

# PMC610J4

## Quad/dual 10/100BaseTX Ethernet NIC PMC

### Features

- PCI 66MHz capable
- Rear I/O
- Quad or dual 10/100BaseTX ports
- Full duplex operation in both 10 and 100 Mbit modes
- TCP/UDP checksum off loading
- Fully supports IP Security (IpSec)
- Indicators for link, activity and connection speed
- PIMs available to connect Ethernet channels to external RJ45 connectors
- Versions supporting wide operating temperature range available
- RoHS versions available – meet European Union (EU) Restriction of Hazardous Substance Directive (2002/95/EC) current revision

The PMC610J4 family of Ethernet NICs provides two or four 10/100BaseTX engines on a PMC. Each engine is capable of full-duplex operation in both 10 and 100 Mbit modes. A PCI to PCI bridge couples the Ethernet interfaces to the host PCI bus, ensuring high performance with minimal PCI loading.

A full auto-negotiation facility allows automatic configuration to the highest possible operating mode. This includes the option of automatic determination of both bandwidth and full-duplex operation.

The board features indicators on each RJ45 network connector for board status. There are three indicators that indicate if there is a link, if there is activity, and the speed of the connection.

PIM610J4, PIM610J4RC (RoHS version) and PIM610J4RC-WT (wide temperature range) boards are available to connect the Ethernet channels on the Ethernet board to external RJ45 connectors. The PIM fits on the PIM site of the transition card.

### Low Cost, Effective Interconnect

Two PMC610J4 boards can be directly cabled with a simple "cross-over". This configuration creates a full duplex 800 Mbit dedicated data path - delivering high bandwidth at very low cost. More complex dedicated interconnects can be created using a hub or switch. Both point-to-point and switched hubs, in full duplex mode, remove many determinism concerns raised with traditional Ethernet solutions. This makes the PMC610J4 an excellent candidate for high performance interconnects that require real time determinism.

### Software Support

Software drivers are available for most popular operating systems such as VxWorks®, Linux®, LynxOS®, Windows® NT and Solaris. These drivers have been carefully designed and implemented to fit within the LAN protocol stack of the host operating system. Thus all facilities available from the host OS can be used across the PMC610J4. These drivers allow user control over the PMC610J4 auto-negotiation capability.



# PMC610J4 10/100BaseTX Ethernet NIC PMC

## Specifications

### Components

- Intel® 82551ER chipset

### Power Requirements

- 3.3 V

### Form Factor

- PMC

### PMC Expansion Site Connector

- 3.3 V and 5 V signaling
- Types 1 and 2, 32-bit PCI bus, 66 MHz maximum

### Ethernet Characteristics

- Ports: two or four 10/100BaseTX
- Port routing: rear

### Mean Time Between Failures (MTBF)

- 281,000 hours

### Standard Temperature

- Operating: 0 to +55 °C
- Storage: -40 to +85 °C

### Wide Temperature Range

- Operating: -20 to +70 °C
- Storage: -40 to +85 °C

### Humidity

- Operating: 5% to 95% non-condensing
- Storage: 5% to 95% non-condensing

### Other Options

- Conformal coating: polyurethane or acrylic

### Operating System Support

- Windows®
- Linux®
- VxWorks®
- LynxOS®

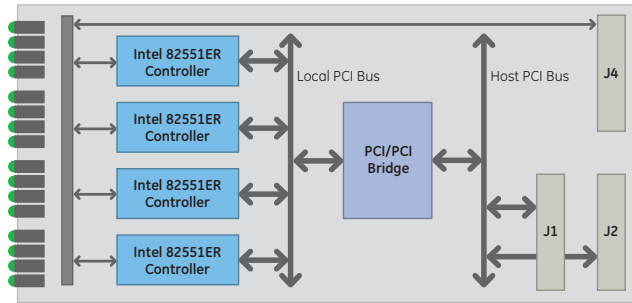
### Regulatory Compliance

- European Union (CE Mark)
- EN55024
- EN55022 Radiated Emissions Class A
- EN61000-4-2 (ESD)
- EN61000-4-3 (Radiated Immunity)
- EN61000-4-4 (EFT)
- EN61000-4-5 (Surge)
- EN61000-4-6 (Conducted RF)
- EN61000-4-8 (Power Frequency Magnetic Fields)
- EN61000-4-11 (Voltage Dips)
- EN61000-3-2 (Harmonic Emissions) (PMC610RC only)
- EN61000-3-3 (Flicker) (PMC610RC only)
- United States FCC Part 15, Class A
- Canada ICES-003, Class A

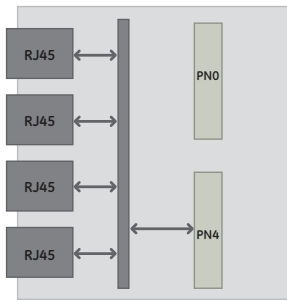
### Safety:

- UL60950-1
- CSA C22.2, No. 60950-1-03
- EN60950-1 (Low Voltage Directive)

## Block Diagram



PMC610J4/PMC610J4RC/PMC610J4RC-2



PIM610J4/PIM610J4RC

## Ordering Information

<b>PMC610J4</b>	10/100BaseTX PMC; four ports; front I/O; standard operating temperature range
<b>PMC610J4RC</b>	10/100BaseTX PMC; four ports; front I/O; standard operating temperature range; RoHS
<b>PMC610J4RC-2</b>	10/100BaseTX PMC; two ports; front I/O; standard operating temperature range; RoHS
<b>PMC610J4RC-WT</b>	10/100BaseTX PMC; four ports; front I/O; wide operating temperature range; RoHS
<b>PMC610J4RC-2-WT</b>	10/100BaseTX PMC; two ports; front I/O; wide operating temperature range; RoHS
<b>PIM610J4</b>	Rear transition card for PMC610J4
<b>PIM610J4RC</b>	Rear transition card for PMC610J4RC products; RoHS
<b>PIM610J4RC-WT</b>	Rear transition card for PMC610J4RC-WT & PMC610J4RC-2-WT; RoHS -CC may be applied to any part to indicate polyurethane conformal coating -CCA may be applied to any part to indicate acrylic conformal coating

## About GE Fanuc Intelligent Platforms

GE Fanuc Intelligent Platforms is a leading global provider of embedded computing solutions for a wide range of industries and applications. Our comprehensive product offering includes many types of I/O, single board computers, high performance signal processors, fully integrated, rugged systems including flat panel displays, plus high speed networking and communications products. The company is headquartered in the U.S. and has design, manufacturing and support offices throughout the world. Whether you're looking for one of our standard products or a fully custom solution, GE Fanuc Intelligent Platforms has the breadth, experience and 24/7 support to deliver what you need. For more information, visit [www.gefanuc.com](http://www.gefanuc.com).

## GE Fanuc Intelligent Platforms Information Centers

Americas:  
1 800 322 3616 or 1 256 880 0444

Asia Pacific:  
+81 3 5544 3973

EMEA:  
Germany: +49 821 5034-0  
UK: +44 1327 359444

## Additional Resources

For more information, please visit the GE Fanuc Intelligent Platforms web site at:

[www.gefanuc.com](http://www.gefanuc.com)

