

PC Institute



*Personal Systems Reference*  
*IBM IntelliStation*  
*professional workstation*



# IBM IntelliStation™ E Pro models (6893)

Type-model	Standard disk (rpm) ms seek / disk interface CD-ROM / interface Controllers	CPU MHz / Upgrade	Write-back L2 cache std / max KB / KB	Memory in MB; std / max 100MHz	SVGA controller; memory std / max	Bus slots P=PCI avail PCI/ISA=av A=AGP av	Total bays	Chipset Ethernet Preload	Available date	
<b>5 slot x 4 bay; PCI/ISA/AGP; Stealth Gray</b>										
6893-10U	6.4GB <sup>2</sup> std (7200) 9.5ms / EIDE / ATA-33 32X-14X <sup>4</sup> CD-ROM / EIDE EIDE	Pentium® II 350/100 MHz	Pent II 400MHz, 450MHz	512/512 175MHz in SEC ECC	64 / 768 SDRAM ECC	Matrox® Millennium II AGP adapter 8 / 16 WRAM	PCI=2 PCI/ISA=1 ISA=1 AGP=0	4 bays 3 used 1 empty	440BX Ethernet Windows NT 4.0 RTC CD	June 1998
6893-11U	4.5GB std (7200) 7.5ms / <b>Wide Ultra SCSI</b> 32X-14X CD-ROM / EIDE EIDE / Wide Ultra SCSI	Pentium II 350/100 MHz	Pent II 400MHz, 450MHz	512/512 200MHz in SEC ECC	64/768 SDRAM ECC	Matrox Millennium II AGP Adapter 8 / 16 WRAM	PCI=1 PCI/ISA=1 ISA=1 AGP=0	4 bays 3 used 1 empty	440BX Ethernet Windows NT 4.0 RTC CD	June 1998
6893-12U	6.4GB std (7200) 9.5ms / EIDE / ATA-33 32X-14X CD-ROM / EIDE EIDE	Pentium II 400/100 MHz	Pent II 450MHz,	512/512 200MHz in SEC ECC	64 / 768 SDRAM ECC	Matrox Millennium II AGP Adapter 8 / 16 WRAM	PCI=2 PCI/ISA=1 ISA=1 AGP=0	4 bays 3 used 1 empty	440BX Ethernet Windows NT 4.0 RTC CD	June 1998
6893-14U	4.5GB std (7200) 7.5ms / <b>Wide Ultra SCSI</b> 32X-14X CD-ROM / EIDE EIDE / Wide Ultra SCSI	Pentium II 400/100 MHz	Pent II 450MHz	512/512 200MHz in SEC ECC	128/768 SDRAM ECC	3D Labs® PERMEDIA 2A AGP Adapter 8/8M SGRAM	PCI=1 PCI/ISA=1 ISA=1 AGP=0	4 bays 3 used 1 empty	440BX Ethernet Windows NT 4.0 RTC CD	June 1998
6893-18U for AAP	<i>no disk</i> 32X-14X CD-ROM / EIDE	Pentium II 400/100 MHz EIDE	Pent II 450MHz	512/512 200MHz in SEC ECC	64 / 768 SDRAM ECC	<i>None</i>	PCI=2 PCI/ISA=1 ISA=1 AGP=1	4 bays 2 used 2 empty	440BX Ethernet Open OS RTC CD	June 1998
☞ 6893-41U	6.4GB std (7200) 9.5ms / EIDE / ATA-33 32X-14X CD-ROM / EIDE EIDE	Pentium II 450/100 MHz	None	512/512 225MHz in SEC ECC	64 / 768 SDRAM ECC	Matrox Millennm G200 AGP-2x Adapter 8/16M SGRAM	PCI=2 PCI/ISA=1 ISA=1 AGP=0	4 bays 3 used 1 empty	440BX Ethernet Windows NT 4.0 RTC CD	Sept 1998
☞ 6893-42U	4.5GB std (7200) 7.5ms / <b>Wide Ultra SCSI</b> 32X-14X CD-ROM / EIDE EIDE / Wide Ultra SCSI	Pentium II 450/100 MHz	None	512/512 225MHz in SEC ECC	64 / 768 SDRAM ECC	Matrox Millennm G200 AGP-2x Adapter 8/16M SGRAM	PCI=1 PCI/ISA=1 ISA=1 AGP=0	4 bays 3 used 1 empty	440BX Ethernet Windows NT 4.0 RTC CD	Sept 1998
☞ 6893-43U	10.1GB std (7200) 9.5ms / EIDE / ATA-33 32X-14X CD-ROM / EIDE EIDE	Pentium II 450/100 MHz	None	512/512 225MHz in SEC ECC	128/768 SDRAM ECC	Matrox Millennm G200 AGP-2x Adapter 8/16M SGRAM	PCI=2 PCI/ISA=1 ISA=1 AGP=0	4 bays 3 used 1 empty	440BX Ethernet Windows NT 4.0 RTC CD	Sept 1998
☞ 6893-44U	9.1GB std (7200) 7.5ms / <b>Wide Ultra SCSI</b> 32X-14X CD-ROM / EIDE EIDE / Wide Ultra SCSI	Pentium II 450/100 MHz	None	512/512 225MHz in SEC ECC	128/768 SDRAM ECC	Matrox Millennm G200 AGP-2x Adapter 8/16M SGRAM	PCI=1 PCI/ISA=1 ISA=1 AGP=0	4 bays 3 used 1 empty	440BX Ethernet Windows NT 4.0 RTC CD	Sept 1998
☞ 6893-48U for AAP	<i>no disk</i> 32X-14X CD-ROM / EIDE	Pentium II 450/100 MHz EIDE	None	512/512 225MHz in SEC ECC	64 / 768 SDRAM ECC	<i>None</i>	PCI=2 PCI/ISA=1 ISA=1 AGP=1	4 bays 2 used 2 empty	440BX Ethernet Open OS RTC CD	Sept 1998
☞ 6893-17U for AAP	<i>no disk</i> 32X-14X CD-ROM / EIDE	Pentium II 350/100 MHz EIDE	Pent II 400MHz, 450MHz	512/512 175MHz in SEC ECC	64 / 768 SDRAM ECC	<i>None</i>	PCI=2 PCI/ISA=1 ISA=1 AGP=1	4 bays 2 used 2 empty	440BX Ethernet Open OS RTC CD	Sept 1998

Windows NT Preload <sup>7</sup>	Supported Memory and Options	Ready to Configure CD-ROM <sup>7</sup>
Windows NT® Workstation 4.0 (SP3) Internet Explorer 4.0 install icon IBM Welcome Center Device drivers for each subsystem Ready to install: - ConfigSafe for Windows NT 4.0 - Norton AntiVirus for Windows NT - DMI Service Provider - DMI BIOS Instrumentation - IBM PC System Monitor Instrumentation - IBM AssetCare Serial Number Information IBM RTC CD-ROM Setup Utility IBM Utilities for Windows 95/NT 4.0 - Hummingbird "Try and Buy" Suite CD-ROM - Ready to Configure CD-ROM - Free license for Lotus SmartSuite 97 CD-ROM - IBM ViaVoice 98 Office Edition CD-ROM - Windows NT Workstation 4.0 CD-ROM - IBM Diagnostics CD-ROM - Access to IBM HomePage Creator  C: is 2GB as FAT16 Remainder is unformatted	32MB SDRAM ECC DIMM 100MHz 64MB SDRAM ECC DIMM 100MHz 128MB SDRAM ECC DIMM 100MHz 256 MB SDRAM ECC DIMM Registered IBM Netfinity 400MHz Pentium II/512KB IBM Netfinity 450MHz Pentium II/512KB Matrox Millennium G200 Graphics Adap Matrox Millennium II AGP Graphics Adap PERMEDIA 2A Graphics Accelerator 4.2 GB EIDE Deskstar 5 (ATA-33) 6.4 GB EIDE Deskstar 5 (ATA-33) 6.4 GB 7200 rpm EIDE disk 8.4 GB Deskstar 9.1 GB 7200 rpm EIDE disk 10.1GB 7200 rpm EIDE disk IBM Ultrastar 2ES 2.1 GB WU SCSI IBM Ultrastar 2ES 4.3 GB WU SCSI 4.5 GB Wide Ultra SCSI (7200 rpm) 9.1 GB Wide Ultra SCSI (7200 rpm) 10/100 PCI EtherJet Adapter WOL Auto Wake Token-Ring ISA Adapter PCI Token Ring Adapter WOL	All models ship with a CD with drivers for Windows® 95, 98, and NT 3.51 and 4.0 and various utilities. Includes: - Intel LANDesk® Client Manager - ConfigSafe - IBM Systems Management Tools  <div style="border: 1px solid black; padding: 5px;"> <b>WARRANTY SERVICE SUPPORT<sup>3</sup></b>                      ☞ 3 year parts warranty                      ☞ 1 year labor warranty                      ☞ International Warranty Service<sup>3</sup>                      ☞ 1st year: on site, 8 am - 5 pm,                      Mon - Fri coverage,                      2nd business day response time                      ☞ 2nd/3rd year: parts exchange only,                      call 1-800-772-2227                      ☞ On site warranty upgrade options:                      ① Next day, on site, Mon-Fri 8-5                      ② Same day, on site, 7 day x 24 hr                      ☞ Post warranty: on site options above                      ☞ IBM SystemXtra™                      ☞ 24 hour / 7 day telephone, bulletin                      board, fax, electronic, Internet                      (www.pc.ibm.com) support                 </div>
Ethernet = Intel® 10/100 ethernet chip; 10BaseT and 100BaseTX; Alert on LAN™ RTC CD = ReadyTo Configure CD-ROM Wide Ultra SCSI = Adaptec® AHA-2940UW PCI Adapter; single channel Wide Ultra SCSI ☞ = Models announced August 24, 1998		

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No warranties are expressed or implied in this summary

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# IBM IntelliStation™ E Pro (6893)

<b>IBM® IntelliStation™ E Pro</b>		<b>Desktop</b>	
Type-model	<b>6893-xxx</b>	<div style="border: 1px solid black; display: inline-block; padding: 2px;">diskette</div> <div style="border: 1px solid black; display: inline-block; padding: 2px; margin-left: 10px;">CD-ROM</div>	
Processor Implementation	<b>Intel® Pentium® II 350/100, 400/100, or 450/100MHz<sup>1</sup></b> Processor and L2 cache in Single Edge Cartridge (SEC) in Intel Slot 1 CPU connector / motherboard has one Slot 1	<div style="border: 1px solid black; display: inline-block; padding: 2px;">②</div> disk	
Processor upgrade Available date	No SMP / Pentium II 400/100MHz or Pentium II 450/100MHz September 1998	Bay ① 5.25", HH 1.6", access, CD-ROM Bay ② 5.25**SL 1", access, open Bay ③ 3.5", SL 1", no access, open or std disk Bay ④ 3.5", SL 1", access, std diskette	
L2 cache	<b>512KB std / 512KB max / ECC / half speed of CPU / integrated in SEC / 4 way set associative / write-back</b>	<b>** Brackets to convert to 3.5" available from AirSpeed with part number 01K5873 from 919-304-5000</b>	
Memory - std / max Mem - total sockets Mem - sockets used Mem - type (support) Memory - supported	<b>64 or 128MB / 768MB max / SDRAM / 100MHz / ECC / 3.3 volt</b> Three 168 pin gold-plated DIMM sockets / industry standard One DIMM used / PC100-compliant / hardware scrubbing ECC Non-parity or ECC (memory controller is Error Checking Correcting) 32, 64, 128 or 256MB ECC SDRAM DIMMs / only 256MB DIMMs are registered (buffered); can not mix registered with non-register	Slot 1: fullsize, 16-bit ISA Slot 2: fullsize, 16-bit ISA or 32 bit PCI 2.1 (5v) Slot 3: halfsize, 32-bit PCI 2.1 (5v) - SCSI adptr (some) Slot 4: halfsize, 32-bit PCI 2.1 (5v) Slot 5: fullsize, 32-bit AGP-2x - on motherboard, not riser <i>All systems stealth gray color</i>	
Graphics controller	<b>AAP models may include: Matrox® Millennium II (2D), Matrox Millennium G200 (2D/value 3D), Intergraph Intense 3D Pro 3400 (fast 3D), Intergraph Intense 3D Pro 3400 Geometry Accelerator (fastest 3D), 3DIabs® PERMEDIA® 2A (value 3D), or Appian J Pro (two connectors on adapter for multi-monitor)</b>		
Graphics - type Graphics - memory Graphics - features	<b>Millennium II / AGP-1x 266MB/s adpt</b> 8MB std / 16MB max / WRAM Sideband / split transactions 250MHz 64-bit RAMDAC / 16.7M colors Max resolution of 1920 x 1200	<b>Millennium G200 / AGP-2x 533MB/s adpt</b> 8MB std / 16MB max 128-bit SGRAM Sideband / split transactions 250 MHz RAMDAC / 16.7M colors Max 2D resolution of 1920x1200	<b>PERMEDIA 2A / AGP-1x 266MB/s adpt</b> 8MB std/max / 90MHz SGRAM Sideband / split transactions 230MHz RAMDAC / 16.7 mil colors Max resolution of 1600x1200
Disk controller	<b>Vary: None (AAP), one EIDE disk (Ultra DMA/33), or one Wide Ultra SCSI disk / all disks SMART and SMART Reaction™ Enhanced IDE busmaster on planar (PIIX4E) / 32-bit PCI 2.1 / Ultra DMA/33 and PIO modes 3, 4 / 2 IDE conn on riser</b> <b>SCSI models: Adaptec® AHA-2940UW UltraSCSI / PCI adapter supports one channel for 15 devices / 16-bit int, 8-bit int, and 16-bit ext connectors</b> <b>SCSI models: Three drop 16-bit SCSI cable</b> <b>All: One 2 drop IDE cable and one 1 drop IDE cable (1 drop cable attaches to CD)</b>		
Disk cable(s)			
Motherboard	<b>NLX motherboard / slides out w/o removing cables or adapters</b> riser contains rear I/O ports and IDE and diskette connectors PCI 2.1 (33MHz), AGP-2x (66MHz), and ISA slots (see side)		
Bus slots Architecture	<b>Intel 440BX AGPset / PIIX4E for EIDE, ISA Bridge, USB / AGP-2x</b> SMC FDC37C673 Super I/O for diskette, par, ser, kybd, mouse		
Serial/parallel ports Universal Serial Bus Diskette drive CD-ROM Audio Audio connectors	<b>Ser: Two 9 pin / 115Kbps / 16550A / non-DMA / Par: One (EPP, ECP) / IEEE 1284</b> Two USB ports / 1.5MB/sec (12Mbps) max speed 3.5" 1.44MB diskette drive 32X-14X <sup>4</sup> speed CD-ROM / CAV / ATAPI / bootable Crystal CS4235 chip on planar / stereo / ISA bus / FM Synthesis / int speaker Stereo line in / mic in / line out (all in back) / software volume control		
Ethernet controller	<b>Intel EtherExpress PRO/100B / PCI 82558 ethernet chip on planar / PCI bus</b> 10BaseT and 100BaseTX / RJ45 UTP connector / Wake on LAN™ / <b>Alert on LAN</b> LANClient Control Manager™ enabled / Wake on LAN / Setup on LAN / Flash on LAN / Hybrid RPL / DHCP/BOOTP / software image download		
LCCM	<b>National Semiconductor® LM80 compatible chip / monitors temperature, front fan speed and optional disk fan A, voltage (processor/pwr supply), cover removal</b>		
Systems mgmt cntrl			
Keyboard / Mouse Cooling fans Power supply	104 key (rubber dome) keyboard / keyboard extender / IBM 3 button mouse Two or three fans (pwr supply, processor, a third may be installed in disk area A) 145 watts / universal / manual switch / Wake on LAN support		
<div style="border: 1px solid black; padding: 5px;"> <b>All models:</b> Maximum internal SCSI disk capacity:            18.2GB with two 9.1GB 7200 rpm Wide Ultra SCSI disks  <b>All models:</b> Maximum internal EIDE disk capacity:            20.2GB with two 10.1GB EIDE disks         </div>			
<b>Alert on LAN™</b> - provides local or remote monitoring; immediate notification of system events such as chassis intrusion, disconnect, start up errors, even if powered off <b>Asset ID™ (RFID)<sup>2</sup></b> - uses radio frequency (RF) technology for deployment, inventory, and security; includes EEPROM that can be accessed via DMI software through network or an external RF link such as hand-held RF read/write units; theft protection <b>SMART Reaction™</b> - automatic backup of disk <b>PC 97 compliant</b> <b>DMI 2.0 compliant</b> with DMI manageability chip; includes MIF browser with DMI Service Layer 2.0, DMI BIOS 2.1, and DMI software <b>Wired for Management 1.1a</b> <b>Adv Config and Power Interface (ACPI) 1.0</b> PC-Doctor diagnostic software		Dual orientation with optional stand The Setup Utility resides in flash memory; invoked by pressing F1 key during memory POST <b>Plug-and-Play 1.0a</b> Vital Product Data support Desktop: 17.72"W x 17.72"D x 5.02" H; 450mm W x 450mm D x 128mm H; 22 to 25 lbs (10 to 11.4 kg) <b>Advanced Power Mgmt 1.2</b> ISO 9241-3 capable Several hardcopy publications 256KB IBM BIOS in flash memory <b>Power management features:</b> - Configurable levels for system, CPU, disk, and monitor including powering system and/or display off - Wake Up on Ring (via modem) from off state - Wake Up on Alarm (scheduled time) from off state - Wake on LAN (from LAN) from off state - PCI Wake Up (supported PCI devices)	
<div style="border: 1px solid black; padding: 5px; text-align: center;"><b>SECURITY</b></div> <ul style="list-style-type: none"> <li>- Chassis intrusion protection</li> <li>- Cover key lock</li> <li>- U-Bolt support</li> <li>- Secure fixed disk</li> <li>- Serial EEPROM with write protect</li> <li>- Power-on password</li> <li>- Admin password</li> <li>- Keyboard/mouse password</li> <li>- Wake on LAN password prompt</li> <li>- Boot sequence control</li> <li>- Boot without keyboard/mouse</li> <li>- Diskette boot inhibit</li> <li>- Disable mouse</li> <li>- Disable external SCSI port</li> <li>- Diskette write protect</li> <li>- Diskette and disk I/O control</li> <li>- Serial/parallel I/O control</li> <li>- Secure access openings (louvers)</li> <li>- Secure removable media</li> <li>- Data storage for LCCM function</li> <li>- Vital Product Data stored in EEPROM</li> <li>- Write protect control circuit for EEPROM</li> <li>- Barcode labels on most components</li> </ul> <p>Remotely readable DMI-compliant:</p> <ul style="list-style-type: none"> <li>- System EEPROM on motherboard (info and serial no for CPU, system unit, planar, power supply, empty fields); also can read/write with external RF unit</li> <li>- EEPROMs on DIMMs (component info, serial no)</li> <li>- Disk firmware (component info, serial no)</li> </ul> <p>Chassis enhancements:</p> <ul style="list-style-type: none"> <li>- Cover removed by two easy-lift tabs</li> <li>- Cover includes metal plate and connecting tabs for easier removal</li> <li>- Pivoting disk cage to access three right bays</li> <li>- Segmented cooling (power supply fan cools power supply and DASD bays; fan in front cools motherboard, processor, DIMMs, and adapters)</li> <li>- Metal monitor support bar to support monitor without sagging</li> </ul>			

# IBM IntelliStation™ M Pro models (Fall 1997)

Type-model	Disk: std (rpm) - max internal ms seek / disk interface CD-ROM interface Controllers	CPU MHz / Upgrade	Write-thru L2 cache std / max KB / KB	Memory in MB; std / max 66 MHz	SVGA controller; memory std / max	Bus slots P=PCI avail I=ISA avail A=AGP av	Total bays	Std features	Estimated Reseller Price*	Avail date
<b>6 slot x 6 bay; PCI/ISA/AGP; Stealth Gray</b>										
6898-10U	4.2GB <sup>2</sup> std (5400) - 27.3G 10ms/EIDE / ATA-33 24 x CD-ROM / EIDE EIDE / 2 x Wide Ultra SCSI	1 x Pentium® II 233/66 MHz	SMP via 2nd Pent II	512/512 117MHz in SEC Non-ECC	32 / 512 SDRAM ECC	3Dlabs® PERMEDIA® 2 AGP adapter 8 / 8 SGRAM	PCI=3 PCI/ISA=1 ISA=1 AGP=0	6 bays 3 used 3 empty	440LX UU/L/A/Eth Windows NT 4.0 RTC CD	\$2499 Nov 1997
6898-11U	4.2GB std (5400) - 27.3G 10ms / EIDE / ATA-33 24 x CD-ROM / EIDE EIDE / 2 x Wide Ultra SCSI	1 x Pentium II 266/66 MHz	SMP via 2nd Pent II	512/512 133MHz in SEC Non-ECC	64 / 512 SDRAM ECC	3Dlabs PERMEDIA 2 AGP Adapter 8 / 8 SGRAM	PCI=3 PCI/ISA=1 ISA=1 AGP=0	6 bays 3 used 3 empty	440LX UU/L/A/Eth Windows NT 4.0 RTC CD	2797♣ Nov 1997
6898-12U	6.4GB std (5400) - 27.3G 9.5ms / EIDE / ATA-33 24 x CD-ROM / EIDE EIDE / 2 x Wide Ultra SCSI	1 x Pentium II 300/66 MHz	SMP via 2nd Pent II	512/512 150MHz in SEC ECC	64 / 512 SDRAM ECC	3Dlabs PERMEDIA 2 AGP Adapter 8 / 8 SGRAM	PCI=3 PCI/ISA=1 ISA=1 AGP=0	6 bays 3 used 3 empty	440LX UU/L/A/Eth Windows NT 4.0 RTC CD	3079♣ Dec 1997
6898-13U	4.5GB std (7200) - 22.7G 9ms / <b>Wide Ultra SCSI</b> 24 x CD-ROM / EIDE EIDE / 2 x Wide Ultra SCSI	1 x Pentium II 300/66 MHz	SMP via 2nd Pent II	512/512 150MHz in SEC Non-ECC	128/512 SDRAM ECC	3Dlabs PERMEDIA 2 AGP Adapter 8 / 8 SGRAM	PCI=3 PCI/ISA=1 ISA=1 AGP=0	6 bays 3 used 3 empty	440LX UU/L/A/Eth Windows NT 4.0 RTC CD	3616♣, J an 1998
6898-14U	4.5GB std (7200) - 22.7G 9ms / <b>Wide Ultra SCSI</b> 24 x CD-ROM / EIDE EIDE / 2 x Wide Ultra SCSI	1 x Pentium II 300/66 MHz	SMP via 2nd Pent II	512/512 150MHz in SEC ECC	128/512 SDRAM ECC	Intergraph® Intense 3D/4T 16MB SDRAM 4MB SGRAM	PCI=2 PCI/ISA=1 ISA=1 AGP=1	6 bays 3 used 3 empty	440LX UU/L/A/Eth Windows NT 4.0 RTC CD	5085♣ Nov 1997
6898-18U for AAP	<i>no disk</i> 24 x CD-ROM / EIDE EIDE / 2 x Wide Ultra SCSI	1 x Pentium II 266/66	SMP via 2nd Pent II	512/512 133MHz Non-ECC	32/512 SDRAM ECC	<i>None</i>	PCI=3 PCI/ISA=1 ISA=1;A=1	6 bays 2 used 4 empty	440LX UU/L/A/Eth RTC CD	2740♣ Nov 1997
6898-19U for AAP	<i>no disk</i> 24 x CD-ROM / EIDE EIDE / 2 x Wide Ultra SCSI	1 x Pentium II 300/66	SMP via 2nd Pent II	512/512 150MHz ECC	32 / 512 SDRAM ECC	<i>None</i>	PCI=3 PCI/ISA=1 ISA=1;A=1	6 bays 2 used 4 empty	440LX UU/L/A/Eth RTC CD	2966♣ Nov 1997
☞ 6898-22U	6.4GB std (7200) - 27.3G 9.5ms / EIDE / ATA-33 24 x CD-ROM / EIDE EIDE / 2 x Wide Ultra SCSI	1 x Pentium II 333/66 MHz	SMP via 2nd Pent II	512/512 166MHz in SEC ECC	64 / 512 SDRAM ECC	3Dlabs PERMEDIA 2 AGP Adapter 8 / 8 SGRAM	PCI=3 PCI/ISA=1 ISA=1 AGP=0	6 bays 3 used 3 empty	440LX UU/L/A/Eth Windows NT 4.0 RTC CD	3418♣ Mar 1998
☞ 6898-24U	9.1GB <sup>2</sup> std (10,000) - 22.7G 8.2ms / <b>Wide Ultra SCSI</b> 24 x CD-ROM / EIDE EIDE / 2 x Wide Ultra SCSI	1 x Pentium II 333/66 MHz	SMP via 2nd Pent II	512/512 166MHz in SEC ECC	128/512 SDRAM ECC	Intergraph Intense 3D/4T 16MB SDRAM 4MB SGRAM	PCI=2 PCI/ISA=1 ISA=1 AGP=1	6 bays 3 used 3 empty	440LX UU/L/A/Eth Windows NT 4.0 RTC CD	5961♣ Mar 1998
☞ 6898-28U for AAP	<i>no disk</i> 24 x CD-ROM / EIDE EIDE / 2 x Wide Ultra SCSI	1 x Pentium II 333/66	SMP via 2nd Pent II	512/512 166MHz ECC	64 / 512 SDRAM ECC	<i>None</i>	PCI=3 PCI/ISA=1 ISA=1;A=1	6 bays 2 used 4 empty	440LX UU/L/A/Eth RTC CD	3334♣ Mar 1998

### Windows NT Preload

Windows NT® Workstation 4.0 (SP3)  
Windows Internet Explorer 3.02  
Microsoft NetMeeting  
ConfigSafe for Windows NT 4.0  
IBM AntiVirus for Windows NT  
IBM ClientCare Setup  
- DMI Service Provider  
- DMI BIOS Instrumentation  
- IBM PC System Monitor Instrumentation  
- IBM AssetCare Serial Number Information  
IBM RTC CD-ROM Setup Utility  
IBM Product Registration  
IBM Utilities for Windows 95/NT 4.0  
Online Books  
Device drivers for each subsystem

- Hummingbird "Try and Buy" Suite CD-ROM
- Exceed 5.1.3
- Exceed 3D 5.1.3
- NFS Maestro Solo 5.1.3
- Intel LANDesk 3.0 for Windows NT CD-ROM
- Internet Explorer 4.0 CD-ROM
- Ready to Configure CD-ROM
- Free license for Lotus SmartSuite 97 CD-ROM
- Windows NT Workstation 4.0 CD-ROM
- Access to IBM HomePage Creator

### Ready to Configure CD-ROM<sup>7</sup>

All models ship with a CD with drivers for OS/2, Windows® 95, and Windows NT and various utilities.  
Includes:  
- ConfigSafe for NT 4.0  
- Client Services for Netfinity 5.0  
- IBM VoiceType Simply Speaking Gold 3.5  
- PC-Doctor for Windows NT 2.0.121  
- Tivoli Lightweight Client Framework  
- Diskette Factory  
- Device drivers for each subsystem  
- Utilities and applications on NT preload

### Supported Memory and Options

32MB SDRAM ECC DIMM	04K0073
64MB SDRAM ECC DIMM	04K0074
128MB SDRAM ECC DIMM	04K0075
256MB EDO ECC DIMM	76H0269
Adaptec ARO-1130CA PCI RAIDport	Adaptec
233MHz Pentium II	Retail
266MHz Pentium II	Retail
Netfinity 300MHz Pentium II	10L5886
Netfinity 333MHz Pentium II	01K8025
Intergraph Intense3D Pro2200/GA Geometry Accelerator	Retail

### Open Bay

Open bay model contains no hard disk. No preload or operating system license is included.  
- Hummingbird "Try and Buy" Suite CD-ROM  
- Exceed 5.1.3  
- Exceed 3D 5.1.3  
- NFS Maestro Solo 5.1.3  
- Intel LANDesk 3.0 for Windows NT CD-ROM  
- Ready to Configure CD-ROM  
- Free license for Lotus SmartSuite 97 CD-ROM (via 800 number)

### WARRANTY SERVICE SUPPORT

- ☞ 3 year parts warranty<sup>3</sup>
- ☞ 1 year labor warranty
- ☞ International Warranty Service<sup>3</sup>
- ☞ 1st year: on site, 8 am - 5 pm, Mon - Fri coverage, 2nd business day response time
- ☞ 2nd/3rd year: parts exchange only, call 1-800-772-2227
- ☞ On site warranty upgrade options:
  - ① Next day, on site, Mon-Fri 8-5
  - ② Same day, on site, 7 day x 24 hr
- ☞ Post warranty: on site options above
- ☞ IBM SystemXtra™
- ☞ 24 hour / 7 day telephone, bulletin board, fax, electronic, Internet (www.pc.ibm.com) support

A = CS4236 FM synthesis audio chip  
Eth = Intel 10/100 ethernet chip; 10BaseT and 100BaseTX  
L = LAN Client Control Manager (LCCM) enabled  
NT4 = Windows NT Workstation 4.0 preinstalled  
RTC CD = ReadyTo Configure CD-ROM  
UU = Two Universal Serial Bus (USB) port  
Wide Ultra SCSI = Adaptec AHA-7895; dual channel Wide Ultra SCSI  
☞ = Models announced February 24, 1998; ♣ = Price decrease effective April 27, 1998

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\* Prices are estimated reseller prices and subject to change without notice; actual prices may vary

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# IBM IntelliStation™ M Pro (Fall 1997)

## IBM® IntelliStation™ M Pro

Type (code name)	<b>6898</b>		
Processor(s)	<b>Intel® Pentium® II 233/66, 266/66, 300/66, or 333MHz<sup>1</sup> / MMX™ technology / 16KB ins + 16KB data L1 cache</b>		
Implementation	Processor and L2 cache in <b>Single Edge Contact (SEC)</b> cartridge in protective metal case / SEC plugged into Intel Slot 1		
Processor upgrade	<b>SMP</b> via second identical processor / upgrade via SEC into motherboard Intel® Slot 1 CPU connector / MPS 1.4		
L2 cache	<b>512KB</b> std / 512KB max / non-ECC for 233, 266MHz; ECC for 300, 333MHz / 1/2 speed of processor / integrated in SEC		
Available date	November 1997, December 1997, or January 1998		
Mem - std / max / type	<b>32MB, 64MB, or 128MB</b> std / 512MB max / <b>Error Checking and Correction (ECC)</b>		
Memory - sockets	4 sockets / 3 available (all have Error Checking and Correcting memory controller)		
Memory - features	SDRAM / 66MHz / four 168 pin gold-plated DIMM 3.3 volt sockets / DIMMs can have a max height of 2.5"		
Memory - support	Supports SDRAM ECC DIMMs (32,64,128MB) or EDO ECC DIMMs (256MB) / can not mix EDO and SDRAM DIMMs		
Graphics controller	<b>3Dlabs® Permedia® 2, Intergraph® Intense 3D Pro2200/4T,</b> (or Intergraph Intense 3D Pro2200/GA for AAP models)		
Graphics - type	<b>3Dlabs / Permedia 2 / 2D/3D acc / AGP-1x 266MB/s adapter</b>	<b>Intense 3D Pro2200/4T / 2D/3D accelerator / PCI adapter</b>	
Graphics - memory	8MB std/max SGRAM / 230MHz RAMDAC / sideband address	16MB SDRAM buffer and 4MB SGRAM texture memory	
Graphics - features	VESA DPMS, DDC1, DDC2B / 64-bit OpenGL, Direct3D, 3D Studio MAX, QuickDraw 3D, DirectDraw Color space conversion / XY scaling / chroma-keying Texture mapping / 3D rendering / z buffering	VESA DPMS, DDC2B / onboard VGA / fogging OpenGL, Direct3D, QuickDraw 3D, DirectDraw Color space conversion / alpha blending / 32-bit textures Hardware accelerated 3D gouraud shading and Z buffering	
Bus slots	PCI 2.1 (33MHz), Accelerated Graphics Port (66MHz; AGP-2x; 533MB/sec), and ISA slots (8.33MHz) / see below		
Architecture - chip set	<b>Intel 440LX</b> AGPset / <b>PIIX4</b> for EIDE (Ultra DMA/33), ISA Bridge, USB / National Semiconductor PC87307 Super I/O for diskette, parallel, serial, keyboard, mouse		
Disk	<b>None, 4.2GB<sup>2</sup> or 6.4GB EIDE (Ultra DMA/33), or 4.5GB or 9.1GB Wide Ultra SCSI<sup>6</sup> / SMART</b>		
SCSI controller	<b>Adaptec® AHA-7895 / dual channel Wide UltraSCSI controller / on planar / PCI 2.1</b>		
SCSI connectors	<i>Channel A:</i> 68 pin (attaches 4 drop cable to SCSI disk); <i>Channel B:</i> 50 pin and 68 pin / 68 pin cable std to external SCSI port (all mod)		
RAID option	Supports Adaptec ARO™-1130CA PCI RAIDport™ adapter (RAID 0, 1) / installs in PCI slot / uses 7895 controller and connectors		
Cables - SCSI and IDE	<i>SCSI model:</i> 4 drop 16-bit cable on Channel A; 16-bit cable to ext port on Channel B; one 2 drop IDE cable (CD-ROM) <i>EIDE and AAP models:</i> Two 2 drop IDE cables (one for disk; one for CD-ROM) and both SCSI cables		
EIDE disk controller	Enhanced IDE busmaster (PIIX4) / Ultra DMA/33 (ATA-33) support / two connectors on planar		
CD-ROM	<b>24X<sup>4</sup> max CD-ROM / CAV (ATAPI) / bootable</b>		
Diskette drive	3.5" 1.44MB diskette drive / 1 drop cable		
Ethernet controller	<b>Intel EtherExpress PRO/100B / PCI 82557</b> ethernet chip on planar / 10BaseT and 100BaseTX / PCI bus / RJ45 UTP connector / Wake-on-LAN		
Wake-on-LAN	Standard on all models with integrated ethernet controller		
LCCM	LAN Client Control Manager enabled / Wake-on-LAN / Setup-on-LAN / POST/BIOS update over LAN / Hybrid RPL / DHCP/BOOTP		
Systems mgmt cntrl	<b>National Semiconductor® LM78 compatible / hardware chip to monitor temperature, front fan speed, voltage, system cover removal / ISA</b>		
Audio	Crystal CS4236B chip on planar / stereo / ISA bus / FM Synthesis / int speaker		
Audio connectors	Stereo line in / mic in / line out (all in back) / software volume control		
Serial / parallel / USB	<i>Ser:</i> Two 9 pin / 115Kbps <i>Par:</i> One (EPP, ECP) / IEEE 1284 <i>USB:</i> Two ports		
Infrared	None		
Preloaded software <sup>7</sup>	<b>N/A</b> (if no disk), or <b>Windows NT® Workstation 4.0</b> All include Ready to Configure CD-ROM (device drivers and utilities) All include Windows NT Workstation 4.0 CD-ROM		
Keyboard / Mouse	104 key (rubber dome) keyboard / keyboard extender / IBM 3 button mouse		
Power supply	330 watts / universal / manual switch / Power Factor Corrected / Wake-on-LAN		
CD-ROM	Bay ① 5.25", HH 1.6", access, std CD-ROM		
②	Bay ② 5.25", HH 1.6", access, open		
③	Bay ③ 3.5", SL 1", access, open		
④	Bay ④ 3.5", SL 1", access, std diskette		
diskette	Bay ⑤ 3.5", SL 1", no access, open (disk only)		
⑥	Bay ⑥ 3.5", SL 1", no access, std disk (disk only)		
⑤	Slot 1: fullsize, 32-bit AGP (3.3v) - used by Permedia 2 adapter (some models)		
disk	Slot 2: fullsize, 32-bit PCI 2.1 (3.3v/5v) - supports optional Adaptec RAIDport 1130CA		
	Slot 3: fullsize, 32-bit PCI 2.1 (3.3v/5v) - used by Intergraph 3D (some models)		
Mini tower mechanical;	Slot 4: fullsize, 32-bit PCI 2.1 (3.3v/5v)		
Stealth gray color	Slot 5: fullsize, 16-bit ISA or 32-bit PCI 2.1 (3.3v/5v)		
	Slot 6: fullsize, 16-bit ISA		
<b>3Dlabs PERMEDIA GRAPHICS MODES (2D)</b>			
<b>Resolution</b>	<b>Frame Rate Hz (non-interlaced)</b>	<b>Memory required</b>	<b>Max colors</b>
640x480	60 to 100Hz	N/A	16.7 mil
800x600	60 to 100Hz	N/A	16.7 mil
1024x768	60 to 100Hz	N/A	16.7 mil
1152x870	60 to 100Hz	N/A	16.7 mil
1280x1024	60 to 100Hz	N/A	16.7 mil
1600x1200	60 to 75Hz	N/A	16.7 mil
<b>INTERGRAPH GRAPHICS MODES (2D)</b>			
640x480	60 I, 60, 72, 75, 85	N/A	16.7 mil
800x600	60 I, 60, 72, 75, 85	N/A	16.7 mil
1024x768	60 I, 60, 72, 75, 85	N/A	16.7 mil
1152x864	60 I, 60, 72, 75, 85	N/A	16.7 mil
1280x960	60 I, 60, 75	N/A	16.7 mil
1280x1024	60 I, 60, 75	N/A	16.7 mil
<b>OTHER STANDARD FEATURES</b>			
The Setup Utility resides in flash memory; invoked by pressing F1 key during memory POST			
Plug-and-Play 1.0a			
Vital Product Data support (type, model, serial, id)			
7.87"W x 17.52"D x 19.37"H; 33 lbs			
200 mm W x 445 mm D x 492 mm H; 15 kg			
Advanced Power Mgmt 1.2; ISO 9241-3 capable			
<b>Adv Config and Power Interface (ACPI)</b> support			
Several hardcopy publications			
256KB SurePath™ BIOS (Flash over LAN support)			
Support for DMI technology (includes MIF browser) with DMI Service Layer 2.0, DMI BIOS 2.0, and DMI software; <b>DMI 2.0 compliant</b>			
Supplier's Declaration available			
Wired for Management 1.0 compliant			
<b>SECURITY</b>			
- Chassis-intrusion detection			
- Cover key lock (in rear)			
- U-Bolt support			
- Power-on password			
- Admin passwd (in security EEPROM)			
- Boot sequence control (in security EEPROM on motherboard)			
- Diskette boot inhibit			
- Boot without keyboard/mouse/diskette			
- Diskette write protect			
- Diskette and disk I/O control			
- Serial/parallel I/O control			
- Unattended start-up (network)			
- Secure removable media			
- Wake-up on LAN (Dual Mode)			
- Mouse disable			
- Laser-etched 22 digit serial number on processor and memory (stored in EEPROMs)			
- Barcode labels on most components (match laser-etched and EEPROM serial numbers)			
Remotely readable DMI-compliant:			
- System EEPROM on motherboard (info and serial no for CPU, riser, system unit, CD-ROM, diskette, five blank fields)			
- EEPROMs on DIMMs (component info, serial no)			
- Disk firmware (component info, serial no)			
<i>Maximum internal SCSI disk capacity:</i> 22.7GB (2 x 9.1GB plus 1 x 4.5GB)			
<i>Maximum internal ESDI disk capacity:</i> 27.3GB (3 x 9.1GB)			
Power and System management features:			
- Three configurable levels for system, CPU, and monitor including powering system and/or display off			
- Wake Up on Ring (via modem) from off state			
- Wake Up on Alarm (scheduled time) from off state			
- Wake-on-LAN from off state			
- PCI Wake Up from supported PCI devices			

# IBM IntelliStation™ M Pro models - Spring 1998 (6889)

Type-model	Std disk (rpm) ms seek / disk interface CD-ROM / interface	CPU MHz / Upgrade	Write-back L2 cache std / max KB / KB	Memory in MB; std / max 100MHz	SVGA controller; memory std / max	Bus slots P=PCI avail PCI/ISA=av A=AGP av	Total bays	Std features	Estimated Reseller Price*	Avail date
<b>6 slot x 6 bay; PCI/ISA/AGP; Stealth Gray</b>										
6889-10U	6.4GB <sup>2</sup> std (7200) 9.5ms / EIDE / ATA-33 32X-14X <sup>4</sup> CD-ROM / EIDE	1 x Pentium® II 350/100	SMP via 2nd Pent II	512/512 175MHz in SEC	64 / 1G SDRAM ECC	Millennium II AGP adapter 8 / 16 WRAM	PCI=4 PCI/ISA=1 AGP=0	6 bays 3 used 3 empty	440BX A/Eth Windows NT 4.0	\$ 2910 <sup>♣</sup> May 1998
6889-11U	9.1GB <sup>8</sup> std (7200) 9.5ms / EIDE / ATA-33 32X-14X CD-ROM / EIDE	1 x Pentium II 400/100	SMP via 2nd Pent II	512/512 200MHz in SEC	64 / 1G SDRAM ECC	Millennium II AGP Adapter 8 / 16 WRAM	PCI=4 PCI/ISA=1 AGP=0	6 bays 3 used 3 empty	440BX A/Eth Windows NT 4.0	3277 <sup>♣</sup> May 1998
6889-13U	9.1GB std (7200) 7.5ms / <b>Wide Ultra SCSI</b> 32X-14X CD-ROM / EIDE	1 x Pentium II 400/100	SMP via 2nd Pent II	512/512 200MHz in SEC	64 / 1G SDRAM ECC	Millennium II AGP Adapter 8 / 16 WRAM	PCI=4 PCI/ISA=1 AGP=0	6 bays 3 used 3 empty	440BX A/Eth Windows NT 4.0	3503 <sup>♣</sup> May 1998
6889-14U	9.1GB std (7200) 7.5ms / <b>Wide Ultra SCSI</b> 32X-14X CD-ROM / EIDE	1 x Pentium II 400/100	SMP via 2nd Pent II	512/512 200MHz in SEC	128/1G SDRAM ECC	Intense 3400 PCI Adapter 32/32 SDRAM	PCI=3 PCI/ISA=1 AGP=1	6 bays 3 used 3 empty	440BX A/Eth Windows NT 4.0	5255 <sup>♣</sup> May 1998
6889-15U	9.1GB std (7200) 9.5ms / EIDE / ATA-33 32X-14X CD-ROM / EIDE	1 x Pentium II 400/100	SMP via 2nd Pent II	512/512 200MHz in SEC	128/1G SDRAM ECC	PERMEDIA 2A AGP Adapter 8/8M SGRAM	PCI=4 PCI/ISA=1 AGP=0	6 bays 3 used 3 empty	440BX A/Eth Windows NT 4.0	3503 <sup>♣</sup> July 1998
6889-16U	9.1GB std (7200) 7.5ms / <b>Wide Ultra SCSI</b> 32X-14X CD-ROM / EIDE	1 x Pentium II 400/100	SMP via 2nd Pent II	512/512 200MHz in SEC	128/1G SDRAM ECC	PERMEDIA 2A AGP Adapter 8/8M SGRAM	PCI=4 PCI/ISA=1 AGP=0	6 bays 3 used 3 empty	440BX A/Eth Windows NT 4.0	3729 <sup>♣</sup> July 1998
6889-18U for AAP	<i>no disk</i> 32X-14X CD-ROM / EIDE EIDE / 2x Wide Ultra SCSI	1 x Pentium II 350/100	SMP via 2nd Pent II	512/512 175MHz ECC	64 / 1G SDRAM ECC	<i>None</i>	PCI=4 PCI/ISA=1 AGP=1	6 bays 2 used 4 empty	440BX A/Eth	AAP May 1998
6889-19U for AAP	<i>no disk</i> 32X-14X CD-ROM / EIDE EIDE / 2x Wide Ultra SCSI	1 x Pentium II 400/100	SMP via 2nd Pent II	512/512 200MHz ECC	64 / 1G SDRAM ECC	<i>None</i>	PCI=4 PCI/ISA=1 AGP=1	6 bays 2 used 4 empty	440BX A/Eth	AAP May 1998
6889-50U for AAP	<i>no disk</i> 32X-14X CD-ROM / EIDE EIDE / 2x Wide Ultra SCSI	<i>No CPU</i>	SMP via 2nd Pent II	512/512 <i>varies</i> ECC	0 / 1G SDRAM ECC	<i>None</i>	PCI=4 PCI/ISA=1 AGP=1	6 bays 2 used 4 empty	440BX A/Eth	AAP Jun 1998
☞ 6889-24U	4.5GB std (7200) 9ms / <b>Wide Ultra SCSI</b> 32X-14X CD-ROM / EIDE	1 x Pentium II 400/100	SMP via 2nd Pent II	512/512 200MHz in SEC	128/1G SDRAM ECC	Millennium II AGP Adapter 8 / 16 WRAM	PCI=4 PCI/ISA=1 AGP=0	6 bays 3 used 3 empty	440BX A/Eth Windows NT 4.0	3503 July 1998
☞ 6889-25U	4.5GB std (7200) 9ms / <b>Wide Ultra SCSI</b> 32X-14X CD-ROM / EIDE	<b>SMP via 2 x</b> Pentium II 400/100	<i>None</i>	512/512 200MHz in SEC	128/1G SDRAM ECC	Millennium II AGP Adapter 8 / 16 WRAM	PCI=4 PCI/ISA=1 AGP=0	6 bays 3 used 3 empty	440BX A/Eth Windows NT 4.0	4803 July 1998
☞ 6889-27U	9.1GB std (10K) 8.5ms / <b>Wide Ultra SCSI</b> 32X-14X CD-ROM / EIDE	1 x Pentium II 400/100	SMP via 2nd Pent II	512/512 200MHz in SEC	256/1G SDRAM ECC	Intense 3400 <b>+ Geo Acceler</b> 32/32 SDRAM	PCI=2 PCI/ISA=1 AGP=1	6 bays 3 used 3 empty	440BX A/Eth Windows NT 4.0	9294 July 1998
☞ 6889-29U	9.1GB std (7200) 7.5ms / <b>Wide Ultra SCSI</b> 32X-14X CD-ROM / EIDE	1 x Pentium II 400/100	SMP via 2nd Pent II	512/512 200MHz in SEC	256/1G SDRAM ECC	Millennium II AGP Adapter 8 / 16 WRAM	PCI=3 PCI/ISA=1 AGP=0	6 bays 3 used 3 empty	440BX A/Eth Windows NT 4.0	4520 July 1998
☞ 6889-30U	9.1GB std (7200) 7.5ms / <b>Wide Ultra SCSI</b> 32X-14X CD-ROM / EIDE	1 x Pentium II 400/100	SMP via 2nd Pent II	512/512 200MHz in SEC	256/1G SDRAM ECC	Intense 3400 PCI Adapter 32/32 SDRAM	PCI=4 PCI/ISA=1 AGP=1	6 bays 3 used 3 empty	440BX A/Eth Windows NT 4.0	6046 July 1998
☞ 6889-90U	9.1GB std (7200) 7.5ms / <b>Wide Ultra SCSI</b> 32X-14X CD-ROM / EIDE	1 x Pentium II 400/100	SMP via 2nd Pent II	512/512 200MHz in SEC	256/1G SDRAM ECC	Millennium II AGP Adapter 8 / 16 WRAM	PCI=4 PCI/ISA=1 AGP=0	6 bays 3 used 3 empty	440BX A/Eth Windows NT 4.0	4850 July 1998

## Windows NT Preload<sup>7</sup>

Windows NT® Workstation 4.0 (SP3)  
Windows Internet Explorer 4.0 install icon  
Ready to install:  
- ConfigSafe for Windows NT 4.0  
- IBM AntiVirus for Windows NT  
- DMI Service Provider  
- DMI BIOS Instrumentation  
- IBM PC System Monitor Instrumentation  
- IBM AssetCare Serial Number Information  
IBM RTC CD-ROM Setup Utility  
IBM Utilities for Windows 95/NT 4.0  
- Hummingbird "Try and Buy" Suite CD-ROM  
- Intel LANdesk 3.0 for Windows NT CD-ROM  
- Ready to Configure CD-ROM  
- Free license for Lotus SmartSuite CD-ROM  
- Windows NT Workstation 4.0 CD-ROM  
- Access to IBM HomePage Creator

## Supported Memory and Options

32MB SDRAM ECC DIMM 100MHz 01K1133  
64MB SDRAM ECC DIMM 100MHz 01K1130  
128MB SDRAM ECC DIMM 100MHz 01K1131  
256MB SDRAM ECC DIMM (registered) 01K1132  
Adaptec ARO-1130 CA-B PCI RAIDport Adap1681100  
IBM Netfinity 350 MHz Pentium II 10L5883  
IBM Netfinity 400 MHz Pentium II 10L5884  
Matrox Millennium II AGP Graphics Ad 02K3459  
Intergraph Intense 3D Pro 3400 02K3460  
Intergraph Intense 3D Pro 3400 GA 02K3461  
Geometry Accelerator

## WARRANTY SERVICE SUPPORT

- ⇒ 3 year parts warranty<sup>3</sup>
- ⇒ 1 year labor warranty
- ⇒ International Warranty Service<sup>3</sup>
- ⇒ 1st year: on site, 8 am - 5 pm, Mon - Fri coverage, 2nd business day response time
- ⇒ 2nd/3rd year: parts exchange only, call 1-800-772-2227
- ⇒ On site warranty upgrade options:
  - ① Next day, on site, Mon-Fri 8-5
  - ② Same day, on site, 7 day x 24 hr
- ⇒ Post warranty: on site options above
- ⇒ IBM SystemXtra™
- ⇒ 24 hour / 7 day telephone, bulletin board, fax, electronic, Internet (www.pc.ibm.com) support

A = CS4235 FM synthesis audio chip  
Eth = Intel 10/100 ethernet chip; 10BaseT and 100BaseTX; Alert on LAN  
NT4 = Windows NT Workstation 4.0 preinstalled  
Wide Ultra SCSI = Adaptec AHA-7895; dual channel Wide Ultra SCSI  
♣ = Price decrease effective July 21, 1998  
☞ = Announced July 21, 1998 (previous models announced April 15, 1998)

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No warranties are expressed or implied in this summary  
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\* Prices are estimated reseller prices and subject to change without notice; actual prices may vary

# IBM IntelliStation™ M Pro - Spring 1998 (6889)

## IBM® IntelliStation™ M Pro

Type	<b>6889</b>		
Processor(s)	<b>One or two Intel® Pentium® II 350/100MHz or 400/100MHz<sup>1</sup> / MMX™ technology / 16KB ins + 16KB data L1 cache</b>		
Implementation	<b>Processor and L2 cache in <b>Single Edge Contact (SEC)</b> cartridge in protective metal case / SEC plugged into Intel Slot 1</b>		
Processor upgrade	<b>SMP</b> via second identical processor / upgrade via SEC into motherboard Intel® Slot 1 CPU connector / MPS 1.4		
L2 cache	<b>512KB std / 512KB max / ECC / 1/2 speed of processor / 4 way set associative / write-back / integrated in SEC</b>		
Available date	May 1998 or July 1998		
Mem - std / max / type	<b>0MB (AAP), 64MB, 128MB, or 256MB std / 1GB max / Error Checking and Correction (ECC)</b>		
Memory - sockets	4 sockets / 3 available (all have Error Checking and Correcting memory controller) / Model 90U uses two 128MB DIMMs		
Memory - features	<b>SDRAM / 100MHz</b> / four 168 pin gold-plated DIMM 3.3 volt sockets / PC100-compliant / hardware scrubbing of ECC errors		
Memory - support	Supports SDRAM ECC DIMMs (32,64,128, 256MB) / only 256MB DIMMs are registered (buffered); can not mix reg/non-reg		
Graphics controller	<b>Matrox® Millennium II (2D), 3Dlabs® PERMEDIA® 2A (entry 3D), Intergraph® Intense 3D Pro 3400 (advanced 3D, or Intergraph Intense 3D Pro 3400/Geometry Accelerator (ultimate 3D))</b>		
Graphics - type	<b>Millennium II / AGP-1x 266MB/s adaptor</b>	<b>PERMEDIA 2A / AGP-1x 266MB/s adaptor</b>	<b>Intense 3D Pro 3400 / PCI adaptor</b>
Graphics - memory	8MB std / 16MB max / WRAM	8MB std/max / 90MHz SGRAM	16MB frame buffer and 16M texture mem
Graphics - features	Baseline / no sideband or split transacts 250MHz 64-bit RAMDAC / 16.7M colors Max resolution of 1920 x 1200	Sideband / split transactions 230MHz RAMDAC / 16.7 mil colors Max resolution of 1600x1200	32MB std / 32MB max / 170 MHz SDRAM Optional or std Geo Accelerator available Max resolution of 1280x1024 at 85Hz
Architecture - chip set	<b>Intel 440BX</b> AGPset / <b>PIIX4E</b> for EIDE (Ultra DMA/33), ISA Bridge, USB / <b>Adaptec® AHA-7895</b>		
Bus slots	National Semiconductor <b>PC87307 Super I/O</b> for diskette, parallel, serial, keyboard, mouse PCI 2.1 (33MHz), Accelerated Graphics Port (66MHz; AGP-2x; 533MB/sec), and ISA slots (8.33MHz) / see below		
Disk	None (AAP models), one EIDE (Ultra DMA/33), or one Wide Ultra SCSI / SMART		
SCSI controller	<b>Adaptec® AHA-7895 / dual channel Wide Ultra SCSI controller</b> / on motherboard / PCI 2.1		
SCSI connectors	<i>Channel A:</i> 68 pin (attaches 4 drop cable to SCSI disk); <i>Channel B:</i> 50 pin and 68 pin / 68 pin cable std to external SCSI port (all mod)		
RAID option	Supports Adaptec ARO™-1130 PCI RAIDport™ adaptor (RAID 0,1) / installs in PCI slot / uses 7895 controller and connectrs		
Cables - SCSI and IDE	<i>SCSI and AAP models:</i> 4 drop 16-bit cable on Chan A; 16-bit cable to ext port on Chan B; one 2 drop IDE cable (CD-ROM) <i>EIDE models:</i> Two 2 drop IDE cables (one for disk; one for CD-ROM) and SCSI cable to external SCSI port		
EIDE disk controller	Enhanced IDE busmaster (PIIX4E) / Ultra DMA/33 (ATA-33) support / two connectors on planar		
CD-ROM	<b>32X-14X<sup>4</sup> CD-ROM</b> / CAV (ATAPI) / bootable		<b>SECURITY</b>
Diskette drive	3.5" 1.44MB diskette drive / 1 drop cable		
Ethernet controller	<b>Intel EtherExpress PRO/100B</b> / PCI 82558 ethernet chip on planar / PCI bus 10BaseT and 100BaseTX / RJ45 UTP connector / Wake on LAN / Alert on LAN		
LCCM support	LANClient Control Manager™ enabled / Wake on LAN™ / Setup over LAN / Hybrid RPL / DHCP/BOOTP / software image download		
Systems mgmt cntrl	<b>National Semiconductor® LM81 compatible / hardware chip to monitor temperature, fan speeds, voltage, system cover removal / I2C</b>		
Audio	Crystal CS4235 chip on planar / stereo / ISA bus / FM Synthesis / int speaker		
Audio connectors	Stereo line in / mic in / line out (all in back) / software volume control		
Microphone	<b>Headset with microphone</b>		
Serial / parallel / USB	<i>Ser:</i> Two 9 pin / 115Kbps <i>Par:</i> One (EPP, ECP) / IEEE 1284 <i>USB:</i> Two ports		
Preloaded software <sup>7</sup>	<b>N/A</b> (if no disk AAP model), or <b>Windows NT Workstation 4.0 (SP3)</b> All include Ready to Configure CD-ROM (device drivers and utilities) All include Windows NT Workstation 4.0 CD-ROM		
Keyboard / Mouse	104 key (rubber dome) keyboard / keyboard extender / IBM 3 button mouse		
Power supply	330 watts / universal / auto-sensing / Wake on LAN		
	Bay ① 5.25", HH 1.6", access, std CD-ROM Bay ② 5.25", HH 1.6", access, open Bay ③ 3.5", SL 1", access, open Bay ④ 3.5", SL 1", access, std diskette Bay ⑤ 3.5", SL 1", no access, open (disk only) } or Half Bay ⑥ 3.5", SL 1", no access, std disk (disk only) } Height		Remotely readable DMI-compliant: - System EEPROM on motherboard (info and serial no for CPU, riser, system unit, CD-ROM, diskette, empty blank fields); also can read/write with external RF unit - EEPROMs on DIMMs (component info, serial no) - Disk firmware (component info, serial no)
Mini tower; Stealth gray color	Slot 1: fullsize, 32-bit AGP (3.3v) - used by AGP graphics adaptor (some models) Slot 2: fullsize, 32-bit PCI 2.1 (3.3v/5v) - supports optional Adaptec RAIDport Slot 3: fullsize, 32-bit PCI 2.1 (3.3v/5v) - used by PCI graphics adaptor (some models) Slot 4: fullsize, 32-bit PCI 2.1 (3.3v/5v) - used by Geometry Accelerator (some mdl) Slot 5: fullsize, 32-bit PCI 2.1 (3.3v/5v) Slot 6: fullsize, 16-bit ISA or 32-bit PCI 2.1 (3.3v/5v)		
<b>Alert on LAN™</b> - provides local or remote monitoring; immediate notification of system events such as chassis intrusion, disconnect, start up errors, even if powered off <b>Asset ID (RFID)<sup>5</sup></b> - uses radio frequency (RF) technology for deployment, inventory, and security; includes EEPROM that can be accessed via DMI software through network or an external RF link such as hand-held RF read/write units; theft protection <b>SMART Reaction™</b> - automatic backup of disk <b>PC 97 compliant</b> <b>DMI 2.0 compliant</b> with DMI manageability chip <b>Wired for Management 1.1a</b> <b>Adv Config and Power Interface (ACPI) 1.0</b> <b>IBM Performance Enhancement Program</b> - initially distributed via Internet	<b>OTHER STANDARD FEATURES</b>		
	The Setup Utility resides in flash memory; invoked by pressing F1 key during memory POST Advanced Power Mgmt 1.2 Support for DMI technology (includes MIF browser) with DMI Service Layer 2.0, DMI BIOS 2.1, and DMI software; DMI 2.0 compliant Plug-and-Play 1.0a ISO 9241-3 capable Vital Product Data support (type, model, serial, id) 7.87"W x 17.52"D x 19.37"H; 38 lbs max (shipped) 200 mm W x 445 mm D x 492 mm H; 17.3 kg Several hardcopy publications; four stabilizing feet 512KB IBM BIOS (Flash over LAN support) Supplier's Declaration available Four fans (three in system and one in power supply)		<b>Maximum internal SCSI disk capacity:</b> 63.7GB (3 x 18.2GB (7200 rpm) plus 1 x 9.1GB (7200 rpm)); if no CD-ROM <b>Maximum internal EIDE disk capacity:</b> 27.3GB (3 x 9.1GB) <b>Power management features:</b> - Configurable levels for system, CPU, and monitor including powering system and/or display off - Wake Up on Ring (via modem) from off state - Wake Up on Alarm (scheduled time) from off state - Wake-on-LAN from off state - PCI Wake Up from supported PCI devices

# IBM IntelliStation™ M Pro models - August 1998 (6889)

Type-model	Std disk (rpm) ms seek / disk interface CD-ROM / interface	Intel® Processor MHz' / Upgrade	Write-back L2 cache std / max KB / KB	Memory in MB; std / max 100MHz	SVGA controller; memory std / max	Bus slots P=PCI avail PCI/ISA=av A=AGP av	Total bays	Chip set Ethernet Preload	Available date	
<b>6 slot x 6 bay; PCI/ISA/AGP; Stealth Gray</b>										
☞ 6889-41U	10.1GB <sup>2</sup> std (7200) 9.5ms / EIDE 32X-14X <sup>4</sup> CD-ROM / EIDE	1 x Pentium® II 450/100	SMP via 2nd Pent II	512 / 512 225MHz in SEC	128 / 1G SDRAM ECC	Millennm G200 AGP Adapter 8 / 16 WRAM	PCI=4 PCI/ISA=1 AGP=0	6 bays 3 used 3 empty	440BX Ethernet Windows NT 4.0	Sept 1998
☞ 6889-42U	4.5GB std (7200) 9ms / <b>Wide Ultra SCSI</b> 32X-14X CD-ROM / EIDE	1 x Pentium II 450/100	SMP via 2nd Pent II	512 / 512 225MHz in SEC	128 / 1G SDRAM ECC	Millennm G200 AGP Adapter 8 / 16 WRAM	PCI=4 PCI/ISA=1 AGP=0	6 bays 3 used 3 empty	440BX Ethernet Windows NT 4.0	Sept 1998
☞ 6889-43U	9.1GB std (7200) 7.5ms / <b>Wide Ultra SCSI</b> 32X-14X CD-ROM / EIDE	1 x Pentium II 450/100	SMP via 2nd Pent II	512 / 512 225MHz in SEC	128 / 1G SDRAM ECC	Millennm G200 AGP Adapter 32/32 SDRAM	PCI=4 PCI/ISA=1 AGP=0	6 bays 3 used 3 empty	440BX Ethernet Windows NT 4.0	Sept 1998
☞ 6889-44U	9.1GB std (7200) 7.5ms / <b>Wide Ultra SCSI</b> 32X-14X CD-ROM / EIDE	1 x Pentium II 450/100	SMP via 2nd Pent II	512 / 512 225MHz in SEC	128 / 1G SDRAM ECC	Intense 3400 PCI Adapter 8 / 16 WRAM	PCI=3 PCI/ISA=1 AGP=1	6 bays 3 used 3 empty	440BX Ethernet Windows NT 4.0	Sept 1998
☞ 6889-45U	9.1GB std (10000) 8.5ms / <b>Wide Ultra SCSI</b> 32X-14X CD-ROM / EIDE	<b>SMP via 2 x</b> Pentium II 450/100	None	512 / 512 225MHz in SEC	256 / 1G SDRAM ECC	Millennm G200 AGP Adapter 8 / 16 WRAM	PCI=4 PCI/ISA=1 AGP=0	6 bays 3 used 3 empty	440BX Ethernet Windows NT 4.0	Sept 1998
☞ 6889-46U	9.1GB std (10000) 8.5ms / <b>Wide Ultra SCSI</b> 32X-14X CD-ROM / EIDE	1 x Pentium II 450/100	SMP via 2nd Pent II	512 / 512 225MHz in SEC	256 / 1G SDRAM ECC	Intense 3400 <b>+ Geo Accel</b> 32/32 SDRAM	PCI=2 PCI/ISA=1 AGP=1	6 bays 3 used 3 empty	440BX Ethernet Windows NT 4.0	Sept 1998
☞ 6889-48U for AAP	<i>no disk</i> 32X-14X CD-ROM / EIDE EIDE / 2 x Wide Ultra SCSI	1 x Pentium II 450/100	via 2nd Pent II	512 / 512 225MHz in SEC	128 / 1G SDRAM ECC	<i>None</i>	PCI=4 PCI/ISA=1 AGP=1	6 bays 2 used 4 empty	440BX Ethernet Open OS	Sept 1998

<p><b>Windows NT Preload<sup>7</sup></b></p> <p>Windows NT® Workstation 4.0 (SP3) Internet Explorer 4.0 install icon IBM Welcome Center Device drivers for each subsystem Ready to install: - ConfigSafe for Windows NT 4.0 - Norton AntiVirus for Windows NT - DMI Service Provider - DMI BIOS Instrumentation - IBM PC System Monitor Instrumentation - IBM AssetCare Serial Number Information IBM RTC CD-ROM Setup Utility IBM Utilities for Windows 95/NT 4.0 - Hummingbird "Try and Buy" Suite CD-ROM - Ready to Configure CD-ROM - Free license for Lotus SmartSuite 97 CD-ROM - IBM ViaVoice 98 Office Edition CD-ROM - Windows NT Workstation 4.0 CD-ROM - IBM Diagnostics CD-ROM - Access to IBM HomePage Creator</p> <p>C: is 2GB as FAT16 Remainder is unformatted</p>	<p><b>Ready to Configure CD-ROM<sup>7</sup></b></p> <p>All models ship with a CD with drivers for Windows® 95, 98, and NT 3.51 and 4.0 and various utilities. Includes: - Intel LANDesk® Client Manager - ConfigSafe - IBM Systems Management Tools</p> <p><b>Supported Memory and Options</b></p> <table border="0"> <tr><td>32MB SDRAM ECC DIMM 100MHz</td><td>01K1133</td></tr> <tr><td>64MB SDRAM ECC DIMM 100MHz</td><td>01K1130</td></tr> <tr><td>128MB SDRAM ECC DIMM 100MHz</td><td>01K1131</td></tr> <tr><td>256 MB SDRAM ECC DIMM Registered</td><td>01K1132</td></tr> <tr><td>Adaptec ARO™-1130 CA-B PCI RAIDport</td><td>1681100</td></tr> <tr><td>IBM Netfinity 400MHz Pentium II/512KB</td><td>10L5884</td></tr> <tr><td>IBM Netfinity 450MHz Pentium II/512KB</td><td>10L5900</td></tr> <tr><td>Matrox Millennium G200</td><td>10L7127</td></tr> <tr><td>Intergraph Intense 3D Pro 3400</td><td>02K3460</td></tr> <tr><td>Intergraph Intense 3D Pro 3400 GA Geometry Accelerator</td><td>02K3461</td></tr> <tr><td>10/100 PCI EtherJet Adapter WOL</td><td>08L2565</td></tr> <tr><td>Auto Wake Token-Ring ISA Adapter</td><td>55H6760</td></tr> <tr><td>PCI Token Ring Adapter WOL</td><td>86H1880</td></tr> <tr><td>10.1GB 10000 rpm EIDE disk</td><td>20L0548</td></tr> </table>	32MB SDRAM ECC DIMM 100MHz	01K1133	64MB SDRAM ECC DIMM 100MHz	01K1130	128MB SDRAM ECC DIMM 100MHz	01K1131	256 MB SDRAM ECC DIMM Registered	01K1132	Adaptec ARO™-1130 CA-B PCI RAIDport	1681100	IBM Netfinity 400MHz Pentium II/512KB	10L5884	IBM Netfinity 450MHz Pentium II/512KB	10L5900	Matrox Millennium G200	10L7127	Intergraph Intense 3D Pro 3400	02K3460	Intergraph Intense 3D Pro 3400 GA Geometry Accelerator	02K3461	10/100 PCI EtherJet Adapter WOL	08L2565	Auto Wake Token-Ring ISA Adapter	55H6760	PCI Token Ring Adapter WOL	86H1880	10.1GB 10000 rpm EIDE disk	20L0548	<p><b>Authorized Assembler Program models</b></p> <p>AAP models contain no hard disk or graphics adapter. No preload or operating system license is included. - Hummingbird "Try and Buy" Suite CD-ROM - Ready to Configure CD-ROM - Free license for Lotus SmartSuite CD-ROM (via 800 number)</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p align="center"><b>WARRANTY SERVICE SUPPORT<sup>3</sup></b></p> <ul style="list-style-type: none"> <li>☞ 3 year parts warranty</li> <li>☞ 1 year labor warranty</li> <li>☞ International Warranty Service<sup>3</sup></li> <li>☞ 1st year: on site, 8 am - 5 pm, Mon - Fri coverage, 2nd business day response time</li> <li>☞ 2nd/3rd year: parts exchange only, call 1-800-772-2227</li> <li>☞ On site warranty upgrade options:               <ul style="list-style-type: none"> <li>① Next day, on site, Mon-Fri 8-5</li> <li>② Same day, on site, 7 day x 24 hr</li> </ul> </li> <li>☞ Post warranty: on site options above</li> <li>☞ IBM SystemXtra™</li> <li>☞ 24 hour / 7 day telephone, bulletin board, fax, electronic, Internet (www.pc.ibm.com) support</li> </ul> </div>
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<p>Ethernet = Intel® 10/100 ethernet chip; 10BaseT and 100BaseTX; Alert on LAN NT4 = Windows NT Workstation 4.0 preinstalled Wide Ultra SCSI = Adaptec AHA-7895; dual channel Wide Ultra SCSI ☞ = Announced August 24, 1998</p>																														



<b>IBM® IntelliStation™ M Pro</b>	
Type	<b>6889</b>
Processor(s)	<b>One or two Intel® Pentium® II 450/100MHz<sup>1</sup> / MMX™ technology / 16KB ins + 16KB data L1 cache</b>
Implementation	Processor and L2 cache in <b>Single Edge Contact (SEC)</b> cartridge in protective metal case / SEC plugged into Intel Slot 1
Processor upgrade	<b>SMP</b> via second identical processor / upgrade via SEC into motherboard Intel® Slot 1 CPU connector / MPS 1.4
L2 cache	<b>512KB std / 512KB max / ECC / half speed of processor / 4 way set associative / write-back / integrated in SEC</b>
Available date	September 1998
Mem - std / max / type	<b>128MB (AAP), 128MB, or 256MB std / 1GB max / Error Checking and Correction (ECC)</b>
Memory - sockets	4 sockets / 3 available (all have Error Checking and Correcting memory controller) / Model 90U uses two 128MB DIMMs
Memory - features	<b>SDRAM / 100MHz</b> / four 168 pin gold-plated DIMM 3.3 volt sockets / PC100-compliant / hardware scrubbing of ECC errors
Memory - support	Supports SDRAM ECC DIMMs (32,64,128, 256MB) / only 256MB DIMMs are registered (buffered); can not mix reg/non-reg
Graphics controller	<b>Matrox® Millennium G200 (2D), Intergraph® Intense 3D Pro 3400 (advanced 3D), or Intergraph Intense 3D Pro 3400 and Geometry Accelerator (ultimate 3D)</b>
Graphics - type	<b>Matrox Millennium G200 / AGP-2x 533MB/sec adapter</b>
Graphics - memory	8MB std / 16MB max / 142MHz, 128-bit SGRAM
Graphics - features	Sideband addressing / split transactions 250 MHz RAMDAC / MGA-G200 128-bit DualBus chip Max 2D resolution of 1920x1200 in 24-bit color at 80Hz
	<b>Intense 3D Pro 3400 / PCI adapter / 32MB std / 32MB max</b> 16MB frame buffer (125MHz SDRAM) and 16MB texture memory (SGRAM) Optional or std PCI geometry accelerator (3D Pro 3400 GA) Max resolution of 1280x1024 at 16.7 million colors at 85Hz
Architecture - chip set	<b>Intel 440BX AGPset / PIIX4E</b> for EIDE (Ultra DMA/33), ISA Bridge, USB / <b>Adaptec® AHA-7895</b>
Bus slots	National Semiconductor <b>PC87307 Super I/O</b> for diskette, parallel, serial, keyboard, mouse PCI 2.1 (33MHz), Accelerated Graphics Port (66MHz; AGP-2x; 533MB/sec), and ISA slots (8.33MHz) / see below
Disk	None (AAP models), one EIDE (Ultra DMA/33), or one Wide Ultra SCSI / SMART
SCSI controller	<b>Adaptec® AHA-7895 / dual channel Wide Ultra SCSI controller</b> / on motherboard / PCI 2.1
SCSI connectors	<i>Channel A:</i> 68 pin (attaches 4 drop cable to SCSI disk); <i>Channel B:</i> 50 pin and 68 pin / 68 pin cable std to external SCSI port (all mod)
RAID option	Supports Adaptec ARO™-1130 CA-B PCI RAIDport™ adapter (RAID 0,1) / installs in PCI slot / uses 7895 controller and connectors
Cables - SCSI and IDE	<i>SCSI and AAP models:</i> 4 drop 16-bit cable on Chan A; 16-bit cable to ext port on Chan B; one 2 drop IDE cable (CD-ROM) <i>EIDE models:</i> Two 2 drop IDE cables (one for disk; one for CD-ROM) and SCSI cable to external SCSI port
EIDE disk controller	Enhanced IDE busmaster (PIIX4E) / Ultra DMA/33 (ATA-33) support / two connectors on planar
CD-ROM	<b>32X-14X<sup>4</sup> CD-ROM / CAV (ATAPI) / bootable</b>
Diskette drive	3.5" 1.44MB diskette drive / 1 drop cable
Ethernet controller	<b>Intel EtherExpress PRO/100B</b> / PCI 82558 ethernet chip on planar / PCI bus 10BaseT and 100BaseTX / RJ45 UTP connector / Wake on LAN™ / Alert on LAN
LCCM support	LANClient Control Manager™ enabled / Wake on LAN / Setup over LAN / Hybrid RPL / DHCP/BOOTP / software image download
Systems mgmt cntrl	National Semiconductor® LM81 compatible / <b>hardware chip to monitor temperature, fan speeds, voltage, system cover removal / I2C</b>
Audio	Crystal CS4235 chip on planar / stereo / ISA bus / FM Synthesis / int speaker
Audio connectors	Stereo line in / mic in / line out (all in back) / software volume control
Microphone	<b>Headset with microphone</b> (noise canceling for ViaVoice)
Serial/parallel/USB	<i>Ser:</i> Two 9 pin / 115Kbps <i>Par:</i> One (EPP, ECP) / IEEE 1284 <i>USB:</i> Two ports
Keyboard / Mouse	104 key (rubber dome) keyboard / keyboard extender / IBM 3 button mouse
Power supply	330 watts / universal / auto-sensing / Wake on LAN
	<b>SECURITY</b>
	<ul style="list-style-type: none"> <li>- Cover key lock (in rear)</li> <li>- Cover tamper detect switch</li> <li>- Secure fixed DASD</li> <li>- Serial EEPROM with write protect</li> <li>- Power-on password</li> <li>- Administrator password</li> <li>- Keyboard/mouse password</li> <li>- Wake Up on LAN password prompt</li> <li>- Boot sequence control</li> <li>- Boot without keyboard or mouse</li> <li>- Diskette boot inhibit</li> <li>- Disable mouse</li> <li>- Disable external SCSI port</li> <li>- Diskette write-protect</li> <li>- Diskette, disk, serial port, parallel port I/O control</li> <li>- Secure access openings</li> <li>- Secure removable media</li> <li>- VPD stored in EEPROM</li> <li>- Write protection control for EEPROM</li> <li>- Barcode labels on most components</li> </ul>
	Remotely readable DMI-compliant:
	<ul style="list-style-type: none"> <li>- System EEPROM on motherboard (info and serial no for CPU, riser, system unit, CD-ROM, diskette, empty blank fields); also can read/write with external RF unit</li> <li>- EEPROMs on DIMMs (component info, serial no)</li> <li>- Disk firmware (compnt info, serial no)</li> </ul>
	<p>Bay ① 5.25", HH 1.6", access, std CD-ROM</p> <p>Bay ② 5.25", HH 1.6", access, open</p> <p>Bay ③ 3.5", SL 1", access, open</p> <p>Bay ④ 3.5", SL 1", access, std diskette</p> <p>Bay ⑤ 3.5", SL 1", no access, open (disk only)</p> <p>Bay ⑥ 3.5", SL 1", no access, std disk (disk only) ] or Half Height</p> <p>Slot 1: fullsize, 32-bit AGP (3.3v) - used by AGP graphics adapter (some models)</p> <p>Slot 2: fullsize, 32-bit PCI 2.1 (5v) - supports optional Adaptec RAIDport</p> <p>Slot 3: fullsize, 32-bit PCI 2.1 (5v) - used by PCI graphics adptr (some models)</p> <p>Slot 4: fullsize, 32-bit PCI 2.1 (5v) - used by Geo Accelerator (some models)</p> <p>Slot 5: fullsize, 32-bit PCI 2.1 (5v)</p> <p>Slot 6: fullsize, 16-bit ISA or 32-bit PCI 2.1 (5v)</p>
<b>Alert on LAN™</b> - provides local or remote monitoring; immediate notification of system events such as chassis intrusion, disconnect, start up errors, even if powered off	<b>OTHER STANDARD FEATURES</b>
<b>Asset ID (RFID)<sup>5</sup></b> - uses radio frequency (RF) technology for deployment, inventory, and security; includes EEPROM that can be accessed via DMI software through network or an external RF link such as hand-held RF read/write units; theft protection	The Setup Utility resides in flash memory; invoked by pressing F1 key during memory POST
<b>SMART Reaction™</b> - automatic backup of disk	Advanced Power Mgmt 1.2
<b>PC 97 compliant</b>	Support for DMI technology (includes MIF browser) with DMI Service Layer 2.0, DMI BIOS 2.1, and DMI software; DMI 2.0 compliant
<b>DMI 2.0 compliant</b> with DMI manageability chip	Plug-and-Play 1.0a
<b>Wired for Management 1.1a</b>	ISO 9241-3 capable
<b>Adv Config and Power Interface (ACPI) 1.0</b>	Vital Product Data support (type, model, serial, id)
	7.87"W x 17.52"D x 19.37"H; 38 lbs max (shipped)
	200 mm W x 445 mm D x 492 mm H; 17.3 kg
	Several hardcopy publications; four stabilizing feet
	512KB IBM BIOS (Flash over LAN support)
	Supplier's Declaration available
	Four fans (three in system and one in power supply)
	<i>Maximum internal SCSI disk capacity:</i> 63.7GB (3 x 18.2GB (7200 rpm) plus 1 x 9.1GB (7200 rpm)); if no CD-ROM
	<i>Maximum internal EIDE disk capacity:</i> 30.3GB (3 x 10.1GB)
	Power management features:
	- Configurable levels for system, CPU, and monitor including powering system and/or display off
	- Wake Up on Ring (via modem) from off state
	- Wake Up on Alarm (scheduled time) from off state
	- Wake-on-LAN from off state
	- PCI Wake Up from supported PCI devices

<sup>1</sup> MHz only measures internal clock speed (or bus speed where indicated), not application performance. Many factors affect application performance.

<sup>2</sup> When referring to hard drive capacity, MB equals one million bytes, GB equals one billion bytes, and TB equals one trillion bytes. Total user-accessible capacity depends on operating environment.

<sup>3</sup> For terms and conditions or a copy of IBM's limited warranty, call 1 800 772-2227 in the U.S. or 1 800 465-7999 in Canada. Limited warranty includes International Warranty Service in those countries where this product is offered.

<sup>4</sup> Variable read rate. Actual playback speed will vary and is often less than the maximum possible.

<sup>5</sup> Asset ID allows your IntelliStation to be "scanned" by various radio frequency devices supplied by independent companies. Asset ID is intended for use only with radio frequency equipment that meets ANSI/IEEE C95.1 1992 RF Radio Frequency Limits.

<sup>6</sup> 9.1GB disk drive capacity with ULTRA DMA is possible only with system units that have a busmaster drive that support ULTRA DMA and hard drives greater than 8.4GB.

<sup>7</sup> Some software may differ from its retail version (if available) and may not include user manuals or all program functionality.

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