

# GE3

## 4-Port Gigabit Copper Ethernet Line Card with PoE 3U CompactPCI Serial

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



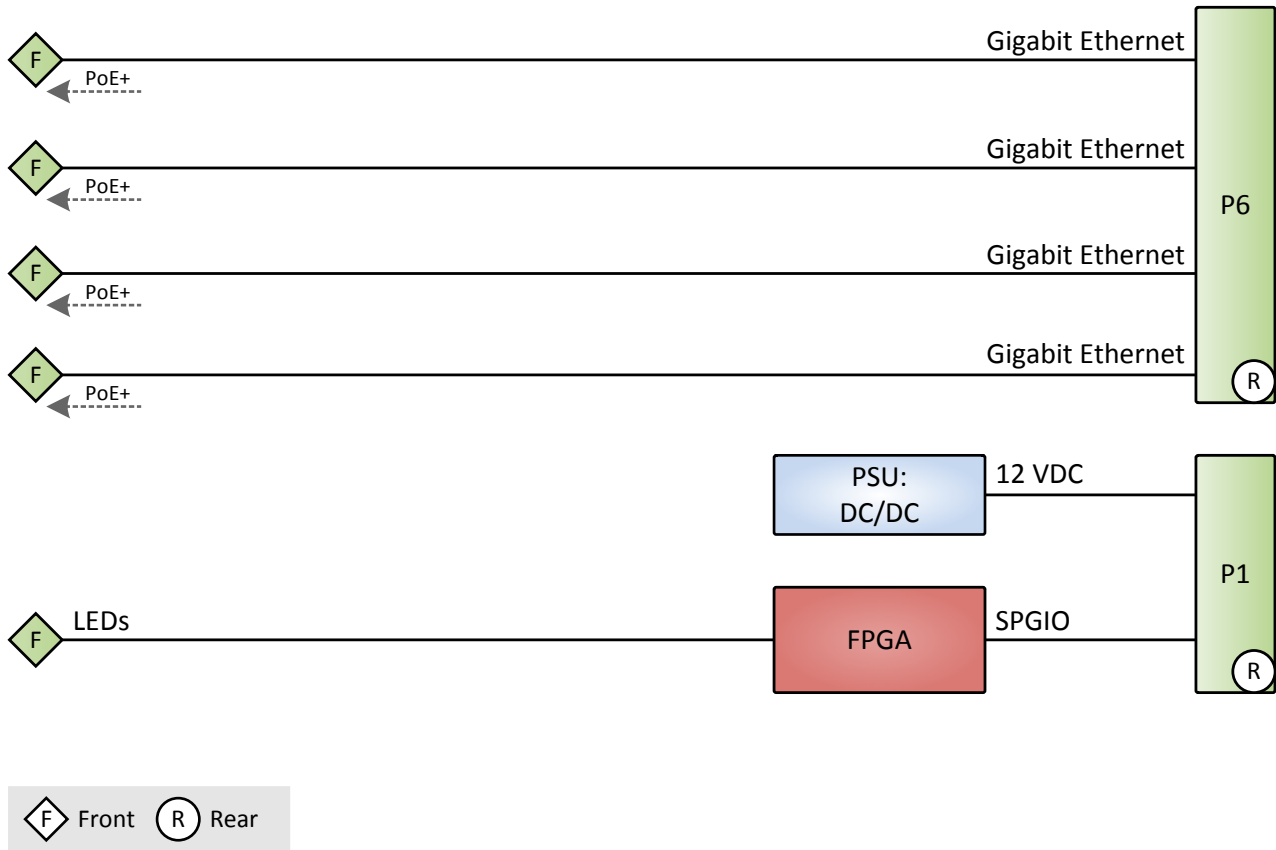
The GE3 is a 3U Gigabit Ethernet line card, with optional PoE support, implemented as a CompactPCI Serial board. It occupies one peripheral slot using a 4 HP front panel with four Gigabit Ethernet ports on M12 X-coded connectors. Alternatively, the GE3 can be supplied with four RJ45 connectors.

The GE3 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 GE3 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 GE3 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.



**Key Features**

- Four 10/100/1000BASE-T ports at front panel
  - 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**

- 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**

- Power over Ethernet functions on all ports
  - PSE (Power Sourcing Equipment) function
  - Supports supply classes 0 to 4
  - Supplies up to four powered devices (up to 60 W total)

**Front Interfaces**

- Ethernet
  - Four M12 X-coded connectors, 1000BASE-TX (1 Gbit/s)
  - Power over Ethernet PSE
- Status LEDs
  - Two LEDs for each port
  - Signal link status
  - Signal link activity

**Rear Interfaces**

- Serial GPIO (SGPIO)
- PoE Control
- Four Ethernet links on P6

**Supervision and Control**

- BITE Voltage Supervision
- PoE Voltage monitoring

**Backplane Standard**

- CompactPCI Specification PICMG CPCI-S.0
  - Peripheral slot

**Electrical Specifications**

- Supply voltages
  - +12 V ( $\pm 10\%$ )
- Power consumption
  - 5 W without PoE support, 85 W max. with 60 W PoE

**Mechanical Specifications**

- Dimensions: 3U, 4 HP
- Weight: 204 g

**Environmental Specifications**

- Temperature range (operation):
  - -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/s<sup>2</sup>, 30 ms
- Vibration (Function): 1 m/s<sup>2</sup>, 5 Hz to 150 Hz (EN 61373)
- Vibration (Lifetime): 7.9 m/s<sup>2</sup>, 5 Hz to 150 Hz (EN 61373)
- Conformal coating on request

**Reliability**

- MTBF: 1.285.302 h @ 40°C according to IEC/TR 62380 (RDF2000)

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## **Safety**

- Flammability
    - UL 94V-0
  - Electrical Safety
    - EN 50155 (Insulation)
    - EN 50155 (Voltage)
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## **EMC**

- EN 55022 (radio disturbance)
- EN 61000-4-2 (ESD Immunity)
- EN 61000-4-4 (burst)

**Germany**

**MEN Mikro Elektronik GmbH**

Neuwieder Straße 3-7  
90411 Nuremberg  
Phone +49-911-99 33 5-0

sales@men.de  
[www.men.de](http://www.men.de)

**USA**

**MEN Micro Inc.**

860 Penllyn Blue Bell Pike  
Blue Bell, PA 19422  
Phone 215-542-9575

sales@menmicro.com  
[www.menmicro.com](http://www.menmicro.com)

**France**

**MEN Mikro Elektronik SAS**

18, rue René Cassin  
ZA de la Châtelaine  
74240 Gaillard  
Phone +33-450-955-312

sales@men-france.fr  
[www.men-france.fr](http://www.men-france.fr)

**China**

**MEN Mikro Elektronik (Shanghai) Co., Ltd.**

Room 808-809, Jiaxing Mansion, No. 877 Dongfang Road  
200122 Shanghai  
Phone +86-21-5058-0961

sales@men-china.cn  
[www.men-china.cn](http://www.men-china.cn)

**Up-to-date information, documentation and ordering information:**

[www.men.de/products/ge3/](http://www.men.de/products/ge3/)

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