

Rugged 10-port Gigabit Switch with 2 SFP+ 10Gbit ports

General Description

The MAXBES comes with 8-ports 1Gbit and 2-ports 10Gbit speed. The eight 1Gbit ports are either available as eight RJ45 copper ports or four RJ45 copper ports and four 1Gbit SFP. The open frame version also offers lockable headers instead of RJ45. All ports have status LEDs, indicating the activity and speed of each port.

The MAXBES solution is extremely compact and can be used as open frame solution or in a MIL housing with connectors of your choice. Supply power is 8–36VDC and uses less than 15W. The product can be operated at -20°C to +60°C and optionally even up to +70°C.

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.

MAXBES Highlights

- Includes two 10Gbit SFP+ ports
- RJ45 & header Versions
- Wide input 8-36VDC
- Fully manageable over Web Interface or Telnet
- Copper or mixed Copper/Fiber versions
- Fanless operation

These features make

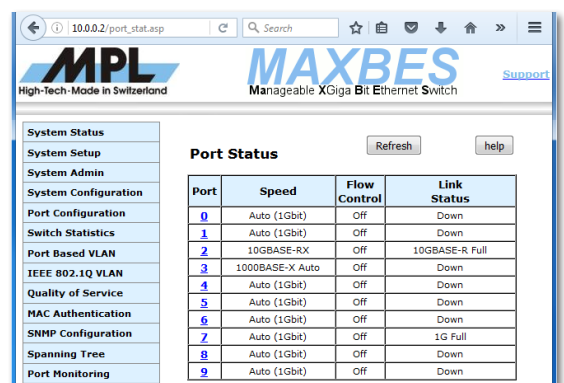
the MAXBES ideally suited for any rugged or industrial network applications. Due to the low power consumption, robust and flexible design, the products are well suited for any embedded system. It is the perfect fit, whether they are used in a rugged, hot or other harsh environment. The MAXBES makes it 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



MAXBES for the harsh Industrial Environment

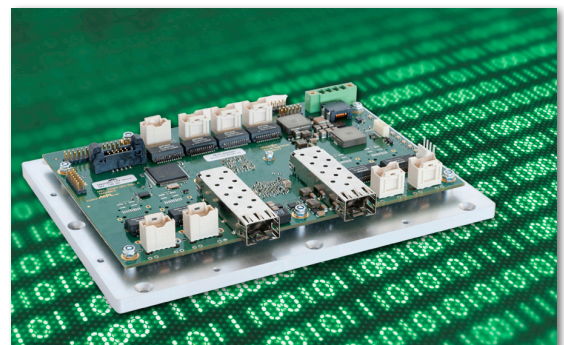


| Port | Speed | Flow Control | Link Status |
|------|-----------------|--------------|----------------|
| 0 | Auto (1Gbit) | Off | Down |
| 1 | Auto (1Gbit) | Off | Down |
| 2 | 10GBASE-RX | Off | 10GBASE-R Full |
| 3 | 1000BASE-X Auto | Off | Down |
| 4 | Auto (1Gbit) | Off | Down |
| 5 | Auto (1Gbit) | Off | Down |
| 6 | Auto (1Gbit) | Off | Down |
| 7 | Auto (1Gbit) | Off | 1G Full |
| 8 | Auto (1Gbit) | Off | Down |
| 9 | Auto (1Gbit) | Off | Down |

Web Interface of MAXBES Management Software



MIL-MAXBES for use in Military Environments



OPEN-MAXBES for integration in existing Housing

MPL AG is an ISO9001 certified company

ICP Electronics
Australia Pty Ltd

TEL: 02 9457 6011
sales@icp-australia.com.au
www.icp-australia.com.au



Technical Features

| | |
|---|--|
| Board Key Data | |
| Switch lookup Engine | High performance lookup engine supports up to 16k MAC entries IEEE 802.3x flow control, back pressure flow control |
| Status LED | 2 LEDs for each copper port (Link/Activity and Speed indicators) 1 LED for each SFP (Link/Activity indicators) |
| external Status LED | all LED for remote indication are available over lockable header |
| Interfaces | |
| Ports | 8x 1Gbit copper, 2x 10Gbit SFP+ / or 4x 1Gbit copper, 4x 1Gbit SFP, 2x 10Gbit SFP+ |
| Copper ports | Auto crossover (Auto MDI/MDIX) support., auto polarity correction, auto negotiation Support for 802.3az Energy Efficient Ethernet |
| 1Gbit SFP ports | Supports all 1Gbit SFP which are MSA compliant and Ethernet compatible Support for digital diagnostics monitoring (DDM) and triple speed copper SFP |
| 10Gbit SFP ports (2x) | Supports all 10Gbit SFP+ and 1Gbit SFP which are MSA compliant and Ethernet compatible Support for direct attached cable SFP+ |
| Management Software | |
| MPL developed and maintains a management SW with easy to use web interface. | |
| Management supports: | <ul style="list-style-type: none"> • Accessible via https, Telnet or RS232 • Configuration file support • SNMPv1, v2c and v3 support • DHCP Client • Switch statistic • Port Based VLAN • IEEE 802.1Q VLAN • Quality of Service • IEEE 802.1X MAC Address Checking • IEEE 802.1D RSTP support • Port monitoring • Firmware Update via HTTP or TFTP • IGMPv3 support (planned) • Trunking support (planned) |
| Power | |
| Input voltage | 8VDC- 36VDC Input range, reverse polarity protection |
| Power consumption | 15W |
| 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 up to 70°C (158°F) |
| Relative Humidity | 5% to 95% none condensing |
| Standard Compliance | |
| The MAXBES 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 MAXBES family has been successfully tested according EN50155, MIL-STD-810-G as well as CE marking | |

Packaging

| Chassis version | width | depth | height | comment |
|-----------------|---------|-------|-----------|--|
| DIN-Rail/Flange | 162 x | 120 x | 62 mm | custom color or foil available |
| IP67 MIL | 280 x | 208 x | 100 mm | custom housings and connectors available |
| Open Frame | 154.5 x | 105 x | min 23 mm | custom cooling plate available |

MAXBES Versions

| Product | Description |
|---------|------------------------------------|
| MAXBES | 10 port manageable Ethernet Switch |

| Mechanical | Description |
|------------|--|
| F | Standard housing, Flange mount |
| D | Standard housing, DIN-Rail mount |
| M | MIL housing |
| O | Open Frame, with cooling plate |
| RF | Rugged/Railway housing, Flange mount |
| RD | Rugged/Railway housing, DIN-Rail mount |

| Option | Description |
|--------|-----------------|
| 0 | No serial CLI |
| 1 | With serial CLI |

| Port Config | 10G SFP+ | 1G SFP | Copper |
|-------------|----------|--------|------------|
| 00 | 2 | | 8 x RJ45 |
| 33 | 2 | 4 | 4 x RJ45 |
| 65 | 2 | 2 | 6 x M12 |
| 44 | 2 | | 8 x header |

MPL AG is an ISO9001 certified company

