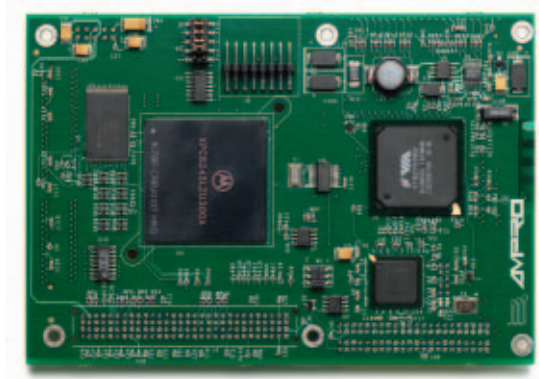


## EnCore™ PP1 Embedded Processor

High-integration, high-performance, PowerPC™-based embedded processor



### FEATURES

- 300MHz Motorola MPC8245 PowerPC™ Processor
- 16-512MB SODIMM SDRAM
- 2MB Flash Memory
- 66MHz PCI Bus interface
- EIDE (2) drive interface
- Two Serial ports, Floppy, ECC/EPP Parallel port
- (4) USB, Fast IrDA, PS/2 Mouse/Keyboard, AC97 Sound
- 10/100BaseT Ethernet interface
- JTAG interface

The EnCore™ PP1 module is a high-performance, high-integration PowerPC-based embedded processor module based on Ampro's new EnCore Platform. Like all EnCore products, it is designed to mate with a custom, application-specific logic board. Using a 300MHz Motorola MPC8245 processor based around the 603e core, the EnCore PP1 provides an outstanding general-purpose PowerPC solution for a variety of embedded applications.

As with all EnCore modules, the EnCore PP1 provides the functionality of a complete embedded CPU subsystem in a small, 100 x 145mm format. It supports up to 512MB SODIMM SDRAM and provides a 66MHz PCI bus interface, 2MB Flash, two serial ports, four USB ports, enhanced Ultra 33/66/100 Synchronous DMA IDE interface to two drives, floppy disk controller, PS/2 keyboard and mouse ports, IrDA port and an ECP/EPP bidirectional parallel port. It also includes a 10/100 BaseT Ethernet controller and an AC97 audio interface.

The EnCore PP1 QuickStart Kit includes a baseboard reference design, sample baseboard and board support packages for popular embedded operating systems. Finally, the EnCore PP1 meets the high quality standards and ruggedized environment, including extended temperature specifications that you would expect from the inventor of PC/104 and EBX standards.



### Processor

- 300MHz Motorola MPC8245 PowerPC processor
- 16KB instruction cache, 16KB non-blocking data cache
- VIA VT82C686 South Bridge with Super I/O

### Memory

- 100MHz, 3.3V PC100 SDRAM
- Socket for one SODIMM module, 144 pin
- 16-512MB SODIMM SDRAM
- 2MB Flash

### Bus Interface

- 32-bit, 66MHz PCI 2.1-compliant bus supports 4 devices (3 masters)

### I/O – all connections to baseboard unless stated

- **EIDE** – Enhanced Ultra 33/66/100 Synchronous DMA IDE interface to two drives, ATAPI extensions including DVD
- **Serial** –
  - Two TTL ports, one with full modem support
  - Separate debug port on module
- **Parallel** – ECP/EPP bidirectional port also serves as floppy drive interface
- **USB** – Four USB v. 1.1 Universal HCI ports
- **IrDA** – Fast IrDA interface
- **Keyboard/Mouse** – PS/2 interface
- **Audio** – AC97, CODEC on the baseboard

### Network Interface

- **Ethernet** – Intel 82559ER 10/100 BaseT Ethernet (autosensing), interface and magnetics on the baseboard

### Software & Development Tools

- Resident monitor/debugger/bootloader
- Board Support Packages for popular Operating Systems – see Web site for currently supported OS
- Flash programming, downloading and debug through JTAG – see Web site for current supported tools

### Mechanical

- **Size** – 100x145mm (3.94x5.70")
- **228-Pin 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 and utility
  - 10-pin Ethernet
  - 10-pin power and ground
- **Power Requirements** (w/64MB RAM, 100% Loaded)
  - 0.59A@3.3V
  - 0.39A@5V
- **Environmental** – Operating temperature: 0° to 70°C standard: -40° to +85°C extended

EnCore PP1 Functional Diagram

