

1.2 LITTLE BOARD/286 FEATURES

A Complete AT Compatible System on One Board

- All the functions of a motherboard and 4 expansion cards in the space of a half-height 5-1/4" disk drive!
- Runs standard IBM PC and PC/AT software, including:
 - Disk Operating Systems
 - Languages (C, Pascal, Fortran, Basic,...)
 - Industrial and commercial applications software
- Powerful 12 MHz or 16 MHz 80286 CPU
- Standard AT DMA, timers, and interrupt controllers
- Complete onboard system memory: 512K, 1M, 2M, or 4M bytes onboard DRAM, and up to 320K bytes EPROM
- Complete set of AT-compatible peripheral ports and controllers:
 - Mini/Micro floppy controller
 - 2 RS232C serial ports, parallel printer port, keyboard port, and speaker port
 - Optional multi-mode video controller modules
 - Battery-backed real time clock
- Onboard expansion module option:
 - Three choices of onboard display controllers (EGA/CGA/MDA/Hercules CRT, CGA/MDA/Hercules CRT, CGA compatible LCD)
 - Future onboard modules available (contact factory)
- Industrialized ROM-BIOS, with support for a wide variety of SCSI devices (hard disk, tape, bubble memory,...) as well as on- and off-board bootable Solid State Disk

Ideal for Embedded Applications

- Low power (mostly CMOS):
 - Uses less than 9 watts of power!
 - Single supply operation (+5V only)
- Wide operating temperature range (0-70° C)
- Reliable:
 - Low component count (30 active components, plus RAM)
 - No backplanes or edgecard connectors required
- Onboard bootable *Solid State Disk drive* (EPROM/NOVRAM) option allows diskless DOS operation
- Same form factor and mounting dimensions as a 5-1/4" disk drive

Two Industry Standard Expansion Buses

- AT bus (header) for connection of standard IBM PC and PC/AT expansion cards
- SCSI bus for addition of Disk/Tape/Optical/Bubble drives, Scanners, and other peripheral devices

1.3 LITTLE BOARD/286 SPECIFICATIONS

CPU

- 80286 microprocessor
- CPU clock rate: 12 or 16 MHz
- Half speed option for CPU and/or expansion bus

Onboard Memory

- 512K, 1M, 2M, or 4M bytes DRAM with parity
- Award ROM-BIOS with Ampro extensions
- Two spare 28-pin byte-wide sockets, located at D0000h and D8000h, usable with:
 - 27256 32K byte EPROM's
 - Intel 27011 128K byte page-addressed EPROM's
 - 62256 32k byte static RAM's
 - Dallas DS1230 32K byte nonvolatile RAM's
 - Dallas DS1217 series NOVRAM cartridges
- 1K bit serial EEPROM, with 512 bits for OEM use

AT-Compatible Controllers

- 2 fully compatible RS232C serial ports
- Parallel printer port with bidirectional data lines
- Standard AT keyboard port
- Speaker port with 0.1 watt output drive
- Standard battery-backed real time clock with 10 year internal lithium battery
- AT-compatible mini (5-1/4") and micro (3-1/2") floppy controller:
 - 2 drive selects, 1-2 sided, 250/500K bps data rates
 - BIOS supports all standard formats (360K/720K/1.2M/1.44M)
 - Reliable all-digital phase-locked loop & write precompensation
 - Disk change sense line support
- Provision for 80287 math coprocessor option

SCSI Interface

- Full ANSI X3.131 (SCSI) compatible
- Uses high performance Adaptec AIC6250 SCSI controller
- Usable as general purpose programmed I/O lines (48 mA sink)
- Over 1.5 megabyte/sec data throughput

Physical

- 8.0 x 5.75 x 1.1 inches (5-1/4" disk drive form factor)
- Mounting slots match 5-1/4" disk drive bottom holes
- Provision for one onboard Ampro MiniModule
- Same DC connector as 5-1/4" disk drives
- Power requirement (with 512K bytes RAM):
 - 80C286 CPU: +5V +/- 5% at 1.6 A (typ.)
 - 80L286 CPU: +5V +/- 5% at 1.8 A (typ.)
- 8-layer PCB, with 2 ground layers for low noise
- Uses latest surface mount technology
- Operating environment:
 - 0-70° C (assuming adequate airflow)
 - 5-95% relative humidity (non-condensing)
- Storage temperature: -55° to +85° C