CPCI-7055RC

PowerPC® CompactPCI® Single Board Computer

Features

- Processor speeds up to 1.0 GHz
- Operating temperature from 0° to +55° C
- Up to 1 GB DDR 400 SDRAM
- Up to 2 GB CompactFlash
- Three independent 10/100/1000BaseTX Ethernet ports
- Ultra DMA IDE Controller
- 64-bit/66 MHz CompactPCI bus interface
- User programmable watchdog timer
- Passive heat sink
- Operating system support for VxWorks® and Linux®
- RoHS compliant

The CPCI-7055RC is a single slot CompactPCI single board computer (SBC) offering exceptional processing performance via the 750GX PowerPC processor, that delivers a solution with the robustness, reliability, flexibility and system features required for your most demanding embedded computing applications. It features the next generation Marvell® Discovery™ III chipset and offers up to 1 GB Double Data Rate (DDR) 400 SDRAM. The CPCI-7055RC also features dual PMC sites (64-bit/100 MHz PCI-X, backward compatible to 5V, 33 MHz PCI), up to 2 GB CompactFlash option, three high performance serial ports, and three 10/100/1000 Ethernet ports.

A few key benefits of the CPCI-7055RC, that help make this SBC the market leader, are highlighted below:

- High performance control and data/vector processing available on the IBM 750 processor permit integration of computing functions and data processing in a single slot.
- Extensive peripheral interfaces simplify system configuration and reduce the number of hardware pieces required to implement your solution.
- High-density non-volatile storage options provide the flexibility for stand-alone operations or extensive data logging.
- User configurable PICMG 2.16, providing Ethernet across the backplane as well as supporting PICMG 2.1 Rev. 1.0 CompactPCI Hot Swap giving system-level flexibility for multiple CompactPCI system functions.
- Onboard monitoring of temperature and voltages with software access enables application-dependent environmental solutions.

Specifications

CPU

- IBM 750GX PowerPC 1.0 GHz
- Advanced L2 cache
  - 1 MB (IBM 750GX)
- Utilizes the Next Generation Marvell PowerPC chipset with 2 MB integrated SRAM

SDRAM

- Up to 1 GB DDR 400 SDRAM with ECC

CompactFlash

- Up to 2 GB of CompactFlash

Ethernet

- Three dedicated 10/100/1000BaseTX Ethernet ports
  - One via a RJ45 front panel port
  - Two available through a PICMG 2.16 or CompactPCI J3 backplane connection

PMC Expansion

- Two 64-bit/100 MHz PCI-X on PMC expansion sites
  - Backward compatible to 5V, 33 MHz
  - Supports double-wide PMC
- IEEE 1386.1 compliant

Serial Interfaces

- Three high performance serial ports: two support asynch RS232/422/RS485 on rear I/O J3, and one RS232 serial port on front panel using RJ45 connector

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CPCI-7055RC PowerPC CompactPCI Single Board Computer

Specifications

Other Interfaces

- One serial port on front panel
  - Two additional ports available through the CPCI J3 connector
- IDE and hard disk support
- Hardware reset on front panel
- User programmable watchdog timer
- Status LEDs on front panel

PICMG Compliance

- High availability hot swap (PICMG 2.1 Rev. 2.0)
- Universal signaling support (PICMG 2.0 Rev. 3.0)

Front Panel Status LEDs

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

Operating System Support

- Linux
- VxWorks

Power Requirements

- +3.3 VDC, (±5%) 1.7A (typical), 3.04A maximum
- +5 VDC (±5%) 3.2A (typical), 6.0A maximum
- ±12 VDC (±5%), 50 mA maximum

Environmental Specifications

- Operating: 0° to +55° C
- Storage: -25° to +80° C
- Relative humidity: 10% to 90%, 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

MTBF

- 361,616 hours

Dimensions

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

Block Diagram

Ordering Information

VMICPCI-7055RC-32x110

6U cPCI SBC - 1 GHz 750GX, 1 GB DDR SODIMM, no CompactFlash, Ethernet via J3, 2x PMC, 64 MB bootflash, 32 KB NVRAM, 3x serial ports, RoHS compliant

VMICPCI-7055RC-31x110

6U cPCI SBC - 1GHz 750GH, 512 MB SODIMM, no CompactFlash, Ethernet via J3, 2x PMC, 64 MB bootflash, 32kb NVRAM, 3x serial ports, RoHS Compliant

VMIACC-7055RC-000

Rear Transition Module for the CPCI-7055, RoHS compliant.

About GE Intelligent Platforms

GE Intelligent Platforms, a General Electric Company (NYSE: GE), is an experienced high-performance technology company and a global provider of hardware, software, services, and expertise in automation and embedded computing. We offer a unique foundation of agile, advanced and ultra-reliable technology that provides customers a sustainable advantage in the industries they serve, including energy, water, consumer packaged goods, government and defense, and telecommunications. GE Intelligent Platforms is a worldwide company headquartered in Charlottesville, VA and is part of GE Home and Business Solutions. For more information, visit www.ge-ip.com.

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