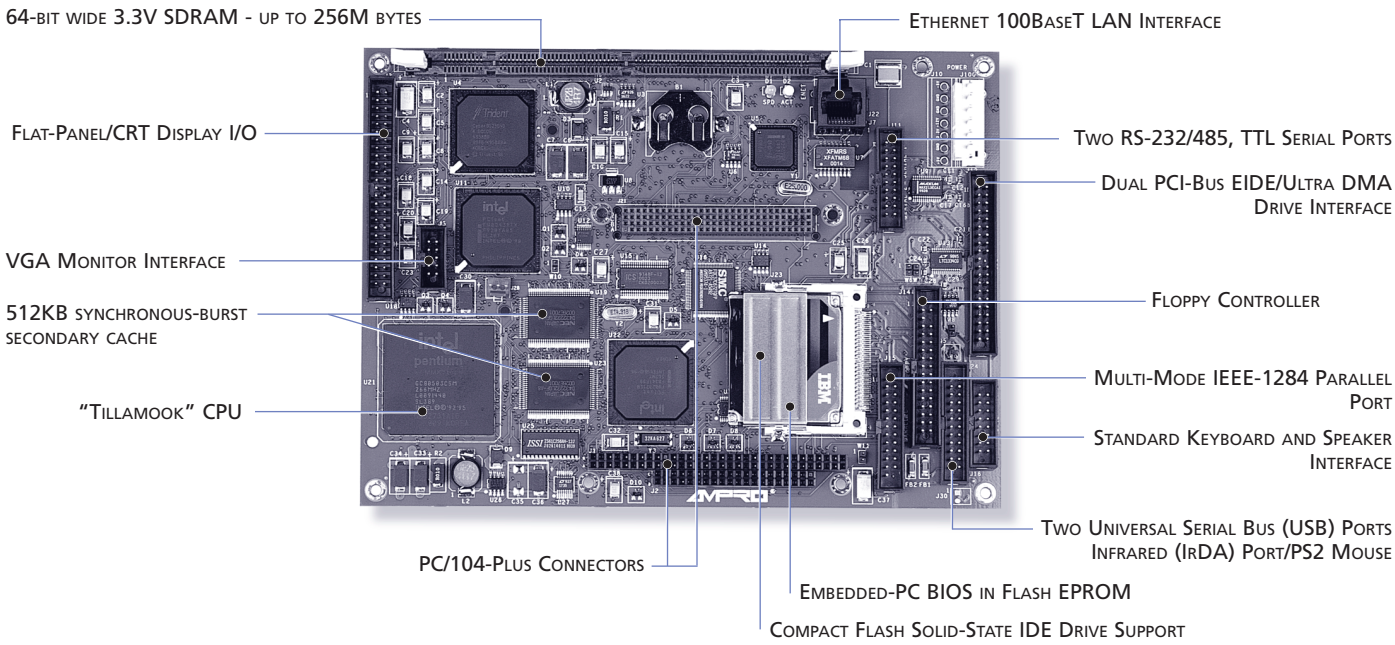
LB3-P5v

Little Board™/P5v • *Third generation Pentum-based, high integration single board system*



The highly integrated Little Board/P5v EBX-compatible single board computer features a powerful, low-power 266 MHz Mobile Pentium processor, advanced networking and high performance graphics. The Little Board/P5v is ideal for high volume, ruggedized, cost-conscious embedded designs that need to optimize cost vs. performance vs. power/heat requirements.

The Little Board/P5v contains all the component subsystems of a PCI motherboard plus the equivalent of up to five expansion boards. Supporting up to 256MB DRAM, the Little Board/P5v also provides 512KB synchronous-burst secondary cache to boost performance, thermal monitoring and advanced power management functions.

PCI FLAT-PANEL/CRT DISPLAY CONTROLLER

A powerful and flexible PCI video display controller (Trident Cyber9525DVD Multimedia Accelerator) supports both CRTs and flat panels (plasma, electroluminescent and LCD), and offers full software compatibility with all popular PC video standards (VGA, Super VGA, and VESA). All standard resolutions up to 1280 x 1024 pixels and up to 16.7 million colors are supported. 2.5M bytes of SDRAM video memory are standard.

100 MB/s ETHERNET LAN INTERFACE

The Ethernet subsystem is based on the Intel 82559ER 10/100 PCI Ethernet Controller. It fully supports IEEE 802.3 Ethernet standards—10BaseT and 100BaseT. For maximum performance, the Ethernet controller uses the PCI bus for system-side data transfers and includes on-board programmable DMA, full-duplex support and Auto-negotiable support.

An extensive set of PC BIOS enhancements ensures robust operation in unpredictable real-world environments. System operation requires a single +5 Volt power source (and 3.3 Volts for low-voltage PCI expansion cards, if required) and offers "green PC" power-saving modes under support of Advanced Power Management (APM) BIOS functions.

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LB3-P5V

SPECIFICATIONS

PC FUNCTIONS

CPU	• Intel Pentium II "Tillamook" processor, 266MHz
MEMORY	• DIMM module, utilizing 3.3V EDO or SDRAM memory chips
	• Supports from 16MB to 256MB total RAM
	• 512KB level-two cache, synchronous burst
DMA INTERNAL	• 15 interrupt channels (8259-equivalent)
	• 7 DMA channels (8237-equivalent)
COUNTER TIMER	• 3 programmable counter/timers (8254-equivalent)
KEYBOARD/MOUSE	• Standard PC/AT keyboard port and PS/2 mouse ports
	• Standard PC speaker port with .1 watt output drive
REAL TIME CLOCK	• Battery-backed real-time clock and CMOS RAM
BIOS	• Award ROM-BIOS with Ampro embedded-PC enhancements

ADDITIONAL ONBOARD FUNCTIONS

SERIAL	• Two 16-byte FIFO-buffered serial ports (16550-equivalent)
	• Both ports are RS-232 or RS-422/485 for half or full-duplex configuration
PARALLEL	• IEEE-1284 (EPP/ECP) compliant, bi-directional
FLOPPY	• Supports 1 or 2 drives
FAST IDE	• PCI Extended IDE/UltraDMA drive controller
	• Supports up to two hard disk drives and one CompactFlash Socket
	• Supports high-speed PIO modes with fast ATA-compatible interface
	• Type II CompactFlash socket
	• Ampro BIOS supports large capacity disk drives through Logical Block Addressing (LBA)
CONFIG EEPROM	• 512 bits available for OEM use
WATCHDOG TIMER	• Utilizes real time clock alarm function
	• Timeout triggers 5MI or hardware reset
POWERFAIL NMI	• Triggers when +5V power drops below +4.7V

PCI BUS DISPLAY CONTROLLER

CONTROLLER	• Uses state-of-the-art Trident Cyber9525DVD Multimedia Accelerator
ONBOARD DISPLAY RAM	• 2.5 MB embedded SDRAM
FLAT PANEL SUPPORT	• Supports CRT, LCD, and video displays
	• Supports true color at 800 x 600 VGA resolution
	• Supports interlaced/non-interlaced displays in up to 1280x1024 resolution modes
	• GUI accelerator for enhanced graphic function performance
	• Standard model supports 3.3V flat panels; support for 5V flat panels with external adapter.

ETHERNET LAN INTERFACE

CONTROLLER	• Intel 82559ER 10/100Mbps Ethernet controller
	• Complies with IEEE-802.3 (ANSI 8802-3) MII
	• 32-bit PCI host for fast operation up to 33MHz PCI clock frequency
TOPOLOGY	• Ethernet bus, using CSMA/CD
MEDIA INTERFACE OPTIONS	• 10/100Base-T (twisted pair), via on-board RJ-45 connector
DATA RATE	• Automatic arbitration for 10/100 Mbits/sec

MECHANICAL

SIZE	• 5.75 x 8.0 in. (146 x 203 mm)
POWER	• Power requirements (typical, with 16MB DRAM, measured at 5V +/- 5%)
ENVIRONMENTAL	• 0° to 70° C standard temperature, –55° C to +85° C storage temperature
	• –40° to +85° C extended operating temperature available by special order
	• 5% to 95% relative humidity, non-condensing
	• Weight: 11.6 oz. (329 gm), no DRAM installed

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