

# DATAKOM



## DM4250

10 GIGABIT ETHERNET AGGREGATION SWITCH

DATASHEET

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## 10 GIGABIT ETHERNET AGGREGATION SWITCH

### ETHERNET SWITCH BASED ON DMOS NETWORK OPERATING SYSTEM WITH 10GE AND 40GE INTERFACES FOR HIGH CAPACITY AND VALUE ADDED METRO ETHERNET APPLICATIONS.

DM4250 provides high switching capacity to meet the growing demands of traffic aggregation and access to high capacity services on Metro Ethernet and local area networks, always delivering high performance and reliability.

Based on the modular network operating system DmOS, DM4250 ensures robustness and high availability of services on a platform with support for a number of L2 and IP functionalities. Features like VLAN operations such as QinQ and VLAN Translate, LAG/LACP, ring operation through the EAPS or ERPS protocols, RSTP support, static and dynamic IP routing protocols using OSPF and BGP, access policy creation (ACL) filters, QoS functionality, among others. All L2 and IP packet forwarding, as well as filtering and QoS policy applications is done in HW, ensuring wirespeed operation for any packet size.

DM4250 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 user authentication and access authorization policies. Local and remote Syslog features, NTP, DHCP, and SNMP clients are also available to enable equipment remote management and troubleshooting.

DM4250 is a compact 1U height switch ready for installation on standard 19 inches racks. It features power redundancy through two hot-swap slots for universal AC or DC power supplies, enabling the operation of high availability services.

- 24 optical 10Gigabit Ethernet ports (SFP+)
- Two 40Gigabit Ethernet uplink interfaces (QSFP+)
- Compact 1U height design
- VLAN, QinQ, VLAN Translate, ERPS and EAPS support for Metro Ethernet applications
- L2 tunneling protocols for LAN-to-LAN services
- Static and dynamic routing through OSPF or BGP
- Two hot-swap slots for redundant AC or DC power supplies

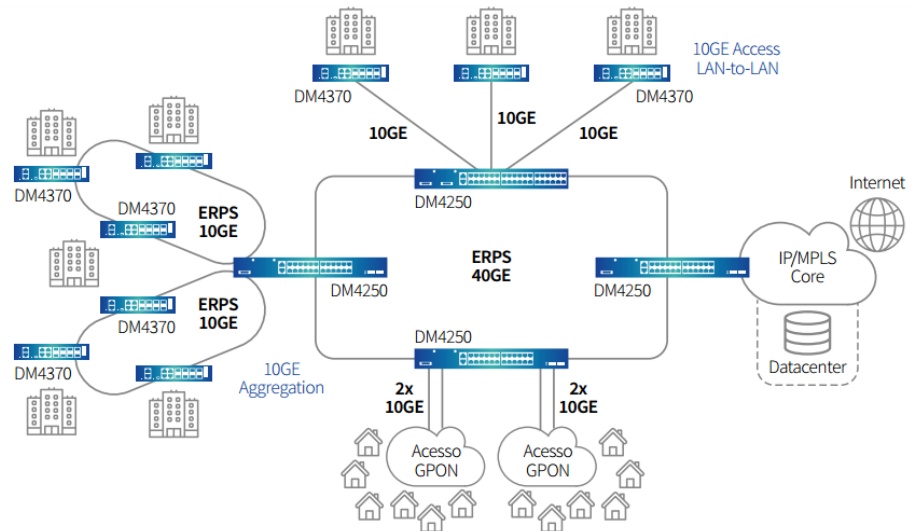
## 10GE ACCESS WITH DM4370

DM4250 together with the DM4370 access switch, form a perfect combination to provide high capacity and value added Metro Ethernet and IP services.

## APPLICATIONS

### METRO ETHERNET AGGREGATION

The DM4250 switch, through its 10GE and 40GE optical interfaces and the complete support for L2 switching and IP routing functionalities, can address high capacity metro ethernet applications, offering a reliable and highly available solution for corporate IP access and broadband services. The product supports different network topologies like ring or linear, allowing the network design that best fits the service requirements.



# FEATURE LIST

## MANAGEMENT

- Commit and rollback Operations support
- In-band and out-of-band management
- Statistics per Ethernet port
- CPU and memory usage monitoring with status available through SNMP
- Firmware rollback
- Firmware upgrade via TFTP
- SNMPv1, SNMPv2, SNMPv2c, SNMPv3
- Command line interface (CLI) via SSHv2, Telnet and RS-232 or USB console
- Digital diagnostics of optical modules according to SFF8472
- System status and alarms LEDs
- Inventory information
- Storage for up to 2 firmware and up to 8 configurations in Flash memory
- SNTP support
- *Remote Syslog*

## SWITCHING

- Switching capacity of up to 640 Gbit/s
- Packet forwarding of up to 475 Mpps
- EAPS and ERPS
- Static and dynamics Link Aggregation (LACP), of up to 8 groups with up to 8 ports per group
- Configuration of up to 4k VLANs with up to 4k VLAN IDs
- Q-in-Q and Selective Q-in-Q
- Spanning Tree (STP), Rapid Spanning Tree (RSTP)
- Aging L2 Global configuration
- Auto negotiation interface configuration, with Auto MDI/MDIX support
- Support for Jumbo Frames of up to 9200 bytes
- MAC table with 32k addresses

## FILTERS AND SECURITY

- ACL Remark and deny actions
- ACL Match for L2 and L3
- Up to 1024 ACL rules
- Local and remote Syslog
- Protection mechanisms against Broadcast, Multicast or DLF attacks
- CPU protection against Denial of Service (DoS) attacks
- Protection mechanisms against IP spoofing
- Authentication of users through RADIUS or TACACS+

## QOS

- P-bit remarking(PCP)
- Packet classification based on DSCP, Src/Dst IP, Src/Dst MAC, VLAN, porta
- DSCP mapping for COS
- Scheduling of queues by WFQ and Strict Priority
- Packet buffer of 4Mbytes
- Up to 8 priority queues per port

## ROUTING

- BGP, with MD5 authentication option
- BGP IP Prefix Lists and Route Map
- Up to 32 BGP neighbors
- Up to 16k IPv4 routes
- OSPFv2, with MD5 authentication option
- Up to 32 areas and 32 OSPFv2 adjacencies
- IPv4 and IPv6 static routing
- Routing between VLANs
- Up to 64 VLANs with configured IP
- Routes distribution between routing protocols
- Up to 2K IPv4 hosts or 1k IPv6 hosts

## SERVICES

- Ping IPv4
- SSH Client
- Telnet Client

## MULTICAST

- IGMPv2, IGMPv3
- IGMP snooping with proxy report
- Up to 1k multicast groups support



## Resolução 442

Regulamento para a Certificação de Equipamentos de Telecomunicações quanto aos Aspectos de Compatibilidade Eletromagnética.

*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

# TECHNICAL SPECIFICATIONS

		DM4250 24XS+2QX
HARDWARE CHARACTERISTICS	Power supply	2 hot swappable slots for PSUs compatible with PSU 125 AC and PSU 125 DC
	PSU 125 AC – Power input	100Vac to 240Vac
	PSU 125 DC – Power input	-38,4Vdc to -72Vdc
	Maximum power consumption	120 W
	Typical power consumption	95 W
	Operational temperature (*)	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
	Dimension (H x D x W)	43mm x 209mm x 444mm (482mm with brackets)
	Weight	3,15kg
	10G Base-X (SFP+)	24
	40G Base-X (QSFP+)	2
	GE Outband Management (RJ45)	1
	Console (RJ45)	1
	USB Host (type A)	1
	USB Device (type B)	1
Alarms (**)	1 output and 2 inputs	
MEMORY	Flash Memory	1GB
	RAM Memory	2GB


(\*) For environments with temperatures above 45°C, it may be necessary to use extended temperature range optical modules, depending on the quantity and power of the modules.

(\*\*)Product / Feature in roadmap. Contact DATACOM for availability information.

## ACCESSORIES

Accessory	Description
<b>QSFP+ 40GE</b> <i>PN: Inquire</i>	Optical 10 Gigabit Ethernet QSFP+ modules. 100m, 10km and 40km models.
<b>QSFP+ to QSFP+ Direct Attach Copper Cable</b> <i>PN: Inquire</i>	Copper cable for interconnection of 40 Gigabit Ethernet ports, 1m or 3m length options.
<b>SFP+ 10GbE</b> <i>PN: Inquire</i>	Optical 10 Gigabit Ethernet SFP+ modules. Several models with varying power and reach specifications are available.
<b>PSU 125 AC</b> <i>PN: 800.5187.xx</i>	AC full range (100V-240Vac) power supply.
<b>PSU 125 DC</b> <i>PN: 800.5188.xx</i>	DC full range (-38,4Vdc to -72Vdc) power supply.

## ORDERING INFORMATION

Model	Description	
<b>DM4250 24XS+2QX</b> <i>800.5197.xx</i>	Manageable L2/L3 wirespeed Ethernet Switch, 24x 10 Gigabit Ethernet optical ports (SFP+) and 2x 40 Gigabit Ethernet optical ports (QSFP+), Metal 1U cabinet for 19" racks. Up to two AC or DC power supplies (not included).	



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