# G211 – 3U CompactPCI<sup>®</sup> 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<sup>®</sup> Serial peripheral card

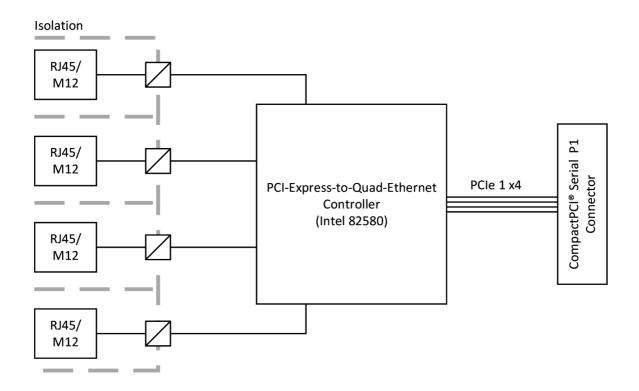


The G211 quad Ethernet interface is a rugged single Eurocard CompactPCI<sup>®</sup> Serial peripheral board. It can be used in combination with a CompactPCI<sup>®</sup> Serial or CompactPCI<sup>®</sup> PlusIO CPU board in a CompactPCI<sup>®</sup> Serial or hybrid system.

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<sup>®</sup> link and supports the IEEE 802.3x standard. Each interface supports a data transfer rate of 1Gbit/s, even 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



### **Technical Data**

Ethernet Interfaces	<ul> <li>Four 10/100/1000Base-T interfaces</li> <li>IEEE802.3x support <ul> <li>Full-duplex flow control</li> <li>Half-duplex back pressure collision flow control</li> <li>1 Gbit/s data transfer rate for each interface, even if all four interfaces are used simultaneously</li> <li>4x2 status LEDs to signal link status and activity</li> </ul> </li> </ul>	
Front Connections	Four standard 8-pin RJ45 or M12 receptacle connectors	
CompactPCI <sup>®</sup> Serial	<ul> <li>Compliance with CompactPCI® Serial PICMG CPCI-S.0 Specification</li> <li>Peripheral slot</li> <li>Host interface: One PCI Express® x4 link</li> <li>PCIe® 2.0 support</li> <li>Data rate up to 2 GB/s in each direction (5 Gbit/s per lane)</li> </ul>	
Electrical Specifications	<ul> <li>Isolation voltage: 1500V between Ethernet links and between Ethernet links and shield or ground</li> <li>Supply voltage/power consumption:</li> <li>+12V (-5%/+5%), 3.5 W typ/ 6 W max.</li> </ul>	
Mechanical Specifications	<ul> <li>Dimensions: conforming to CompactPCI<sup>®</sup> Serial specification for 3U boards</li> <li>Weight: 240 g (with heat sink)</li> </ul>	
Environmental Specifications	<ul> <li>Temperature range (operation): <ul> <li>-40+85°C (screened)</li> <li>Airflow: min. 1.0 m/s</li> </ul> </li> <li>Temperature range (storage): -40+85°C</li> <li>Relative humidity (operation): max. 95% non-condensing</li> <li>Relative humidity (storage): max. 95% non-condensing</li> <li>Altitude: -300 m to + 3,000 m</li> <li>Shock: 15 g, 11 ms</li> <li>Bump: 10 g, 16 ms</li> <li>Vibration (sinusoidal): 2 g, 10150Hz</li> <li>Conformal coating on request</li> </ul>	
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	<ul> <li>Tested according to EN 55022 (radio disturbance), EN 61000-4-2 (ESD), EN 61000-4-4 (burst) and EN 61000-4-5 (surge)</li> </ul>	
Software Support	<ul> <li>Windows<sup>®</sup></li> <li>Linux</li> </ul>	

# **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	<ul><li>Four RJ45 connectors at the front panel</li><li>Four M12 connectors at the front panel</li></ul>				
Operating Temperature	Maximum: +85	<ul> <li>Depends on system configuration</li> <li>Maximum: +85°C</li> <li>Minimum: -50°C</li> </ul>			
Cooling Concept	<ul> <li>Also available w</li> </ul>	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 all available separate software packages.		
	13T001-90	Linux network driver (MEN) for G211, G211F, GM1, GM2 and GM3	
Software: Windows®	This product is des	igned to work under Windows®. See below for all available separate software packages.	
	13T010-70	Windows <sup>®</sup> 32-bit network driver (Intel <sup>®</sup> ) for XM1, XM1L, XM2, MM2, CB70C, F11S, F18, F18E, F19P, F21P, F22P, G20, G22, GM1, GM2, GM3, G211, G211F, SC24, BC50I, BC50M, BL50W, BL50S, BL70W and BL70S	
	13T020-70	Windows <sup>®</sup> 64-bit network driver (Intel <sup>®</sup> ) for F18, F18E, F19P, F21P, F22P, G20, G22, GM1, GM2, GM3, G211, G211F, XM2, CB70C, SC24, BC50I, BC50M, BL50W, BL50S, BL70W and BL70S	

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 <sup>®</sup> / PlusIO CPU cards » Download		
	20G211-00	G211 User Manual	

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