

TECHNOLOGY OVERVIEW



Welcome to the next generation of processing power: the Intel® Pentium® Pro processor.

Featured in AST's new Bravo MS-T Pro, it's expressly designed for 32-bit operating systems like today's popular Windows NT®. And what else does Bravo MS-T Pro provide? Everything from the Intel 440FX PCIset and Matrox MGA® Millennium 64-bit graphics with WRAM to AST-CommandCenter™ and an integrated audio subsystem. All cutting-edge technology to maximize the life of your hardware investment.

Once more, AST is first to answer the ever-changing needs of PC performance with this latest innovation: Bravo MS-T Pro.

Offering hardware power, software manageability and all-around value, it's ready for the future, ready for you.

PENTIUM PRO PROCESSOR

AST's latest generation of Bravo commercial desktops feature some of the fastest processors on the market - 180 and 200 MHz Intel Pentium Pro processors. AST's Pentium Pro processor desktops are designed to provide superior performance for Windows NT and 32-bit applications. This revolutionary platform achieves incredible gains in processing power when running standard office and business applications concurrently.



Of course, with Pentium Pro processor technology you can also run current 16-bit software, while enjoying a significant performance gain when you switch to 32-bit applications. And AST's Bravo MS-T Pro systems cost as little as 7% more than our comparable Intel Pentium processor-based systems yet can deliver up to 64% faster performance. That's why an investment now in Pentium Pro processor technology will better equip your system for today and tomorrow. This smart move ultimately translates into low-cost flexibility and greater efficiency overall.

The Pentium Pro processor achieves performance gains through an entirely new approach to processing software instructions that maximize 32-bit performance, called **Dynamic Execution**. Dynamic Execution represents the combination of three processing techniques to speed up software:



Multiple Branch Prediction - To increase the amount of work fed to the processor, the chip looks multiple steps ahead in the software and predicts which groups of instructions are likely to be processed next.

Dataflow Analysis - The Pentium Pro processor creates an optimum "schedule" of instructions by analyzing which instructions are dependent on each other's results.

Speculative Execution - Instructions are then carried out speculatively, keeping all the chip's superscalar processing power busy, and boosting overall software performance.



Bravo systems based on a 180 MHz Pentium Pro processor are up to 64% faster than

INTEL 440FX PCISet

AST is among the first to feature the Intel 440FX PCISet with the Bravo MS-T Pro systems.

Through new levels of chip set integration, the Intel 440FX PCISet delivers incredible performance while using half the number of components than the previous Intel PCISet. It includes new features such as scalability through Concurrent PCI and support for Error Checking and Correction (ECC).

The Intel 440FX PCISet logic chips speed up the data flow over the PCI bus, memory, and CPU systems for overall system performance gains. These gains are achieved via a technology called Concurrent PCI. Concurrent PCI conducts transactions simultaneously on the CPU, PCI and ISA buses for increased bandwidth, which facilitates better 2D and 3D graphics, video and audio performance, and faster processing of host-based applications.

The combination of the Pentium Pro processor and the Intel 440FX PCISet offers significant gains in performance from previous generations of Bravo systems.

WINDOWS NT 32-BIT OPERATING SYSTEM

All Bravo MS-T Pentium Pro processor systems are preconfigured with Microsoft® Windows NT Workstation operating system.

Windows NT is one of the most powerful desktop operating systems on the market today. Fully 32-bit, multithreaded and multitasking, it makes the most of today's 32-bit applications while having full compatibility with 16-bit applications as well. Windows NT includes all 32-bit device drivers, so it needs no address conversions, and makes an ideal foundation for today's media rich applications.

MULTITASKING

Preemptive multitasking runs multiple applications with absolutely peak response, simultaneously. And with Windows NT Workstation, preemptive multitasking is integrated so applications share the CPU, allowing a user to get E-mail, recalculate a spreadsheet and print a document all at once, seamlessly. What's more, OLE (Object Linking and Embedding) technology integrates data across many different applications without requiring the user to convert the data to new formats. In short, multitasking improves productivity.

CRASH PROTECTION

Windows NT Workstation offers total crash defense for 16-bit and 32-bit applications. Unlike Windows® 95 and Windows 3.1, it features built-in data protection to keep all information secure - it's virtually impossible for an application to crash the operating system. Separate memory spaces also safeguard applications from causing a failure or data corruption in other applications. This maximizes uptime and lowers support costs.



SECURITY

Peace of mind is built right in. Security is directly integrated into the operating system. Unauthorized access and end-user error are prevented. Added precautions reduce the support burden and lost productivity from corrupted files.

NETWORK CONNECTABILITY

Windows NT Workstation supports more than 15 networks and protocols. Integrating with existing networks is simple and cost-effective. Everything installs simply with an easy program... and there are no system configuration files to modify.

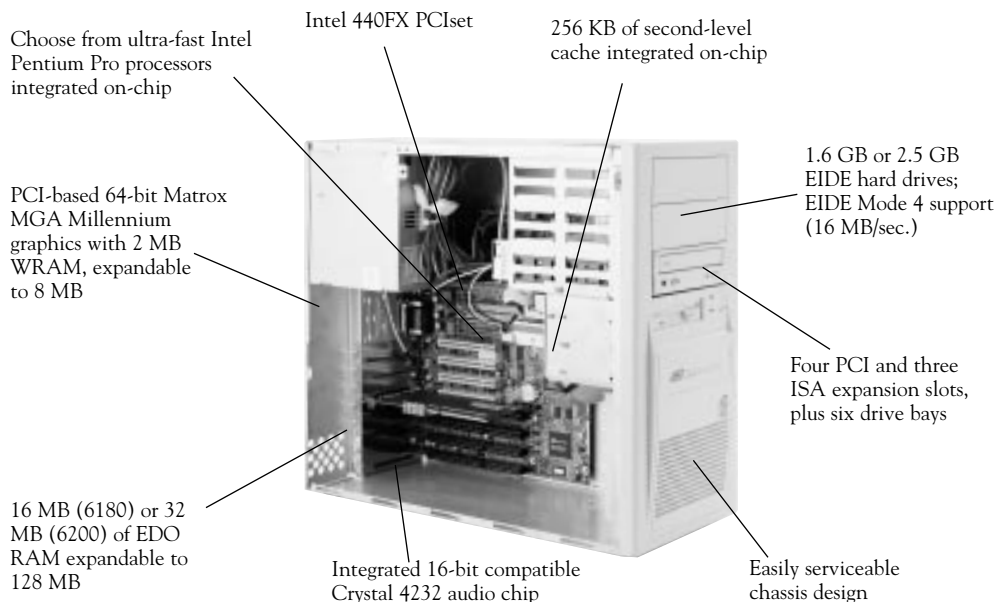
MATROX MGA MILLENNIUM 64-BIT GRAPHICS WITH WRAM

All Bravo MS-T Pro computers include the outstanding Matrox MGA Millennium graphics board, featuring a 64-bit graphics accelerator which utilizes the dual ported WRAM.



AST's high performance PCI graphics solution includes 2 MB WRAM that can be expanded to 8 MB. WRAM is a dual ported memory that allows the input of graphic drawing data and the output of screen refresh data to occur simultaneously. The accelerator runs at 50 MHz with a time frame buffer bandwidth of 960 MB per second, boosting graphics speeds 50% over VRAM-based acceleration for optimized multimedia performance.

WRAM offers a full range of special functions including: plane masking; dual color block write mode for fast text and pattern fills, operations common in 2D GUI environments; Fast Blit for buffer to buffer copying which is 6 times faster than other graphics memory types; DCI video playback and double buffering for smooth 3D animation; dual ported memory functionality for processing data intensive applications such as 2D/3D and video; hardware acceleration of DCI and Direct Draw video playback for higher frame rates and high-quality, full-screen, full-motion playback of video clips; 1600x1200 resolutions for more viewing area; and 175 MHz DAC delivers 85 Hz @ 1600x1200 for flicker-free displays. Achieve a "nearly perfect" 29 frames per second of AVI playback performance with AST's DirectVideo functionality.



BRAVO MS-T PRO

AUDIO SUBSYSTEM

AST has included stereo inputs for CD-audio, plus line-in and music synthesis chips, stereo line output, microphone output and a serial data port to simplify the integration of advanced telephony applications. AST also offers full duplex operation to allow simultaneous two-way communication to save time.



32-BIT SOFTWARE

Every day more and more new 32-bit business software titles are being introduced. Following is a list of popular 32-bit software titles being used today.

COMPANY	SOFTWARE TITLES	COMPANY	SOFTWARE TITLES
Adobe	Adobe Pagemaker 6.0	Netscape Communications	Netscape Navigator
Adobe	Adobe Photoshop	Novell	PerfectWorks
Asymetrix	Asymetrix 3D/FX	QualComm	Eudora Pro
Autodesk	AutoCAD	SAS Institute	The SAS System
Borland International	Borland C++	SPSS	SPSS for Windows
Borland International	Paradox	Softekey Multimedia	Project Manager PRO
Clarisc	Filemaker Pro	Software Publishing Company	Harvard ChartXL
Corel	CorelDRAW	Software Publishing Company	Harvard Graphics
Delrina Corporation	WinFax PRO	Starfish	Sidekick 95
IBM/Lotus	Freelance Graphics	Symantec	Norton Anti-Virus
Macromedia	Extrem	Symantec	pcANYWHERE 32
Macromedia	Macromedia Director	Symantec	Symantec C++
McAfee Associates	VirusScan	Traveling Software	Laplink
Microsoft	Excel	Visio Corporation	Visio
Microsoft	Microsoft Access		
Microsoft	Microsoft Works		
Microsoft	Money		
Microsoft	MS Visual Fox Pro		
Microsoft	MS Visual Basic		
Microsoft	Office		
Microsoft	PowerPoint		
Microsoft	Project		

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