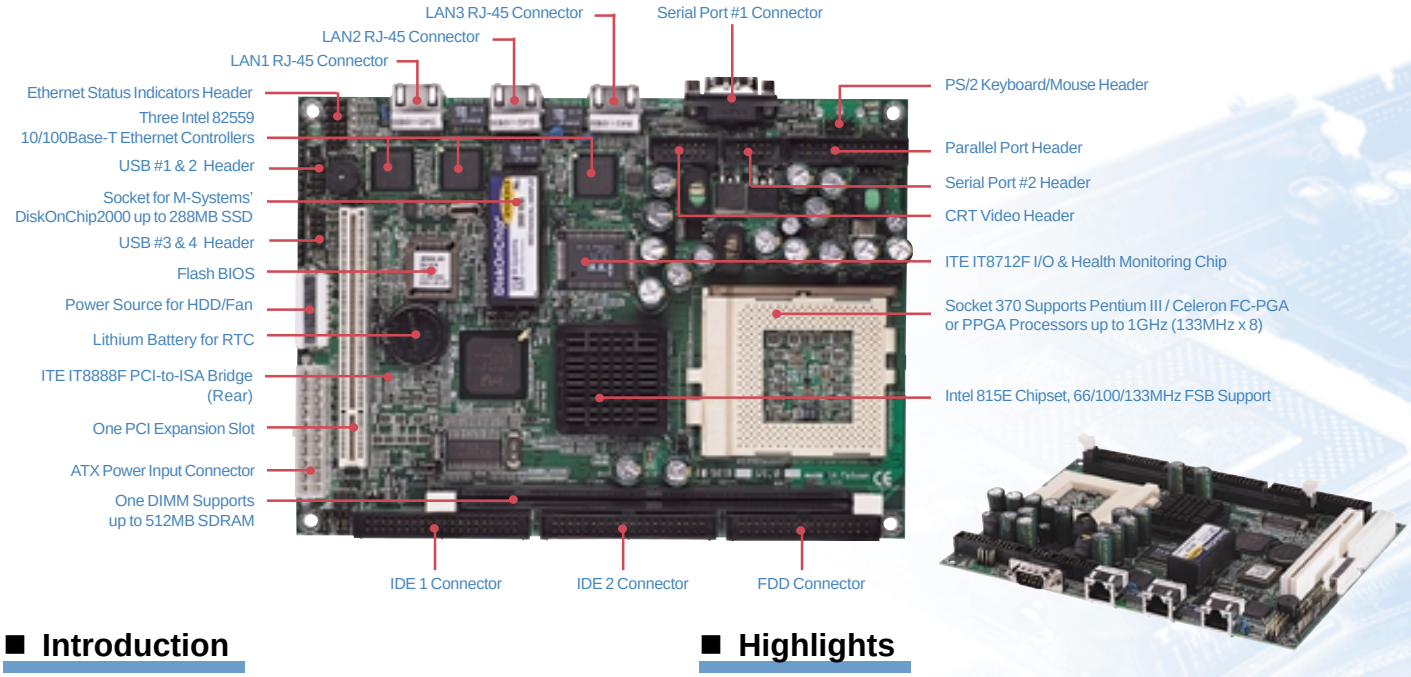
EM-561B Socket370 Embedded SBC w/ Integrated Video and Three Ethernet

5.25”-size Embedded SBC



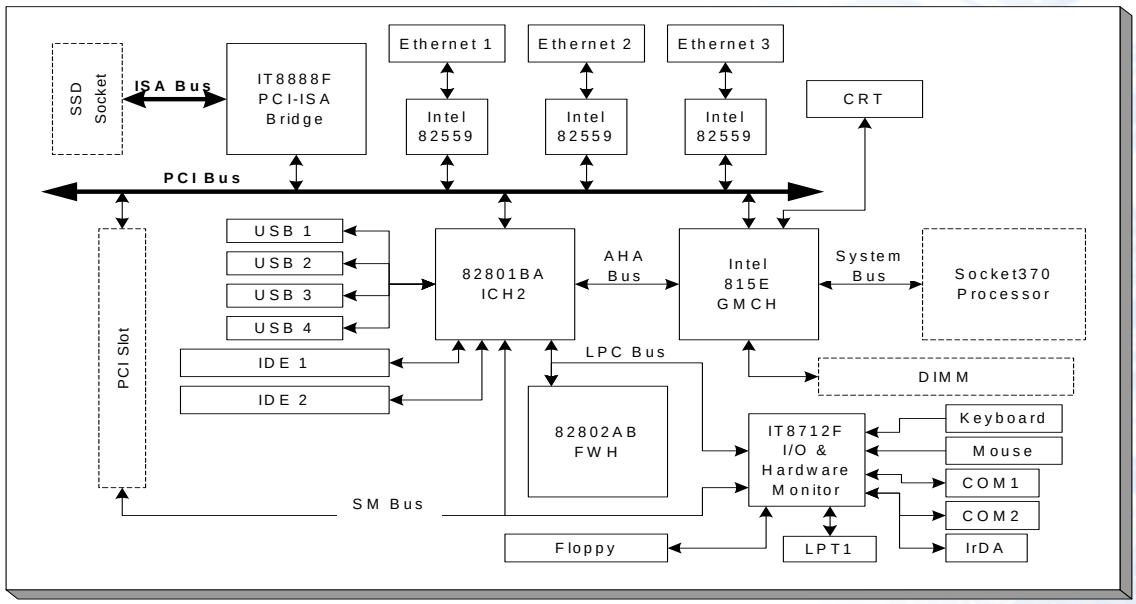
■ Introduction

The EM-561B is specially designed for firewall, router, and other embedded applications requiring multiple Ehternet controllers. The SBC has three Intel 82559 Fast Ethernet controllers with three RJ-45 connectors and status indicators. Next to the RJ-45 connectors, a serial port provides access point for console management. A socket for flash memory offers capability for diskless operation. A PCI slot, with an available PCI riser card, allows expansion for option cards. The Intel 815E chipset supports wide range of Intel Celeron and Pentium III processors for scalable performance, and has a built-in video controller.

■ Highlights

- Scalable performance 5.25”-size embedded board
- Intel 815E chipset
- Supports Intel Pentium III/Celeron processors up to 1GHz
- Supports up to 512MB SDRAM
- Integrated video for resolutions up to 1600x1200x256 colors
- Three Intel 82559 10/100Base-T Ethernet controllers
- One PCI expansion slot with one PCI riser card
- 2 Serial, 1 Parallel, 4 USB
- DiskOnChip flash memory support
- Multilevel watchdog timer and system health monitoring

■ Block Diagram



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■ EM-561B Features

- **Processor**
  Supports Socket370 Intel Pentium III / Celeron processors in FC-PGA or PPGA package.
  Max processor speed supported: 533MHz with 66MHz FSB processors, 800MHz with 100MHz FSB processors, 1GHz with 133MHz FSB processors.
- **Chipset**
  Intel 815E Chipset, supports 66/100/133MHz FSB & ITE IT8712F I/O + Health Monitoring chip.
- **System BIOS**
  512KB Award licensed flashable BIOS.
- **System Memory**
  One 168-pin DIMM socket supports up to 512MB of 3.3V PC100 or PC133 (ECC capable) SDRAM .
- **Solid State Disk / Flash Memory**
  One 32-pin DIP socket supports M-Systems’ DiskOnChip up to 288MB.
- **Video**
  Integrated 815E GMCH graphics controller with Intel’s Dynamic Video Memory Technology, shared 4MB system memory. Supports resolutions and color depth: VGA 640x480 up to 16mil colors, SVGA 800x600 up to 16mil colors, XVGA 1024x768 up to 16mil colors, SXVGA 1280x1024 up to 16mil colors, and UXVGA 1600x1200 up to 256 colors.
- **Fast Ethernet**
  Three Intel 82559 PCI Fast Ethernet (10/100Base-T) controllers with on-board RJ-45 connectors with LEDs for link status and activity. Pin headers for link status, activity, and 10 or 100Mbps signal.
- **IDE Interface**
  Two PCI Enhanced IDE interface supports up to four (PCI Bus Master, Ultra DMA-33/66/100, Multiword DMA & PIO mode 0-4) IDE devices.
- **Floppy Interface**
  One floppy interface supports up to two floppy devices.
- **Serial I/O**
  Two 16550 serial ports, One RS-232 on DB-9 connector and one RS-232/422/485 selectable on header.
- **Parallel I/O**
  One parallel port on header, supports EPP, ECP and SPP modes.
- **IR**
  One IrDa v1.0 interface on header.
- **Keyboard, Mouse and USB**
  One 6-pin header for PS/2 keyboard / mouse connector.
- **Expansion Bus**
  One 32-bit 33MHz PCI expansion slot.
- **Watchdog Timer**
  Software triggered 16 level time-out intervals from 0~30 seconds in 2-second intervals.
- **Health Monitoring**
  Enhanced hardware monitor functions with optical sensor.
- **Real Time Clock**
  Internal RTC with Lithium battery back-up.

■ Specifications

- **Electrical**
  Power Requirement: +5V, +12V
  Power Input: Standard ATX
  Power Consumption:
  w/ PentiumIII 1GHz CPU and 256MB RAM
  7.45A @ +5V, 0.12A @ +12V (38.7W)
  w/ PentiumIII 850MHz CPU and 64MB RAM
  6.44A @ +5V, 0.12A @ +12V (33.7W)
- **Mechanical**
  5.25”-size Embedded SBC
  Dimension: 203mm x 146mm x 25mm
  (8” x 5.75” x 1”)
  Weight: 337.4g (11.9oz)
- **Environmental**
  Operating Temperature: 0°C to 60° C
  Storage Temperature: -20°C to 70° C
  Operating Humidity: 10% to 90% RH, non-condensing
- **Reliability**
  MTBF: designed for >40,000 hours
- **Safety Approvals**
  CE & FCC Certification Pending
- **Warranty**
  Two years (Contact Lanner for detail)

■ Software

The EM-561B is compatible with operating systems developed for x86 PC. The board supports Windows 95 / 98, Windows NT / NT Embedded, Windows 2000, Windows XP and Linux. Drivers for various OSes are included on a CD-ROM with every package.

■ OEM/ODM

Lanner can depopulate a standard product to fit your project needs and reduce your time-to-market. We also provide OEM/ODM design and manufacturing services to meet your specific project requirements. Please contact Lanner USA for more information.

■ Ordering Information

- **EM-561B**
  Socket 370 5.25”-size embedded SBC with integrated video, three on-board Ethernet and one PCI slot.
- **FW-2100**
  1U Rackmountable Firewall hardware featuring EM-561B (Coming soon Q1, 2002. Please contact Lanner for detail)

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