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Industrial Network Solutions - µMAGBES-Rack

Rugged managed Gbit Switch
up to 19 ports built in 19” Rack housing

General Description

The µMAGBES-Rack is a 10 up to 19 port manageable Gigabit Ethernet 4th generation switch from MPL. The robust design, the low power consumption, and the various connector selections make the switch ideally suited for any application that needs a rugged and reliable 19” switch solution.

Besides the long-term availability, manageable features like Quality of Service, Port Based VLAN, and IEEE 802.1Q VLAN, just to mention a few, are available. The µMAGBES also supports Rapid Spanning Tree IEEE 802.1D 2004 and allows to use redundant Ethernet connections without introducing network loops. Unique is the fact, that it supports 1588 PTP as part of the standard Firmware.

The 1U and 2U 19” rack solution can be equipped with M12 or R45 connectors, depending on the application. All ports have optional status LEDs, indicating the activity and speed of each port, including reset and default setting. Supply power is 5-36VDC and 10 ports use less than 6W. The solution can be operated at -20°C to 60°C and optionally even in extended temperature -40°C to 85°C.

The 1U 19” solution is available with 10 manageable ports. In case more ports are required, up to 19 ports can be built in a 2U* housing. Internally, all LAN connections are executed with lockable headers and are straight connections to the X-coded M12 connectors. If your application requires D-coded (10/100Mbps), no problem we can provide this configuration as well. The same applies if you need some fiber or PoE+ ports.

Key features are:

- High-End M12 or RJ45 connectors
- Rugged and compact 1U or 2U 19” housing
- Manageable over Web Interface or Telnet
- Fanless operation
- Can be used unmanaged
- Long-term availability
- Expandable for fiber and/or PoE+
- 1588 PTP support

These features make
the 19” µMAGBES is ideally suited for any rugged, industrial, railways or defense network application with long life cycle requirements. Due to the extreme low power consumption and the robust and flexible design, the µMAGBES is well suited for tough environments.

MPL products are 100% designed and manufactured in Switzerland.



µMAGBES-A10RMX in 1U housing with 10 ports on M12



µMAGBES-A19RMX in 2U housing with 19 ports on M12

The µMAGBES can be operated in a Master-Slave configuration, creating a flexible system with cascaded switch and making it easy to increase the number of ports. As pointed out, the 1U 19” solution is available with 10 manageable ports and the 2U* with up to 19 ports.

** the 19” Rack with RJ45 ports come in 1U housing*



µMAGBES-A19RR
in 1U housing with 19 ports on RJ45

MPL AG is an ISO9001 certified company

MPL High-Tech • Made in Switzerland

Sistemi Avanzati Elettronici S.r.l.
Via Marconi, 11D - 13836 Cossato (BI)
+39 015 983206 | info@sisav.it | www.sisav.it

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Technical Features

Board Key Data

Switch lookup Engine	Supports up to 1024 MAC entries with automatic learning and aging Supports auto crossover (Auto MDI/MDIX) and polarity correction
Jumbo Frame support	up to 10k Byte
1588 PTP support	
Status LED	2 LEDs for each copper port (Link/Activity and Speed indicators)

Interfaces

Copper ports	10/100/1000Mbit LAN ports on M12 or RJ45 connectors
Optional	
Fiber ports	10/100/1000Mbit LAN ports on universal SFP ports
PoE+ ports	

Management Software

MPL developed and maintains a management SW with easy to use web interface.

Management supports: (Layer 2 managed sw)

- Port Based VLAN
- Quality of Service
- IEEE 802.1D RSTP support
- SNMP V1, V2c, V3 support
- IGMPv3 snooping
- Trunking
- IEEE 802.1Q VLAN
- IEEE 802.1X MAC Address Checking
- Port monitoring
- Firmware Update via HTTP or TFTP
- TLS (HTTPS)
- Spanning tree
- gPTP (1588 PTP support

Power

Input voltage	5VDC - 36VDC Input range, input over 4-pin power connector
Power consumption	Typically 6W per 10 ports

Mechanical

Dimension	Up to 10 ports: 19" x 280mm x 1U (up to 19 ports with RJ45 connectors) Up to 19 ports: 19" x 280mm x 2U
Material	Aluminum

Environment

Operating Temperature	-20°C to 60°C (-4°F to 140°F) at full operation optionally -40°C to 85°C (-40°F to 185°F) at full operation
Storage Temperature	-45°C to 85°C (-49°F to 185°F)
Relative Humidity	5% to 95% none condensing

Standard Compliance

The µMAGBES-Rack is designed to meet or even exceed the most common standard, particular references are:

EMC	EN 55022, EN 55024, EN 61000, MIL-STD-461E
Shock & Vibration	EN 60068
Environmental & Safety	EN 50155, MIL-STD-810-F, EN 60601, EN 60950
Approval List	CE, IEC 60945, IACS E10

Ordering Information

µMAGBES-A10DRX

Product	Description
µMAGBES	Managed Ethernet Switch

Version	Description
A	Standard
C	With CLI

Ports	Description
10	Quantity of ports
19	Quantity of ports
28	Quantity of ports

Option	Description
X	-40°C to +85°C

Copper	Description
R	RJ45
HR	Horizontal Header (MOQ 50 pieces)
H	Header
MX/MD	M12 (X or D coded)
D	D38999 connector

Mount	Description
O	Open Frame
D	DIN-Rail
F	Flange
R	Rack
M	MIL housing

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