GE
Intelligent Platforms

V7768

Intel Core 2 Duo/Celeron M VME Single Board Computer

Features

- Intel® Core™ 2 Duo processor up to 2.16 GHz
- Up to 4 MBytes L2 cache
- Up to 2 Gbytes DDR2 SDRAM via single SODIMM
- 667 MHz system and memory bus
- Up to 8 Gbytes bootable CompactFlash
- One PCI-X PMC expansion site
- Board-to-board connection for PMC237CM1/V PMC expansion board
- 2x Gigabit Ethernet on the front panel
- 2x Serial ports
- 4x USB 2.0 ports
- 2x SATA
- PS/2 keyboard/mouse on the front panel
- Operating System Support for Windows®, VxWorks®, and Linux®

The V7768 is a VMEbus single board computer from GE Intelligent Platforms, offering up to 2.16 GHz of processing speed via the Intel Core 2 Duo processor with up to 2 Gbytes DDR2 SDRAM. This board integrates the Intel 945GME Express Chipset and offers a very rich I/O set, making this a very flexible addition to our expansive line of Intel architecture VME SBCs. I/O options include dual Gigabit Ethernet, two SATA interfaces, four USB 2.0 ports, keyboard/mouse/SVGA on the front panel, as well as a PCI-X capable PMC site. The V7768 also offers a Celeron® M processor option that allows for 20 more degrees on the upper operating temperature limit.

The V7768 provides further customer defined I/O capabilities with the board-to-board connector for the PMC237CM1/V PMC expansion board from GE Intelligent Platforms, which gives customers three additional PMC expansion sites in addition to the PCI-X PMC site on the V7768.

Specifications

Processor
- Intel Core 2 Duo Processor at 2.16 GHz
- Intel Celeron M Processor at 1.07 GHz
- 4 Mbytes cache (Core 2 Duo options), and 1 Mbytes (Celeron M option)
- 667 MHz system and memory bus on the Core 2 Duo options, 533 MHz system and memory bus on the Celeron M option

SDRAM
- Maximum memory configuration of up to 2 GBytes DDR2 SDRAM via single SODIMM

Compact Flash
- CompactFlash up to 8 Gbytes accessible through secondary IDE port
- CompactFlash may be configured as the boot device through the BIOS boot device set-up

BIOS
- The V7768 System BIOS and Video BIOS are provided in reprogrammable flash memory.

Ethernet
- Dual Gigabit Ethernet interface via the Intel 82571
- Both ports are routed to front panel RJ45 connectors
- Network boot via PXE

USB Ports
- Four USB 2.0 ports: two to rear I/O via P2, and two to front panel
- Supported USB features include
  - isochronous data transfers
  - asynchronous messaging
  - self-identification and configuration of peripherals
  - dynamic (hot) attachment

VMEbus Backplane Interface
- Tundra Universe II supporting VME64 modes: A32/A24/D32/D08(EO)/MBLT64/BLT32
- Hardware byte swapping
- Enhanced bus error handling

Specifications (continued)

Serial Ports
- Two 16550 compatible serial ports via DB-9 connectors: COM1 routed to front panel, COM2 routed to P2
- Ports feature independent 16-byte FIFO supporting baud rates up to 115 Kbaud

PMC Extension Slot
- One 133 MHz PCI-X PMC site
- 46-pin P2 user I/O per VITA35, P4V2-46dz
- Add 3x 32-bit/33 MHz PMC sites with the PMC237CM1/V

Front Panel Options
- VME Standard
- 1101.10 front panel

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

Nonvolatile SRAM
- 32 Kbyte of nonvolatile SRAM

Dimensions
- 6U (4HP) single slot Eurocard form factor
- Height: 9.2 in. (233.4mm)
- Depth: 6.3 in. (160mm)
- Thickness: 0.8 in. (20.3mm)

Power Requirements
- +5 VDC (±5/-2.5 percent), C2D: 6A (typical), 7.6A (maximum); Celeron M: 4A (typical) to 4.6A (maximum)
- +12 VDC (±5 percent), less than 1mA
- -12 VDC (±5 percent, less than 1mA

Note: VME Interface only allows lower voltage of -4.875
Note: Does not include PMC site for power requirements

Airflow
- Forced air cooling required
- 400 LFM minimum, measured at the outlet of the heat sink

Temperature
- Operating: 0 to +70°C (Intel Celeron M)
- 0 to +55°C (Intel Core 2 Duo)
- Storage: -40 to +80°C

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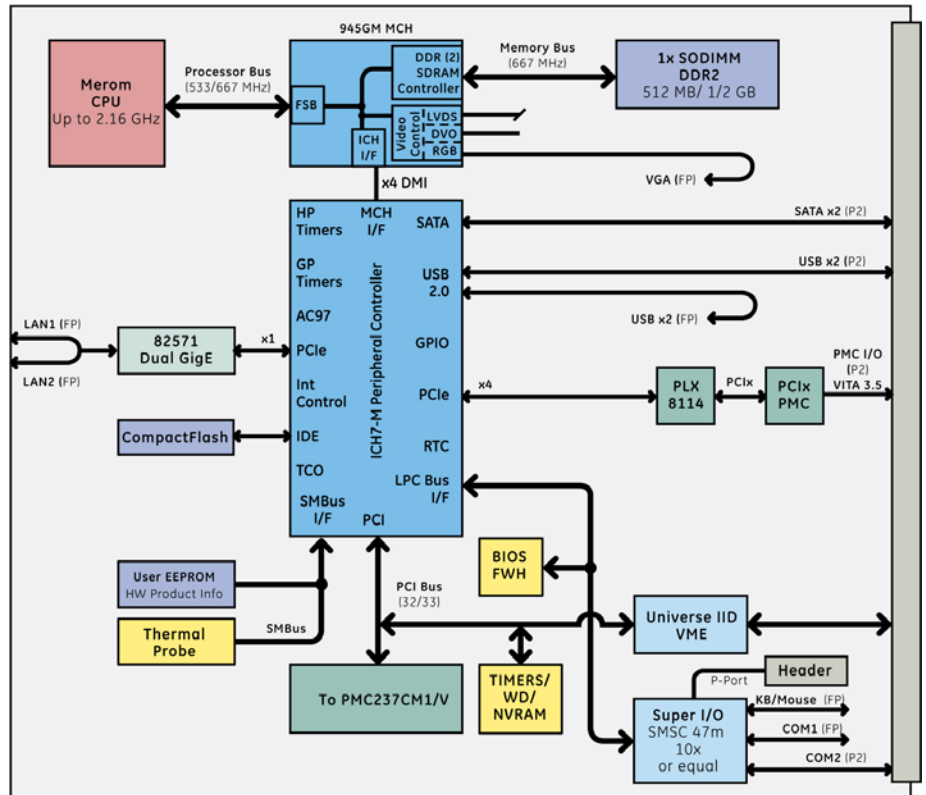- Storage: 0 - 40,000 ft (12,000m)

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

MTBF
- Contact factory

Block Diagram

Compatible with the ACC-0602RC-100 and ACC-0603RC-100 Rear Transition Modules to provide rear I/O points.

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 defense.ge-ip.com.

GE Intelligent Platforms Contact Information

Americas: **1 800 433 2682** or **1 434 978 5100**
Global regional phone numbers are listed by location on our web site at **www.ge-ip.com/contact**.

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