

► **S U M M A R Y O F F E A T U R E S**

Pentium PCs

Products listed in alphabetical order

■ = YES □ = NO

	Acer AcerFrame 3000MP	ALR ProVEISA V	Compaq Deskpro 5/66M	DECpc 560ST	HP NetServer 5/60 LM	IBM PS/2 Server 95	Unisys PW² Advantage Plus 5606
List price (estimated)	<\$25,000	\$6,500	<\$8,100	\$8,500	<\$8,100	Info not available	\$10,000
Processor type and speed (MHz)	Pentium/60	Pentium/66	Pentium/66	Pentium/60	Pentium/60	Pentium/66	Pentium/60
Hard disks	Two 520MB	Four 120MB	One 510MB	One 426MB	Two 1.05GB	Two 540MB	One 1.2GB
Dealers/Direct-distribution channel	■ □	■ ■	■ □	■ ■	■ ■	■ □	■ ■
Case style	Tower	Tower	Desktop	Tower	Tower	Tower	Desktop
Bus architecture	EISA	EISA	EISA	EISA	EISA	MCA	EISA
Power supply (and number of connectors)	500 (8)	300 (6)	240 (4)	254 (6)	396 (9)	400 (3)	200 (5)

Motherboard and CPU

Motherboard manufacturer	Acer	ALR	Compaq	Intel	Intel	IBM	Unisys
Chip set manufacturer	Intel	ALR, Intel	Compaq	Intel	Intel	IBM	TI
BIOS version (or date)	Acer 1.2R4.0	Phoenix 1.00.25B	Compaq (1/13/93)	Phoenix 1.00.07	Intel 1.00.06V0	IBM 1.0	Phoenix 1.0.02
Flash memory	□	■	□	■	■	■	■

Memory and Processor RAM Cache

Installable RAM on motherboard	N/A	4MB–256MB	16MB–136MB	4MB–64MB	2MB–384MB	16MB–128MB	8MB–198MB
Cache architecture	Two-way set-associative	Direct-mapped	Direct-mapped	Two-way set-associative	Two-way set-associative	Two-way set-associative	Two-way set-associative
Cache write design	Write-back	Write-back	Write-through	Write-back	Write-back	Write-back	Write-back
Data path from cache to CPU	64-bit	64-bit	64-bit	64-bit	64-bit	64-bit	64-bit
Data path from cache to RAM	64-bit	32-bit	128-bit	32-bit	32-bit	64-bit	32-bit

Disk Drives

Accessible drive bays (5.25", 3.5")	4, 0	5, 0	3, 0	3, 1	8, 1	3, 2	3, 1
Internal drive bays (5.25", 3.5")	4, 0	1, 6	0, 1	1, 0	0, 0	2, 0	0, 1
Floppy disk drives	1.2MB	1.44MB	1.44MB	1.2MB, 1.44MB	1.44MB	2.88MB	1.44MB
Hard disk options	213MB–1GB	340MB–1.2GB	240MB–510MB	127MB–1GB	535MB–1.05GB	80MB–2GB	245MB–1.2GB
Disk controller location	EISA card	Motherboard	Motherboard	EISA card	EISA card	MCA card	Motherboard

Expansion Bus

8-bit, 16-bit, 32-bit slots	0, 2, 8	0, 2, 8	0, 0, 5	0, 0, 6	0, 0, 8	0, 0, 8	0, 0, 5
VESA, PCI, proprietary slots	0, 0, 6	0, 0, 2	0, 0, 0	0, 0, 2	0, 0, 2	0, 0, 1	0, 0, 1
Parallel, serial, mouse ports on motherboard	1, 2, 1	2, 1, 1	1, 2, 1	1, 2, 1	1, 2, 1	2, 2, 1	1, 2, 1
Integrated network adapter option	None						

Video

Display circuitry location	ISA card	EISA card	EISA card	EISA card	Motherboard	MCA card	Motherboard
Video chip set manufacturer	ATI	ATI	Compaq	S3	WD	IBM	ATI

Miscellaneous

DOS/Microsoft Windows 3.1 included	■ □	□ □	■* ■	■ ■	□ □	□ □	□ □
Warranty	1 year	5 years parts, 15 months peripherals and labor	3 years	1 year	3 years	3 years	1 year
On-site service charge	Included (90 days)	\$9.95 (1 year)	Included (1 year)	Included (1 year)	Included (3 years)	Included (3 years)	Varies
FCC Class B identification number	Pending	Pending	Pending	EJMX86D56	B9HHPL5102	Pending	Pending

N/A—Not applicable: The product does not have memory on the motherboard but comes with 256MB of RAM on a card.

* DOS 6.0.

ATI—ATI Technologies Inc., TI—Texas Instruments Inc., WD—Western Digital Corp.

HP is loading the NetServer with high-end server options such as the two-line, 16-character LED (light-emitting diode) panel, which displays data on processor speed and special error codes. The NetServer can take a maximum of 256MB of RAM, or 348MB with the soon-to-be-available 32MB SIMMs (single in-line memory modules). This memory can be ordered with or upgraded to error-correcting memory as an option and works in conjunction with a 256K secondary cache.

The NetServer also includes a SCSI controller integrated onto the motherboard and a slot for an additional controller. The unit also features an 8GB drive-array option. The company claims that dual-Pentium options and an additional 10GB external array are in the works.

HP's new server management software, called NetServer Assistant, comes bundled with the NetServer and offers just about everything a network administrator would want, including diagnostics and remote control of server functions, as well as the consolidation of HP, Novell, and third-party utilities.

HP offers a new, three-year, worldwide, on-site service warranty to sweeten the deal.—OR

IBM Personal Computer Co.

IBM PS/2 Server 95

IBM wasn't the first to market with 80386- and 80486-processor computers, but its initial Pentium machine, the IBM PS/2 Server 95, takes a rightful place as one of the leaders on the new CPU platform. The high-scoring IBM server is designed and built for lasting performance.

The 66-MHz Pentium-based MCA (Micro Channel Architecture) bus system is at the top of the PS/2 Server 95 line. The tower case has a 400-watt power supply and two

fans, a variable-speed fan inside the power supply, and a cylindrical fan attached to the case cover. The drive-bay arrangement accommodates five external devices (three 5.25-inch and two 3.5-inch) and two internal 5.25-inch drives.

Indicative of this system's design quality, almost all component modules can be removed without tools. Even the power-supply bracket can be loosened by hand to tilt the power supply forward, enabling access to the SIMM (single in-line memory module) sockets (128MB motherboard capacity). Or you can loosen and remove the power unit completely. Another design nicety is a clear plastic guard that slides down over the case's front-mounted power switch in order to protect against inadvertent power interruptions.

IBM uses its own processor board for the PS/2 Server 95, including an Intel Cache 82496 cache controller chip and its own Pentium support chip set. The company also manufactures the SCSI-2 Fast/Wide hard disk controller and video adapter. These in-house components, plus a Maxtor 540MB 9-millisecond SCSI-2 hard disk with its own 512K disk cache, led the IBM unit to very high scores on our benchmark tests. The unit led the pack with its processor scores.

While we did not chart these scores, the PS/2 Server 95 performed exceptionally on our Windows disk tests. But it did not do as well under Windows video testing. On our network tests, the system came equipped with four IBM MCA Token-Ring cards, which the company calls "streamers." "Screamers" would have been just as appropriate; in I/O throughput—the true measure of a server—the IBM PS/2 Server 95 led the way.

We'd have a hard time justifying this admirable unit as a single-user workstation. But as a file server, the IBM PS/2 Server 95's MCA-based system shines, both in terms of performance and construction.—BB

HP's new server management software offers just about everything a network administrator would want.



FACT FILE

IBM PS/2 Server 95

IBM Personal Computer Co., Rt. 100,
Somers, NY 10589; 800-772-2227;
fax, 800-426-4329

Estimated list price (tested configuration): Information not available.

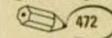
Memory and processor RAM cache: 16MB 70-ns SIMMs with 256K external cache.

Disk drives and controller: 2 Maxtor MXT-540S 9-ms 540MB SCSI-2 hard disks with 512K cache, IBM SCSI-2 Fast/Wide MCA card disk controller, 2.88MB floppy disk drive.

Display: IBM PS/2 SVGA MCA card video controller with 512KB of DRAM, IBM 8515 13-inch monitor with 31.5-Hz refresh rate at 640 by 480.

Software: None.

In short: This IBM server combines exceptionally rugged design and construction with fast components.



Unisys Corp.

Unisys PW² Advantage Plus Model 5606

With its Model 5606, Unisys is fleshing out its new PW² Advantage Plus series of Pentium-compatible PCs. Unlike the rest of the Advantage Plus line (Models 4333, 4666, and 4668), which can be upgraded to Pentium, Model 5606 starts out with one and provides better support for it.

Though you'll notice a sturdy desktop case that even has a 9-pin connector for communicating with an intelligent UPS (uninterruptible power supply), we noticed several design shortcomings, including noisy fans that rattled the case.

Inside, things were about the same as we saw with the other tested units. Everything necessary was there, but it all

IBM PS/2 Server 95	
SUITABILITY TO TASK	
Scalability	GOOD
Security/fault tolerance	FAIR
Throughput/small block	EXCELLENT
Throughput/large block	EXCELLENT