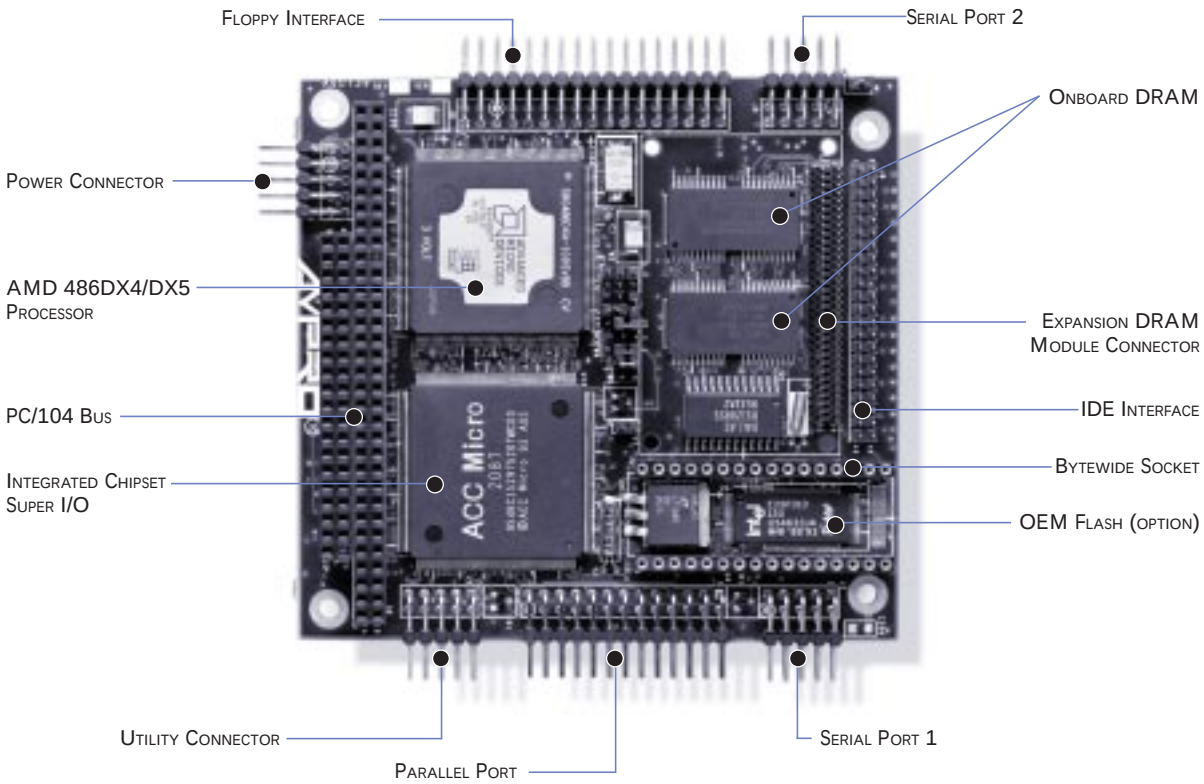
CM2-4Di

CoreModule™/4DX*i* • *High Performance PC/AT-compatible PC/104™ CPU module*



The CoreModule/4DX*i* provides high-performance 486DX processing power and PC/AT compatibility in a compact, preconfigured subsystem module. Within just 14 square inches of space, the CoreModule/4DX*i* includes the equivalent functions of a PC/AT motherboard plus several additional expansion cards. Performance-critical embedded applications that formerly required chip-based custom designs can now benefit from an off-the-shelf module with the power of a 66 or 100/133 MHz 32-bit 486DX4/DX5 CPU, along with hardware and software standards like PC/AT and MS-DOS compatibility.

The CoreModule/4DX*i* is designed to meet the demands of embedded systems through its extremely compact design, low power consumption, +5V-only operation, wide operating temperature range, and high reliability.

CONFIGURATION FLEXIBILITY

The CoreModule/4DX*i* can be used as a macrocomponent, plugged into a proprietary application board, or it can be combined with PC/104-compatible expansion products to form compact, highly integrated control subsystems. Multiple modules can be stacked together without the cost and space penalties of additional mounting hardware.

Ampro Computers, Inc. • 4757 Hellyer Ave., San Jose, CA 95138 • Tel. (408)360-0200 • Fax (408)360-0222 • sales@ampro.com

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SPECIFICATIONS

Fully PC/104 Compliant!

PC MOTHERBOARD FUNCTIONS

CPU	• 486DX4/DX5 CPU, 66MHz or 100/133 MHz internal clock rate
MEMORY	• 4M bytes directly surface mounted, expandable to 52M bytes via socketed DRAM module
DMA INTERNAL	• 7 DMA channels (8237 equivalent) • 14 interrupt channels (8259 equivalent)
COUNTER TIMER	• 3 programmable counter/timers (8254 equivalent)
KEYBOARD	• PC/AT-compatible keyboard port • Speaker port with 0.1 watt drive
REAL TIME CLOCK	• Real time clock with CMOS RAM (MC146818 equivalent); requires external 3.0-3.6V battery • Battery-free operation option
BIOS	• Award ROM-BIOS with Ampro enhancements (See Ampro Embedded-PC Enhancements section)

ADDITIONAL ONBOARD FUNCTIONS

SERIAL	• Two RS232C serial ports with full handshaking • Both ports implemented using 16C550 equivalent, with 16 byte data FIFOs
PARALLEL	• Parallel printer port with bidirectional data lines • Supports fast PIO modes up to mode 4
FAST IDE	• Supports 1 or 2 IDE hard disk drives • Low profile 44 pin compact 2 mm connector
FLOPPY	• Supports 1 or 2 drives
BYTEWIDE SOCKET	• Usable with 32K-1M byte EPROMs, 32K-512K Flash EPROMs, 32K-512K SRAMs, or 32K-512K NOVRAMs • Configurable as 64K-, or 128K-byte window, addressed in the range D0000-EFFFFh • Usable with DiskOnChip2000™ read/write Flash SSD device • SRAM backup using off board battery
OEM FLASH	• Onboard 1M byte OEM Flash (optional) • 960K bytes available for OEM use (balance used by system BIOS) • Configurable as 64K-byte window, addressed in the range D0000-DFFFFh or E0000-EFFFFh • SSD 5.31 Support Software converts into an in-system programmable read only SSD device • OEM Flash TrueFFS software converts into a full read/write solid state disk drive (not usable simultaneously with DiskOnChip2000™)
CONFIG EEPROM	• 2K bit configuration EEPROM, with 512 bits for OEM use • Supports battery-free capability
WATCHDOG TIMER	• Utilizes real-time clock alarm function • Timeout triggers hardware reset or non-maskable interrupt

MECHANICAL

SIZE	• 3.6 x 3.8 x 0.9 in. (90 x 96 x 23mm) (Includes stackthrough pins. Please refer to PC/104 specification for stacking and other dimensions.)
BUS	• 16-bit PC/104 bus
POWER	• Requirements (typical with 4M bytes RAM): +5V ±5% — 133 MHz: 1170 mA active/210 mA sleep — 100 MHz: 930 mA active/150 mA sleep — 66 MHz: 670 mA active/180 mA sleep
ENVIRONMENTAL	• 0° to 70° C standard temperature • –40° to +85° C extended operating temperature (available by special order) Note: additional airflow or heatsinking required to maintain 85° C maximum CPU case temperature. • 5% to 95% relative humidity, non-condensing • Storage temperature: -55° to +85° C • Weight: 3.4 oz. (96 gm)

NOTE: Contact Ampro for custom configurations and special order options

For ordering information and pricing please refer to Ampro Ordering Guide.

THE EMBEDDED SOLUTIONS PROVIDER™