Boxed Rugged 8-port Gigabit Switch
with copper and fiber

General Description

The MAGBES-20 Family (3rd Gen. of the MPL Switches) consist of models matching your application needs. The eight ports can be equipped with RJ45 or M12 connectors, up to four of them can be fiber. All ports have status LEDs, indicating the activity and speed of each port. The indication signals can also be accessed remote, same applies for reset and default setting.

The Boxed MAGBES solution is extremely compact and in addition, it can be used as Open Frame solution or in a MIL housing with MIL 38999 connectors of your choice. Supply power is 5 - 36VDC and uses under any condition less than 8W. Optional, it can be supplied with redundant power or different input voltage. The product can be operated at -20°C to 60°C and optionally even -40°C to 85°C. Additionally available is also coating and bonding of the switch.

For the fiber ports, most Ethernet compatible transceivers (acc. MSA) can be used. It allows the users to select the appropriate transceiver for each link.

As managed switch, the product gives access to various switch settings to configure features like: Quality of Service, VLAN, Rapid Spanning Tree, etc.. To adjust these switch settings, MPL provides an easy to use web interface.

MAGBES-20 Family Highlights

- DIN-Rail / Flange mount
- Wide input 5 - 36VDC
- Fully manageable over Web Interface or Telnet
- Copper or mixed Copper/Fiber versions
- Fanless operation
- Versions for –40°C to +85°C environment
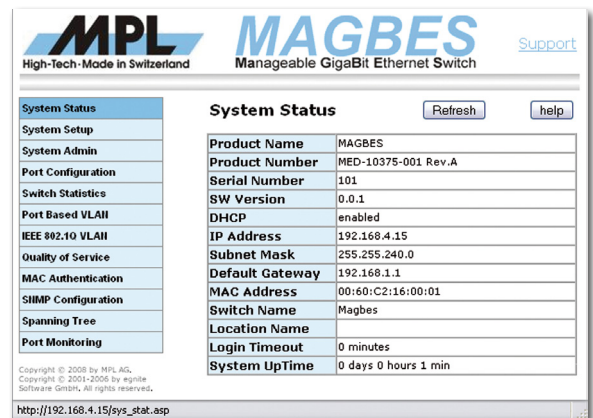- 1588 PTP support

These features make

the boxed MAGBES switch ideally suited for any rugged or industrial network applications. Due to the low power consumption, robust and flexible design, the products are well suited for any embedded system. The MAGBES makes it easy to set up a challenging network!

MPL products are 100% designed and manufactured in Switzerland. All products are fanless, shock and vibration proof, low power, rugged, and long-term* available. The perfect solution for a system to be used in rugged environments.

Typically 10 years or more, 20+ years repair-ability

Boxed 8-port MPL Switch with 6 copper ports on RJ45 and 2 fiber ports on SFP

Web Interface of MPL MAGBES Management Software

8-port MPL Switch with 8 x M12 connectors and power for use in Railway applications

MPL AG is an ISO9001 certified company

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Technical Features

Board Key Data

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

Interfaces

Up to 8 Ports	High quality RJ45 or M12 connectors (X-coded or D-coded)
Up to 4 Fiber Ports	Supports standard SFP Modules (Single and Multimode) at a data rate 100Mbit and 1Gbit

Management Software

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

Management supports:
- Port Based VLAN
- Quality of Service
- IEEE 802.1D RSTP support
- SNMP V1, V2c, V3 support
- Telnet
- IGMPv3 snooping

- IEEE 802.1Q VLAN
- IEEE 802.1X MAC Address Checking
- Port monitoring
- Firmware Update via HTTP or TFTP
- TLS (HTTPS)
- gPTP (1588 PTP support)

Power

Input voltage	5VDC - 36VDC Input range,	input over 4-pin power connector
Power consumption	Typically 8W	for all versions

Environment

Storage Temperature	-45°C to 85°C (-49°F to 185°F)
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
Relative Humidity	5% to 95% none condensing

Standard Compliance

The MAGBES 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

The MAGBES family has been successfully tested according EN50155, MIL-STD-810-G as well as CE marking

Packaging

Chassis version	length		width		heights	weight	
DIN-Rail/Flange	83.0	x	118	x	162 mm	1.4kg	custom color or foil available
IP67 MIL	175	x	182	x	66 mm	2.1kg (4.66lb)	custom housings and connectors available

Open Frame solutions are available, see specific datasheet

MAGBES 8-port Versions   MAGBES F 211R

Product	Description
MAGBES	Manageable Ethernet Switch

Mechanical	Description
F	Standard housing, Flange mount
D	Standard housing, DIN-Rail mount
M	MIL housing

Port Config	copper	SFP
211R	8 x RJ45	0
211M	8 x M12	0
212R	6 x RJ45	2
212M	6 x M12	2
222R	4 x RJ45	4
222M	4 x M12	4

Options

- Redundant power input
- Galvanic isolation

- Different power input range
- Coating and bonding

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