PMC676

Single or Dual Fiber Gigabit Ethernet PMC with Deep FIFO

Features

- Packet filtering based on checksum errors
- SNMP and RMON statistic counters
- Hardware TCP checksum offloading
- Support for various address filtering modes:
  - 16 exact matches (unicast or multicast)
  - 4096-bit hash filter for multicast frames
  - Promiscuous unicast and promiscuous multicast transfer modes
- PCI-X, PCI 64/66 MHz
- Connector options SC, LC
- DMA engine
- Dual/single 1000Mbit Ethernet
- Jumbo Frame capable
- 1000BaseSX or optional 1000BaseLX
- RoHS versions available*
- RoHS compliant versions supporting wide operating temperature range available

*RoHS versions are recommended for new designs

The PMC676 is a Gigabit Ethernet NIC that offers dual 1000 Mbit Ethernet connectivity in both SX and LX options. The card is capable of full duplex operation on each of its channels. The Ethernet/PCI/PCI-X interface includes a powerful DMA engine for each port with very deep FIFO buffers (64 Kbyte). This assures continuous, full bandwidth operation with minimum PCI overhead. The PMC676 has two types of I/O connectivity: SC and LC. In addition, card edge PCI systems can be accommodated using a GE PMC239 adapter for rapid prototype and development.

Low Cost, Effective Interconnect

Two PMC676 boards can be directly cabled with a simple "cross-over". This configuration creates a full duplex 1000 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 PMC676 an excellent candidate for high performance interconnects that require real time determinism.

Software Support

The PMC676 is supported by native drivers for many common operating systems (Windows®, Linux®). GE has software drivers for addtional operating systems (VxWorks®, LynxOS®, 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 utilized across the PMC676.

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Specifications

Components
- Dual port Ethernet: 82546
- Single port Ethernet: 82545

Power Specifications
- Power (total): 6 watts
- @ 3.3 V: 0.9 amps
- @ 5 V: 0.6 amps

Ethernet Characteristics
- Ports: 2 × 1000 Mbit fiber
- Port routing:
  Front: fiber (SC or LC; /SX or/LX signaling)

PCI Bus Characteristics
- Signaling: 3 V and 5 V
- Specification: 2.2
- Speed: 33/66 MHz
- Width: 32/64

Form Factor
- Single slot PMC

MTBF
- SMIL 217-F Nav Shel 25 Deg. C: 245,000 hours

Temperature
- Operating: 0 to +60 °C
- Storage: -40 to +85 °C

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

Humidity
- Operating: 5% to 95% noncondensing
- Storage: 5% to 95% noncondensing

Other Options
- Conformal coating: acrylic or polyurethane
- PXE (Preboot eXecution Environment) boot option
- Solaris OBP boot option

Operating System Support
- Windows®
- Linux®
- VxWorks®
- LynxOS®
- Solaris®

Ordering Information

PMC676LC	Dual port LC conectors /SX signaling
PMC676LC/LX	Dual port LC connectors /LX signaling
PMC676LC/1	Single port LC connector /SX signaling
PMC676LC/1/LX	Single port LC connector /LX signaling
PMC676SC	Dual port SC connector /SX signaling
PMC676SC/LX	Dual port SC connector /LX signaling
PMC676SC/1	Single port SC connector /SX signaling
PMC676SC/1/LX	Single port SC connector /LX signaling
PMC676RCLC	Dual port LC connectors /SX signaling; RoHS
PMC676RCLC/LX	Dual port LC connectors /LX signaling; RoHS
PMC676RCLC/1	Single port LC connector /SX signaling; RoHS
PMC676RCLC/1/LX	Single port LC connector /LX signaling; RoHS
PMC676RCSC	Dual port SC connector /SX signaling; RoHS
PMC676SRCC/LX	Dual port SC connector /LX signaling; RoHS
PMC676RCSC/1	Single port SC connector /SX signaling; RoHS
PMC676RCSC/1/LX	Single port SC connector /LX signaling;RoHS

-S may be applied to any model number to indicate Solaris OBP boot option
-CC may be applied to any model number to indicate polyurethane conformal coating
-CCA may be applied to any model number to indicate acrylic conformal coating
-PXE may be applied to any model number to indicate PXE boot option
-WT wide temperature range is available on some RoHS-compliant models;
     please contact your sales representative for availability

Media Kits

M-GBI-SEL-ARC	LynxOS (3.x) for PPC
M-GBI-SEL-ARP	LynxOS (3.x) for x86
M-GBI-SES-ARS	Solaris (versions 7, 8, 9) SPARC
M-GBI-SEV-ARC	VxWorks (versions 5.4, 5.5) PPC
M-GBI-SEV-ARP	VxWorks (versions 5.4, 5.5) x86
M-GBI-SEVB-ARC	VxWorks (version 5.3) PPC

Linux (2.4.x, 2.6.x), Windows (XP, NT, 2000) supported by drivers from Intel® (included in most distributions, available from the Intel web site). LynxOS 4.x supported by driver included in the distribution.

About GE Intelligent Platforms

GE Intelligent Platforms, a General Electric Company (NYSE: GE), is an experienced high-performance technology company and a global provider of hardware, software, services, and expertise in automation and embedded computing. We offer a unique foundation of agile, advanced and ultra-reliable technology that provides customers a sustainable advantage in the industries they serve, including energy, water, consumer packaged goods, government and defense, and telecommunications. GE Intelligent Platforms is a worldwide company headquartered in Charlottesville, VA and is part of GE Home and Business Solutions. For more information, visit www.ge-ip.com.

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