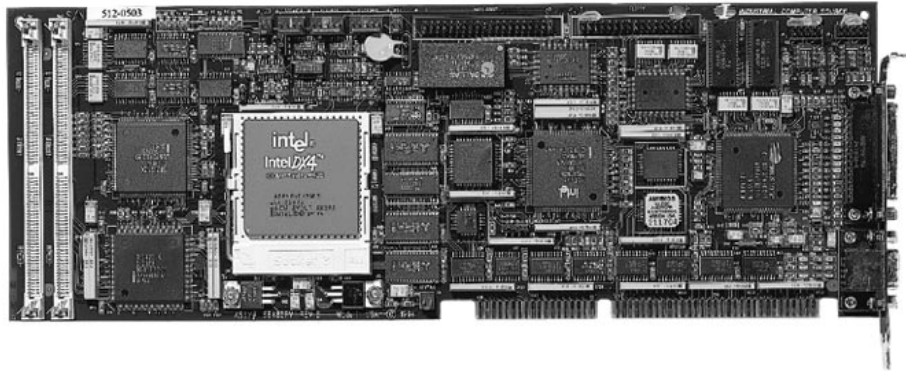


Model SB486PV Series



Single Board Computer



FEATURES

- **80486SX Through P24T Processors**
- **33Mhz to 100Mhz CPU Clocks**
- **On-board PCI Bus IDE and SVGA Video**
- **128K or 512K External Cache RAM**
- **Up to 64MB On-board DRAM**
- **Made in the USA!**



DESCRIPTION

The SB486PV Series employ state of the art electronics into a passive backplane architecture for industrial applications. The SB486PV provides all the features of a basic system on one plug-in card. On-board controllers included are, dual serial port, single parallel port, and floppy controller. While each controller is itself an enhancement over the norm, there are additional features on the card well beyond those of typical cards.

The enhancements of the standard controllers include 16550 compatible serial ports with FIFO buffers and a floppy controller capable of handling two disk drives of 360K, 1.2M, 720K, 1.44M or 2.88M in any combination.

The EIDE fixed disk controller, located on the PCI local bus, is capable of supporting two hard disks. The Intel Saturn-2 chip-set, PCI local bus implementation, and AMI Windows oriented BIOS, permit easy installation

of hard disks in the fastest modes available. Newer drivers, capable of Multiple Read and Multiple Write commands, will enjoy their best throughput in this system. To further maximize the disk throughput speeds, 128K of Cache memory is standard with 512K optional. For application requirements, the SB486PV includes two 72-pin SIMM sockets; supporting 1x36, 2x36, 4x36, and 8x36 SIMMs, for up to 64MB of system DRAM.

The SVGA video controller, located on the PCI Local bus, utilizes a Cirrus Logic Device Controller, and 1MB of VRAM. Resolutions of up to 1024 x 768 (Non-Interlaced) in 256 colors can be achieved as well as standard 640 x 480, to True Color 16M colors, and 800 x 600, to 64K colors, VESA standard resolutions. Winmark ratings of up to 24M are achieved at 640 x 480 x 256 Colors - comparable with many expensive ISA graphics accelerators!

Standard models are available with 80486SX, 33MHz, 80486DX, 33MHz, 80486DX2, 33/66MHz, 80486DX4, 33/100MHz, **or** (when available from Intel) the P24T, 66MHz processors. The processor installs in a ZIF (Zero Insertion Force) socket. Jumper selections permit easy field upgrade of any processor, except the P24T, to any higher performance processor in this series. For example, if you purchase a unit with a 80486SX, 33MHz, in the future, you can easily upgrade to a 80486DX4, 33/100MHz by switching processors. The SB486PV has on-board power regulators necessary to operate a 80486DX4 at 3.3VDC. For applications operating in higher temperatures, the SB486PV provides a connector for a DC powered Fan Chip Cooler, such as the Industrial Computer Source SPN1-486Z, to keep the processor operating smoothly at elevated temperatures.

Additionally for industrial applications, the SB486PV offers a built-in Watch Dog Timer which monitors the address lines of the processor. If these lines stop toggling, i.e. the processor stops running, the Watch Dog Timer will automatically reset the computer. Application software, and associated costs, is not required for Watch Dog Timer operation.

The SB486PV is a standard AT Form Factor designed to plug into an ISA passive backplane, permitting older passive backplane systems; 80286 through 80486DX, to be easily upgraded to 100MHz processing power, with PCI Local Bus video, and IDE controller performance!

SPECIFICATIONS

Processors Supported

80486SX, 80486SX2, 80486DX, 80486DX2, 80486DX4 and P24T in a ZIF Socket

Processor Clock Rate

25Mhz, 33Mhz, 25/50Mhz, 33/66Mhz, 25/75Mhz, 33/100Mhz and P24T

Chip Set

Intel Saturn-2 Chip Set

BIOS

AMI WinBIOS Full Feature, FLASH, Field Upgradable (software)

Memory Capacity

4MB to 64MB Maximum On-board

SIMM Support

1 Bank, 2 Sockets, 72-Pin, Interleaved Supports 512Kx36(2MB), 1Mx36(4MB), 4Mx36(16MB), 8Mx36(32MB) SIMMs

Memory Speed Required

70 or faster

Cache Memory

128K or 512K

Write-Back or Write-Through Dependent on Processor

(PCI Bus)

Video

SVGA to 1024x768 x 256 Colors, NI

Cirrus Logic GD543X Chip

1MB VRAM

1MB	Resolution	Colors
	640 x 480	16M
	800 x 600	64K
	1024 x 768	256

Horizontal Sync Sigans

31.5 - 60KHz

Vertical Refresh

43 - 75Hz

24.9M WinMarks

EIDE Disk Controller

(PCI Bus)
2 drive capacity, Utilizes Multiple Read/Write Drives, PCTech RZ1000 Chip.
Support for a secondary IDE controller, installed in an open ISA Expansion Slot Permitting up to Four IDE Drives to be Installed in the system.

Floppy Controller

2 Floppy drives to 2.88M Supported

Serial Ports

2 16550 Compatible, 16 byte FIFO buffer, Transmit and Receive, Internal Cables Included

Parallel Port

Centronics compatible, compatible with software "dongle" keys, Rear Panel DB25S

Keyboard Port

5-Pin Header

Speaker Port

4-Pin Header

Reset Port

2-Pin Header

Dimensions (L x H)

13.345" x 4.75" (339mm x 66mm) Exclusive of mounting bracket
8 Layer Construction
When fitted with a CPU Chip Cooling Fan, the CPU will require two expansion slots although a half-length to 2/3 length feature board can be installed next to it.

Power Requirement

+5V @ 1.4A without CPU or DRAM, Add Approx 1.0A for Processor
+12V @ <100mA,
-12V @ <100mA,
The +5V is Regulated Down to 3.3V at the ZIF Socket for Processor Chips Requiring it.

Operating Environment

Temperature: 0 to +70°C
Humidity: 5 to 95% RHNC

Storage Environment

Temperature: -40 to +70°C
Humidity: 5 to 95% RHNC

Operating Altitude

10,000 ft

MTBF

>77,500 P.O.H. @ 25°C

ORDERING GUIDE

NON-VIDEO MODELS

Model SB4864PVN/100

80486DX4, 100MHz CPU, 128K Cache RAM, Serial Port Connectors, No SVGA

Model SB4862PVN/66

80486DX2, 66MHz CPU, 128K Cache RAM, Serial Port Connectors, No SVGA

VIDEO MODELS

Model SB4864PV5/100

80486DX4, 100MHz CPU, 512K Cache RAM, Serial Port Connectors

Model SB4862PV5/66

80486DX2, 66MHz CPU, 512K Cache RAM, Serial Port Connectors

Model SB4864PV/100

80486DX4, 100MHz CPU, 128K Cache RAM, Serial Port Connectors

Model SB4862PV/66

80486DX2, 66MHz CPU, 128K Cache RAM, Serial Port Connectors

ACCESSORY

Model SPN1-486Z

CPU Cooling Fan & Heatsink

