



V7865

Intel® Core™ 2 Duo Processor VME Single Board Computer

Features

- Intel Core Duo and Core 2 Duo processors up to 2.16 GHz
- Up to 3 GB DDR2 SDRAM
- RoHS Compliant
- Up to 4 GB bootable CompactFlash
- 667 MHz system and memory bus
- ANSI/VITA 1.5-2003 (2ESST, up to 320 MB/s)
- Optional VITA 41.3 (1000 Mb/s IEEE 802.3)
- Two RS232/422 serial ports
- Single PCI-X PMC site
- Four USB 2.0 ports
- Available for two environments:
 - Commercial
 - Rugged extended temperature*
- Multiple operating systems supported

* 1.66 GHz CPU only

The V7865 is GE Fanuc Embedded Systems' flagship Core 2 Duo VMEbus single board computer, offering processor and I/O flexibility to meet many different application needs. The V7865 is available in commercial up to rugged extended temperature models, making it ideal for applications including advanced defense, aerospace, and homeland security.

Based on the Intel Core Duo/Core 2 Duo processors, this board offers processor speeds at 1.66 GHz, 2.0 GHz, or 2.16 GHz and features up to 4 MB of L2 cache with Advanced Transfer Cache Architecture, while delivering optimized power efficient computing with low power consumption. Memory options include up to 3 GB DDR2 SDRAM (1 GB on-board), and up to 2 GB CompactFlash.

The V7865 meets the ANSI/VITA 1.5-2003 standard, based on the Tundra Tsi148. The VMEbus can run at a bandwidth of up to 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

The V7865 features multiple I/O options, including two Gigabit Ethernet ports, two RS232/422 ports, four USB 2.0 ports, and one serial ATA interface.

Specifications

Processor

- Intel Core/Core 2 Duo processor with core processor speeds up to 2.16 GHz
- High performance with low power consumption (1.66 GHz)
- 4 MB of advanced L2 cache (2.16 GHz CPU)
- 667 MHz system bus

SDRAM

- Maximum memory configuration of 3 GB of DDR2 SDRAM
- 1 GB of on-board memory
- 2 GB of SODIMM (one 200-pin SODIMM DDR2 module)
- The rugged extended temperature option is only available with either 512 MB or 1 GB on-board memory

Compact Flash

- CompactFlash up to 4 GB
- CompactFlash may be configured as the boot device through the BIOS boot device set-up

BIOS

- The V7865 System BIOS and Video BIOS are provided in reprogrammable memory.

Gigabit Ethernet

- VITA 41.3 (dual 1000 Mb/s)
- Dual Gigabit Ethernet routed to front panel RJ45 connectors
- Ethernet controller is Intel 82571

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, and dynamic (hot) attachment

VMEbus Backplane Interface

- The Tundra Tsi148 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
- Optional VITA 41.3



