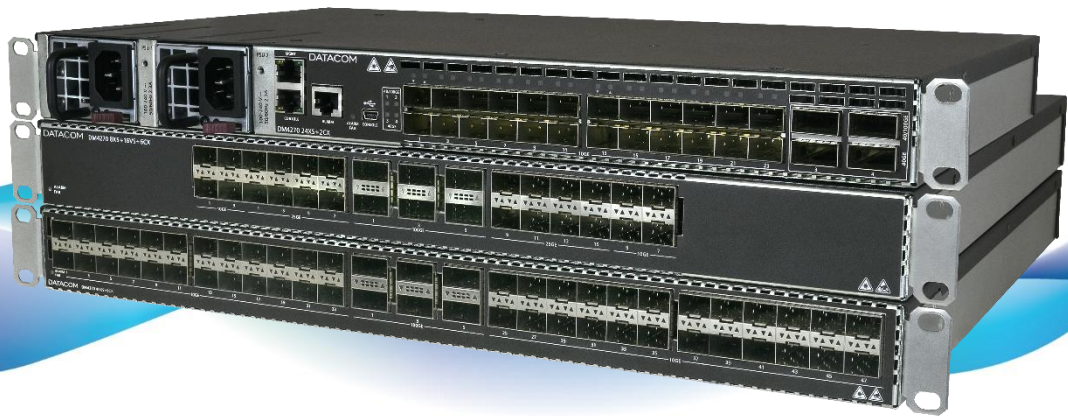


# DATACOM



## DM4270

10GE/25GE/100GE AGGREGATION SWITCHES

DATASHEET

# DM4270

## 10GE/25GE/100GE AGGREGATION SWITCHES

**IP/MPLS SWITCH POWERED BY DmOS NETWORK OPERATION SYSTEM, WITH 10GE, 25GE, 40GE AND 100GE INTERFACES FOR HIGH CAPACITY AND VALUE ADDED METRO ETHERNET APPLICATIONS.**

The DM4270 family of 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.

Powered by the DmOS network operating system, the DM4270 switches guarantee 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 products offer 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, DHCP, and SNMP clients are also available to enable remote management and troubleshooting.

The DM4270 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.



- Three switch models: one with 24 10GE optical ports, one with 48 10GE optical ports and one with 8 10GE and 16 25GE/10GE (10GE optical ports in SFP+ and 25GE in SFP28 connectors).
- 24 Port model contains two uplink options, either three 100GE interfaces or four 40GE interfaces
- 48 port and 8x10GE+16x25GE/10GE models contains 6 100GE uplink interfaces
- Compact design with 1U in height
- VLAN, QinQ, VLAN Translate, ERPS and EAPS support for Metro Ethernet applications
- MPLS LDP VPWS and VPLS, L3VPN
- Static and dynamic routing through OSPF or BGP
- Two hot-swap slots for redundant AC or DC power supplies

# TECHNICAL SPECIFICATIONS

		DM4270 24XS+2CX	DM4270 48XS+6CX	DM4270 8XS+16VS+6CX
HARDWARE CHARACTERISTICS	Power supply	2 hot swappable slots for PSUs		
	Compatible PSUs	PSU 200 DC-B PSU 400 AC-B PSU 400 DC-B	PSU 400 DC-F PSU 400 AC-F PSU 600 DC-F PSU 600 AC-F PSU 600 DC-F HW2	
	PSU 400 AC – Input voltage	100Vac to 240Vac		
	PSU 400 DC – Input voltage	-40.5Vdc to -72Vdc		
	Maximum power consumption	180W	390W	355W
	Typical power consumption	150W	250W	215W
	Operational temperature (*)	PSU 400: 0°C to 65°C (*) PSU 200: 0°C to 55°C (*)	0°C to 55°C (*)	
	Operational relative humidity	10% to 90%, non-condensed		
	Operational altitude	0 to 3000m		
	Storage temperature	-20°C to 70°C		
	Storage relative humidity	10% to 90%, non-condensed		
	Dimensions in mm (H x D x W)	44 x 265 x 444 (482 with brackets)	44 x 400 x 447 (482 with brackets)	
	Weight	3.15kg	6.28kg	
	INTERFACES	10G/1G Base-X (SFP+)	24	48
25G/10G/1G Base-X (SFP28)		0	0	16
100G/40G Base-X (QSFP28)		3x 100GE or 4x 40GE(**)	6	
GE Outband Management (RJ45)		1		
Console (RJ45)		1		
USB Console (type A)		1		
USB Data (type B)		1		
BUFFER	Packet Buffer	8MB	32MB	32B
PERFORMANCE	Throughput	1080 Gbps	2160 Gbps	2160 Gbps
	Packets per Second	804 Mpps	1607,1 Mpps	1607,1 Mpps

(\*) For temperatures above 45° C, extended temperature optical modules may be necessary.

(\*\*) The uplink interfaces can be selected to operate in one of the two available modes: 4x 40GE QSFP+ or 3x 100GE QSFP28.

NOTE: To check product features, check the DmOS datasheet

# STANDARDS

## *ANATEL*

Resolução 242 (Nov 30, 2000)

Rules for Certification and Homologation of Telecommunication Products.

Resolução 323 (Nov 7, 2002)

Standard for Certification of Telecommunication Product.

Resolução 442 (Jul 21, 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

## DM4270 24 PORTS



Model	Description
DM4270 24XS+2CX 800.5231.xx	L2/L3/MPLS wire speed switch with 24x 10GE optical ports on SFP+ connectors and 3x 100GE optical ports on QSFP28 connectors. Optionally the uplink ports can be configured to operate as 4x 40GE ports, disabling the 100GE ports. 1U metal cabinet for 19" rack. Power supplies, MPLS license and optical modules must be ordered separately.
PSU 400 DC-B 800.5240.xx	DC power supply with 48V-60Vdc input. Airflow entering the PSU's front panel. Allows operation as redundant and hot-swap power source.
PSU 200 DC-B 800.5308.xx	DC power supply with 48V-60Vdc input. Airflow entering the PSU's front panel. Allows operation as redundant and hot-swap power source.
PSU 400 AC-B 820.0011.xx	AC power supply with 100-240VAC and 50 / 60Hz input. Airflow entering the PSU's front panel. Allows operation as redundant and hot-swap power source.
DM4270 24P - SW MPLS license 012.4207.xx	Software with MPLS capabilities for DM4270 24 ports. License per unit.

## DM4270 48 PORTS



Model	Description
DM4270 48XS+6CX 800.5304.xx	L2/L3/MPLS wire speed switch with 48x 10GE optical ports on SFP+ connectors and 6x 100GE optical ports on QSFP28 connectors. 1U metal cabinet for 19" rack with 4 FAN modules. Power supplies and MPLS license and optical modules must be ordered separately.
FAN 1U-F-56 800.5229.xx	Spare Hot-swap ventilation module for DM4270 48XS + 6XS. Airflow leaving the FAN's front panel. 4 FAN modules are required per DM4270 switch.
PSU 400 DC-F 800.5215.xx	DC power supply with 48V-60Vdc input. Airflow leaving the PSU's front panel. Allows operation as redundant and hot-swap power source.
PSU 400 AC-F 820.8006.xx	<b>(Do not use this version on new designs. Replace by PSU 600 AC-F)</b> AC power supply with 100-240VAC and 50 / 60Hz input. Airflow leaving the PSU's front panel. Allows operation as redundant and hot-swap power source.
PSU 600 DC-F 800.5257.xx	DC power supply with 48V-60Vdc input. Airflow leaving the PSU's front panel. Allows operation as redundant and hot-swap power source.
PSU 600 DC-F HW2 820.0024.xx	DC power supply with 48V-60Vdc input. Airflow leaving the PSU's front panel. Allows operation as redundant and hot-swap power source.
PSU 600 AC-F 820.0018.xx	AC power supply with 100-240VAC and 50 / 60Hz input. Airflow leaving the PSU's front panel. Allows operation as redundant and hot-swap power source.
DM4270 48P - SW MPLS license 012.4208.xx	Software with MPLS capabilities for DM4270 48 ports. License per unit.

## DM4270 8X10GE+16X25GE PORTS



Model	Description
<b>DM4270 8XS+16VS+6CX</b> 800.5313.xx	L2/L3/MPLS wire speed switch with 8x 10GE optical ports on SFP+ connectors and, 16x 25GE/10GE optical ports on SFP28 connectors and 6x 100GE optical ports on QSFP28 connectors. 1U metal cabinet for 19" rack with 2 FAN modules. Power supplies and MPLS license and optical modules must be ordered separately.
<b>FAN 1U-F-56</b> 800.5229.xx	Spare Hot-swap ventilation module for DM4270 48XS + 6XS. Airflow leaving the FAN 's front panel. 2 FAN modules are required per DM4270 8XS+16VS+6CX.
<b>PSU 400 DC-F</b> 800.5215.xx	DC power supply with 48V-60Vdc input. Airflow leaving the PSU 's front panel. Allows operation as redundant and hot-swap power source.
<b>PSU 400 AC-F</b> 820.8006.xx	<b>(Do not use this version on new designs. Replace by PSU 600 AC-F)</b> AC power supply with 100-240VAC and 50 / 60Hz input. Airflow leaving the PSU 's front panel. Allows operation as redundant and hot-swap power source.
<b>PSU 600 DC-F</b> 800.5257.xx	DC power supply with 48V-60Vdc input. Airflow leaving the PSU 's front panel. Allows operation as redundant and hot-swap power source.
<b>PSU 600 DC-F HW2</b> 820.0024.xx	DC power supply with 48V-60Vdc input. Airflow leaving the PSU 's front panel. Allows operation as redundant and hot-swap power source.
<b>PSU 600 AC-F</b> 820.0018.xx	AC power supply with 100-240VAC and 50 / 60Hz input. Airflow leaving the PSU 's front panel. Allows operation as redundant and hot-swap power source.
<b>DM4270 8XS+16VS+6CX - SW MPLS license</b> 012.4219.xx	Software with MPLS capabilities for DM4270 8XS+16VS+6CS. License per unit.

**Note:** DM4270 switches can be equipped with any combination of PSUs among those supported by the model as per the tables above.

## OPTICAL MODULES AND CABLES

Accessory	Description
<b>MO QSFP+ ETH - 40GBase-ER4 (40km)</b> 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.
<b>MO QSFP+ ETH - 40GBase-LR4 (10km)</b> 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.
<b>MO QSFP+ ETH - 40GBase-SR4 (0,1km)</b> 377.1402.00	Optical 40GBase-SR4 QSFP+ module. Multimode with MPO connector. Maximum reach of up to 100m. Performs monitoring via Digital Diagnostics.
<b>MO QSFP28 ETH - 100GBase-ER4 (40km)</b> 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.
<b>MO QSFP28 ETH - 100GBase-LR4 (20km)</b> 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.
<b>MO QSFP28 ETH - 100GBase-LR4 (10km)</b> 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.
<b>MO QSFP28 ETH - 100G 4WDM-10 (10km)</b> 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.
<b>MO QSFP28 ETH - 100GBase-SR4 (0,1km)</b> 377.1403.00	Optical 100GBase-SR4 QSFP28 module. Multimode with MPO connector. Maximum reach of up to 100m. Performs monitoring via Digital Diagnostics.
<b>QSFP+ to QSFP+ Direct Attach Copper Cable 1m</b> 710.0384.00	Copper cable for interconnection of 40 Gigabit Ethernet ports, 1m length.
<b>QSFP+ to QSFP+ Direct Attach Copper Cable 3m</b> 710.0391.00	Copper cable for interconnection of 40 Gigabit Ethernet ports, 3m length.
<b>QSFP28 to QSFP28 Direct Attach Copper Cable 1m</b> 710.0395.00	Copper cable for interconnection of 100 Gigabit Ethernet ports, 1m length.
<b>QSFP28 to QSFP28 Direct Attach Copper Cable 3m</b> 710.0396.00	Copper cable for interconnection of 100 Gigabit Ethernet ports, 3m length.
<b>SFP+ 10GbE</b> PN: Inquire	Optical 10 Gigabit Ethernet SFP+ modules. Several models with varying power and reach specifications are offered.

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