

GE1 4-Port Gigabit Copper Ethernet Line Card with PoE

- **4 Gigabit Ethernet on RJ45 connectors (M12 optional)**
- **Power over Ethernet (PoE+) PSE (all ports)**
- **LEDs for link and activity status**
- **-40 to +85°C with qualified components**
- **EN 50155 classTx (railways)**
- **PICMG CPCI-S.0 CompactPCI® Serial**
- **IEEE 1588v2 supported (together with G101)**



The GE1 is a 3U Gigabit Ethernet line card, with optional PoE support, implemented as a CompactPCI® Serial board. It occupies one peripheral slot using a 4 HP front panel with four Gigabit Ethernet ports on RJ45 connectors. Alternatively, the GE1 can be supplied with four M12 connectors on the front panel (X-coded variants in preparation).

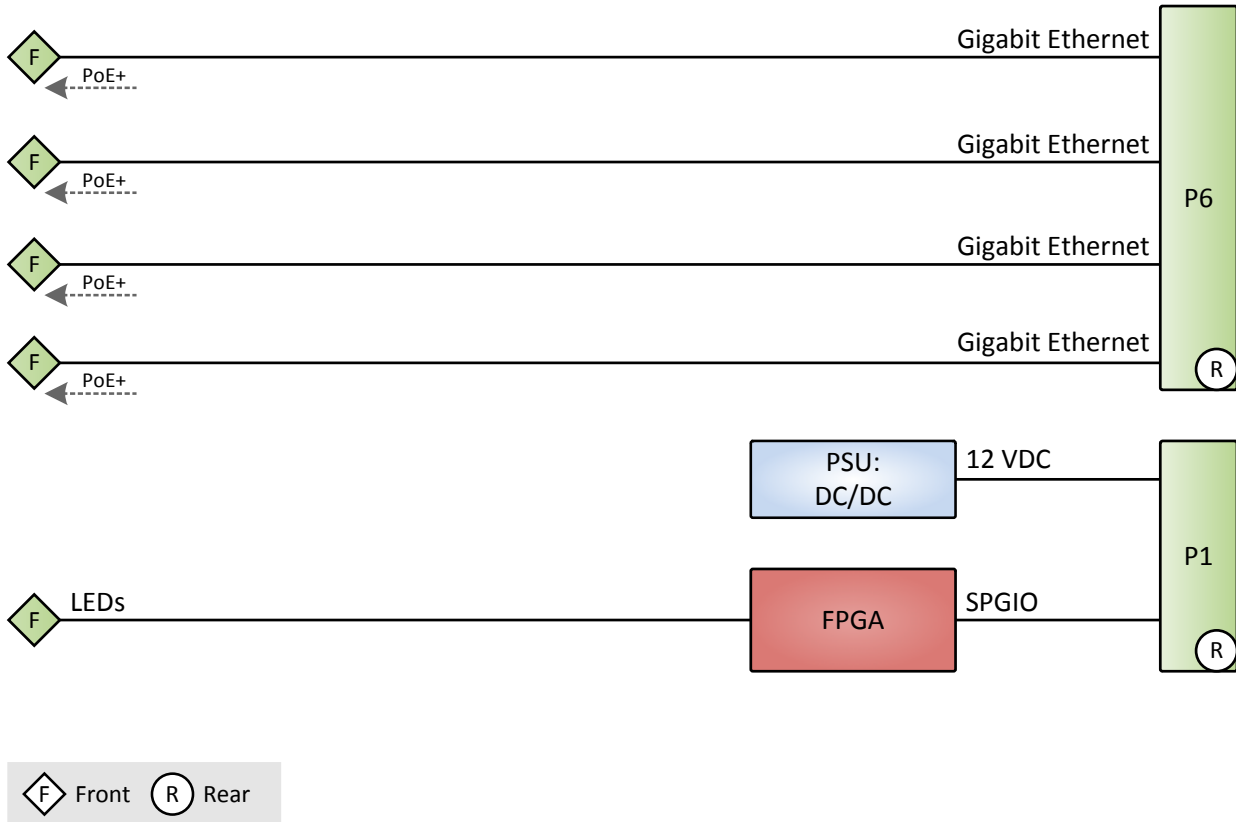
The GE1 is designed to work in combination with various Ethernet switches, routers and CPU boards available from MEN, including the [G101](#) CompactPCI® Serial managed industrial Ethernet switch.

The GE1 features four connectors on the front panel, which can also be used to create 4 ports of copper Gigabit Ethernet, and one Gigabit Ethernet connection

directly to the backplane. In addition, the card can act as Power over Ethernet (PoE) Power Sourcing Equipment (PSE), supplying other devices on all ports with power. Each interface supports a data transfer rate of 1 Gbit/s, and provides two LEDs to indicate the link and activity status.

The GE1 operates with a primary voltage supply of +12 V, which is provided via the rear CompactPCI® serial connector. All additional required voltages are generated onboard. It is fully compliant with the EN 50155 railway standard, qualified for a -40 to +85°C operation temperature and ready for coating.

Diagram



Technical Data

Key Features	<ul style="list-style-type: none"> ■ Four 10/100/1000BASE-T ports at front panel (Electrical isolation: 1500 Vrms) <ul style="list-style-type: none"> □ One common isolation group when PoE PSE is installed ■ Optional PoE(+) Power sourcing support ■ Port configuration: copper, 10/100 and 1000 MBit/s
Supported Protocols and Standards	<ul style="list-style-type: none"> ■ IEEE 1588v2 (together with G101) ■ IEEE 802.3 Standard ■ Power over Ethernet support (IEEE 802.3 Section 2, Type 1 and 2 - classes 0, 1, 2, 3, 4) ■ EEE (Energy Efficient Ethernet)
Power Over Ethernet Features	<ul style="list-style-type: none"> ■ Power over Ethernet functions on all ports <ul style="list-style-type: none"> □ PSE (Power Sourcing Equipment) function □ Supports supply classes 0 to 4 □ Supplies up to four powered devices (up to 60 W total)
Front Interfaces	<ul style="list-style-type: none"> ■ Ethernet <ul style="list-style-type: none"> □ Four RJ45 or M12 connectors, 1000BASE-TX (1 Gbit/s) □ Power over Ethernet PSE ■ Status LEDs <ul style="list-style-type: none"> □ Two LEDs per channel □ Signal link status □ Signal link activity
Rear Interfaces	<ul style="list-style-type: none"> ■ Serial GPIO (SGPIO) ■ PoE Control ■ Four Ethernet links on P6
Supervision and Control	<ul style="list-style-type: none"> ■ BITE Voltage Supervision ■ PoE Voltage monitoring
Backplane Standard	<ul style="list-style-type: none"> ■ CompactPCI® Specification PICMG CPCI-S.0 <ul style="list-style-type: none"> □ Peripheral slot
Electrical Specifications	<ul style="list-style-type: none"> ■ Supply voltages <ul style="list-style-type: none"> □ +12 V (±10%) ■ Power consumption <ul style="list-style-type: none"> □ 5 W without PoE support, 85 W max. with 60 W PoE
Mechanical Specifications	<ul style="list-style-type: none"> ■ Dimensions: 3U, 4 HP ■ Weight: 204 g
Environmental Specifications	<ul style="list-style-type: none"> ■ Temperature range (operation): <ul style="list-style-type: none"> □ -40°C to +85°C □ Airflow 1.5m/s ■ Temperature range (storage): -40°C to +85°C ■ Relative humidity (operation): max. 95% non-condensing ■ Relative humidity (storage): max. 95% non-condensing ■ Altitude: -300 m to +2000 m ■ Shock: 50 m/s², 30 ms ■ Vibration (Function): 1 m/s², 5 Hz to 150 Hz (EN 61373) ■ Vibration (Lifetime): 7.9 m/s², 5 Hz to 150 Hz (EN 61373) ■ Conformal coating on request
Reliability	<ul style="list-style-type: none"> ■ MTBF: 250.000 h @ 40°C according to IEC/TR 62380 (RDF2000)
Safety	<ul style="list-style-type: none"> ■ Flammability <ul style="list-style-type: none"> □ UL 94V-0 ■ Electrical Safety <ul style="list-style-type: none"> □ EN 50155 (Insulation) □ EN 50155 (Voltage)

Technical Data

EMC	<ul style="list-style-type: none"> ■ EN 55022 (radio disturbance) ■ EN 61000-4-2 (ESD Immunity) ■ EN 61000-4-4 (burst)
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Ordering Information

Standard GE1 4-Port Gigabit Copper Ethernet Line Card with PoE Models	02GE01-00	3U CompactPCI® Serial, 4 x RJ45 passive Ethernet port extender, no PoE, -40 to +85°C
	02GE01-01	SemiCus: 3U CompactPCI® Serial, 4 x RJ45 passive Ethernet port extender, PoE+, -40 to +85°C
	02GE01-02	3U CompactPCI® Serial, 4 x M12 passive Ethernet port extender, no PoE, -40 to +85°C, conformal coated
	02GE01-03	SemiCus: 3U CompactPCI® Serial, 4 x M12 passive Ethernet port extender with PoE+, -40 to +85°C, conformal coated
Related Hardware	02G101-00	25-Port Gigabit Ethernet Managed Switch, 2x RJ45 + 1x SFP 2.5 Gbps on front, 10x GE + 3x QSGMII links on backplane, -40 to +85°C with qualified components
	02G101-01	24-Port Gigabit Ethernet Managed Switch, 3x M12 on front, 9x GE + 3x QSGMII links on backplane, -40 to +85°C with qualified components

Contact Information

Germany

MEN Mikro Elektronik GmbH
Neuwieder Straße 3-7
90411 Nuremberg
Phone +49-911-99 33 5-0
Fax +49-911-99 33 5-901

info@men.de
www.men.de

France

MEN Mikro Elektronik SAS
18, rue René Cassin
ZA de la Châtelaine
74240 Gaillard
Phone +33 (0) 450-955-312
Fax +33 (0) 450-955-211

info@men-france.fr
www.men-france.fr

USA

MEN Micro Inc.
860 Penllyn Blue Bell Pike
Blue Bell, PA 19422
Phone (215) 542-9575
Fax (215) 542-9577

sales@menmicro.com
www.menmicro.com

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