

Swiss Made

Gigabit Ethernet Controller with PoE+

for applications with copper and fiber

General Description

The UNIGET Family is a Universal Gigabit Ethernet expansion module based on the PCIe/104 standard. It is designed to expand mainly the rugged MPL embedded computers. With a single UNIGET module, a system can be expanded with up to four Gigabit Ethernet controllers!

To support the different requirements of a flexible embedded solution, the UNIGET supports several interfaces like RJ45 connectors, 2mm lockable header, and SFP cages for fiber optical LANs. In addition, the copper ports of the module also facilitate Power over Ethernet (PoE+). Each ethernet port has its own Intel Ethernet controller connected to a dedicated PCI Express x1 lane.

UNIGET Highlights

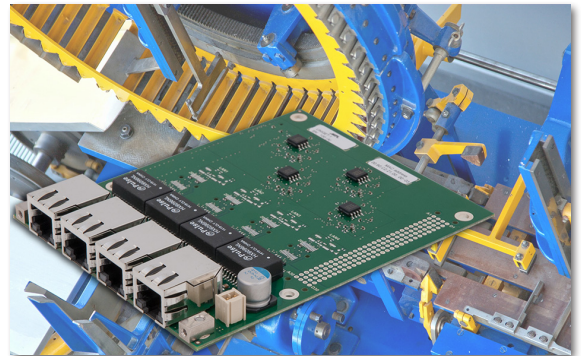
- Up to four Gigabit Ethernet ports
- Four independent Intel Ethernet controllers
- Status LEDs onboard or remote accessible
- RJ45, 2mm lockable headers or SFP
- Each LAN is connected to dedicated PCI Express x1 lane
- Single 3.3V power supply
- Long-term* available solution
- Independent power supply of the PoE

These features make

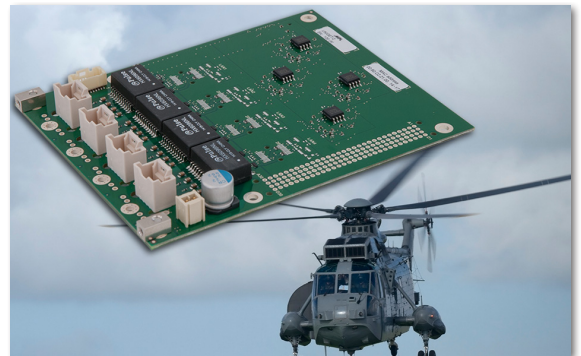
the UNIGET Family ideally suited for any rugged industrial or defense network applications. Due to the low power consumption, robust and flexible design, the products are well suited for embedded systems even in extended temperature environments. The UNIGET makes it easy to set up a challenging network gateway with all flavors and can also be combined with our rugged Switch Family.

MPL products are 100% designed and manufactured in Switzerland for applications where reliability is key. All products are fanless, shock and vibration proof, low power, rugged, and long-term* available.

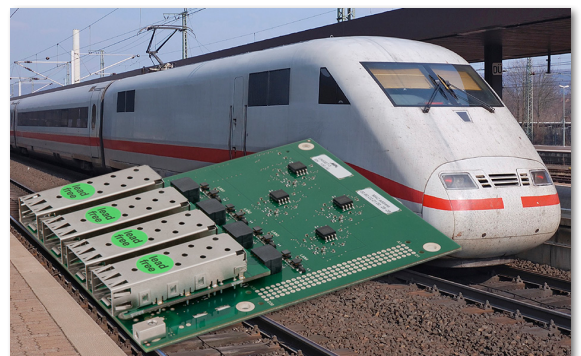
** Typically 10 years or more, 20+ years repair-ability (after first introduction)*



UNIGET-1 with RJ45 copper ports



UNIGET-2 with lockable headers



UNIGET-3 with SFP slots



UNIGET-4 with RJ45 copper ports and SFP slots

MPL AG is an ISO9001 certified company

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Technical Features

Board Key Data	
Network Controller	4x Intel i210IT or IS GbE LAN controller Available with 10pin iGrid lockable headers or at standard RJ45 connectors
Status LEDs	LAN speed and activity LEDs for each Ethernet port available, either at the RJ45 connectors, at a 20 pin Molex pClasp connector or directly at the UNIGET PCB (fiber versions)
Host Interface	PCIe/104 - Each controller resides on a dedicated PCI Express x1 lane link (all four PCI Express Gen2 x1 lane links used) PCIe v2.1 (2.5 GT/s) optional PCI bus stack through
Management Support	
Features	Automatic polarity detection Automatic MDI/MDI-X detection Advanced cable diagnostics 9.5 kB jumbo frame support IEEE 802.1q VLAN support IEEE 1588/802.1as precision time synchronization IEEE 802.3at PoE+ support on copper type UNIGETs ESD protected connectors
Interfaces	
Copper Ports	2mm lockable header or high quality RJ45 connectors
Up to 4 Fiber Ports	supports standard SFP Modules (Single and Multimode) at a data rate 100Mbit and 1Gbit
Power	
Input Voltage	3.3 VDC over PCIe/104 connector
Power Consumption	1.4W without LAN cables / 1.8W with 1 GbE link / 2.2W with 2 GbE links / 2.9W with 4 GbE links
PoE+ Voltage	Must be supplied to the PoE+ power connector +44 .. +57 V (Power Classes 0 .. 3) / +50 .. +57 V (Power Class 4)
PoE+ Power Classes	15.4 W (Class 0) / 4 W (Class 1) / 7 W (Class 2) / 15.4 W (Class 3) / 30.0 W (Class 4)
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 UNIGET 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

UNIGET Versions

	UNIGET-1	UNIGET-2	UNIGET-3	UNIGET-4
Ethernet controller	4x Intel i210IT	4x Intel i210IT	4x Intel i210IS	2x Intel i210IS 2x Intel i210IT
RJ45 connectors	4x	-	-	2x
lockable headers	-	4x	-	-
SFP cages (fiber)	-	-	4x	2x
PoE	yes	yes	no	no
weight	90g	70g	100g	95g
footprint (L x W x H)	121.2 - 124.6 x 95.9 x 24.4 - 26.0mm (length & height depends on used interface)			

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