



V7807RC

Intel® Pentium® M VITA 31.1 VMEbus Single Board Computer

Features

- Intel® Pentium® M @ 1.1 GHz, 1.4 GHz, or 1.8 GHz
- Up to 2 Mbyte L2 cache
- Up to 1.5 Gbyte DDR SDRAM
- Up to 2 Gbyte bootable CompactFlash
- One PCI-X PMC expansion site
- 400 MHz system bus
- 10/100 BaseTX Ethernet port on the front - 10/100/1000 Base Tx Ethernet port on the front (non-VITA 31.1 option)
- 2x Gigabit Ethernet with VITA 31.1 optional
- 4x serial ports
- 4x USB2.0 ports
- SATA support
- Mouse, keyboard, and SVGA routed to front panel
- Operating System Support for Windows® XP, Windows 2000, VxWorks®, QNX and Linux®
- RoHS compliant

High performance with VITA 31.1 compliance.

The VME-7807RC is a highly flexible single board computer (SBC) that integrates Intel's Pentium M processor with up to 1.5 Gbyte DDR SDRAM and Dual Gigabit Ethernet with a PCI-X, 66 MHz PMC expansion slot. Operating at up to 1.8 GHz, this SBC provides high bandwidth and processing power and is ideal for I/O intensive applications.

Utilizing Intel's new highly integrated 6300ESB I/O controller hub, the VME-7807RC offers four serial ports, four USB 2.0 ports, serial ATA, IDE, and up to 2 Gbyte of optional CompactFlash. This SBC utilizes the Intel 855GME to provide SVGA and DVI-I graphics support.

Specifications

Processor

- Intel Pentium M @ 1.1 GHz, 1.4 GHz, or 1.8 GHz
- Favorable thermal characteristics
- 2 Mbyte L2 cache (1.4 GHz and 1.8 GHz options), and 1 Mbyte (1.1 GHz option)
- 400 MHz system and memory bus

SDRAM

- Maximum memory configuration of 1.5 Gbyte of DDR SDRAM with optional ECC support

Compact Flash

- CompactFlash up to 2 Gbyte accessible through secondary IDE port
- CompactFlash may be configured as the boot device through the BIOS boot device set-up

BIOS

- The V7807RC System BIOS and Video BIOS are provided in reprogrammable flash memory.

Ethernet

- Dual Gigabit Ethernet interface using the Intel 82546EB with one port routed to front panel and the second routed to P2
- Both Gigabit Ethernets can be routed to optional P0 connector supporting VITA 31.1
- One 10/100 Mbit Ethernet port on front panel using the Intel 82551ER

USB Ports

- Four USB ports, two routed to front panel and two to P2
- Supported USB features include
 - isochronous data transfers
 - Asynchronous messaging
 - Self-identification and configuration of peripherals
 - Dynamic (hot) attachment

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VMEbus Backplane Interface

- Tundra Universe II supporting VME64 modes:
A32/A24/D32/D08(E0)/MBLT64/BLT32

Serial Ports

- Four 16550 compatible serial ports
 - One RJ45 on the front panel
 - Three to P2
- Ports feature independent 16-byte FIFO supporting baud rates up to 115 Kbaud
- All ports are configurable for both RS232/422

PMC Extension Slot

- One 5V PMC expansion site (IEEE 1386.1)

Programmable Timers

- Two 16-bit timers and two 32-bit timers
- Mapped in PCI memory space
- Completely software programmable and can generate PCI bus interrupts

Watchdog Timer

- Programmable Intervals
- Interrupt and board reset triggers

Dimensions

- 6U (4HP) 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)

Power Requirements

- +5 VDC (+5/-2.5 percent), 4.0 A (typical), 5.4 A (maximum)
 - +12 VDC (+/-5 percent), less than 1 mA
 - 12 VDC (+/-5 percent), less than 1 mA
- Note: VME Interface only allows lower voltage of -4.875
Note: Does not include PMC site for power requirements

Airflow

- Forced air cooling required
- 350 LFM minimum, measured at the outlet of the heatsink

Temperature

- Operating: 0° to +60° C
- Storage: -40° to +80° C

Altitude

- Operating: 0 to 10,000 ft (3,000 m)
- Storage: 0 to 40,000 ft (12,000 m)

Humidity

- Operating: relative humidity 5% to 95%, non-condensing
- Storage: relative humidity 5% to 95%, non-condensing

MTBF

- Contact factory

Regulatory

- The V7807RC has been tested and found to meet the requirements of the following standards:
 - European Union (CE Mark)
 - United States (FCC Part 15, Class A)
 - Canada (ICES-003, Class A)

Block Diagram

