EN50155 certified Firewall / Router

General Description

The GUARD-F12 is EN50155 Class Tx certified for the use in railways applications. It is an expansion of the existing GUARD product range. The GUARD is designed by MPL to be used as Industrial Gigabit Firewall and VPN Router. The GUARD-F12 comes with 3 Fast or Gbit Ethernet interfaces on M12 connectors, ready for industrial, railway, or vehicle applications. The specially designed GUARD housing allows to operate the Firewall in harsh environments without the need of fans or ventilation holes and can easily be mounted on a 35mm DIN rail, in a rack, or on a wall. The compact housing offers sufficient space to add other peripherals. The GUARD-F12 can be customized for customer specific applications or uses.

GUARD-F12 Highlights

The operation temperature range is from -20°C to +60°C and optionally even -40°C to +85°C without fan or case openings. The internal mini-PCIe slot allows various extensions (WLAN, GPRS...). Additionally available is an external USB connector and a microSD Memory Card slot for easy logging and/or configuration capabilities.

- Wide Input voltage range 8-36VDC (others on request)
- Choice of 3x Gbit or 3x Fast Ethernet ports
- M12 connectors
- USB and SD interface (optional)

These features make

the GUARD-F12 to the ideal solution for all rugged industrial, railways and vehicle applications, where security, quality, reliability, low power consumption, and long-term availability are key.

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.
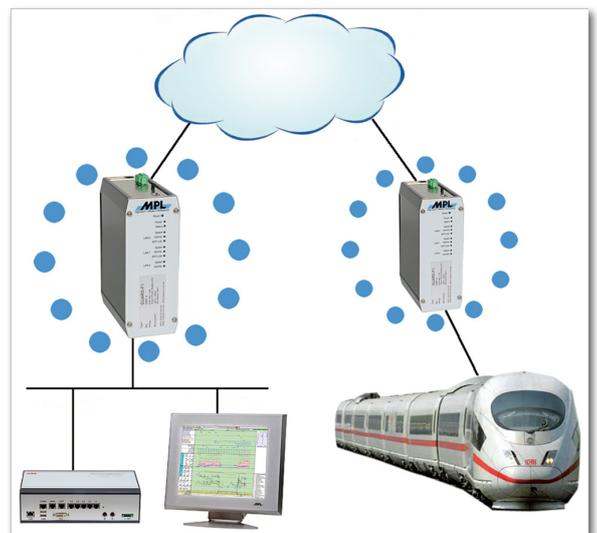
* Typically 10 years or more, 20+ years repair-ability
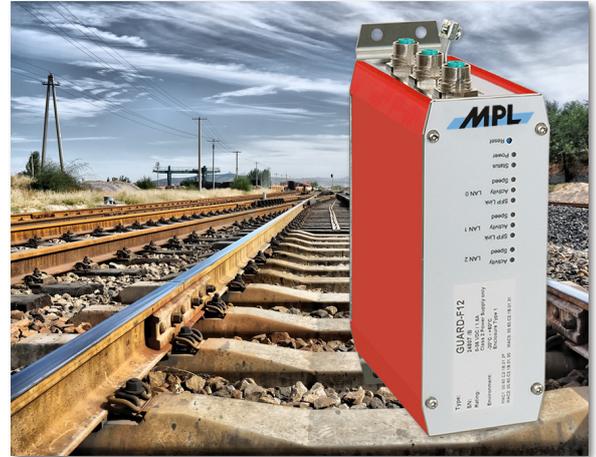
GUARD with M12 and flange

GUARD with M12 and DIN-Rail mounting

MPL AG is an ISO9001 certified company

MPL
High-Tech • Made in Switzerland

Technical Features

Board Key Data		
Processor	RISC SoC 1.2GHz	Low Power CPU
Memory / Firmware	512MByte DDR2 / 512MByte NAND Flash	Soldered OnBoard

Interfaces		
3 x Ethernet	10BaseT / 100BaseTX (opt. 1000BaseTX)	3 x M12 connector, auto negotiation, auto MDI MDIX
1 x USB2 (optional)	1 external port	Type A connectors, ESD protected
1 x microSD (optional)	For microSD Memory Card	Can be used as external storage (config., logging)
Mini PCI-Express	WLAN, GPRS, UMTS or similar expansions	Minicard Slot

Physical / Power		
Chassis	Compact rugged chromated Aluminum with stainless steel plates, no ventilation holes	
Size & Weight	62.1 x 162.1 x 118 mm	0.94kg / 2lb including housing
Power	8 – 36VDC	Power consumption < 9 W, reverse polarity protection

Environment		
Temperature Range	-20°C to +60°C optionally -40°C to +85°C	No fan, no openings, values at full CPU load
Humidity	5% - 95% none condensing	Optional coating available

Standard Compliance	
The GUARD-F12 is designed to meet or exceed the most common standards. Particular references are:	
EMC	EN 55022, EN 55024, EN 61000, MIL-STD-461E
Shock & Vibration	EN 60068
Environmental & Safety	EN 50155, MIL-STD-810G, EN 60601, EN 60950

Software

The GUARD-F12 comes preinstalled with an adapted version of OpenWrt (www.openwrt.org). This Linux based embedded distribution provides all functionality required for operation as IPV4 and/or IPV6 firewall and router. The vast amount of additional packages available in conjunction with MPL support allows you to create a solution for every routing or firewall project.

Most of the configuration of the firmware installed can be done using a web based interface. For more specialized requirements, a console based configuration utility is available. All configuration is stored on the device in a human friendly text format and can be modified using a text editor, too.

Functions and protocols:
- TCP/IP V4 and V6, IPsec
- QoS (Quality Of Service) capable
- SIIT(IPV4-over-IPV6 translation)
- Miredo/Teredo (IPV6 over IPV4 tunneling)
- PPP (Point-to-Point Protocol)
- Network address translation
- Multi WAN Setup (failover and load balancing)
- DHCP Server for IPV4 and IPV6
- DNS server/forwarder
- Support for dynamic DNS providers
- OpenVPN support
- OpenConnect client support
- Firewall based on Linux iptables
- SSH and telnet device access
- Snort (lightweight intrusion detection)
- Routing daemons (OSPF, RIP, BGP, ...)

Further functionality can be installed using a package repository that contains more then 2000 precompiled applications ready to install. A software development kit (SDK), allowing to implement customer specific applications, is available as well.

GUARD-F12 Options

- Wall mounting instead of DIN-Rail
- Heavy duty housings with MIL connectors
- Extended temperature / coating
- Customized versions and expansions

Versions

Please check out our homepage http://www.mpl.ch for the different available versions of the GUARD.

MPL
High-Tech • Made in Switzerland

Backplane Systems
Technology Pty Ltd

Backplane
Systems
Technology

TEL 02 9457 6400
sales@backplane.com.au
www.backplane.com.au