

V7875

Intel® Core™ 2 Duo Processor VME Single Board Computer

Features

- Intel® Core™ 2 Duo T9400 processor
- 6 MByte L2 cache
- Up to 4 GByte DDR3 SDRAM
- 1067 MHz system bus
- ANSI/VITA 1.5-2003 (2eSST, up to 320 MByte/s)
- Two RS232/422 serial ports
- Single PCI-X XMC/PMC expansion site (VITA 42.3 compliant)
- Two Gigabit Ethernet on the front panel
- Optional VITA 41.3
- Six USB 2.0 ports
- Board-to-board connection for EXP237 XMC/PMC expansion board
- Available for commercial environment

The V7875 is a VMEbus single board computer from GE Fanuc Intelligent Platforms offering the Intel Core 2 Duo T9400 processor, up to 4 GByte DDR3 SDRAM, and also features a very rich I/O set, making this a very flexible addition to our expansive line of VME SBCs. I/O options include dual Gigabit Ethernet, two SATA interfaces, four USB 2.0 ports, keyboard/mouse/DVI-I on the front panel, as well as a PCI-X capable XMC/PMC site.

The V7875 provides further customer defined I/O capabilities with the board-to-board connector for the EXP237 XMC/PMC expansion board from GE Fanuc Intelligent Platforms, which gives customers three additional PCI-X XMC/PMC expansion sites to utilize.

A unique feature of the V7875 is the filler module that fits in the on-board PMC/XMC site. The inexpensive module fills the PMC bezel area when a PMC is not used and provides access to additional on-board I/O. The module adds connectivity on the front panel for one eSATA port, one USB 2.0 port, and two Gigabit Ethernet ports (only when VITA 41 is not available).

Specifications

Processor

- Intel Core 2 Duo T9400 Processor @ 2.53 GHz
- 6 MByte L2 cache
- 1067 MHz system bus

SDRAM

- Maximum memory configuration of 4 GByte DDR3 SDRAM
- 1066 MHz memory bus (contact factory for higher configurations)

Compact Flash

- CompactFlash up to 16 GByte accessible through secondary IDE port
- CompactFlash may be configured as the boot device through the BIOS boot device set-up

BIOS

- The V7875 System BIOS and Video BIOS are provided in reprogrammable flash memory.

Gigabit Ethernet

- Dual Gigabit Ethernet routed to front panel RJ45 connectors
- Optional VITA 41.3 via separate Gigabit Ethernet controller

USB Ports

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

VMEbus Backplane Interface

- The Tundra Tsi 148 enables ANSI/VITA 1.5-2003 (2eSST) protocol providing 320 MB/s along the full length of a 21-slot backplane. Performance is increased in the following ways:
 - 8x faster than the 40 MB/s transfer rate of VME64
 - 3x faster than a multi-domain, 64 bit/66 MHz CompactPCI bus
 - Broadcast Mode support for sending data to multiple cards at one time



V7875 Intel® Core™ 2 Duo Processor VME Single Board Computer

Specifications (continued)

Serial Ports

- Two RS232/422 serial ports: one to rear via P2, and one to front panel
- Ports feature independent 16-byte FIFO supporting baud rates up to 115 Kbaud

Video

- DVI-I (analog and digital) on the front panel
- Analog resolution up to QVGA

Filler Module

- Fits in the on-board PMC/XMC site providing additional front panel I/O:
 - One eSATA port
 - One USB 2.0 port
 - Two Gigabit Ethernet ports (only when VITA 41 is not available)

Serial ATA

- Two serial ATA interfaces: one to rear via P2, and one to front panel
- 1.5 GByte/s (150 MByte/s)

PMC Extension Slot

- One 133 MHz PCI-X XMC/PMC site (VITA 42.3 compliant)
- 46-pin P2 user I/O per VITA35, P4V2-46dz
- Add 3 x PCI-X XMC/PMC sites via the board-to-board connector to the EXP237 XMC/PMC carrier board

Programmable Timers

- Two 16-bit timers and two 32-bit timers
- 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

Input/Output Chart

I/O	V7875 FP	ACC0603-TM
Serial ports	1	1
USB 2.0	2	2
Gigabit Ethernet	2	
SATA	1	1
DVI-I	1	

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

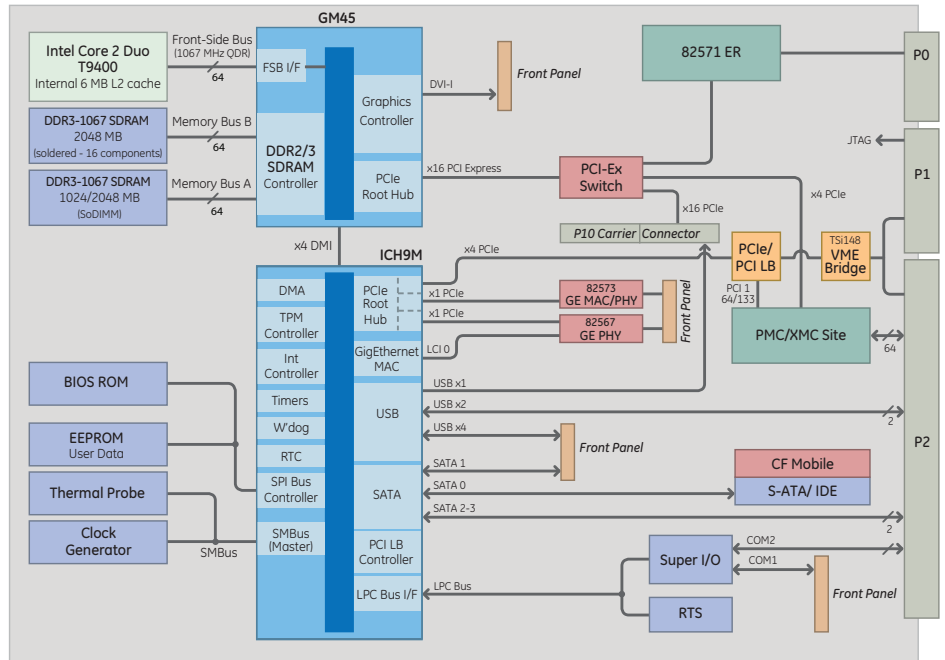
- +5 VDC (±5 percent), 7 A (typical), 11 A (maximum)
- +12 VDC (±5 percent), 0 mA
- 12 VDC (±5 percent), 0 mA

Note: Does not include PMC site for power requirements

Airflow

- Forced air cooling required
- 350 LFM minimum, measured at the top (outlet) of the unit

Block Diagram



Level 1 Environmentals

Cooling Method	Convection
Conformal Coating	Optional
High/Low Temperature	0° to 55° C
Storage Temperature	-50° to 100° C
Shock	12 g shock
Random Vibration	5 Hz to 100 Hz PSD increasing at 3 dB/octave 100 Hz to 1000 Hz PSD = 0.04 g ² /Hz 1000 Hz to 2000 Hz PSD decreasing at 6 dB/octave
Humidity	Operating: relative humidity 5% to 95%, noncondensing Storage: relative humidity 5% to 95%, noncondensing
Altitude	Operating: 0 – 10,000 ft (3,000m) Storage: 0 – 40,000 ft (12,000m)

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.

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.gefanuc.com

