



PMC-GBIT-DT2CC

Conduction cooled PMC with Dual Gigabit Ethernet Interfaces

Features

- Dual 10BaseT/100BaseTX/1000BaseT network interface card with rear panel access
- Single-wide 32/64-bit 33/66 MHz PCI, 66/133 MHz PCI-X PMC
- Auto-negotiating protocol selection
- Transmit and receive FIFOs
- Drivers for VxWorks®, Linux®, Windows® NT and Windows 2000 available
- Supports Jumbo frames
- Conduction cooling
- Conformal coating
- Extended operating temperature range: -40° to + 85° C when temperature screened
- Rear panel access provided by the PIM-GBIT-DT module; module has two RJ-45 connectors and LED indicators for link, speed and activity

PMC-GBIT-DT2CC is a conduction cooled, conformal coated PCI Mezzanine Card (PMC) with dual 1000BaseT Gigabit Ethernet interface controller ports. This COTS Gigabit Ethernet interface card has rear panel access and can be screened to support a wider operating temperature range.

The Ethernet network interface complies with the IEEE 802.3 specifications for 10BaseT, 100BaseTX, and 1000BaseT over category 5 twisted-pair cable. Full-duplex and half-duplex modes are supported for 10BaseT and 100BaseTX. 1000BaseT supports full duplex mode only. The PMC-GBIT-DT2CC is compliant with standard single-wide PMC IEEE P1386.1, PCI 2.2, and PCI-X 1.0 specifications.

Using the Intel 82546EB with 64KB FIFO buffer memory, the PMC-GBIT-DT2CC allows back-to-back transmissions with minimum interface latency. It also features a 10BaseT, 100BaseTX, and 1000BaseT auto-detection CSMA/CD interface controller.

Dual integrated low-powered MAC/PHY functionality is provided by the Intel 82546EB. The 82546EB appears on the PCI bus as multifunction device, eliminating one PCI-to-PCI bridge and, consequently, significantly improving bus performance. It supports a number of sophisticated features, including auto-negotiation, collision detection, link detection, 4B/5B encoding/decoding (100BaseTX), flow control, and half-duplex/full-duplex. Standard network connection is accomplished through a rear panel I/O connector and rear panel interface module for Ethernet, PIM-GBIT-DT.

The PMC-GBIT-DT2CC addresses applications requiring high-bandwidth system interconnection, PMC form factor, and a high level of protection against heat and particle contaminants.

PMC-GBIT-DT2CC Conduction Cooled PMC with Dual Gigabit Ethernet Interfaces

Specifications

Technical Highlights

- Single-wide PMC; two ports
- 64-bit PMC Specification IEEE P1386.1 compliant
- Intel® 82546EB PCI Controller/Ethernet MAC
- Protocols: Ethernet 10BaseT, 100BaseTX, 1000BaseT
- Transmit/receive FIFOs with 64 KB total

PCI Interface

- 32/64-bit, 33/66 MHz, master and slave, 3.3V/5V signaling
- PCI Protocol and Electrical Rev. 2.2
- 66/133 MHz PCI-X bus
- PCI-X 1.0 specification

Rear Panel I/O Access

- P4

Rear Panel Access

- Via PIM-GBIT-DT module

Power Requirements

- +3.3 VDC at 1.6 A (typical)

Temperature

- Operating: -40° to +85° C
- Storage: -40° to +125° C

Relative Humidity

- 5% to 95% non-condensing

Shock & Vibration

- Designed to withstand 18 GRMS as specified in MIL-STD-810F

Weight

- 0.11 kg (0.24 lbs)

Dimensions

- 74.0 mm x 143.75 mm

Ordering Information

PMC-GBIT-DT2CC

Conduction cooled, conformal coated PMC with two copper rear panel Gigabit Ethernet interfaces

PIM-GBIT-DT

Two port 10/100/1000BaseT rear panel interface module for Gigabit Ethernet PMC-GBIT-DT2CC and PMC-GBIT-DT2BP

PP-600

Dual PIM carrier for 6U CompactPCI; 100 ohm differential pairs for rear panel Gigabit Ethernet interface

Note

To assure error-free operation using full-length cable as specified in IEEE 802.3, physical link traces for Gigabit Ethernet signals on all interconnects between the PMC and cable must be routed differentially with 100-ohm differential impedance.

GE Fanuc Embedded Systems' PIM carrier PP-600 has matching differential pairs and is recommended to be used with PMC-GBIT-DT2CC and PIM-GBITDT.

About GE Fanuc Embedded Systems

GE Fanuc Embedded Systems 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 Embedded Systems has the breadth, experience and 24/7 support to deliver what you need. For more information, visit www.gefanucembedded.com.

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Additional Resources

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

www.gefanucembedded.com

