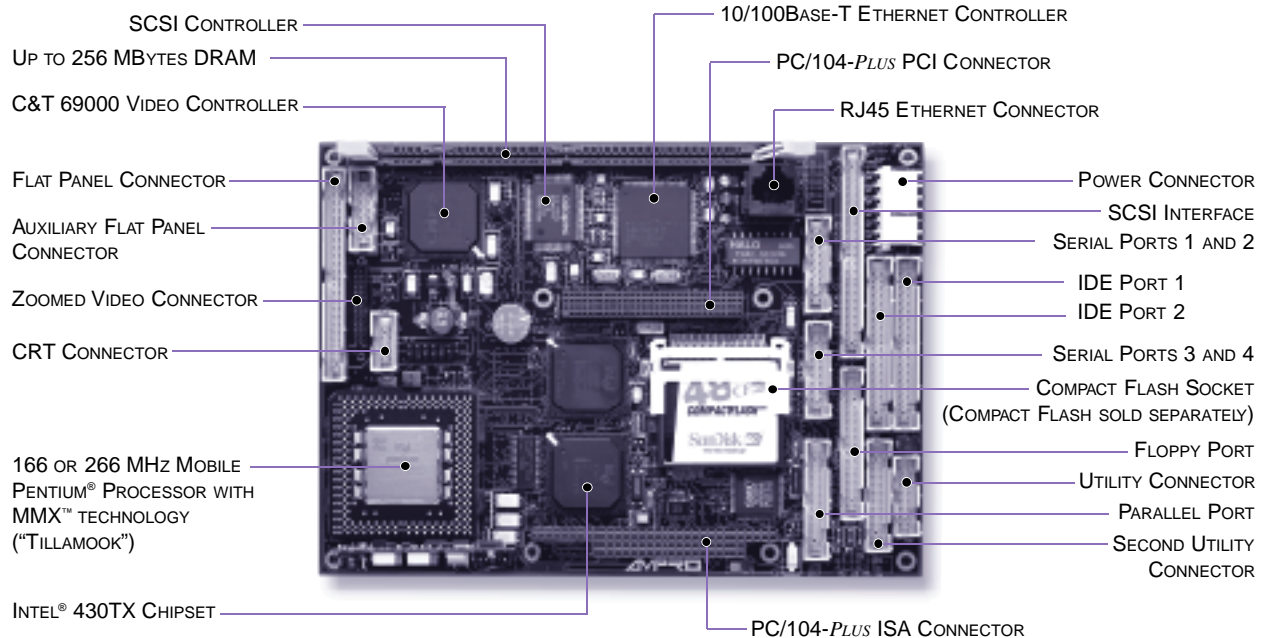


# LB3-P5x

Little Board™/P5x • *Exceptional performance, integration, and power management on an EBX compliant SBC*



The Little Board/P5x raises the bar for Pentium-based embedded-PC designs. The latest laptop chipsets are combined with a rugged, robust design to provide a highly reliable single-board solution for embedded applications that demand small size, low power consumption, and high functionality.

This mobile Pentium processor based member of the popular Ampro "third generation" Little Board family contains—on a single highly integrated assembly—all the functions of a fully configured PC-compatible system. Included are the latest disk, LCD/CRT display, "Fast Ethernet", and UltraSCSI controllers, plus four FIFO-buffered serial ports, an enhanced capabilities parallel port, PS/2 keyboard/mouse interfaces, USB, IrDA, CompactFlash socket, and laptop-style Advanced Power Management.

## **HIGH PERFORMANCE AND RELIABILITY**

The Little Board/P5x meets the performance and reliability demands of a wide range of fixed, mobile, and portable embedded applications. Compact size, reduced power consumption, wide operating temperature, high quality, and rugged construction

all make the Little Board/P5x the optimal choice for use in punishing embedded environments. Additional reliability enhancements include a watchdog timer, a power-fail NMI generator, and an onboard bootable CompactFlash "solid state disk."

## **EXTENSIVE VIDEO SUPPORT**

The Little Board/P5x provides a high resolution LCD/CRT GUI-accelerated display controller with 2 MBytes of video SDRAM. This powerful and highly flexible PCI-based display controller supports virtually all available graphic flat panels and CRTs, in resolutions up to 1280 x 1024 pixels, including "true color" display (in 800 x 600 pixels). Software programmable flat panel interface timing accommodates variations among LCD and electroluminescent (EL) displays. Several optional plug-in adapters ease the task of interfacing with a variety of display technologies including PanelLink or LVDS interfaces, NTSC or PAL-compatible television monitors and 5V digital flat panels. A "zoomed video" port is also provided, allowing convenient full motion video overlay.

# LB3-P5x

## SPECIFICATIONS



### PC FUNCTIONS

- CPU** • 166 or 266 MHz Intel Mobile Pentium® processor with MMX™ technology ("Tillamook")
- CACHE** • 512K synchronous burst level two cache
- CHIPSET** • Intel 82439TX North Bridge/82371AB South Bridge
- MEMORY** • Supports up to 256 Mbytes, EDO DRAM or SDRAM
- Supports one 168-pin DIMM without parity
- SYSTEM CONTROLLERS** • 15 interrupt channels (8259 equivalent)
- 7 DMA channels (8237 equivalent)
- 3 programmable counter/timers (8254 equivalent)
- KEYBOARD AND MOUSE** • Standard PS/2 (PC/AT) keyboard and mouse ports
- Speaker port with 0.1 watt output
- REAL TIME CLOCK** • Battery backed real-time clock and CMOS setup; onboard battery with 10 year life
- BIOS** • Award ROM-BIOS with Ampro embedded-PC enhancements
- POWER MANAGEMENT** • Includes laptop-style APM support
- Compliant with Intel/Microsoft APM specification (version 1.1 or higher)

### ADDITIONAL ONBOARD FUNCTIONS

- SERIAL** • Four FIFO-buffered serial ports with full handshaking (16550 equivalent)
- Two are RS232 only; one is RS232 or RS485; one is RS232, TTL, or IRDA
- PARALLEL FLOPPY** • IEEE-1284 compatible enhanced parallel printer port with bidirectional data lines
- Supports 1 or 2 drives
- PCI ENHANCED IDE** • Supports up to four drives; Ultra DMA/33 mode transfers (33MB/sec burst)
- OPTIONAL PCI ULTRASCSI** • Adaptec AIC-7860
- Supports SCSI III, "UltraSCSI" (up to 20MB/sec), synchronous or asynchronous transfers
- COMPACTFLASH SOCKET** • Configurable as master or slave
- USB** • Two USB ports
- IRDA** • PC compatible infrared interface port, supports up to 4 megabits/sec
- CONFIG EEPROM** • Supports battery-free boot capability
- 512 bits available for OEM use
- WATCHDOG TIMER** • Timeout triggers hardware reset
- POWERFAIL NMI** • Triggers when +5V power drops below +4.7V

### PCI DISPLAY CONTROLLER

- CONTROLLER** • Supports CRT, LCD, and EL displays
- ONBOARD DISPLAY RAM** • C&T 69000
- 2 MBytes internal SDRAM
- Up to 1280 x 1024 resolution
- Supports 24-bit "true color" (at 800 x 600 resolution)
- VIDEO OVERLAY** • Zoomed video input port
- FLAT PANEL SUPPORT** • Software programmable flat panel interface signal timing
- Sequenced LCD power to protect display
- OPTIONAL PLUG-IN ADAPTERS** • Panellink or LVDS differential flat panel converters
- NTSC or PAL television output converters
- 5V LCD I/F; LCD bias power supply

### ETHERNET LAN INTERFACE

- CONTROLLER** • Complies with IEEE-802.3 (ANSI 8802-3)
- MEDIA INTERFACE** • AMD AM79C972
- 10/100Base-T via onboard RJ45 connector

### MECHANICAL

- SIZE** • 5.75 x 8.0 x 1.2 in. (146 x 203 x 30 mm); EBX form-factor compliant
  - POWER** • Requirements (mA typical, with 16 Mbytes SDRAM): +5V ±5%
- |         | normal | doze | sleep | suspend |
|---------|--------|------|-------|---------|
| 166 MHz | 1950   | 1480 | 1300  | 1020    |
| 266 MHz | 2140   | 1580 | 1400  | 1060    |

- ENVIRONMENTAL** • Operating temperature: 0° to 70° C standard; -40° to +85° C extended
- 5% to 95% relative humidity, non-condensing
- Storage temperature: -55° C to +85° C
- Weight: 11.6 oz. (329 gm)

NOTE: Contact Ampro regarding custom configurations and special order options.

FOR A COMPLETE LIST OF  
PANELS SUPPORTED,  
PLEASE VISIT OUR WEBSITE  
[www.ampro.com/support](http://www.ampro.com/support)

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