



The AST Premium/286™ is a powerful and versatile personal computing system that combines legendary AST quality, uncompromising compatibility and lightning speed. Reliably engineered, this system provides for exceptional versatility and upgradeability, yet it is IBM® Personal Computer AT® (PC AT) compatible. Its power delivers bottom-line productivity improvements in single and multitasking applications, individual workstation and shared environments alike.

Choice of new ergonomically designed enhanced color or monochrome video displays.

1.2 MB diskette drive standard, 360Kb diskette drive optional.

20 MB, 40 MB or 70 MB fast-access fixed disk drives.

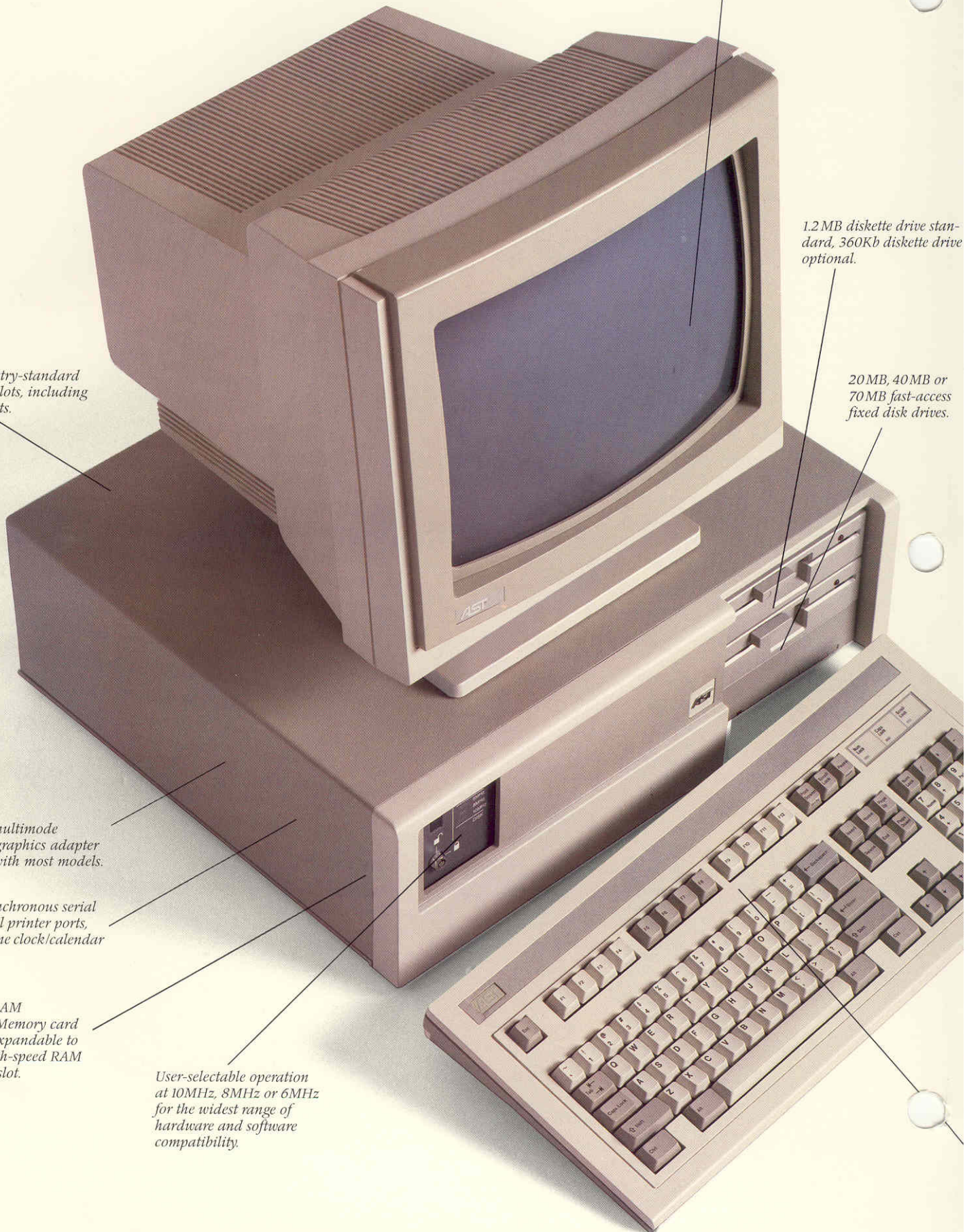
Seven industry-standard expansion slots, including two FASTslots.

AST-3G™ multimode enhanced graphics adapter included, with most models.

25-pin asynchronous serial and parallel printer ports, and real-time clock/calendar included.

AST FASTRAM Enhanced Memory card included, expandable to 2 MB of high-speed RAM in a single slot.

User-selectable operation at 10MHz, 8MHz or 6MHz for the widest range of hardware and software compatibility.



The AST Premium/286 personal computing system provides increased IBM AT-compatible computing power, performing 50% faster than traditional 8 MHz ATs. Ideal for general business use, the AST Premium/286 also serves as an extremely powerful engine for applications-oriented workstations, both standalone and shared, including desktop publishing, business graphics and CAD/CAE. Its design also includes support for increased connectivity and access to shared information—use the AST Premium/286 (with AST enhancement boards installed) as a local area network file server, to manage multi-user environments or as a cluster controller in shared mainframe or minicomputer connections.

Above all, compatibility is never a question. Built by AST, the leader in PC enhancement solutions with over two million products already in use, the AST Premium/286 benefits from this technological expertise, and is compatible with both AST and IBM products.

From the inside-out AST applies the same philosophy of quality, reliability, compatibility, added performance and service to the AST Premium/286. Translated, this solution means true “plug and play” abilities, and a competitive edge for you.

Fast Processing

Based on the proven reliability of the 80286 chip, combined with the advanced technology developed by AST, this system possesses the power to speed either memory/processor-bound or disk-bound applications.

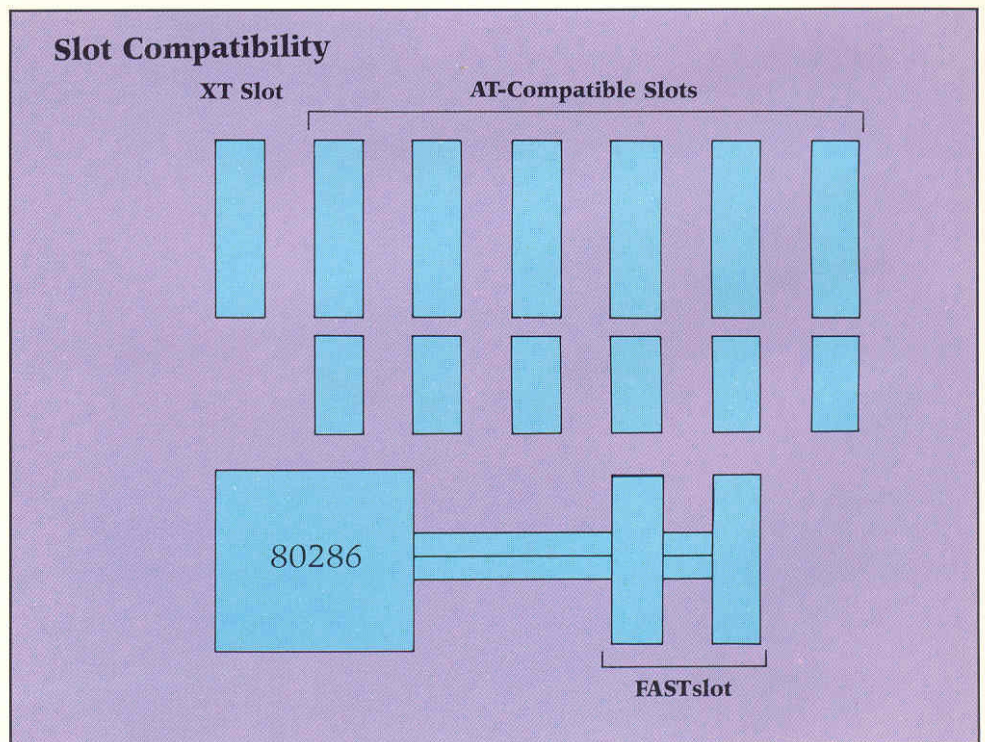
Processor- and memory-intensive applications, such as large spreadsheet analysis and multitasking/windowing, benefit from its 10 MHz Enhanced Expanded Memory capabilities. And the AST Premium/286's rapid fixed disk data access boosts performance in disk-bound applications, such as data base searches and sorts as well as systems configured as network file servers, host gateways on a local area network or cluster nodes for connecting multiple PCs to a host.

True Hardware Compatibility

Unlike other 10 MHz machines, the AST Premium/286 offers

high speed with built-in compatibility for industry standard enhancement cards. The system provides two AST FASTslots capable of running without wait states through the addition of a third connector to the standard 2-connector, 16-bit IBM AT bus. This third connector provides a high-speed interface direct to the 10 MHz 80286 processor. This native 80286 bus interface, coupled with high-speed circuitry on the FASTRAM board, permits address signals to be accepted faster and data to be ready early—allowing zero wait state operation.

This architecture enables system operation at a Norton Utilities™ Version 3.0 SysInfo rating of 11.5, or one and one-half times the speed of the 8 MHz IBM PC AT and a full two-times the speed of the original 6MHz AT. These FASTslots provide acceleration of up to 4MB of AST



Enhanced, low-profile 101/102-key keyboard with separate numeric keypad, dedicated cursor control and extra function keys. International versions available.

FASTRAM Enhanced Memory on two 2MB boards. All the while, your standard PC- and AT-type peripheral cards run at standard AT speeds with wait states—so you only speed up what you need to.

AST's FASTslots also provide a bridge to the future, allowing easy upgradeability and expandability. A perfect foundation offering the power you need now and future upgradeability, this advanced architecture is also an open architecture for easy development and system integration.

True Software Compatibility

The AST Premium/286, shipped with MS-DOS 3.1 and BASIC, is compatible with a vast library of popular and technical off-the-shelf application software. It easily runs IBM PC AT-compatible software, including word processing, business graphics, spreadsheet and data base management.

Flexible, Powerful Memory Addressing

The AST Premium/286 supports a maximum memory configuration of 13 MB per system with AST options. The system features the industry's most flexible array of memory addressing modes, including conventional and extended (protected mode) Linear memory capabilities and Enhanced EMS and EMS Expanded Memory addressing. This versatility provides ultimate performance and com-

patibility with current DOS and current and future protected mode operating systems, as well as new generation Expanded Memory application and operating environment software.

Technically, AST's Expanded Memory addressing capabilities provide full Lotus®/Intel®/Microsoft® (LIM) EMS performance plus a larger page window from which to access expanded memory. Up to 64 16K-pages are supported, including direct paging into conventional memory, providing advanced multitasking capabilities with appropriate multitasking/windowing software.

For standard Linear memory addressing, AST Premium/286 FASTRAM memory supports both conventional and extended modes (the native 80286 Linear memory addressing modes). AST's industry-first "Split Memory Addressing™" ability makes memory configuration extremely versatile and allows automatic fill-in of memory in the nearly 16 MB conventional/extended range.

Fast Access To Large Volumes Of Data

As a complement to the AST Premium/286's speedy operation, AST offers high performance access to large volumes of data with its full line of disk subsystems.

Available with the AST Premium/286 system is our 20MB hard disk and our fast-access 40MB hard disk. The 40MB drive provides

one-third more storage with a faster—28 msec—access time than the PC AT's fixed disk. Additionally, we offer a 70 MB hard disk with an equally fast access time. And an optional tape unit that provides rapid backup of a full 40 MB of data on a single cartridge.

The AST-4000™ and AST-5000™ external disk/tape subsystems are ideal for multiuser environments. These subsystems feature advanced SCSI architecture allowing easy expandability for Gigabytes of storage.

The AST Plus

Finally all this increased power, speed, compatibility and reliability is extremely cost competitive. And AST's complete line of proven peripherals and enhancement cards provide the one-stop solution allowing you to expand and upgrade your system with assurance of future compatibility, support and service.

AST is known the world over for the high quality and reliability of its products. There's always extra value too, like built-in interfaces, user conveniences, a one-year warranty and a network of sales, service and support teams worldwide.

The AST Premium/286 is a unique machine which not only maintains compatibility with other computer products—whether they be peripherals, software or other accessories—it truly advances the standard.

Faster Than The Fastest PC AT

- 10 MHz 80286 System Unit with zero wait-state operation, runs popular IBM-compatible software 50% faster than the 8 MHz IBM PC AT for true productivity improvements, even for the most demanding user.
- Advanced coprocessor socket accepts 8 MHz 80287 devices. When configured with coprocessor, AST Premium/286 significantly accelerates mathematics-intensive programs including Lotus 1-2-3® Release 2 applications, AutoCAD™ and VersaCAD™.

Advanced Architecture With Hardware Compatibility

- Advanced architecture allows incorporation of two AST FASTslots™ that provide accelerated bus operations, while remaining IBM PC AT compatible.
- Seven industry standard expansion slots, including two AST FASTslots.
- FASTslot design ensures built-in future upgradeability, accommodating the next generation of accelerator and high-performance enhancement cards.

A Commitment To Software Compatibility

- Keyboard-selectable operation at 10 MHz, 8 MHz or 6 MHz for the ultimate in software compatibility.
- Compatible with a wide variety of operating systems, such as IBM PC-DOS™, MS-DOS®, Concurrent DOS™ and XENIX®.
- Compatible with available multitasking and task switching software packages, including Microsoft Windows, DESQview™ and TopView™.
- Compatible with virtually all application software designed for the IBM PC environment.

- MS-DOS operating system and BASIC® software, AST software utilities and complete documentation included.

Large Memory Capacity With Multiple Addressing Capabilities

- AST FASTRAM™ Enhanced Memory card included—expandable to 2 MB in a single slot. Up to 4 MB high-speed RAM per machine. Total system memory expandable to 13 MB with AST options.
- AST FASTRAM supports Enhanced EMS and EMS, breaking the 640KB DOS barrier and eliminating “memory full” messages.
- Supports extended (protected mode) and conventional memory addressing.
- Memory, speed and high-performance to work with huge spreadsheets and databases—run one or more at the same time using windowing software.

Disk Storage Options

- Choice of high-performance 20 MB, 40 MB and 70 MB fixed disk drives. The 40 MB and 70 MB drives offer rapid data access up to two times faster than the PC AT's 30 MB fixed disk drive.
- Optional standalone AST disk/tape subsystems with SCSI interface can be combined for Gigabytes of mass storage.
- Optional internal tape unit for rapid backup of a full 40 MB of data on a single tape cartridge.
- High-capacity 1.2 MB diskette drive standard.

Multimode Enhanced Graphics Capabilities

- AST-3G Plus multimode enhanced graphics adapter with 256KB video RAM included on most models. Supports IBM EGA, CGA, Hercules Graphics Card™ (HGC) and IBM Monochrome Display Adapter (MDA) modes for flexible graphics and text display.

Choice Of Displays

- Available with new AST ergonomic video display options:
 - AST Premium Display/Enhanced Color™
 - AST Premium Display/Monochrome™ (black and white, dual-mode)Both offer sharp presentation of text and graphics.

Premium Keyboards

- Ergonomically designed, the AST Premium 101 and 102-key (international), low-profile keyboards feature a separate numeric keypad, dedicated cursor control and extra function keys.

Built-In Input/Output Ports And Clock

- Real-time clock/calendar provides time and date stamp.
- One 25-pin asynchronous serial communications port standard.
- One 25-pin parallel printer port standard.

AST, The Industry Standard

- AST also offers a full line of products that provide complete, proven compatibility and connectivity—mainframe and minicomputer connections, gateways, local area networks and multiuser capabilities, as well as laser printers, scanners and mass storage subsystems.
- AST quality, reliability, service and support—over two million users already depend on us.

Specifications

Standard Equipment

CPU: 10MHz 80286; keyboard-selectable 10, 8, or 6MHz operation.

Coprocessor: 80287 socket supporting 8MHz 80287 coprocessors.

Expansion Slots: 7 total; 1 8-bit, 6 8/16-bit including 2 FASTslots; 4 user slots available in standard models.

Memory: FASTRAM Enhanced Memory, supports conventional, extended, Enhanced EMS, EMS memory modes; up to 4 Megabytes FASTRAM, 8 Megabytes EEMS RAM, 13 Megabytes total RAM per machine using AST options.

Video Adapter: (except Model 80) AST-3G Plus™ multi-

mode Enhanced Graphics Adapter, supporting IBM EGA, CGA, MDA, Hercules graphics and text modes; 256 Kbyte video RAM.

Diskette Drives: 1.2 Megabyte half height diskette drive.

Fixed Disk Drives: 20 Megabyte fixed disk drive—Model 120; 40 Megabyte fixed disk drive (average access 28ms)—Model 140; 70 Megabyte fixed disk drive (average access 28ms)—Model 170.

Disk Controller: AT-standard combination disk controller supporting up to 4 devices—diskette drives, fixed disk drives and internal tape drives.

Input/Output Ports: 25-pin asynchronous serial printer

Expansion Bus Speed	Number Of Wait States Per CPU Speed		
	10MHz	8MHz	6MHz
FASTslots*	0	0	0
8/16-bit slots**	2	1	1
8-bit slot	2	1	1

*Using FASTslot 3rd connector
**Including FASTslots using conventional 8- and 16-bit boards

port and 25-pin parallel printer port.

Keyboard: AST Premium Keyboard (101-key) with two-position height adjustment, removable key caps; optional (102-key) version supporting international alphabets.

Front Panel Controls: Cold-boot Reset button; security lock preventing unauthorized

keyboard access; indicator lights for 10, 8, 6MHz operating speeds and fixed disk access.

Software and Documentation: MS-DOS/BASIC Version 3.1 software and manuals; AST User Diagnostics, AST Utility Software and complete documentation.

Warranty: One year limited warranty.

Additional Options

AST Premium Display/Enhanced Color: Enhanced Color Display, 14 inch diagonal, up to 64 colors, supporting 640x350, 640x200 text and graphics resolutions.

AST Premium Display/Monochrome: Monochrome Display, 14 inch diagonal, black and white colors, supporting 720x350, 640x200 text and graphics resolutions.

Memory: 512Kb FASTRAM Enhanced Memory board; 512Kb high-speed dynamic RAM upgrade kit. Additional memory available with RAM-page 286, Advantage! or any memory products.

Diskette Drive: 360 Kbyte half-height diskette drive.

Internal Tape Backup: 40 Megabyte half-height internal cassette tape drive.

Other Options: All AST 8- and 16-bit PC enhancement products, including memory, multifunction, graphics, data communications, local area networks; all AST systems-level PC products.

Technical Specifications

Power: Voltage—110 VAC at 60Hz, 220 VAC at 50Hz, external switch selectable; Rating—192 Watts.

Models And Configurations

Model 80: 512Kb FASTRAM, 1.2 Megabyte diskette drive; disk controller board; keyboard.

Model 90: 1 Megabyte FASTRAM; 1.2 Megabyte diskette drive; AST-3G Plus Enhanced Graphics Board; disk controller board; keyboard.

Model 120: 1 Megabyte FASTRAM; 1.2 Megabyte diskette drive; AST-3G Plus Enhanced Graphics Board; disk controller board; 20 Megabyte fixed disk drive; keyboard.

Model 140: 1 Megabyte FASTRAM; 1.2 Megabyte diskette drive; AST-3G Plus Enhanced Graphics Board; disk controller board; 40 Megabyte fixed

disk drive; keyboard.

Model 170: 1 Megabyte FASTRAM; 1.2 Megabyte diskette drive; AST-3G Plus Enhanced Graphics Board; disk controller board; 70 Megabyte fixed disk drive; keyboard.

AST Premium/286 is also offered in specific, applications-oriented workstations built by AST. OEM and International versions also available. International options include: System unit operation at either 110V or 220V; Monitors in both 110V and 220V versions; International (102-key) keyboards and drivers; Multilingual documentation and messages.

Physical Dimensions:

Component	Inches			Millimeters		
	W	H	D	W	H	D
System Unit	19.25	6.25	16.50	489	159	419
Keyboard	19.25	1.50	8.25	489	38	210
Color Monitor	14.10	12.19	14.17	358	310	360
Monochrome Monitor	12.60	11.42	11.93	320	290	303

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