



ePIC-M965

EPIC - Embedded Platform for Industrial Computing™

Features

- EPIC form factor with PCI-104 expansion socket
- Processors
 - Intel® Core™ 2 Duo, PGA (mPGA478P)
- GME965/ICH8M chipset combination
- Up to 2 GB DDR2 SDRAM, 200-pin SODIMM
- CompactFlash socket
- Graphics
 - VGA and LVDS
 - DVMT 4.0 support
 - Smart 2D display technology
 - MPEG-2 support
 - Microsoft DirectX9 and DirectX10
- PCI-104 expansion slot
- Two Gigabit Ethernet ports
- Two USB 2.0 ports on rear panel
 - Additional four ports onboard
- Four COM ports
- IrDA interface
- Serial ATA interface with SATA-II support
- Up to two IDE devices
- Floppy interface
- 2-Channel audio
 - High Definition audio CODEC
- Temperature, voltages and fan alarms
- Energy Efficiency
 - ACPI and OS directed power management
 - Wake-On events (PS/2, USB, LAN, RTC)
 - Microsoft®/Intel® APM 1.2 compliant
- RoHS compliant

EPIC (Embedded Platform for Industrial Computing) is an open-architecture positioned between and complementary to the PC/104 and the EBX single board computers. I/O functionality is expandable through off-the-shelf PCI-104 I/O modules to meet application requirements. Compared to a PCI-104 module the EPIC form factor offers a wider connector I/O area and higher performance processors.

The ePIC-M965 is an EPIC single board computer featuring Intel's Core 2 Duo processor. This processor option delivers performance-per-watt improvements and provides an excellent choice for system integrators with low-power, high performance embedded application requirements.

Using a SODIMM socket, the 2 GB of DDR2 memory can be adjusted, on demand, to satisfy an application's needs. The ePIC-M965 is well equipped with two Gigabit Ethernet ports, up to 6 USB ports, and four RS-232 ports two of which can be RS-422/RS-485. Also supported are various mass storage devices, including choice of one SATA, up to two IDE interfaces, one CompactFlash socket, and a floppy interface.

For superior graphic performance, the ePIC-M965 features integrated analog CRT and LVDS interfaces along with the Smart 2D Display Technology, Gen 4 Integrated Graphics Engine and high-performance MPEG-2 coding. Coupled with a high-definition audio port, it lends itself to a range of multimedia implementations.

The ePIC-M965 is powered via an ATX power connector.

All these functions position the ePIC-M965 to perform in applications for industrial control, simulation/training, test and measurement, automation, transportation, military/COTS and other market segments.



ePIC-M965 EPIC - Embedded Platform for Industrial Computing™

Specifications

Processor

- Intel® Core™ 2 Duo mobile processor
 - 800/533MHz system data bus
- Processor socket: mPGA478P

Chipset – Intel®

- Intel GME965 Express Chipset
- Intel 82801HBM I/O Controller Hub (ICH8M)

Memory

- One 200-pin SODIMM socket
- Supports up to 2 GB of DDR2 SDRAM
 - 256, 512, 1024 or 2048 Mbit x8/x16 devices
- Supports 533 MHz and 667 MHz DDR2 SDRAM

Graphics Features

- Internal graphics features DVM 4.0
 - Estimated 400 MHz core render clock
 - High performance MPEG-2 coding
 - Intel Smart 2D Display Technology
 - Intel Gen 4 Integrated Graphics Engine
 - WMV9C (VC-1) and H.264 (AVC) support
 - Microsoft DirectX9 and DirectX10 support
- Integrated graphics interface
 - Analog CRT
 - Integrated 300 MHz RAMDAC
 - Analog monitor supports up to QXGA
 - CRT hot plug support
 - LVDS interface
 - 4:3 aspect ratio panel supports up to UXGA (1600x1200@75 Hz)
 - Wide screen panel supports up to WUXGA (1920x1200@65 Hz)
 - 25 MHz to 112 MHz single/dual channel @ 18 bpp, TFT panel type support

Audio

- Realtek ALC262 high definition audio CODEC
- 2-channel audio output
- 1 stereo DAC support (16/20/24-bit PCM)
- 2 stereo ADC support (16/20-bit PCM)

LAN

- Two Marvell 88E8056 PCI Express Gigabit controllers
- Supports 10 Mbps, 100 Mbps and 1 Gbps
- IEEE 802.3 and IEEE 802.3ab compliant

Expansion

- 1x PCI-104 slot for four PCI devices

Serial ATA Interface

- One Serial ATA II interface (up to 3 GB/s)
- Intel Matrix Storage technology
- Integrated AHCI controller

IDE Interface

- Up to two IDE devices
- Up to Ultra ATA 100/66/33

Rear Panel I/O Ports

- Mini-DIN-6 port: PS/2 for KB and mouse
- 1x DB9 serial port
- 1x DB-15 VGA port
- 2x RJ45 LAN ports
- 2x USB 2.0 ports

I/O Connectors

- CompactFlash
- Connectors for additional four USB 2.0 ports
- 4x external RS-232 ports, two are RS422/485 capable
- LCD brightness control
- LVDS LCD panel
- LCD AUX power
- Digital IO
- DIO power
- Front audio (Line-Out, Mic-In)
- IrDA interface
- 1x SATA, 1x IDE, 1x Floppy
- ATX power
- Front panel
- 2x Fan control

Ordering Information

EPE9650002401

EPIC module for PGA processors without memory

BIOS

- AMI BIOS
- 4 Mbit SPI Flash memory

Monitoring

- Temperature, voltages, fans, failures
- Watchdog

Temperature

- Operating: 0° C to +60° C
- Storage: -40° C to +85° C

Humidity

- Operating: 10% to 90%

PCB

- Dimensions
 - EPIC form factor
 - 115 mm x 165 mm (4.528" x 6.496")



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.

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Additional Resources

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

www.gefanuc.com



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