity enterprise networks, and aggregation of servers and networks in Datacenters, always offering high capacity and reliability. The family contains two models, with 16 and with 32 100GE interfaces.

Powered by the DmOS network operating system, the DM4770 switch guarantees robustness and high availability services on a platform with support for a series of L2, L3 and MPLS functionalities. The main supported features are VLAN operations such as QinQ and VLAN Translate, LAG / LACP, ring operation through EAPS or ERPS protocol, RSTP support, static and dynamic IP routing protocols through OSPF and BGP, access policy creation filters (ACL), QoS functionality, among others. MPLS transport and aggregation capabilities are available through LDP for point-to-point (VPWS) and point-to-multipoint (VPLS) services, and L3VPN for IP Services. All L2, L3 and MPLS packets forwarding, filter application and QoS policies are done in HW, guaranteeing wirespeed operation.

The product offers configuration via command line (CLI) accessible by SSHv2, Telnet and RS-232 or USB console port. RADIUS and TACACS functionalities enable the creation of authentication and authorization policies for user access. Local and remote Syslog features, NTP and SNMP clients are also available to enable remote management and troubleshooting.

The DM4770 switches are 1U high equipment ready for installation in standard 19 inch racks. They feature power redundancy through two hot-swap slots for AC or DC power supplies, ensuring high availability services.

- 32CX model with 32 100GE ports (QSFP28 connectors) plus 2 10GE ports (SFP+)

- 16CX model with 16 100GE ports, with 12 of them based on QSFP28 and 4 os them based on QSFP-DD. Additionally the switch contains 4 10GE/25GE interfaces (SFP28 connectors)

- Compact design with 1U in height

- VLAN, QinQ, VLAN Translate, ERPS and EAPS support for Metro Ethernet applications

- MPLS LDP, VPWS , VPLS, and L3VPN support for aggregation applications and data transport in high capacity networks

- Static and dynamic routing through OSPF or BGP

- Two hot-swap slots for redundant AC or DC power supplies

TECHNICAL SPECIFICATIONS

DM4770 32CX			
HARDWARE CHARACTERISTICS	Power supply	2 hot swappable slots for PSUs compatible with PSU 600 DC or AC for 32CX and PSU 400 DC or AC for 16CX	
	PSU AC – Input voltage	100Vac to 240Vac	
	PSU DC – Input voltage	-48Vdc to -60Vdc	
	Maximum power consumption	580W	380W
	Operational temperature	0ºC to 45ºC	0ºC to 55ºC
	Operational relative humidity	10% to 90%, non-condensed	
	Operational altitude	0 to 3000m	
	Storage temperature	-20ºC to 70ºC	
	Storage relative humidity	5% to 95%, non-condensed	
	Dimensions in mm (H x D x W)	44 x 400 x 447	
	Weight	6,2 kg	4,0 kg
INTERFACES	10G Base-X (SFP+)	2	-
	25G/10G Base-X (SFP28)	-	4
	100G/40G Base-X (QSFP28)	32	12
	100G/40G Base-X (QSFP-DD)	-	4
	GE Outband Management (RJ45)	1	1
	Console (RJ45)	1	1
	USB (type A)	1	1
	USB (type B)	1	-
PERFORMANCE	Throughput	6,44 Tbps	3,28Tbps
	Packet per Second	2.000 Mpps	1.000 Mpps

STANDARDS

ANATEL

Resolução 242 (30 de Novembro 2000)

Rules for Certification and Homologation of Telecommunication Products.

Resolução 323 (7 de Novembro de 2002)

Standard for Certification of Telecommunication Product.

Resolução 442 (21 de julho 2006)

Rules for the Certification of Telecommunication Equipment in Aspects of Electromagnetic Compatibility.

ETSI

EN 300 019-1-1, Class 1.2	Environmental Conditions for storage
EN 300 019-1-2, Class 2.3	Environmental Conditions for Transport
EN 300 386 V1.6.1 (2012-09)	Electromagnetic compatibility and Radio spectrum Matters (ERM)
EN 55022	Information technology equipment. Radio disturbance characteristics - Class A

IEC

60825-1	Laser Safety Class
61000-4-11	Voltage dips, short interruptions and voltage variations immunity tests
61000-4-6	Immunity to conducted disturbances, induced by radio-frequency fields
EN 61000-4-2	Electrostatic Discharge Immunity Test
EN 61000-4-4	Electrical fast transient/burst immunity test
EN 61000-4-5	Surge immunity test

ORDERING INFORMATION

DM4770 32CX

Model	Description
DM4770 32CX *800.5255.xx*	Manageable L2/L3/MPLS wirespeed Ethernet Switch, 32x 40GE/100GE optical ports (QSFP28) and two GE/10GE optical ports (SFP+). 1U metal cabinet for 19" racks with 4 slots for FAN units and two slots for AC or DC redundant power supplies. Interfaces for outbound management, RS232 and USB console. FAN units, power supplies, MPLS license and optical transceivers to be ordered separately.
FAN 1U-F-56 *800.5229.xx*	Fan module for DM4770 with front-to-back airflow. Four required per DM4770.
PSU 600 AC-F *820.0018.xx*	AC power supply with 100-240VAC and 50 / 60Hz input. Provides 600W of power. It has forced ventilation with air flow leaving the source. It allows operation as a hot swap redundant source with another PSU 600 AC-F or a PSU 600 DC-F.
PSU 600 DC-F *800.5257.xx*	DC power supply with -48 to -60VDC input Provides 600W of power. It has forced ventilation with air flow leaving the source. It allows operation as a hot swap redundant source with another PSU 600 DC-F or a PSU 600 AC-F.
DM4770 32CX - SW MPLS license *012.4215.xx*	Software license for with MPLS capabilities for DM4770 32CX.

DM4770 16CX

Model	Description
DM4770 16CX *800.5280.xx*	Manageable L2/L3/MPLS wirespeed Ethernet Switch, 12x 40GE/100GE optical ports (QSFP28), 4x 40GE/100GE optical ports (QSFP-DD) and 4x 10GE/25GE optical ports (SFP28). 1U metal cabinet for 19" racks with 1 slot for FAN unit (included) and two slots for AC or DC redundant power supplies. Interfaces for outbound management, RS232 and USB console. Power supplies, MPLS license and optical transceivers to be ordered separately.
PSU 400 AC-F *820.0006.xx*	AC power supply with 100-240VAC and 50 / 60Hz input. Provides 400W of power. It has forced ventilation with air flow leaving the source. It allows operation as a hot swap redundant source with another PSU 400 AC-F or a PSU 400 DC-F.
PSU 400 DC-F *800.5215.xx*	DC power supply with -48 to -60VDC input Provides400W of power. It has forced ventilation with air flow leaving the source. It allows operation as a hot swap redundant source with another PSU 400 DC-F or a PSU 400 AC-F.
DM4770 16CX - SW MPLS license *012.4216.xx*	Software license for with MPLS capabilities for DM4770 16CX.

OPTICAL MODULES AND CABLES

Accessory	Description
MO QSFP+ ETH - 40GBase-ER4 (40km) *377.1400.00*	Optical 40GBase-ER4 QSFP+ module. Single mode with LC connector, dual fiber. Maximum reach of up to 40km. Performs monitoring via Digital Diagnostics.
MO QSFP+ ETH - 40GBase-LR4 (10km) *377.1401.00*	Optical 40GBase-LR4 QSFP+ module. Single mode with LC connector, dual fiber. Maximum reach of up to 10km. Performs monitoring via Digital Diagnostics.
MO QSFP+ ETH - 40GBase-SR4 (0,1km) *377.1402.00*	Optical 40GBase-SR4 QSFP+ module. Multimode with MPO connector. Maximum reach of up to 100m. Performs monitoring via Digital Diagnostics.
MO QSFP28 ETH - 100GBase-ER4 (40km) *377.1405.00*	Optical 100GBase-ER4 QSFP28 module. Single mode with LC connector, dual fiber. Maximum reach of up to 40km. Performs monitoring via Digital Diagnostics.
MO QSFP28 ETH - 100GBase-LR4 (20km) *377.1415.00*	Optical 100GBase-LR4 QSFP28 module. Single mode with LC connector, dual fiber. Maximum reach of up to 20km. Performs monitoring via Digital Diagnostics.
MO QSFP28 ETH - 100GBase-LR4 (10km) *377.1404.00*	Optical 100GBase-LR4 QSFP28 module. Single mode with LC connector, dual fiber. Maximum reach of up to 10km. Performs monitoring via Digital Diagnostics.
MO QSFP28 ETH - 100G 4WDM-10 (10km) *377.1414.00*	Optical 100G 4WDM-10 QSFP28 module. Single mode with LC connector, dual fiber. Maximum reach of up to 10km. Performs monitoring via Digital Diagnostics.
MO QSFP28 ETH - 100GBase-SR4 (0,1km) *377.1403.00*	Optical 100GBase-SR4 QSFP28 module. Multimode with MPO connector. Maximum reach of up to 100m. Performs monitoring via Digital Diagnostics.
Cabo QSFP+ to QSFP+ Direct Attach Copper 1m *710.0384.00*	Copper cable for interconnection of 40 Gigabit Ethernet ports, 1m length.
Cabo QSFP+ to QSFP+ Direct Attach Copper 3m *710.0391.00*	Copper cable for interconnection of 40 Gigabit Ethernet ports, 3m length.
Cabo QSFP28 to QSFP28 Direct Attach Copper 1m *710.0395.00*	Copper cable for interconnection of 100 Gigabit Ethernet ports, 1m length.
Cabo QSFP28 to QSFP28 Direct Attach Copper 3m *710.0396.00*	Copper cable for interconnection of 100 Gigabit Ethernet ports, 3m length.
SFP+ 10GbE *PN: consultar*	Optical 10 Gigabit Ethernet SFP+ modules. Several models with varying power and reach specifications are offered.

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