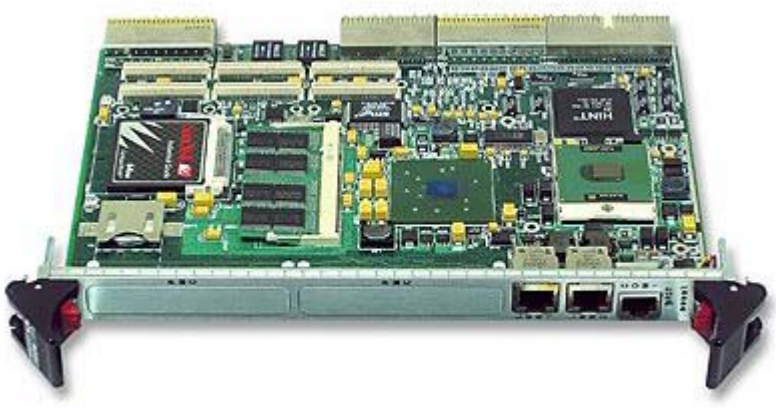
GE Fanuc
Intelligent Platforms



CPCI-7806RC

Intel® Pentium® M/Celeron® M Universal CompactPCI® Single Board Computer

Features

- 6U single slot universal controller
- PICMG 2.1 Rev. 2.0 hot swap compliant
- PICMG 2.16 Ethernet on backplane compliant
- Up to 1 Gbyte DDR SDRAM
- Up to 1 Gbyte CompactFlash
- 64-bit/66 MHz CompactPCI bus interface
- Integrated video controller
- VGA and digital LVDS video available via rear I/O
- User programmable watchdog timer
- Operating system support for QNX®, Linux®, and VxWorks®
- RoHS compliant

The CPCI-7806RC incorporates Intel® Pentium® M or Celeron® M processor with a fully compliant PICMG 2.16 CompactPCI Packet Switching backplane. With multiple options and product variations, the CPCI-7806RC is an ideal solution for a wide variety of embedded applications with benefits that include:

- Low power consumption processor option for the most power sensitive applications
- Available CompactFlash options allows for flexible booting and product configurations

GE Fanuc Intelligent Platforms' CPCI-7806RC is a single slot CompactPCI single board computer (SBC) offering low power consumption without compromising the robustness, reliability and high performance required for demanding embedded computing applications.

Available with either Intel® Pentium® M or Celeron® M processor technology, the CPCI-7806RC features a 400 MHz system bus and incorporates Intel® 855GME graphics memory controller with up to 1 Gbyte Dual Data Rate (DDR) SDRAM. The CPCI-7806RC is ideal for I/O intensive applications thanks to Intel® highly integrated, small footprint 6300ESB I/O controller hub which provides dual PMC sites (64-bit/66 MHz PCI and 32-bit/33 MHz PCI), parallel and serial ATA, CompactFlash option, dual integrated serial ports, and dual USB ports.

Specifications

Processor

- Intel® Pentium® M processor with 1.6 GHz or 1.8 GHz
- Advanced L2 cache
  - 1 MByte (1.6 GHz or 1.8 GHz Pentium® M)
- 400 MHz system bus
- Utilizes the Intel® 855GME chipset and Intel® 6300ESB I/O controller hub SDRAM
- Up to 1 Gbyte DDR SDRAM via one SODIMM CompactFlash
- Up to 1 Gbyte of CompactFlash Ethernet
- Two 10/100/1000BaseT Ethernet ports
  - Software selectable front or rear (PICMG 2.16)
- Intel® 82546EB Ethernet controller Graphics; Intel® 82546GB Ethernet controller for RoHS version
- Intel® 855GME graphics memory controller
- Up to 1600 x 1200 resolution
- VGA and digital LVDS video available via rear I/O PMC Expansion
- Two PMC expansion sites
  - No. 1 PMC site: 3.3V 64-bit/66 MHz PCI-X PMC
  - No. 2 PMC site: 5.0V 32-bit/33 MHz PCI
- IEEE 1386.1 compliant Serial Interfaces
- Two 16550-compatible serial ports
  - One accessible via RJ45 front panel connector
  - Both accessible via rear panel

Other Interfaces

- Serial ATA via rear panel
- Two USB 2.0 ports via rear panel
- One PS/2 port for keyboard and mouse
- IDE and floppy disk support
- Hardware reset on front panel
- User programmable watchdog timer PICMG Compliance

CPCI-7808RC Intel® Universal CompactPCI® Single Board Computer

Specifications

PICMG
- Supports Intelligent Platform Management Interface (IPMI) architecture (PICMG 2.9 Rev. 1.5)
- High availability hot swap (PICMG 2.1 Rev. 2.0)
- Ethernet on the backplane (PICMG 2.16 Rev. 1.0)

Front Panel Status LEDs
- Primary IDE interface activity
- Board status
- Power
- Hot swap
- LAN activity (located on each RJ45)

Operating System Support
- QNX
- Linux
- VxWorks

Power Requirements (Pentium® M 1.4 GHz)
- +5 VDC (+5%, -3%), 1.5 A (typical), 3.5 A maximum
- +3.3 VDC, (+5%, -3%), 1.5 A (typical), 1.8 A maximum
- ±12 VDC (+5%, -3%), 50 mA maximum

Power Requirements (All Other Processors)
- +5 VDC (+5%, -3%), 4.5 A (typical), 3.5 A maximum
- +3.3 VDC, (+5%, -3%), 1.5 A (typical), 2.0 A maximum
- ±12 VDC (+5%, -3%), 50 mA maximum

Environmental Specifications
- Operating: 0° to +50° C
- Storage: -20° to +70° C
- Relative humidity: 5% to 95%, non-condensing

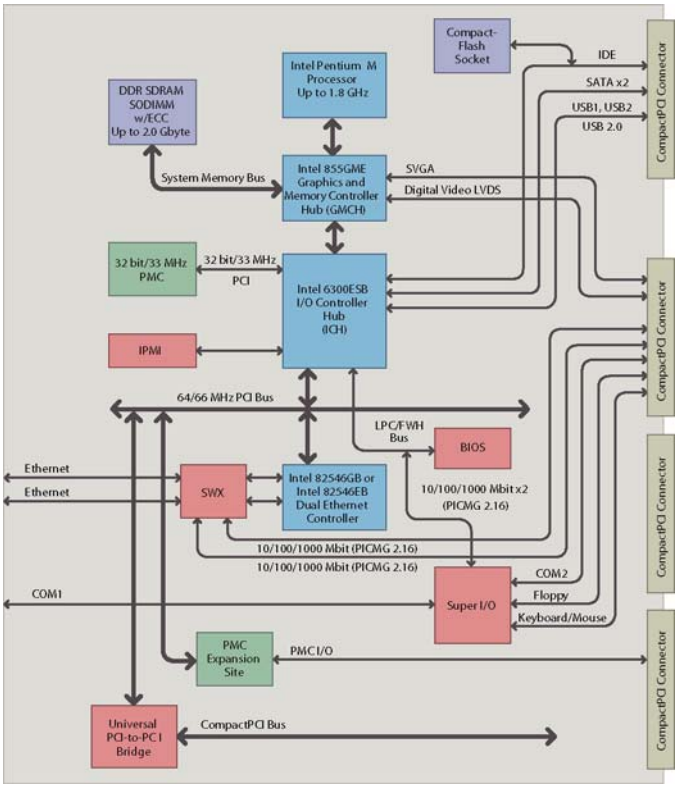
Shock
- 10 Gs, 16 ms half sine, 6 axis, 10 pulses each

Vibration
- 6 Gs RMS (20 – 2000 Hz) random, 0.0185 G2 per Hz spectrum

Dimensions
- 6U single slot Eurocard form factor
- Height 9.2 in. (233.4mm)
- Depth 6.3 in. (160mm)
- Thickness 0.8 in. (20.3mm)

Regulatory
- European Union (CE Mark)
- EN55024
- EN55022 Radiated Emissions Class A
- EN61000-4-2 (ESD)
- EN61000-4-3 (Radiated Immunity)
- EN61000-4-4 (EFT)
- EN61000-4-5 (Surge)
- EN61000-4-6 (Conducted RF)
- FCC Part 15, Class A (United States)
- ICES-003, Class A (Canada)

Block Diagram



Ordering Information

VMICPCI-7806RC-22x000
6U CPCI PICMG 2.16 SBC with 1.6 GHz Intel® Pentium® M, 1 GB DDR SDRAM, Ethernet, SATA, serial ports, PMC, 64-bit/66 MHz bus interface, IPMI, USB

CompactPCI Rear Transition Utility Board:
The ACC-0584RC installs in the rear transition area of the CPCIbus backplane. The ACC-0584RC is sold separately.

Note: All CPCI single board computer products come standard with a CPCI specification compliant front panel. Other OEM configurations are available; please contact the factory for additional ordering options.

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.gefanucembedded.com or call 1-800-GE Fanuc.

GE Fanuc Intelligent Platforms Information Centers

Americas:
1 800 322 3616 or 1 256 880 0444

Asia Pacific:
+81 3 5544 3973

EMEA:
Germany: +49 821 5034 0
UK: +44 1327 359444

Additional Resources

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

www.gefanucembedded.com