



RM677

Quad 1000Base Fiber Ethernet, PCI-X, Pluggable Transceivers

The RM677 is a PCI edge-connect card designed to offer maximum 1000 Mbit full duplex Ethernet connectivity on four channels. The RM677 uses pluggable transceivers, providing LC connectors with SX or (optionally LX) transceivers. The RM677 Ethernet/PCI interface includes a powerful DMA engine with very deep FIFO buffers (64 Kbyte). This assures continuous, full bandwidth operation with minimum PCI overhead. The RM677 has one PCI-to-PCI bridge onboard.

Product Features

Host Offloading 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

Other Features

- PCI-X, PCI 64/66 Mhz
- LC connector
- DMA engine
- Full 1000 Mbit point-to-point performance
- Four 1000 Mbit Ethernet fiber ports
- Interchangeable, pluggable transceivers
- Jumbo Frame capable
- 1000BaseSX or optional 1000BaseLX

Software Support

The RM677 is supported by native drivers for many common operating systems (e.g. Windows®, Linux®). GE Fanuc Embedded Systems has software drivers for additional operating systems (e.g. 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 RM677.



RM677 Specifications

Components

- PCI Bridge: IBM21P100
- Dual port Ethernet: Intel 82546

Power Specifications

- Power (total): 8.7 watts
- @3 V: 0.8 amps
- @5 V: 1.06 amps

Ethernet Characteristics

- Ports: 4 x 1000 BaseSX, optional LX
- Port routing: Front, fiber LC (SPF)

PCI Bus Characteristics

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

Form Factor

- Single slot PCI

MTBF

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

Temperature

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

Humidity

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

Conformal Coating

- Yes, additional charge

Operating System Support

- Windows
- Linux
- VxWorks
- LynxOS
- Solaris

Warranty

- 3 years

Ordering Options

| | |
|---|--|
| RM677 | Quad gigabit Ethernet, SFP, SX transceiver |
| RM677/LX | Quad gigabit Ethernet, SFP, LX transceiver |
| -CC may be affixed to any part number to indicate conformal coating | |

Media Kits

| | |
|----------------------|------------------|
| M-GBI-SEV-ARC | VxWorks on PPC |
| M-GBI-SEV-ARP | VxWorks on x86 |
| M-GBI-SES-ARS | Solaris on SPARC |

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.



Embedded Systems

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Additional Resources

For more information, please visit the GE Fanuc Embedded Systems web site at:

www.gefanuc.com/embedded