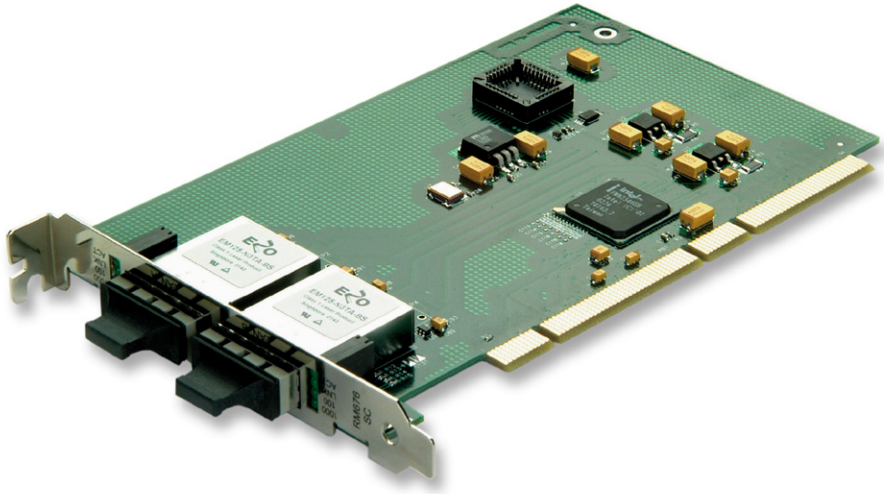
GE Fanuc
Intelligent Platforms



RM676

PCI Edge Connect Gigabit Ethernet NIC

Features

- PCI-X, PCI 64/66 MHz
- Connector options SC, LC
- DMA engine
- Dual/single 1000 Mbit fiber Ethernet
- Full 1000 Mbit point-to-point performance
- Jumbo Frame capable
- 1000BaseSX or optional 1000BaseLX
- RoHS versions available

Host Off-loading Features

- Hardware TCP checksum offloading
- Packet filtering based on checksum errors
- SNMP and RMON statistic counters
- 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

The RM676 is a Gigabit Ethernet Network Interface Card (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 RM676 is available with two flavors of I/O connectivity: SC or LC for both the -SX and -LX options.

The RM676 does not require a PCI-to-PCI bridge onboard for single or dual version, which contributes to higher performance.

Low Cost, Effective Interconnect

Two RM676 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 RM676 an excellent candidate for high performance interconnects that require real time determinism.

Software Support

The RM676 is supported by native drivers for many common operating systems (Windows®, Linux®). GE Fanuc Intelligent Platforms has software drivers for additional 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 RM676.

Solaris OBP boot and PXE (Preboot eXecution Environment) boot options are available.

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Specifications

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

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

Ethernet Characteristics
- Ports: 2 x 1000 Mbit fiber
- Port routing: front fiber (SC or LC)

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

Form Factor
- Single slot PCI

Mean Time Between Failures (MTBF)
- MIL 217-F Nav Shel 25 Deg. C: 245000 Hours

Temperature
- Operating: 0 to +60 °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
- Solaris OBP boot option
- PXE (Preboot eXecution Environment) boot option

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

Ordering Information

RM676LC	Dual port LC conectors /SX signaling
RM676LC/LX	Dual port LC connectors /LX signaling
RM676LC/1	Single port LC connector /SX signaling
RM676LC/1/LX	Single port LC connector /SX signaling
RM676SC	Dual port SC connector /SX signaling
RM676SC/LX	Dual port SC connector /LX signaling
RM676SC/1	Single port SC connector /SX signaling
RM676SC/1/LX	Single port SC connector /LX signaling
RM676RCLC	Dual port LC conectors /SX signaling; RoHS
RM676LC-LX	Dual port LC connectors /LX signaling
RM676LC-1	Single port LC connector /SX signaling
RM676RCLC-1-LX	Single port LC connector /LX signaling; RoHS
RM676RCSC	Dual port SC connector /SX signaling; RoHS
RM676RCSC-LX	Dual port SC connector /LX signaling; RoHS
RM676RCSC-1	Single port SC connector /SX signaling; RoHS
RM676RCSC-1-LX	Single port SC connector /LX signaling; RoHS

-S may be applied to any part to indicate Solaris OBP boot option
-CC may be applied to any part to indicate polyurethane conformal coating
-CCA may be applied to any part to indicate acrylic conformal coating
-PXE may be applied to any part to indicate PXE boot option

Media Kit Options

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 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.

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Additional Resources

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

www.gefanuc.com

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