

## CoreModule™ 420

Дистрибьютор в России и странах СНГ  
**MicroMax Computer Intelligence, Inc.**  
 Россия, Москва, улица Азовская, дом 6, корпус 3  
 Телефон: +7 (095) 310-7666 Факс: +7 (095) 310-2502 E-mail: info@micromax.com

### High-integration PC/104 Single Board System with Onboard Ethernet and Video



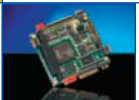
#### FEATURES

- 133MHz x86-based STPC Atlas Processor
- 64MB soldered SDRAM
- 1 MB Flash Memory, 768KB available to user/OEM
- EIDE (2) drive interface (ATAPI including DVD)
- (4) Serial ports, (2) configurable as RS485
- Floppy Interface on ECP/EPP Parallel Port
- USB I.I port
- (8) GPIO pins
- PS/2 Keyboard and Mouse interfaces
- 10/100BaseT Ethernet Interface
- 2D CRT and TFT Flat Panel Interface
- Byte-wide Socket for DiskOnChip® 2000
- Type II CompactFlash Socket

The CoreModule™ 420 PC/104 Single Board System is a state-of-the-art, high-integration x86-based computer on a single PC/104 board with extensive I/O for industrial applications. Based on the STMicroelectronics™ 133MHz STPC® Atlas processor, the CoreModule 420 provides complete embedded PC functionality, including Ethernet and video interfaces, normally found on larger boards. Standard features include processor, 64MB soldered SDRAM memory, four RS232 serial ports (one with RS485 capability), EPP/ECP parallel port, USB port, floppy port and DMA EIDE disk interface, 10/100BaseT Ethernet and high-resolution 2D video with CRT and TFT flat panel interfaces. The CoreModule 420 offers two types of solid-state disk interfaces, with a byte-wide socket supporting DiskOnChip® 2000 devices as well as a Type II Socket supporting CompactFlash devices. This extraordinary level of integration allows a single module to serve a wide range of embedded applications.

In spite of its high level of integration, the CoreModule 420 remains fully compliant with the PC/104 Specification. It replaces earlier CPU modules that required two or even three PC/104 cards to provide equivalent functionality, reducing both package size and the cost of CPU electronics by as much as 50%.

Like all Ampro CoreModule boards, development with the CoreModule 420 is supported by QuickStart kits, complete Development Systems (including power supply and disk drives) and Board Support Packages (BSPs) for popular operating systems. Finally, the CoreModule 420 meets the high quality standards and ruggedized environment, including extended temperature specifications, that you would expect from the inventor of the PC/104 and EBX standards.



## Processor

- 133MHz STPC Atlas processor (5x86)
- Unified instruction and data cache, 8KB
- Integrated Floating point Unit
- PC/AT compatible System Controllers
- Real Time Clock with CMOS setup; requires external 3.0 - 3.6V battery for backup
- Configuration EEPROM supports batteryless boot capability
- System and Video BIOS with Ampro extensions

## Memory

- 100MHz, 3.3V SDRAM
- 64MB SDRAM, 64 bit wide, soldered
- 1 MB Flash, 768KB for OEM use
- Byte-wide Socket supports DiskOnChip® 2000 bootable flash drive
- Type II CompactFlash Socket

## Bus Interface

- 16-bit PC/104 bus

## I/O

- **EIDE** – Enhanced Synchronous DMA IDE interface to two drives, ATAPI extensions including DVD
- **Serial** –
  - Four RS232 ports, two with RS485 and full modem support
  - 16550-compatible with 16 byte FIFOs
  - Two ports configurable as RS485
- **Parallel** – ECP/EPP bidirectional
- **Floppy** –
  - Interface to two drives
  - Shares ECP/EPP parallel interface
- **USB** – One USB 1.1 Open HCI port
- **Keyboard / Mouse** – PS/2 Interface
- **GPIO** – Eight general-purpose digital I/O pins
- **Speaker** – Standard PC speaker with 0.1 watt output

## Network Interface

- **Ethernet** – Intel 82551ER 10/100BaseT Ethernet

## Video Interface

- Integrated Controller
- 64-bit single-cycle 100MHz 2D graphics engine
- 4MB UMA Frame Buffer
- TFT support
- Up to 256K colors (18-bit)
- Programmable Flat Panel Support up to 1024x768 resolution
- Supports 4/3 and 16/9 screen size
- Allows external TMDS transmitter for advanced flat panel interfaces
- Supports both 3.3V and 5.0V LCD panels

## Software & Development Tools

- **OS Support** – Board Support Packages for popular Operating Systems – see Web site for current listings
- **BIOS** – General Software BIOS with Ampro embedded PC enhancements

## Mechanical

- **Size** – 90x96 mm (3.6x3.8")
- **Power Requirements** – 1.30A @ +5V (64MB RAM, running, fully loaded)
- **Environmental** – Operating temperature: 0° to 70° C standard; -40° to +85° C extended

www.ampro.com

## ORDERING INFORMATION

MODEL	DESCRIPTION
CM2-420-Q-01	CoreModule 420, 133MHz STPC Atlas CPU, 64MB RAM, Video, Ethernet
CM2-420-K-01	CoreModule 420, QuickStart Kit (CM2-420-Q-01, Cable Kit, Software, Documentation)
CM2-420-S-01	CoreModule 420 Development System (CM2-420-Q-01, Software, Documentation, Development Platform with power supply, floppy, hard disk drive, CD-ROM, ISA backplane)
CBL-420-W-01	CoreModule 420 Cable Kit

CoreModule 420 Functional Diagram

