The Breakthru Plug 'n' Play 386 Accelerator board

The 386 Accelerator board allows instant installation on any PC or AT while providing speed unequalled by any other conventional 386 board. Just push it into any open slot and turn the machine back on for fully automatic installation.

Probably most interesting to a board-wary market is that because there is no cable or jumpers or CPU removal, installation of the board is truly Plug 'n' Play. The built-in ROMware will automatically configure the board for the particular model or clone machine where it is installed.

No CPU removal

No cables

No jumpers

No diskettes

No switches

No loss of peripheral cards

No loss of system memory

No installation procedure

and

No equal in all the world

Better than other boards because:

1) Installation is simple, just plug it in; no jumpers, no chip removal, no cables! (no voiding warranty)

2) Works in any machine with PC full-card-slot

-XT, XT286, AT, PS/2 30, clones

-upgrades from 8088/8086/80186/80286/V20/V30,

-even if CPU soldered in

-even non-true-compatibles become true-compatibles with special install software

3) Don't throw away memory boards, take advantage of them. No need to remove any memory your from machine, keep the full 640K and EMS too!

4) Completely emulates any PC or AT environment (user's choice)

Can run AT operating systems on any PC "out of the box" with no modifications or special drivers (OS/2, Unix, Xenix, etc.)

5) With the piggy back Disk controller card option, the board doesn't even use up a slot and can use 1.2M and 3.5" diskettes, as well as your standard diskette drive.

6) Any necessary updates (e.g. for compatibility, etc.) can be distributed on a floppy disk, no need to disassemble your machine.

7) You can even install two boards in a single machine, for those specialized multi-processor applications.

Automatic Installation

- EPROM automatically tests your machine and boots into an optimal set-up.

- Hot key pop-up menus allow you to set all optional features. Context sensitive help is available for every choice. Just press F1.

- All user preferences are stored in on-board non-volatile RAM, there are no jumpers.

Faster than other boards because:

1) Designed to accommodate a 16, 20, or 25 MHz 386

2) 0 wait-state 16/64K Cache

3) Full 32 bit Write-Buffering

4) Onboard 32-bit DRAM (up to 8Mbyte with 1M DRAMs, 16Mbyte with 4M)

5) Efficient interface through your 8088 to the motherboard

6) 387 socket which also accepts Weitek or 287 daughterboard.

7) Other proprietary techniques to increase performance.

(Five patents applied for).

More Compatible because:

1) You can switch between the 8088 and 386 via hot-key driven menu ROMware

   a) Normally runs as a 386

   b) For ill-behaved copy-protected software you can boot with the 8088, then switch on the fly to the 386 for running the programs.

   c) user-selectable power-up mode: either 386 or 8088.

   d) For speed-sensitive applications like games or flight simulators, run with the 8088

2) Can completely emulate other hardware

   a) **Emulate an AT on any PC**

   b) **Emulate several keyboard types**

   c) **Emulate AT hard disk BIOS on a PC.**

3) You can vary the speed of the 386 to any degree.

Extensive ROMware provided:

- Control Panel: pop-up window in which user can select various options

(CPU, Video, Memory configurations, Emulate, Security and other Utilities)

- Automatically will install and run as a very fast PC environment

- User menu option allows complete emulation of AT environment:

turns PC into AT, runs OS/2, Unix, Xenix "out of the box"

- LIM4.0: Use on-board 386 memory as LIM.

- LIGHTNING: Disk Cache (Can select to 8Mbyte of Extended or EMS)

- Utility software: user options allow:

Extra 64K beyond 640K for DOS, when not using EGA/VGA graphics modes

Password protection
Faster booting
Accelerated auto-repeat keys

Vaccine

Intelligent Virus Inhibitor

Since the 8088 handles all disk I/O, it can operate as a very intelligent virus inhibitor. The applications and operating system on the 386 can not touch the 8088 or its ROMware. Since the vaccine code runs independently, on a different CPU, it is extremely difficult to destroy or fool.

When the Virus Inhibitor detects a problem, it pops up the message:

"Writes to disk appear malicious, want to continue?"

Allowing the user to decide if he really meant to destroy critical files or re-format his disk.

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Optional Software made possible by the new board:

- Simulate a PC or an AT: turns incompatible PCs into
true-compatibles

- VIRTMEM - emulate EMS or extended memory from a hard disk

- PROCTYPE - use the ERRORLEVEL command to determine if the
current processor is the 8088 or 386 from a batch file

- DUAL DOS's (88 and 386)

- Performance analysis and debugging tools

- Special Compatibility software: even software that typically
fails due to timing-dependencies can have a special 8088 I/O
driver to fix these problems.

Summary

The benchmarks speak for themselves. Breakthru 386 is very different from a
regular 386 turbo board in design and performance. The design is so radical
that five patents have been applied for.

Plug and play - no switches, the Breakthru 386 figures it all out for you.

Dramatic speed enhancement - faster than most new generation 386 machines

Across the board compatibility. Same board works in PC's, AT's and clones.

Works with many less compatible clones too!

Up to 16MB of DRAM on board.

Optional all-format (5.25 & 3.5) diskette controller.

All existing add in boards are utilized, including standard and EMS RAM!

Pop up menu let you change your configuration on the fly.

Password protection for your PC.

Runs OS/2, Unix, and Xenix out of the box - no special drivers.

Socket for 387 and Weitek math coprocessors.

Leaves old CPU in place for speed sensitive games etc.

PC Magazine 'Instruction Mix' benchmark