IMPCC2

3U CPCI Multifunction PMC Carrier Card

Features

- PMC carrier card with multi-function I/O, mass storage and PowerPC processing capability:
  - 2 x 10/100BaseT Ethernet
  - 2 x USB 2.0
  - 4 hi-speed serial channels
  - VGA Video
  - Solid state storage (Flash memory module)
- Optional embedded PowerPC processing
- Five air- and conduction-cooled ruggedization levels
- Comprehensive Deployed Test software
- Comprehensive operating system support

The IMPCC2 multifunction PMC carrier card is the latest in the PowerPact 3 family of rugged 3U CPCI products, targeted at weight- and space-constrained defense and aerospace applications.

The IMPCC2 is an extremely versatile product offering a range of functions and capabilities to help create complete system solutions in conjunction with other PowerPact 3 boards and the extremely compact RT4 rugged 4-slot chassis.

PMC carrier card : The IMPCC2 offers support for a wide range of GE Fanuc Embedded Systems and third party PMCs for add-on system functionality

I/O Card : the IMPCC2 provides a range of on-board I/O options including Ethernet, hi-speed serial, USB2.0 and RGB video

Mass storage card : the IMPCC2 offers solid state mass storage via an add-on Flash memory module currently available up to 2GB.

Processor card : the IMPCC2 can be configured as a standalone or peripheral processor (not CPCI host) utilizing the PowerPC processing core (603e @ 266MHz) in its PowerQUICC II (8270) communications processor.

IMPCC2 3U CompactPCI Multi-function PMC Carrier Card

Specifications

PMC carrier card functionality
- One PMC Extension Slot(IEEE 1386/1386 .1-2001 compatible)
- 32bit 33/66MHz PCI Interface (3V3 only)
- 64 pins I/O (if COM 3/4 not required) or 48 pins I/O (if COM3/4 required)
- Support for NED (Nuclear Event Detection) input

I/O Card functionality
- Ethernet – two 10/100BaseT ports (reduced to one port if COM 2 is required to be sync capable)
- Hi-speed serial – four ports
  - SCC 1 – RS232/422/485 sync/async (up to 8MBaud)
  - SCC 2 – RS232/422/485 sync/async (up to 8MBaud)
  - SCC 3 – RS232/422/485 async only
  - SCC 4 – RS232/422/485 async only
- USB2.0 – two ports
- Optional RGB video interface

Mass storage card functionality
- 512MB, 1GB or 2GB Flash memory modules

Processor card functionality
- Freescale PowerQUICC II 8270 @ 266MHz
- Peripheral card functionality only
- 32 MB SDRAM (16-bit wide)
- 64 MB Flash memory
- Write-protection options
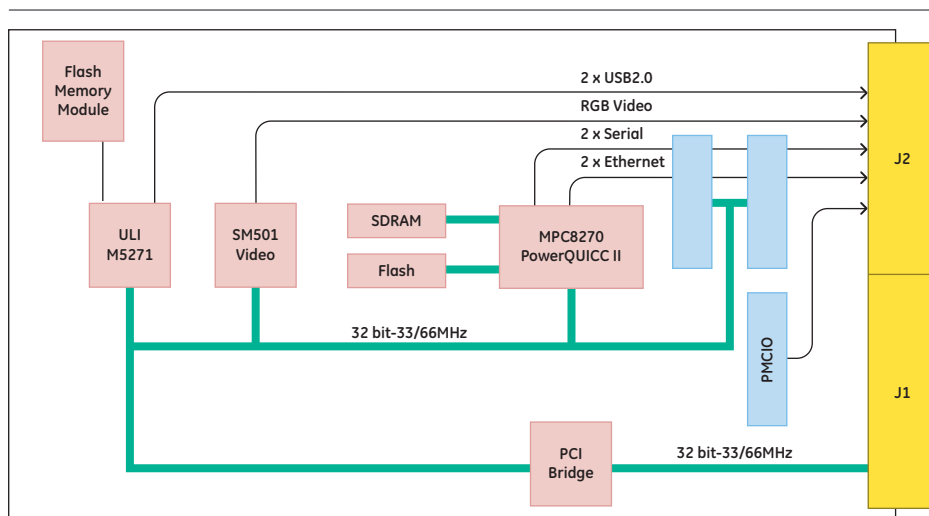
Temperature Sensor
- Ambient temperature sensor

CPCI Interface
- 32bit 33/66MHz, slave only, 3.3V/5V tolerent
- Hot-swap capable

Power Requirements
- +5 V – required
- +3.3 V – required
- ±12V - only if required by mounted PMC module
- Hot swap supported on 5 and 3.3v rails

Block Diagram

	Level 1	Level 2	Level 3	Level 4	Level 5
Cooling Method	Convection	Convection	Convection	Conduction	Conduction
Conformal Coat	Optional	Standard	Standard	Standard	Standard
High / low temp operational	0 / 55°C (300 ft/m)	-20 / +65°C (300 ft/m)	-40 / +75°C (300 ft/m)	-40 / +75°C at cold wall	-40 / +85°C at cold wall
Random Vibration	0.002g2/Hz*	0.002g2/Hz*	0.04g2/Hz**	0.1g2/Hz**	0.1g2/Hz**
Shock	20g***	20g***	20g***	40g***	40g***

* from 10-2000Hz   ** with a flat response to1000Hz. 6dB/Oct roll-off from 1000-2000Hz   *** Pk Sawtooth 11mSec Duration

About Radstone Embedded Computing
Radstone Embedded Computing is part of GE Fanuc Embedded Systems, 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 Radstone Embedded Computing web site at:

www.radstone.com

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03.07   GFA-829