

# GM1 – Quad Gigabit Ethernet Rear I/O Card

- Mezzanine card for CompactPCI® Serial CPU boards
- Four 10/100/1000Base-T Ethernet channels
- Support of full mesh and star architecture
- Wake-on-LAN
- Fully integrated to comply with IEEE802.3u and IEEE802.3ab
- TCP/IP checksum offload
- -40 to +85°C screened

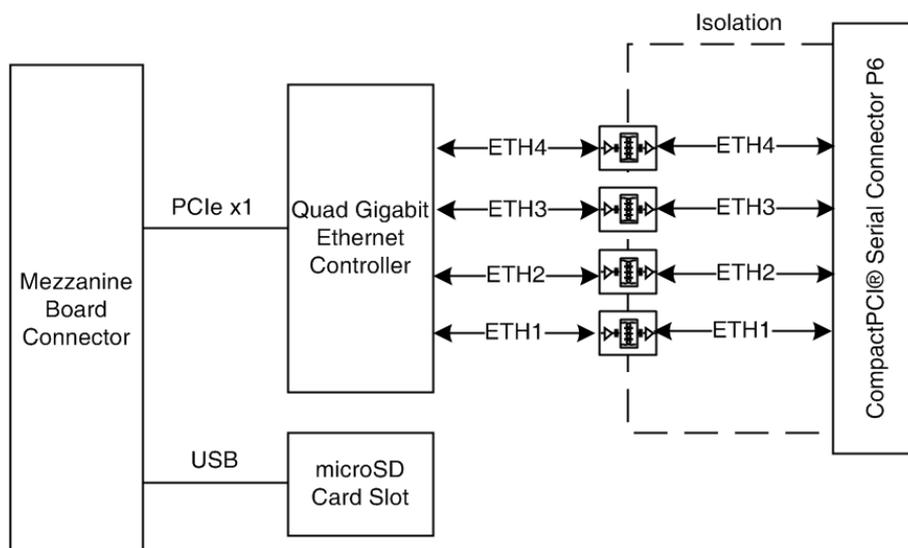


The GM1 is a mezzanine card which is plugged onto CompactPCI® Serial CPU boards to implement four Ethernet interfaces on the backplane. The CompactPCI® Serial standard defines up to eight Ethernet interfaces which can be connected in a star or

in full mesh architecture via the backplane. The GM1 is used to implement four Gigabit Ethernet interfaces which are led to the backplane via CompactPCI® Serial connector P6. All four interfaces are controlled by one Ethernet controller which supports the IEEE 802.3x standard.

In addition, the GM1 offers the possibility to plug a microSD™ card. The board is screened for operation in the extended temperature range of -40 to +85°C.

## Diagram



## Technical Data

<b>Ethernet Interfaces</b>	<ul style="list-style-type: none"><li>■ Four 10/100/1000Base-T interfaces</li><li>■ IEEE802.3x support<ul style="list-style-type: none"><li>□ Full-duplex flow control</li><li>□ 100 Mbit/s data transfer rate for each interface when used simultaneously</li></ul></li><li>■ TCP/IP checksum offload</li><li>■ Wake-on-LAN support</li></ul>
<b>MicroSD card slot</b>	<ul style="list-style-type: none"><li>■ Support of class 6 devices</li><li>■ Data transfer rate up to 48 MBit/s (depends on media and host)</li></ul>
<b>CompactPCI® Serial</b>	<ul style="list-style-type: none"><li>■ Compliance with CompactPCI® Serial PICMG CPCI-S.0 Specification</li><li>■ Ethernet interfaces via CompactPCI® Serial connector P6</li></ul>
<b>Electrical Specifications</b>	<ul style="list-style-type: none"><li>■ Supply voltage/power consumption:<ul style="list-style-type: none"><li>□ +3.3 V (-10%/+10%) from CPU board, 5.83 W max.</li></ul></li></ul>
<b>Mechanical Specifications</b>	<ul style="list-style-type: none"><li>■ Dimensions: 80 mm x 95 mm (without P6 connector)</li><li>■ Weight: 38 g</li></ul>
<b>Environmental Specifications</b>	<ul style="list-style-type: none"><li>■ Temperature range (operation):<ul style="list-style-type: none"><li>□ -40..+85°C (screened)</li><li>□ Airflow: min. 1.5 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: 50 m/s<sup>2</sup>, 30 ms</li><li>■ Vibration (Function): 1 m/s<sup>2</sup>, 5 Hz - 150 Hz</li><li>■ Vibration (Lifetime): 7.9 m/s<sup>2</sup>, 5 Hz - 150 Hz</li><li>■ Conformal coating on request</li></ul>
<b>MTBF</b>	<ul style="list-style-type: none"><li>■ 2,770,085 h @ 40°C according to IEC/TR 62380 (RDF 2000)</li></ul>
<b>Safety</b>	<ul style="list-style-type: none"><li>■ PCB manufactured with a flammability rating of 94V-0 by UL recognized manufacturers</li></ul>
<b>EMC</b>	<ul style="list-style-type: none"><li>■ Conforming to EN 55022 (radio disturbance)</li></ul>
<b>Software Support</b>	<ul style="list-style-type: none"><li>■ Windows®</li><li>■ Linux</li></ul>

## Configuration & Options

### Options

<b>Operating Temperature</b>	<ul style="list-style-type: none"> <li>■ Depends on system configuration</li> <li>■ Maximum: +85°C</li> <li>■ Minimum: -50°C</li> </ul>
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Please note that some of these options may only be available for large volumes. Please ask our sales staff for more information.

## Ordering Information

<b>Standard GM1 Models</b>	<b>08GM01-00</b>	CompactPCI® Serial 4x Gigabit Ethernet rear I/O mezzanine card, -40..+85°C screened
<b>Related Hardware</b>	<b>02G020-02</b>	Intel® Core™ i7-620UE, 1.06 GHz, 2 GB DDR3 DRAM with ECC, mSATA and uSD socket, -40..+85°C Tx screened (-40..+70°C, with up to +85°C for 10 minutes)
	<b>02G020-03</b>	Intel® Core™ i7-610E, 2.53 GHz, 4 GB DDR3 DRAM with ECC, mSATA and uSD socket, 0..+60°C
<b>Memory</b>	<b>0751-0046</b>	MicroSD card, 2 GB, -40..+85°C
	<b>0751-0052</b>	MicroSD card, 4 GB, -40..+85°C
<b>Software: Linux</b>	This product is designed to work under Linux. See below for potentially available separate software packages from MEN.	
	<b>13T001-90</b>	Linux network driver (MEN) for G211, G211F, GM1, GM2 and GM3
<b>Software: Windows®</b>	This product is designed to work under Windows®. See below for potentially available separate software packages from MEN.	
	<b>13T010-70</b>	Windows® 32-bit network driver (Intel®) for XM1, XM1L, XM2, MM2, F11S, F18, F18E, F19P, F21P, F22P, G20, G22, GM1, GM2, GM3, G211, G211F, SC24, BC50I, BC50M and BL50W
	<b>13T020-70</b>	Windows® 64-bit network driver (Intel®) for F18, F18E, F19P, F21P, F22P, G20, G22, GM1, GM2, GM3, G211, G211F, XM2, SC24, BC50I, BC50M and BL50W
For operating systems not mentioned here <a href="#">contact MEN sales</a> .		
<b>Documentation</b>	<b>20GM01-00</b>	GM1 User Manual

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