AMPRO®
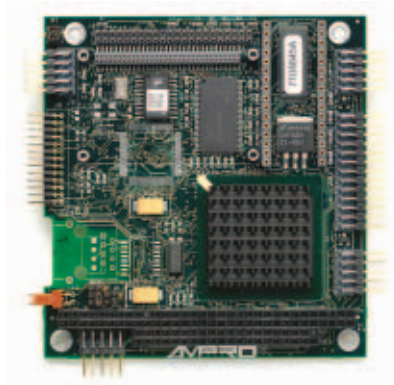
CoreModule™ 4Gn

Low cost, 486-based PC/104 CPU

FEATURES

- 100MHz 486DX4-compatible integrated processor
- Two RS232 serial ports with full handshaking
- Supports DiskOnChip® 2000 bootable flash drive
- −40° to +80° C extended temperature option
- Fully PC/104 compliant

The CoreModule™ 4Gn module is a cost-effective, entry level PC/104-compatible CPU providing the performance and on-board memory required for many low- to mid-range control applications. The CoreModule 4Gn is an ideal solution for standalone, headless applications requiring PC software compatibility and the access via a standard bus to a variety of off-the-shelf IO modules.

CoreModule 4Gn features include a 100MHz 486DX4-compatible microprocessor, 16MB of onboard DRAM (expandable to 48MB), two RS232 serial ports (one with RS485 capability), bidirectional parallel port, EIDE interface for hard disk drives or CD-ROM drives and floppy disk drive support. The CoreModule 4Gn includes a 32-pin bytewide socket with support for a wide range of DiskOnChip® devices. Like all Ampro CoreModule products, it also incorporates a watchdog timer and serial EEPROM for retaining configuration information.

Embedded Ready

The CoreModule 4Gn is designed from the ground up to meet the demands of embedded systems through its compact design, low power consumption, wide operating temperature range, and high reliability. An extensive set of embedded PC BIOS enhancements ensures robust operation in unpredictable real-world environments.

Full compatibility with PC hardware and software standards assures seamless integration with a wide range of off-the-shelf expansion modules, operating systems, application software and peripheral devices.

CM 4Gn

Processor

- 100MHz 486DX4-compatible integrated processor
- **System Controllers –** PC/AT compatible
- **Real Time Clock –** WIth CMOX setup; onboard replaceable battery provided
  - Real-time clock with CMOS setup; requires external 3.0 - 3.6V battery for backup
  - Battery-free operation option
- **Watchdog Timer –**
  - Utilizes real-time clock alarm function
  - Timeout triggers hardware reset or non-maskable interrupt
- **Configuration EEPROM –**
  - 2KB configuration EEPROM
  - 512 bits available for OEM use

Memory

- **DRAM –** 16MB onboard DRAM, expandable to 32 or 48MB via socketed DRAM module
- **Bytewide Socket –**
  - Supports DiskOnChip® 2000 bootable flash drive
  - Supports up to 128KB EPROM, +5V flash EPROM, or NOVRAM memory device

Bus Interface

- 16-bit PC/104 bus (ISA)

I/O

- **IDE –** Supports 1 or 2 Fast IDE disk drives
- **Serial –**
  - Two RS232 serial ports with full handshaking
  - One port supports RS485 option
  - Both ports implemented using 16550 equivalent with 16 byte data FIFOs
- **Parallel –** Parallel printer port with bidirectional data lines
- **Floppy –**
  - Standard floppy port; supports 1 or 2 drives
  - Uses 2 mm cable connector
- **Keyboard –** PC/AT interface
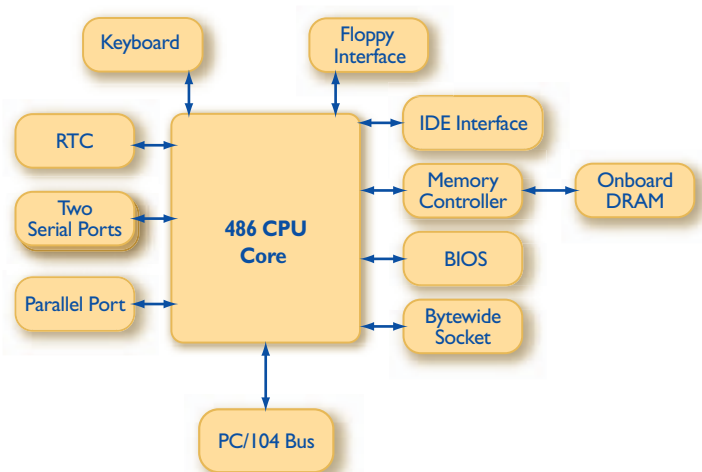- **Audio –** Speaker port with 0.1watt drive

Software & Development Tools

- Board Support Packages for popular Operating Systems – see Web site for current listings
- **BIOS –** Award ROM-BIOS with Ampro enhancements

Mechanical

- **Size –** 90×96 mm (3.6×3.8'')
- **Power Requirements –** 1.5A@5V
- **Environmental –** Operating temperature: 0° to 70° C standard; –40° to +85° C extended

CoreModule 4Gn Functional Diagram

DS-CM4GN 5K 01002