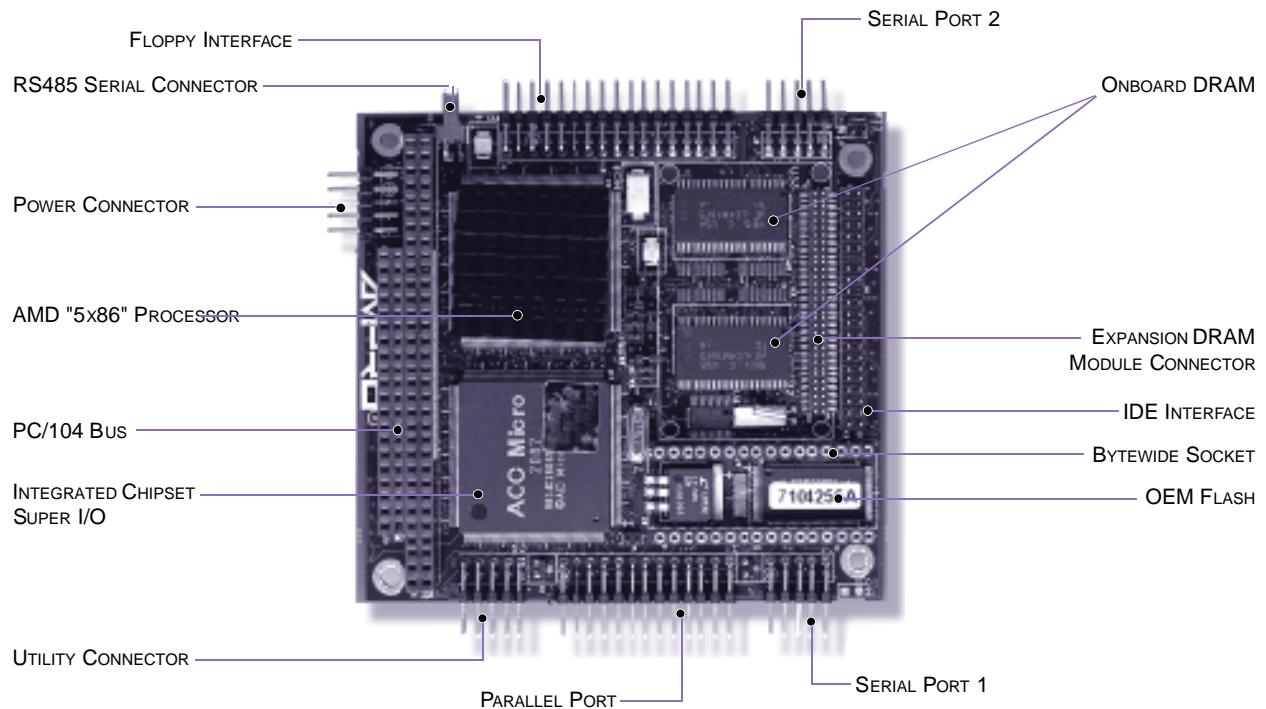


CM2-4De

CoreModule™/4DXe • High Performance PC/AT-compatible PC/104™ compliant CPU module



The new CoreModule/4DXe provides high-performance "5x86" processing power and PC/AT compatibility in a compact, preconfigured subsystem module. Within just 14 square inches of space, the CoreModule/4DXe 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 133 MHz 32-bit AMD "5x86" CPU, along with hardware and software standards like PC/AT and MS-DOS compatibility.

The CoreModule/4DXe 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/4DXe 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.

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SPECIFICATIONS

PC MOTHERBOARD FUNCTIONS

- CPU**
 - AMD "5x86" (486DX5) CPU, 133 MHz internal clock rate; jumper selectable to 100 MHz (66 MHz version also available)
- MEMORY**
 - 4 or 16 Mbytes directly surface mounted, expandable to 64 Mbytes via socketed DRAM module
- SYSTEM CONTROLLERS**
 - 7 DMA channels (8237 equivalent)
 - 14 interrupt channels (8259 equivalent)
 - 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 embedded-PC enhancements

ADDITIONAL ONBOARD FUNCTIONS

- SERIAL**
 - Two RS232C serial ports with full handshaking
 - One port is jumper-configurable for RS232 or RS485
 - Both ports implemented using 16C550 equivalent with 16 byte data FIFOs
- PARALLEL FAST IDE**
 - Parallel printer port with bidirectional data lines
 - Supports 1 or 2 IDE hard disk drives
 - Low profile 44 pin compact 2 mm connector
- FLOPPY BYTEWIDE SOCKET**
 - Supports 1 or 2 drives
 - Usable with 32K - 1 Mbyte EPROMs, 32K - 512K Flash EPROMs, 32K - 512K SRAMs, or 32K - 512K NOVRAMs
 - Configurable as 64K, or 128 Kbyte window, addressed in the range D0000-EFFFFh
 - Usable with DiskOnChip2000™ read/write Flash SSD device
 - SRAM backup using off board battery
- OEM FLASH OPTION**
 - Onboard 1 Mbyte OEM Flash
 - 960 Kbytes available for OEM use (balance used by system BIOS)
 - Configurable as 64 Kbyte 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); PC/104 compliant form-factor (Includes stackthrough pins. Please refer to PC/104 specification for stacking and other dimensions.)
- BUS POWER**
 - 16-bit PC/104 bus
 - Requirements (typical with 4 Mbytes RAM): +5V ±5%
 - 133 MHz: 1170 mA active / 210 mA sleep
 - 100 MHz: 930 mA active / 150 mA sleep
- ENVIRONMENTAL**
 - Operating temperature: 0° to 70° C standard; -40° to +85° C extended (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 regarding custom configurations and special order options.