

# 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 Mbyte L2 cache
- Up to 2 Gbyte DDR2 SDRAM via single SODIMM
- 667 MHz system and memory bus
- Up to 8 Gbyte 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® XP, VxWorks®, and Linux®

The V7768 is a VMEbus single board computer from GE Fanuc Intelligent Platforms, offering up to 2.16 GHz of processing speed via the Intel Core 2 Duo processor with up to 2 Gbyte 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 Fanuc 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 Mbyte cache (Core 2 Duo options), and 1 Mbyte (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 2 Gbyte DDR2 SDRAM via single SODIMM

#### Compact Flash

- CompactFlash up to 8 Gbyte 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(E0)/MBLT64/BLT32
- Hardware byte swapping
- Enhanced bus error handling



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## 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

### 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 percent), A (typical), A (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 heatsink

### 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)

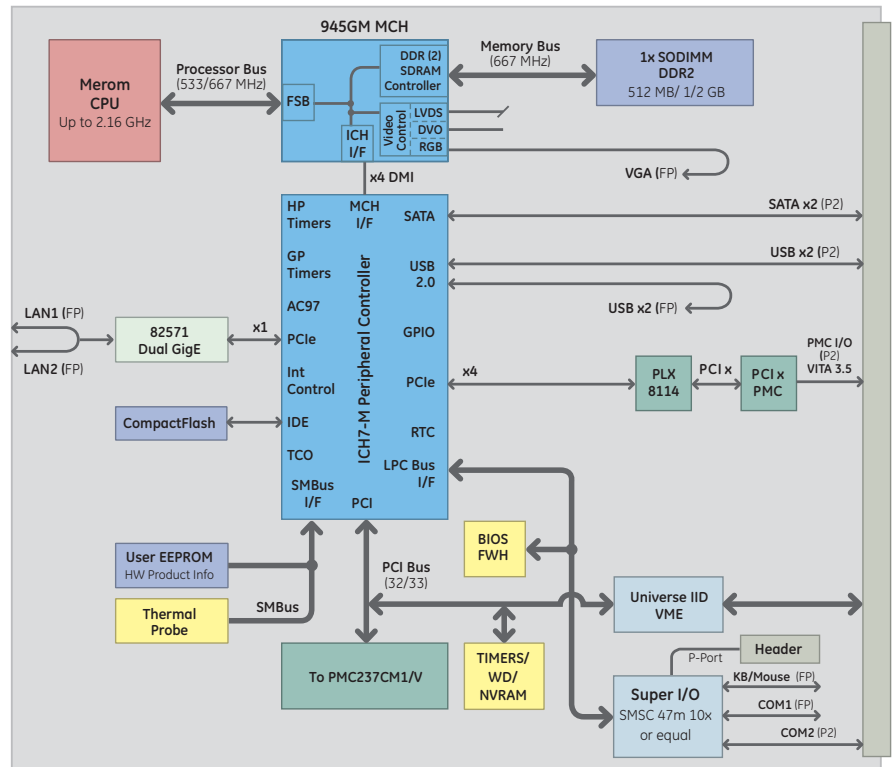
### Humidity

- Operating:  
Relative humidity 5% to 95%, noncondensing
- Storage:  
Relative humidity 5% to 95%, noncondensing

### 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 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.gefanuc.com](http://www.gefanuc.com).

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## Additional Resources

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

[www.gefanuc.com](http://www.gefanuc.com)

