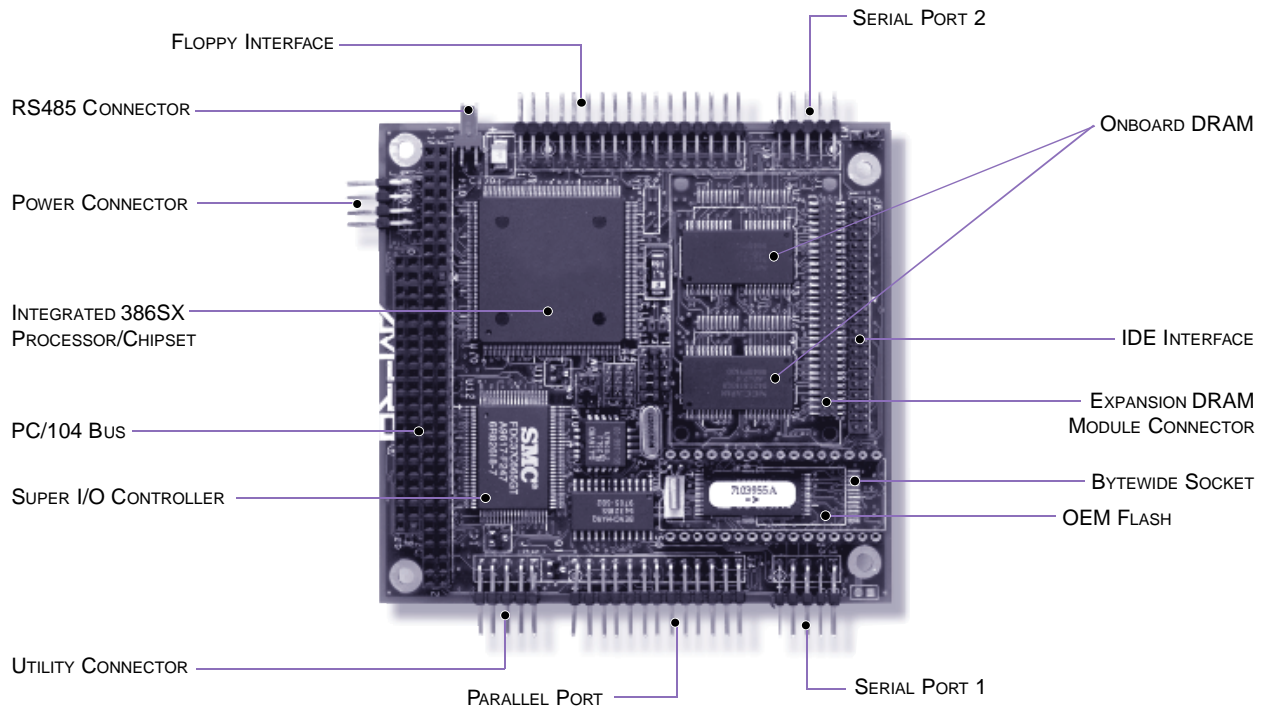


# CM2-SXi

CoreModule™/3SXi • Low Cost PC/AT-compatible PC/104™ compliant CPU module



The CoreModule/3SXi provides cost-effective 386SX processing power and PC/AT compatibility in a compact, preconfigured subsystem module. Within just 14 square inches of space, the CoreModule/3SXi includes the equivalent functions of a PC/AT motherboard plus several additional expansion cards. Cost-sensitive embedded applications that formerly required chip-based custom designs can now benefit from an off-the-shelf module powered by a 25 MHz 386SX-compatible CPU, along with hardware and software standards like PC/AT and MS-DOS compatibility.

The CoreModule/3SXi 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/3SXi 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.

# CM2-SXi

## SPECIFICATIONS

### PC MOTHERBOARD FUNCTIONS

- CPU** • 386SX-compatible, 25 MHz internal clock rate
- MEMORY** • 2 or 4 Mbytes directly surface-mounted. Additional 4 Mbytes via plug-in 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 BIOS** • CMOS RAM (MC146818 equivalent); requires external 3.0 - 3.6V battery (Tadiran TL-5242/W or equivalent)
  - Award BIOS with Ampro embedded-PC enhancements

### ADDITIONAL ONBOARD FUNCTIONS

- SERIAL** • Two RS232 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 IDE** • EPP/ECP compatible bidirectional parallel printer port
  - Support for 1 or 2 IDE hard disk drives
  - Low profile 44 pin compact 2mm 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
  - SRAM backup using off-board battery
  - Configurable as 64K, or 128 Kbyte window, addressed in the range D0000-EFFFFh
  - Usable with DiskOnChip2000™ read/write Flash SSD device
- 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 devices
  - OEM Flash TFFS software converts into a full read/write SSD drive (not usable simultaneously with DiskOnChip2000™)
- CONFIG EEPROM** • 2K bit configuration EEPROM, with 512 bits for OEM use
  - Supports battery-free boot 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 25 MHz with 4 Mbytes RAM): +5V ±5%
    - 500 mA active / 160 mA sleep
- ENVIRONMENTAL** • Operating temperature: 0° to 70° C standard; -40° to +85° C extended (special order)
  - 5% to 95% relative humidity, non-condensing
  - Storage temperature: -55° to +85° C
  - Weight: 3.0 oz. (85 gm)

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