

# Blue Chip Technology



Single Board Computer

APX-4D

# APX-4D

## 5x86 PC/104+ SBC with PCI Ethernet

- AM5x86-P75/133MHz CPU
- ALi Finali PCI chipset
- Up to 16MB DRAM
- 1MB Flash fitted as standard
- 2-72MB Flash options (DiskOnChip)
- 10Base-T NE2000 compatible Ethernet PCI interface
- PC/104 (ISA) expansion
- PC/104+ (PCI) expansion
- Dual PCI EIDE drives
- Dual Floppy drives
- 2 Serial ports (1 x RS232, 1 x R422/485)
- Bi-directional SPP/EPP/ECP parallel port
- Real-time clock with on-board Dyna Cap
- Watchdog timer
- PS/2 mouse and keyboard connectors
- +5V only operation
- Standard 5.25" PC power connector

Blue Chip Technology's APX-4D is a PC/104+ based 5x86 single board computer with an NE2000 compatible PCI 10Base-T Ethernet controller. The APX-4D is an ideal platform for the increasing performance requirements of embedded control applications and provides both PCI and ISA bus interfaces.

The design is based on the AMD AM5x86 running at 133MHz, providing an equivalent performance to a P75. Up to 16MB of DRAM can be supported in standard 72-pin SODIMM low profile memory modules. In addition to the 1MB of Flash fitted as standard, DiskOnChip plug-in modules provide Flash expansion options from 2MB to 72MB.

APX-4D utilises the ALi Finali PCI chipset, which has a long life and contains an integrated PCI Bus EIDE controller with a high performance IDE interface allowing up to two IDE devices (HDD and CD-ROM drives).

The SMC 37C665 Super I/O controller integrates the standard PC I/O functions: floppy interface, two FIFO serial ports and one SPP/EPP/ECP bi-directional parallel port.

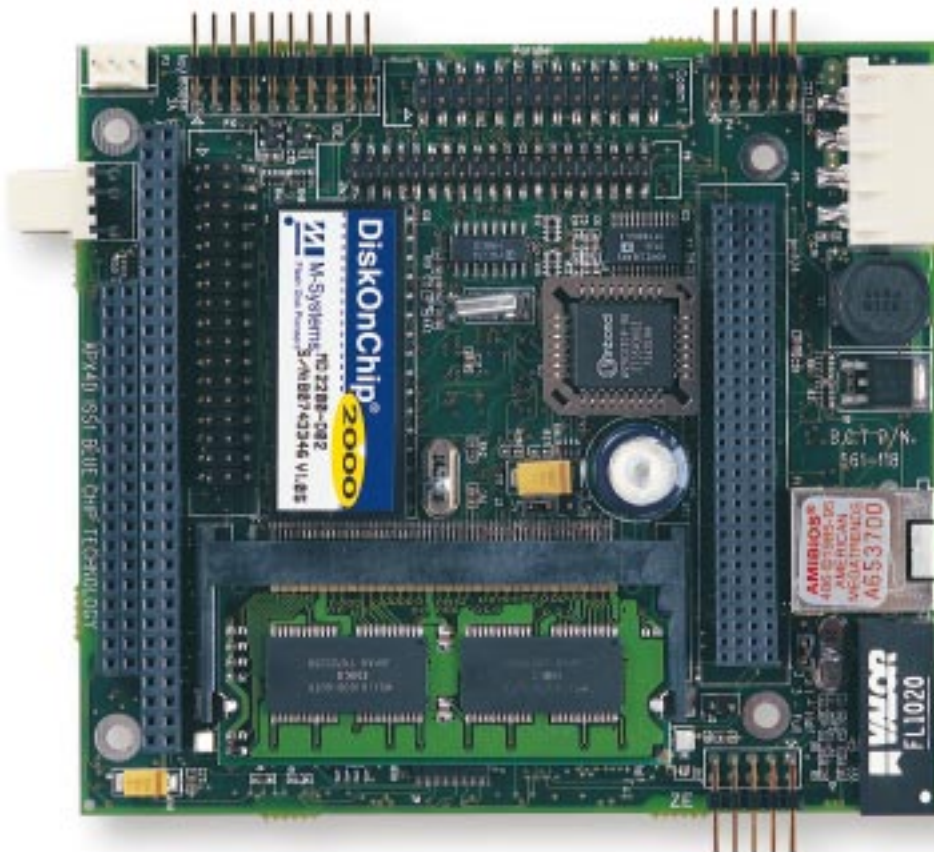
An NE2000 compatible PCI 10Base-T Ethernet controller is provided together with an RJ45 connector for ease of interfacing. For expansion APX-4D has both PC/104 (ISA) and PC/104+ (PCI) connectors.

For applications requiring LCD or CRT support, Blue Chip Technology's APX-LCT, a high performance PC/104+ SVGA expansion module, can be combined with APX-4D to provide a compact and rugged 'stack'.

The APX-LCT provides LCD and CRT resolutions to 1280 x 1024 x 256, 1024 x 768 x 64K, 800 x 600 x 16M and 640 x 480 x 16M. Please refer to the APX-LCT datasheet for further details.



**3**  
YEAR  
WARRANTY



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5x86 PC/104+ SBC with PCI Ethernet

## TECHNICAL SPECIFICATION

### PROCESSORS SUPPORTED & SPEED

AM5x86/133MHz

### MAIN CHIP SET

ALi Finali

### DRAM

0, 4, 8 and 16MB options  
SODIMM low profile modules

### FLASH

1MB Flash SSD as standard  
M-Systems DiskOnChip  
2-72 MB options

### EEPROM

128 bytes non-volatile

### BIOS

AMI System BIOS  
Located in 256KB device

### ETHERNET

PCI based 10Base-T controller  
NE2000 Compatible  
UTP connector

### HARD DISK

Fixed Disk Controller for dual  
PCI EIDE

### FLOPPY DISK

Floppy Disk Controller for  
dual FDD to 2.88MB

### BUS INTERFACE

PCI Local Bus Interface  
(Version2.0) via PC/104+  
ISA Bus interface via PC/104  
PC/104 16 bit interface

### SERIAL PORTS

1 x RS232  
1 x RS422/485

### PARALLEL PORT

1 x Enhanced Bi-Directional  
SPP/EPP/ECP

### WATCHDOG

Software disabled/enabled

### KEYBOARD PORT

AT and PS/2 compatible

### MOUSE PORT

PS/2 compatible

### PERIPHERALS HEADER

Reset, Speaker, LEDs, Mouse,  
Keyboard etc.

### BATTERY

On-board back-up for 24 hours  
(minimum)  
Optional off-board 3.6V battery

### CONNECTORS

5 1/4" disk connector for +5V, +12V  
3 way Molex for -5V, -12V

### BOARD DIMENSIONS

100mm x 114mm

### MOUNTING

Via 4 x 3mm PC/104 mounting  
holes

### ENVIRONMENTAL

0°C to 60°C Operational temp  
-25°C to 85°C Storage temp  
Non-condensing Relative  
Humidity 10% to 90%

### SUPPLY VOLTAGE

+5V operation for true embedded  
applications

### POWER CONSUMPTION

8 Watts typical

### EMC

Compliant with EN55022  
and EN50082

### OPERATING SYSTEM

MS-DOS  
Windows 95, 98  
Windows CE (1999)

### WARRANTY

3 years

### ACCESSORIES

*APX-4D hard copy User Manual  
APX-4D cable kit:  
includes cables for Utilities, HDD,  
FDD, Serials and Parallel*

### OPTION

*APX-LCT PC/104+  
LCD/CRT module*

### ORDER GUIDE

*Please call or refer to our  
price list for detailed  
ordering information.*



YEAR 2000  
Compliance

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