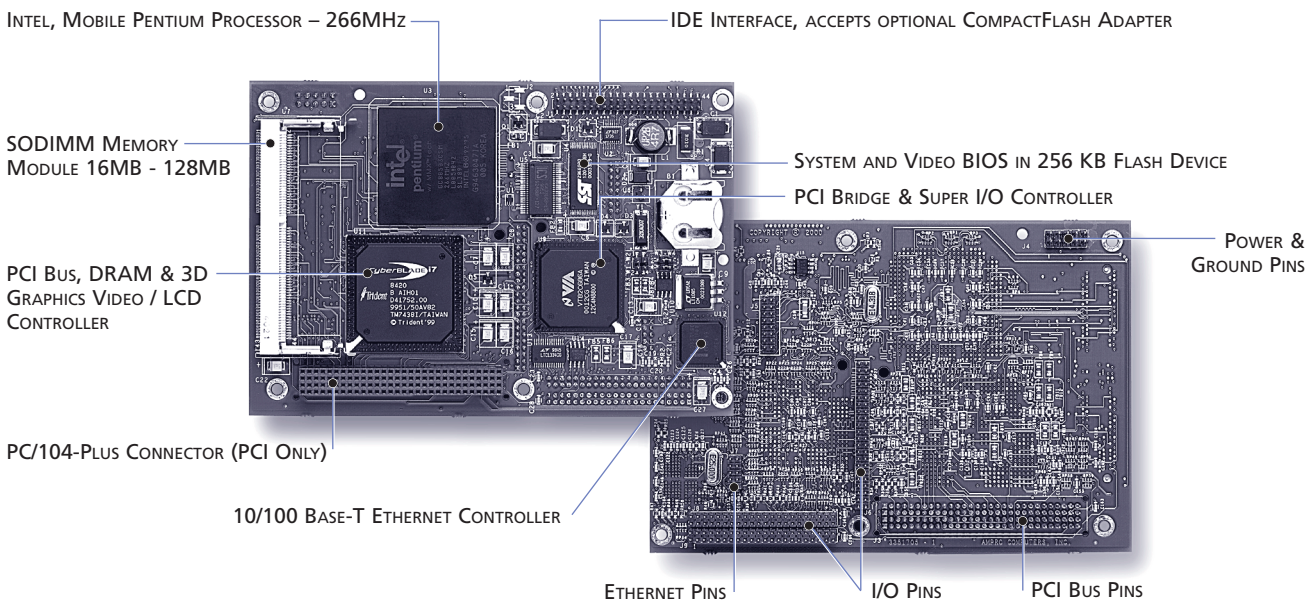


# ENC-500

EnCore™ 500 • Compact, high integration Pentium-based system module for connected embedded applications



The EnCore™ 500 module is the first product to be based on Ampro's new EnCore platform — a platform created to provide for the efficient delivery of high performance CPU technology while reducing time-to-market for network- and Internet-connected embedded systems. Based on a 266MHz Mobile Pentium processor, the EnCore 500 provides the functionality of a complete single-board computer in a 100mm x 145mm format. Like all EnCore modules, the EnCore 500 is designed to interface with a host baseboard that provides application-specific logic and I/O connections. EnCore modules interface to the baseboard via the industry-standard PCI bus and set of I/O signals. The small form-factor of EnCore modules gives OEMs outstanding flexibility in baseboard design.

The EnCore 500 includes high performance 3D graphics for CRT and popular LCD panels, 10/100 Base-T Ethernet, and SoundBlaster™-compatible sound interface. It supports up to 128MB SODIMM SDRAM, two serial ports, ECP/EPP parallel port, (4) USB ports, primary IDE controller with a SanDisk®

CompactFlash™/IBM™ Microdrive support, and PC/104-Plus expansion (PCI only).

EnCore modules enhance time to market for systems that seek to combine a standard 32- or 64-bit processor subsystem with applications-specific logic on a custom baseboard. To speed baseboard design, Ampro offers two sample baseboards (in EBX and 3U CPCI form-factors) to OEM customers as a reference design for development of their own system boards.

The EnCore 500 is fully compatible with PC hardware and software standards assuring seamless integration with a wide range of off-the-shelf operating systems, application software and peripheral devices. Along with the many Ampro-created embedded-PC systems enhancements like power management, boot options, etc., the EnCore 500 module meets the size, power consumption, temperature range, quality, and reliability demands that you'd expect from the inventor of PC/104 and EBX.

# ENC-500

## SPECIFICATIONS

### PROCESSOR SUBSYSTEM

- CPU**
  - 266MHz Intel, Mobile Pentium' processor (Tillamook)
  - CPU thermal and fan control
  - Fan failure monitor
- CHIPSET**
  - North Bridge: Trident CyberBlade i7
  - South Bridge: VIA VT82C686A
- MEMORY**
  - One SODIMM module 16MB - 128MB
  - Supports 3.3V SDRAM with ECC (optional)
- SYSTEM CONTROLLERS**
  - Seven DMA channels (8237 equivalent)
  - 15 interrupt channels (8259 equivalent)
  - Three programmable counter/timers (8254 equivalent)
- REAL TIME CLOCK CONFIG EEPROM**
  - Real-time clock with CMOS setup; onboard replaceable battery provided
  - Supports battery-free boot capability
  - 512 bits available for OEM use
- BIOS**
  - System and Video BIOS in 256 KB Flash Device programmable on the board

### I/O

- SERIAL PARALLEL/FLOPPY DRIVE INTERFACE**
  - Two 16550 Serial ports configurable as RS-232 or RS-485 (RTS, CTS, RX, TX)
  - One ECP/EPP (IEE 1284) bi-directional parallel port
  - Serves as floppy drive interface
- IDE**
  - Single master mode PCI bus IDE
  - Two drive, ATAPI including DVD
  - Support "Ultra 33/66" synchronous DMA
- MOUSE/KEYBOARD**
  - PS/2 Keyboard and PS/2 Mouse
- USB**
  - Four USB Ports
  - USB v.1.1 and Intel Universal HCI v.1.1 compatible
- COMPACTFLASH IRDA**
  - Compact Flash Adapter Option, usable with standard CompactFlash modules or IBM MicroDrive
  - Infrared-4MB IrDA (HPSIR) and ASK (Amplitude Shift Keyed) IR port

### CRT / LCD INTERFACE

- CONTROLLER**
  - Trident CyberBlade i7 – North Bridge
  - 64-bit single cycle 2D/3D graphics engine
  - Real time DVD MPEG-2 and AC-3 playback
- ONBOARD DISPLAY RAM**
  - Supports 2MB to 8MB frame buffer located in system memory
  - Up to 1600x1200 resolution
  - Supports 24-bit "true color"
- FLAT PANEL SUPPORT**
  - Digital Flat Panel (DFP) Interface
  - 85Mhz DFP interface supports 1024 x 768 flat panels
  - Allows external TMDS transmitter for advanced flat panel interfaces

### ETHERNET LAN INTERFACE

- CONTROLLER MEDIA INTERFACE**
  - Intel 82559ER 10/100 Base-T Ethernet autosensing chip
  - Twisted pair, via RJ-45 on baseboard
  - Magnetics on baseboard

### SOUND INTERFACE

- CONTROLLER**
  - AC97 Audio controller, SoundBlaster Pro hardware and Direct Sound ready
  - Codec on baseboard

### MECHANICAL

- SIZE**
  - 100x145mm (3.94"x5.70") form factor
- BASEBOARD INTERFACE**
  - Industry-standard 120-pin PCI bus interface via PC/104-Plus compatible connector
  - 88-pin I/O interface (2x44-pin connectors) for serial, parallel, sound, USB, keyboard, mouse, IRDA & utility
  - 44-pin interface for VGA and LCD
  - 16-pin ISA bus subset
  - 10-pin Ethernet
  - 10-pin power & ground
- BUS EXPANSION**
  - Directly supports the standard PC/104-Plus (PCI) expansion modules
  - Supports a ISA bus subset through the baseboard
- POWER**
  - Input Voltage Requirements: 5.0V; 3.3V
  - 2.0V and 2.5V Power Supplies are on Board.
- ENVIRONMENTAL**
  - 0° to 70° C standard temperature, -55° C to +85° C storage temperature

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