G211 – 3U CompactPCI® Serial Quad Gigabit Ethernet Interface

- **Four 10/100/1000Base-T Ethernet channels**
- **Alternatively two redundant channel pairs**
- **Full-duplex or half-duplex**
- **RJ45 or robust M12 connectors**
- **Fully integrated to comply with IEEE802.3u**
- **1500 V isolation voltage**
- **-40 to +85°C screened**
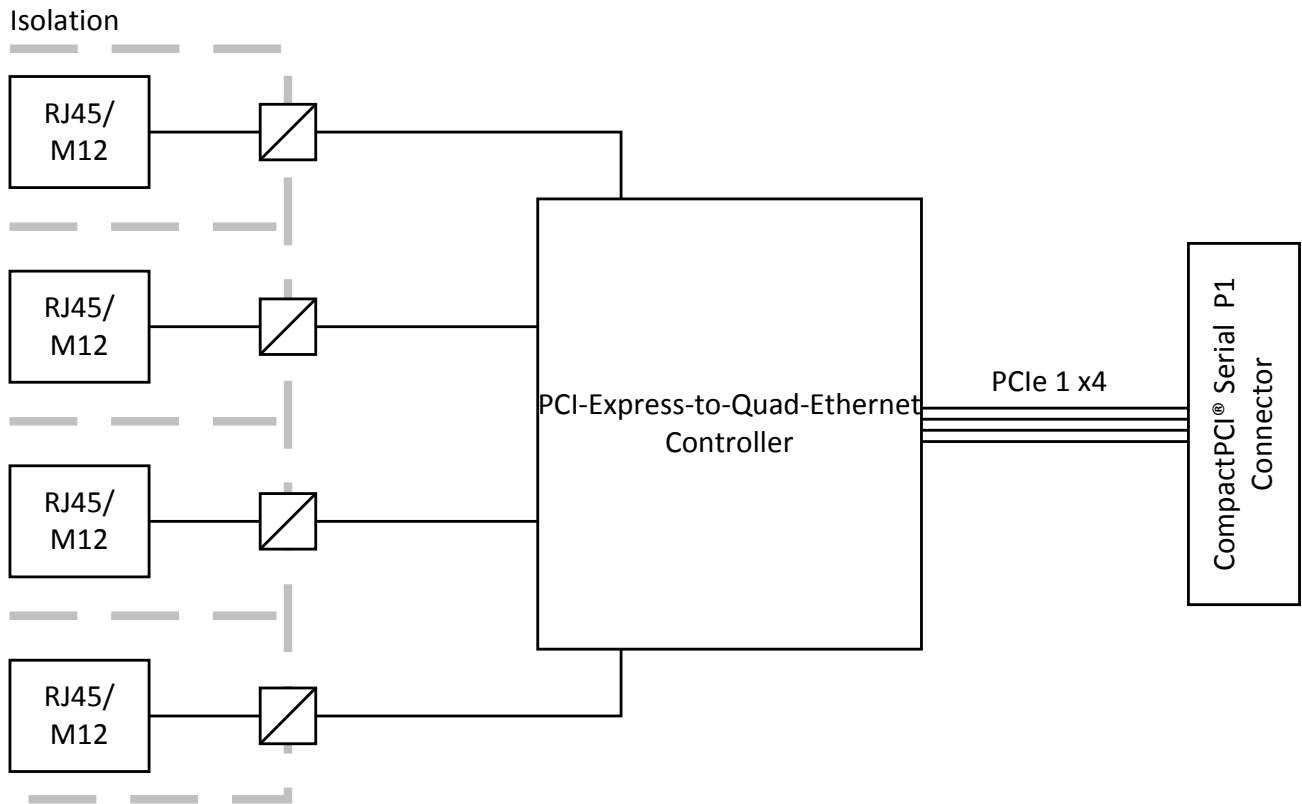- **PICMG CPCI-S.0 CompactPCI® Serial peripheral card**

The G211 quad Ethernet interface is a rugged single Eurocard CompactPCI® Serial peripheral board. It can be used in combination with a CompactPCI® Serial or CompactPCI® PlusIO CPU board in a CompactPCI® Serial or hybrid system.
It provides four Gigabit Ethernet interfaces at the front panel which can be accessed either on four RJ45 or four M12 connectors making it especially suited for applications in harsh environments. All four interfaces are controlled by one Ethernet controller which is connected to the backplane via a x4 PCI Express® link and supports the IEEE 802.3x standard. Each interface supports a data transfer rate of 1Gbit/s if all interfaces are used simultaneously. Two LEDs show the link and activity status of every interface.
The G211 is screened for extended operating temperature and prepared for conformal coating for use in harsh and mobile environments.

Diagram

Isolation

RJ45/ M12

RJ45/ M12

RJ45/ M12

RJ45/ M12

PCI-Express-to-Quad-Ethernet Controller

PCIe 1 x4

CompactPCI® Serial P1 Connector

Technical Data

Ethernet Interfaces	■ Four 10/100/1000Base-T interfaces
	■ IEEE802.3x support
	    □ Full-duplex flow control
	    □ Half-duplex back pressure collision flow control
	    □ 1 Gbit/s data transfer rate for each interface when all 4 interfaces are used simultaneously
	■ 4x2 status LEDs to signal link status and activity

Front Connections	■ Four standard 8-pin RJ45 or M12 receptacle connectors

CompactPCI® Serial	■ Compliance with CompactPCI® Serial PICMG CPCI-S.0 Specification
	■ Peripheral slot
	■ Host interface: One PCI Express® x4 link
	    □ PCIe® 2.0 support
	    □ Data rate up to 2 GB/s in each direction (5 Gbit/s per lane)

Electrical Specifications	■ Isolation voltage: 1500V between Ethernet links and between Ethernet links and shield or ground ■ Supply voltage/power consumption: □ +12V (-5%/+5%), 3.5 W typ/ 6 W max.
Mechanical Specifications	■ Dimensions: conforming to CompactPCI® Serial specification for 3U boards ■ Weight: 240 g (with heat sink)

Environmental Specifications	■ Temperature range (operation):
	    □ -40..+85°C (screened)
	    □ Airflow: min. 1.0 m/s
	■ Temperature range (storage): -40..+85°C
	■ Relative humidity (operation): max. 95% non-condensing
	■ Relative humidity (storage): max. 95% non-condensing
	■ Altitude: -300 m to + 3,000 m
	■ Shock: 15 g, 11 ms
	■ Bump: 10 g, 16 ms
	■ Vibration (sinusoidal): 2 g, 10..150Hz
	■ Conformal coating on request

MTBF	■ MTBF: 324,639h @ 40°C according to IEC/TR 62380 (RDF 2000)
Safety	■ PCB manufactured with a flammability rating of 94V-0 by UL recognized manufacturers
EMC	■ Tested according to EN 55022 (radio disturbance), EN 61000-4-2 (ESD), EN 61000-4-4 (burst) and EN 61000-4-5 (surge)
Software Support	■ Windows® ■ Linux

Configuration & Options

Standard Configurations

Article No.	Channels	Connectors	Front Panel	Operation Temperature
02G211-00	4	4 RJ45	4HP	0..+60°C
02G211-01	4	4 M12	4HP	-40..+85°C

Options

Ethernet	■ Four RJ45 connectors at the front panel ■ Four M12 connectors at the front panel
Cooling Concept	■ Also available with conduction cooling in MEN CCA frame

Please note that some of these options may only be available for large volumes. Please ask our sales staff for more information.

Ordering Information

Standard G211 Models	**02G211-00**	4 1000Base-T Ethernet interfaces, 4 RJ45 connectors at front, 0..+60°C
	02G211-01	4 1000Base-T Ethernet interfaces, 4 M12 connectors at front, -40..+85°C screened, conformal coating
Software: Linux	This product is designed to work under Linux. See below for potentially available separate software packages from MEN.	
	13T001-90	Linux network driver (MEN) for G211, G211F, GM1 and GM2
Software: Windows®	This product is designed to work under Windows®. See below for potentially available separate software packages from MEN.	
	13T010-70	Windows® 32-bit network driver (Intel®) for XM1, XM1L, XM2, MM2, F11S, F18, F18E, F19P, F21P, F22P, G20, G22, GM1, GM2, G211, G211F, SC24, BC50I, BC50M and BL50W
	13T020-70	Windows® 64-bit network driver (Intel®) for F18, F18E, F19P, F21P, F22P, G20, G22, GM1, GM2, G211, G211F, XM2, SC24, BC50I, BC50M and BL50W

For operating systems not mentioned here contact MEN sales.

Documentation	Compare Chart 3U CompactPCI® Serial CPU and I/O cards » Download	
	Compare Chart 3U CompactPCI® / PlusIO CPU cards » Download	
	20G211-00	G211 User Manual

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