IBM RISC System/6000 Model 3AT and 3BT

The RISC System/6000® Model 3AT and 3BT systems are new POWER2-based, high performance graphics workstations, which may be used for interactive 2D and 3D graphical applications.

The Model 3AT/3BT systems are offered in easy-to-order system packages:

- POWERdisplay 17 — high-resolution 17-inch color display features a Trinitron** CRT with a maximum viewable image size of 16.1 inches/409 mm, measured diagonally
- POWER GXT150M™ Graphics Adapter
- Keyboard
- Mouse
- 32MB of memory
- 1GB SCSI-2 disk

Two 5.25-inch half-high removable media bays are available for optional media devices. You may select an optional POWER Gt3i™, POWER Gt4i, POWER Gt4xi 8-Bit, POWER Gt4xi 24-Bit, POWER Gt4e™ Adapter, IBM 7235 GTO Accelerator Adapter or IBM 7250 Attachment Adapter in place of the standard POWER GXT150M Graphics Adapter. You may also select the POWERdisplay 20 in place of the POWERdisplay 17. The POWERdisplay 20 features a Trinitron CRT with a fixed image size of 19.1 inches/486 mm, measured diagonally.

These systems have a maximum memory capacity of 512MB and internal disk capacity of 4GB. Four Micro Channel® expansion slots (three available) and a range of optional workstation features help you to configure these systems as powerful technical workstations. You can order an optional internal tape or CD-ROM-2 drive, at an additional charge, to occupy the 5.25-inch half-high removable media bays. An optional non-locking switch is also available for these models.

AIX/6000™, one to two user, and AIXwindows® are required; they are ordered and priced separately.

Purchase Prices:

RISC System/6000 7030-3AT	$22,995
RISC System/6000 7030-3BT	26,500

Planned Availability Dates:

Systems	June 10, 1994
Features (MES)	July 29, 1994
Model conversions (MES)	
L2 cache MES	August 12, 1994
Model 3BT with L2 cache	

® Registered trademark of International Business Machines Corporation
** Product or company name is a trademark or registered trademark of its respective holder.
™ Trademark of International Business Machines Corporation

IN BRIEF . . .

- New graphics workstation packages

- IBM POWER2 Technology
  - 59MHz processor Model 3AT
  - 67MHz processor Model 3BT

- Standard POWER GXT150M Graphics Adapter

- Optional selects to 2D and 3D Graphics Adapters

- POWERdisplay 17

- Optional select to POWERdisplay 20

- Keyboard

- Mouse

- Two serial and one parallel port

- 32KB instruction cache

- 64KB data cache

- Integrated Dual Ported SCSI-2 Fast/Wide Controller

- Integrated Ethernet interface

- Memory capacity of up to 512MB, 32MB standard

- Optional .5MB or 1MB L2 Cache on Model 3BT

- Internal disk capacity up to 4GB, 1GB standard

- Two 5.25-inch half-high removable media bays

- Four Micro Channel expansion slots (three available)

- Model conversion capability

- Optional non-locking switch

Performance and Productivity

The Model 3AT and 3BT systems are powerful technical workstations used for interactive graphical applications.

New systems have processor clock speeds:

- 59MHz in the Model 3AT
- 67MHz in the Model 3BT

The Model 3AT and 3BT, packaged for easy configuration and ordering, are designed to grow with your customer's needs. The standard memory of 32MB can be increased to 512MB with two 256MB memory cards (available as optional features).

One internal 1GB SCSI-2 8-bit disk is standard. Two disk drives can be installed in the system for up to 4GB of internal disk. Additionally, you can select a SCSI-2 fast/wide disk drive.

These models include integrated dual ported SCSI-2 fast/wide controllers (one for internal and one for external devices) and one integrated Ethernet interface as standard features. These features are integrated into the I/O board and do not use Micro Channel slots. In the standard configuration, three Micro Channel slots are available for additional features such as additional SCSI adapters, expanded graphics capability or communications. In addition, two 5.25-inch half-high removable media bays are standard and available for expansion.

Two different POWERdisplays are available, offering 1,280 X 1,024 color capability. The POWERdisplay 17 (17-inch) is standard. The POWERdisplay 20 (20-inch) is optional. These displays are high-resolution color displays that support the International Organization for Standardization (ISO) Part 3 recommendations for Video Display Terminal (VDT) ergonomics about screen flicker and character appearance when used with the appropriate display adapter at 77Hz (such as the standard POWER GXT150M). You may select an optional POWER Gt3i, Gt4i, POWER Gt4xi 8-Bit, POWER Gt4xi 24-Bit, POWER Gt4e Adapter, IBM 7235 GTO Accelerator Adapter or IBM 7250 Attachment Adapter in place of the standard POWER GXT150M graphics adapter. Customers may also select the POWERdisplay 20 in place of the POWERdisplay 17.

AIX/6000 Version 3.2.5 for RISC System/6000 and additional PTFs are included on all 3.2.5 orders shipped after June 3, 1994 (labeled AIX/6000 Version 3.2.5 3250-01-04). Refer to the memo to users for details on installing these PTFs or call the IBM support center and request the PTFs referenced in APAR number IX42623 and AIXwindows are required for the Model 3AT/3BT. These software products are ordered and priced separately.

Summary of standard features of the 3AT/3BT package:

- System unit
- 32MB of memory, two memory card slots
- 32KB instruction cache buffer
- 64KB data cache buffer
- 1GB SCSI-2 disk
- Diskette drive
- Keyboard
- Mouse
- POWER GXT150M Graphics Adapter
- Two serial ports
- Parallel port

- Integrated dual ported SCSI-2 fast/wide controller
- Integrated Ethernet interface
- POWERdisplay 17 color display
- Four Micro Channel slots (three are available for options)
- Two 5.25-inch half-high removable media bays

* The POWER GXT150M Graphics Adapter uses one of the four Micro Channel slots available in these workstations.

Level 2 (L2) Cache on Model 3BT

The introduction of a secondary L2 cache, in addition to the already resident L1 cache, provides significant performance improvements to many applications. The optional .5MB or 1MB L2 cache, much larger than the L1 cache, accommodates large programs and increases the probability that the next instruction of data can be found in the cache, avoiding the access of main memory. The L2 cache, in conjunction with the L1 cache and main memory, balances cost and performance efficiency for most commercial and technical customers with three-level hierarchy of memory.

Interoperability

The Model 3AT and 3BT with AIX/6000 operating system interoperates with other IBM and other vendor systems, helping to protect the customer's data processing investment.

The Model 3AT/3BT are binary compatible with previously announced RISC System/6000 systems.

Non-Locking Switch (#1101)

An optional non-locking switch is available on the initial plant order in place of the standard keylock. The non-locking, three position, MODE switch provides logic security without the need of a key.

Model Conversions

Model conversions utilizing the new processors are available.

Model conversions will be available to upgrade to the 3AT and 3BT models as follows:

From	To
355	3AT
365	3AT
36T	3AT
355	3BT
365	3BT
375	3BT
36T	3BT
37T	3BT
3AT	3BT

POWERdisplay 17

The POWERdisplay 17 is a 17-inch high-resolution graphics, raster-scan color monitor. The POWERdisplay 17 is intended for high-resolution graphic applications and supports an Analog RGB and separate horizontal and vertical sync. The POWERdisplay provides sharp, bright, realistic colors with minimum distortion. Signal redrive is provided for all input signals. The anti-reflective CRT surface treatment virtually eliminates screen reflections while optimizing image quality.

The POWERdisplay 17 meets ISO 9241 Part 3 recommendations for VDT ergonomics and also meets Very Low Frequency Magnetic Field (VLMF) and Extremely Low Frequency Magnetic Field (ELMF) emission standards and virtually eliminates static discharge from the front of the screen. Operator controls for power, brightness, contrast, selectable screen formats, horizontal and vertical static convergence, vertical centering, and indicators are included in a front-accessible panel. A tilt/swivel base is standard.

Voltage/Power Cord: No specify code is required to order the default six-foot Power Cord.

- Resolution: 1,280 X 1,024
- Vertical Scan Frequency: 77Hz non-interlaced
- Horizontal Scan Frequency: 82KHz
- View Area, H X V: 11.5 x 9.2 inches

Product Positioning

The RISC System/6000 Models 3AT/3BT are the most powerful RISC System/6000 graphics workstations. They feature implementation of the POWER2 architecture. The POWER2 processor is the industry's most advanced generation of super scalar design with the ability to execute up to six instructions and eight operations in a single CPU cycle. Processor performance can be further enhanced with 512KB or 1MB of Level 2 (L2) Cache on the Model 3BT.

Workstation Positioning

IBM's introduction of new workstations provides customers with one of the industry's most extensive product offerings. The family of workstations is as follows:

- M20: Low-priced, diskless LAN workstation.

- 220/22W: Entry workstation, suited for entry 2D applications such as drafting and desktop publishing.

- 25W/25T: First packaged workstations featuring the PowerPC™ 601 processor and the POWER GXT150 2D graphics accelerator; excellent 2D and entry 3D workstations.

- 41W/41T: The second workstation featuring the PowerPC 601™ processor. With their faster clock speed and new GXT150L™ graphics accelerator, these workstations are ideal for 2D and 3D wireframe applications.

- 3AT/3BT: Highest performance workstations. They have the highest performance and capacity of any workstations. These systems offer up to 4GB of internal disk, up to 512MB of memory, tape, CD-ROM, high- performance graphics accelerators, multimedia, and communication options. These models are targeted primarily for 3D applications and 2D solutions that require the highest floating point available in a desktop workstation.

Customers can choose among a number of graphics options:

- New POWER GXT150M
- POWER Gt3i
- POWER Gt4e
- POWER Gt4i
- POWER Gt4xi (8-Bit)
- POWER Gt4xi (24-Bit)
- New POWER GXT1000™
- New Freedom Series 6000

These workstations support all of the key graphics APIs —OpenGL, PHIGS, and PEX.

Publications

The following publications are shipped with the product. Additional copies are available for a fee.

Title	Order Number
7030 Models 3AT and 3BT Operator Guide	SA23-2733
7030 Models 3AT and 3BT Service Guide	SA23-2734
7030 Models 3AT and 3BT Hardware Setup Guide	SA23-2732
Documentation Overview	SC23-2456
System Unit Safety Information	SA23-2652
IBM POWERdisplay 17 and 20 Setup and Operator Guide	GA23-2076
IBM POWERdisplay 17 and 20 Service Guide	SY66-0225

The following updated publications are available for a fee. To order, contact your IBM representative.

Title	Order Number
7030 Models 3AT and 3BT Operator Guide	SA23-2733
7030 Models 3AT and 3BT Service Guide	SA23-2734
7030 Models 3AT and 3BT Hardware Setup Guide	SA23-2732
Documentation Overview	SC23-2456
System Unit Safety Information	SA23-2652
IBM RISC System/6000 System Overview	GC23-2406
IBM RISC System/6000 Planning for Your System Installation	GC23-2407
POWERstation™ and POWERserver™ Common Diagnostics and Service Guide	SA23-2687
Customer Support Information	SA23-2690
CD-ROM Hypertext Information Base Library for AIX® Version 3.2	SC23-2163
Problem Solving Guide and Reference	SC23-2204
Quick Reference	SC23-2401
AIX Version 3.2 Diskless Workstation Management Guide	SC23-2433
Getting Started	GC23-2521
IBM POWERdisplay 17 and 20 Setup and Operator Guide	GA23-2076
IBM POWERdisplay 17 and 20 Service Guide	SY66-0225

SLSS is available by order number only. If you are currently a subscriber to SLSS, you will receive publication updates automatically.

Education Support

Call Skill Dynamics™, An IBM Company, at 800-IBM-TEACH (426-8322), for schedules and enrollments.

Technical Information

Physical Specifications

Horizontal	**Vertical**
Width: 442 mm (17.4 inches)	280 mm (11 inches at pedestal)
Depth: 478 mm (18.8 inches)	478 mm (18.8 inches)
Height: 162 mm (6.4 inches)	452 mm (17.8 inches with pedestal)

Weight: 18.1-21.8 kg
(40-48 pounds)

- Voltage: 100 to 125 V AC, 200 to 240 V AC Nominal Auto Ranging; 50/60Hz
- Power supply: 275 Watts output (peak)
- Thermal output: 220 joules/sec (750 BTUs per hour)
- Power source loading: 0.34 KVA

POWERdisplay 17

- Width: 406 mm (17.0 inches)
- Depth: 451 mm (17.8 inches)
- Height: 417 mm (17.4 inches)
- Weight: 29.5 kg (65.0 pounds)
- Voltage: 100/120V AC, 220/240V AC 50/60Hz
- Power source loading: 0.29 KVA

POWERdisplay 20

- Width: 480 mm (18.9 inches)
- Depth: 506 mm (20.92 inches)
- Height: 485 mm (20.09 inches)
- Weight: 34.0 kg (74.8 pounds)
- Voltage: 100/120V AC, 220/240V AC 50/60Hz
- Power source loading: 0.48 KVA
- Temperature: 17° to 32° C. (60° to 90° F.)
- Relative humidity: 8% to 80%
- Maximum wet bulb: 23° (73° F.)
- Noise level (average at 1-meter position ─ typical machine):
  - Desktop position: 41 dBA operating, 41 dBA idle
  - Floor-standing position: 38 dBA operating, 38 dBA idle

Operating Environment

EMC Conformance Classification:

- U.S.A.: FCC Class A
- Germany: IOP
- Europe: CISPR 22
- Japan: VCCI-1

This equipment is subject to FCC rules and it shall comply with the appropriate FCC rules before final delivery to the buyer or centers of distribution.

- Temperature: 17° to 32° C. (60° to 90° F.)
- Relative humidity: 8% to 80%
- Maximum wet bulb: 23° C. (73° F.)
- Noise level (average at 1-meter position ─ typical machine):
  - Desktop position: 41 dBa operating, 41 dBa idle
  - Floor-standing position: 38 dBa operating, 38 dBa idle

General Requirements: Compliance with IBM Corporate Bulletin C-B 0-2594-000 Statement of Conformity of IBM Product to External Standard (Suppliers Declaration).

Environmental Impact Assessment Number 617P-3: The RISC System/6000 processors were developed in compliance with IBM corporate policy letter number 139 (Environmental Affairs).

Compliance with IBM Corporate Standard C-S 3-0527-002 (2091-06) Control of Chemicals in IBM Facilities, Requirements and Responsibilities.

Product Safety/Country Testing/Certification:

- U.S.A.: UL
- Canada: CSA
- Europe: EN60-950
- Germany: GS Mark (Safety, TUV)

Telecom Environmental Testing (Safety and EMC): IBM RISC System/6000 Models and applicable features meet the environmental testing requirements of the country TELECOM. The testing and approval process is ongoing.

Country	Environmental Test Safety	EMC
Canada	CSA	
Chile	Telecom	
Finland	EIF	
France	LCIE	LCIE
Hong Kong	Telecom	
Ireland	Telecom	
Italy	Telecom	
Japan	Telecom	
Korea	Telecom	
Malaysia	SIRIM	
Mexico	Telecom	
Netherlands	Telecom	
New Zealand	Telecom	Telecom
Spain	Ministry of Industry	
Switzerland	SEV	
U.K.	BABT	

ISO 9000 Certification, IBM Locations:

- Santa Palomba, Italy
- Havant, England
- Austin, Texas

Supported IBM Monitors Complying to ISO 9241 Part 3:

- 6091 Model 016
- 6091 Model 19i
- RISC System/6000 POWERdisplay 16
- RISC System/6000 POWERdisplay 17
- RISC System/6000 POWERdisplay 19
- RISC System/6000 POWERdisplay 20

The 6091-016 display (featuring a Trinitron CRT) has a fixed image size of 14.8 inches/375 mm, measured diagonally.

The 6091-019i display (featuring a Trinitron CRT) has a fixed image size of 17.3 inches/439 mm, measured diagonally.

The POWERdisplay 16 (featuring a Trinitron CRT) has a fixed image size of 14.8 inches/375 mm, measured diagonally.

The POWERdisplay 19 (featuring a Trinitron CRT) has a fixed image size of 17.3 inches/439 mm, measured diagonally.

Hardware Requirements: Configurations including AIX InfoExplorer™ or AIXwindows development tools may require disk capacities greater than 1GB.

Software Requirements: AIX/6000 Version 3.2.5 for RISC System/6000 with additional PTFs. These PTFs are included on all 3.2.5 orders shipped after June 3, 1994, (labeled AIX/6000 Version 3.2.5 3250-01-04). Refer to memo to users on installing these PTFs or call the IBM support center and request the PTFs referenced in APAR number IX42623.

AIX/6000 applications written for POWER-based RISC System/6000s will run on the new POWER2-based models without recompilation, and will run significantly faster. Additional performance improvements can be achieved by recompiling with the latest versions of the IBM XL compilers to further exploit the POWER2 technology.

Applications compiled using a compiler option that exploits POWER2 technology may not function properly on systems that do not employ the new POWER2 technology. Customers with any combination of POWER-, PowerPC 601- and POWER2-based systems may continue to run their applications unmodified. New applications and recompilation of existing applications for use in a mixed processor environment should be compiled using the POWER or common mode options available in the XL compilers or any other compilers that support those options.

Refer to Software Announcements 293-488 and 293-493 for more information.

Model Conversions

Model conversions will be available to upgrade to the 3AT and 3BT models as follows:

From	To	RPQ Number
355	3AT	8A0845
365	3AT	8A0847
36T	3AT	8A0850
355	3BT	8A0846
365	3BT	8A0848
375	3BT	8A0849
36T	3BT	8A0851
37T	3BT	8A0852
3AT	3BT	

Upgrade Considerations: RPQ upgrades to a Model 3AT/3BT will be shipped using a new "chassis exchange" process in conjunction with an RPQ. When ordering this model conversion, you must specify both the model conversion and RPQ number on the MES order. RPQs are not supported in "CFRS6000."

The upgrade from Model 3AT to 3BT is not an RPQ and is a processor card exchange.

The RPQ provides a model conversion for customers with installed Model 355, 365, 375, 36T or 37T systems who want the RISC System/6000 Model 3AT/3BT model capability. This field-installable model conversion will help provide increased system performance and contribute to the protection of customers' initial investment in a Model 355, 365, 375, 36T, or 37T system. The resultant model conversion will retain the serial number of the system prior to the upgrade.

Model conversion offers a high degree of flexibility in increasing the performance level of the system and helping you with computation-intensive applications to take advantage of the performance of the new processor while protecting their investment in disks and features.

Compatibility: The RISC System/6000 Model 3AT/3BT uses a new SCSI-2 fast/wide interface. All other external interfaces are the same as on the POWERstation/POWERserver 355, 365, 375, 36T, and 37T. The following SCSI cables will be required for externally attached devices after the model conversion:

Feature Number	Description
2439	8-bit IBM SCSI-2 Fast/Wide Adapter/A to Single Ported Device
2437	8-bit IBM SCSI-2 Fast/Wide Adapter/A to Dual Ported Device
2435	16-bit IBM SCSI-2 Fast/Wide Adapter/A to Dual Ported Device

All Micro Channel cards, external and internal devices currently supported by the RISC System/6000 Model 3AT/3BT and announced later as supported by the RISC System/6000 Model 3AT/3BT will also be supported by the newly converted 3AT/3BT.

The SCSI-2 fast/wide interface does NOT support the following devices:

- 7206-001 External 4 mm Tape Drive
- 7210-001 External CD-ROM Drive
- 160MB Disk Drive Features #2120, #2121, #2123, #9240, #9241 and #9242

Note: Features displaced remain with the customer.

A minimum of 32MB of memory is required prior to the upgrade. Customers who do not meet the memory minimum must order additional memory features or SIMM kits. This is not included in the price of the model conversion. The upgrade kit will provide a one-for-one replacement of the customer's installed memory cards. The existing memory SIMMS are reused on the replacement cards.

For upgraded machines, it may be necessary for 8MB or 16MB memory to be replaced or for SIMM kits to be installed to meet the above requirements.

A machine being upgraded must have a minimum of 1GB of SCSI-2 disks installed or on order. These can be any one or combination of the following:

Feature Number	Description
2555	1GB SCSI-2 Drive
2556	400MB to 1GB SCSI-2 Drive Select
2580	2GB SCSI-2 Drive
2582	400MB to 2GB SCSI-2 Drive Select

Current machine configuration (product topology information) will be requested by the plant prior to scheduling the shipment of this upgrade.

Software Requirements: AIX/6000 Version 3.2.5 for RISC System/6000 with additional PTFs. These PTFs are included on all 3.2.5 orders shipped after June 3, 1994, (labeled AIX/6000 Version 3.2.5 3250-01-04). Refer to memo to users on installing these PTFs or call the IBM support center and request the PTFs referenced in APAR number IX42623. This version of AIX/6000 or later must be installed and operational PRIOR to beginning the upgrade. This is not included in the price of the model conversion.

AIX/6000 applications written for POWER-based RISC System/6000s will run on the new POWER2-based models without recompilation and will run significantly faster. Additional performance can be achieved by recompiling with the latest versions of the IBM XL compilers to further exploit the POWER2 technology.

Applications compiled using a compiler option to exploit POWER2 technology may not function properly on systems that do not employ the new POWER2 technology. Customers with any combination of POWER-, POWERPC 601-, and POWER2-based systems may continue to run their applications unmodified. New applications and recompilation of existing applications for use in a mixed processor environment should be compiled using the POWER or common mode options available in the new XL compilers or any other compilers that support those options.

The 355, 365, 375, 36T, 37T to 3AT/3BT upgrade kit will contain some or all of the following:

- Base model 3AT/3BT chassis and covers with original serial number
- New memory card(s) without SIMMS
- Maintenance documentation
- As-required engineering changes

This upgrade is accomplished by transferring the customer's existing media, disks, adapters, and memory SIMMS to the new chassis. The chassis will contain the same serial number as the customer's existing machine.

Note: Base display adapter features as well as POWERdisplay features on the Model 355, 365, 375, 36T, 37T will be supported on the model conversion. New POWERdisplays or display adapters (which are base features on a new Model 3AT/3BT) will NOT be shipped as part of the upgrade kit.

Ordering Information

When ordering model conversion, you must specify both the model conversion and the RPQ on the MES order.

Supported Features Information

All features announced as supported on the 3AT/3BT are also available on model conversions.

The following features presently supported on the Model 355, 365, 375 36T, and 37T will not be supported on the newly converted system:

Feature Number	Description
2780	High-Performance 8-bit 3D Color Graphics Processor
2781	High-Performance 24-bit 3D Color Graphics Processor
2782	24-bit Z-Buffer Solid Rendering Option
2783	24-bit Color Graphics Frame Buffer Upgrade

Note: Features displaced remain with the customer.

Supported but not Orderable Features

The following features presently supported on the Model 355, 365, 375, 36T, and 37T, will be supported but cannot be ordered on the newly converted system.

Feature Number	Description
2390	540MB SCSI-2 Disk Drive
2391	400MB to 540MB SCSI-2 Disk Drive Select
2556	400MB to 1GB SCSI-2 Disk Drive Select
2560	400MB SCSI Disk Drive
2714	POWER Gt3i to POWER Gt4xi 8-bit Select
2715	POWER Gt4e to POWER Gt4xi 24-bit Select
2716	POWER Gt4e to POWER Gt4xi 8-bit Select
2717	POWER Gt4e to POWER Gt4i 24-bit Select
2718	POWER Gt3i to POWER Gt4i 24-bit Select
2719	POWER Gt3i to POWER Gt4xi 24-bit Select
2790	POWER Gt4x™ 8-bit Feature
2792	POWER Gt4™ 8-bit to 24-bit Upgrade
2794	POWER Gt4 Performance Upgrade
2795	POWER Gt4 8-bit Feature
2801	5086 Attachment Adapter
2802	5085 Attachment Adapter
2805	POWER Gt3i to POWER Gt4e Graphics Adapter Select
2806	POWER Gt3i to POWER Gt4 8-bit Feature Select
2807	POWER Gt3i to POWER Gt4x 8-bit Feature Select
2808	POWER Gt3i to 7235 POWER GTO™ Accelerator Feature Select
2815	POWER Gt4e to POWER Gt4 24-bit Adapter Select
2816	POWER Gt4e to POWER Gt4x 8-bit Adapter Select
2817	POWER Gt4e to POWER Gt4x 24-bit Adapter Select
2914	SCSI-2 Passthrough Terminator Cable (50-Pin)
2915	SCSI Controller Passthrough Terminator Cable (60-Pin)
3600	POWERdisplay 16
3601	POWERdisplay 19
3602	POWERdisplay 16 to POWERdisplay 19 Select
3606	POWERdisplay 17 to POWERdisplay 19 Select
4066	16MB Memory Card
4068	16MB to 32MB Memory Select
4074	16MB to 64MB Memory Select
4091	16MB to 128MB Memory Select
4099	16MB to 256MB Memory Select
6306	IBM Speech Accelerator 1
6307	IBM Speech Accelerator 2
9234	16MB Memory Specify
9244	400MB SCSI Disk Drive Specify
9610	POWERdisplay 16 Specify
9988	POWER Gt3i Specify
9990	POWER Gt4e Specify

Note: The displaced chassis and all associated parts removed become the property of IBM.

All other previously announced features, if installed on the Model 355, 365, 375, 36T or 37T can be included in the upgrade to the Model 3AT/3BT. However, after the upgrade, only those features announced as orderable on the 3AT/3BT will be available.

Note: Base display adapter features as well as POWERdisplay features on the Model 355, 365, 375, 36T, 37T will be supported on the model conversion. New POWERdisplays or display adapters (which are base features on a new Model 3AT/3BT) will NOT be shipped as part of the upgrade kit.

Limitations: The RISC System/6000 Model 3AT/3BT uses a new SCSI-2 integrated fast/wide interface. All other external interfaces are the same as on the Model 355, 365, 375, 36T, and 37T.

- "Target mode" is not supported by the SCSI-2 integrated fast/wide interface.

- The SCSI-2 integrated/fast wide interface DOES NOT support the following devices:

  - 7206-001 External 4 mm Tape Drive
  - 7210-001 External CD-ROM Drive
  - 160MB Disk Drive Features #2120, #2121, #2123, #9240, #9241 and #9242
  - 200MB Disk Drive Features #2490, #2491, #2492, #2495 and #2496

- If an additional POWER GXT150M Graphics Adapter is to be installed the customer must order the appropriate cable that depends on the particular display to be attached. Refer to Hardware Announcement 194-148, dated May 24, 1994 for information on display cables.

Cables used for attaching existing SCSI devices are not compatible with the new SCSI-2 integrated interface. The following cable(s) are required with the integrated SCSI-2 fast/wide interface:

Feature Number	Description
2439	8-bit IBM SCSI-2 Fast/Wide Adapter/A to Single Ported Device
2437	8-bit IBM SCSI-2 Fast/Wide Adapter/A to Dual Ported Device
2435	16-bit IBM SCSI-2 Fast/Wide Adapter/A to Dual Ported Device

Planning Information

Problem Determination: For problem analysis, diagnostic programs with installed AIX/6000 programs, provide console routines that lead a user through problem determination and provide direction to resolve problems.

Packaging:

Shipment Group:

- System Unit
- POWERdisplay
- Graphics Display Adapter and cable
- Keyboard
- Mouse
- Language group ─ specified on the order, which will include the following publications:
  - Quick Reference
  - System User's Guide
  - Customer Support Information
  - Documentation Overview
  - 7030 POWERstation and POWERserver Operator Guide
  - POWERstation and POWERserver Common Diagnostics and Service Guide
  - 7030 POWERstation and POWERserver Installation and Service Guide
  - POWERdisplay publications
  - System unit safety information
- Power cords
- Diagnostic diskettes

Accessories and/or Supplies:

For End Users: LEXMARK International, Inc., manufactures and markets IBM supplies. For information about products or services, call LEXMARK at 800-358-5835.

Supplies can be purchased from LEXMARK Authorized Supplies Dealers or directly from LEXMARK by calling 800-438-5835.

Fax orders may be sent to:

   800-522-3422

Mail orders may be sent to:

   LEXMARK Telemarketing Center
   1221 Alverser Drive
   Midlothian, VA 23113

Security, Auditability and Control

Security and auditability features of the systems are:

- Physical security is provided by a key lock that helps prevent cover removal when locked unless the optional non-locking switch is ordered.

- A three-position MODE switch helps provide logic security for the system.

- Customer orderable security tie-down cable accessory.

Otherwise, these products use the security and auditability features of host hardware, software and/or application software.

User management is responsible for evaluation, selection and implementation of security features, administrative procedures and appropriate controls in application systems and communications facilities.

Volume Discount: Volume purchasing is available under the Volume Discounts section of the IBM Customer Agreement (ICA).

For information regarding volume orders, contact your IBM representative.

IBM Credit Corporation Financing: Term leases and installment payment plans are available for commercial and state and local government customers.

Customer Fulfillment Option Applies: Yes

Warranty Period: One year

The warranty for the original machine (Model 355, 365, 375, 36T, 37T) controls the warranty period of the converted machine (Model 3AT/3BT) so that any time remaining from the original one-year warranty on the original machine is applied to the Model 3AT/3BT conversion.

Replacement parts assume the remaining warranty of the parts they replaced. Additional new parts, if any, have a one-year warranty.

All 3AT to 3BT (MES) model conversions will be a processor upgrade.

The model conversion MESs contain some or all of the following items:

- Processor replacement
- I/O board
- As-required engineering changes
- Installation instructions
- New publications

Note: Parts removed become the property of IBM.

Warranty Service: IBM On-Site Repair (IOR)

Maintenance Service: IOR

IBM Hourly Service Rate Classification: Two

IBM Warranty Service, Maintenance Service or IBM Hourly Service may be obtained by calling 800-IBM-SERV (426-7278). IBM Hourly Service is available at the applicable rate and terms, including element exchange price, if applicable.

Mid-Range System Option: The announced product is an eligible machine for the Mid-Range System Option of the ICA. A revised exhibit will be available at a later date.

Eligible Types	Discount Three-Year	Five-Year
7030	12%	17%

Corporate Service Option: The announced product is an eligible machine for the Corporate Service Option of the ICA. A revised exhibit will be available at a later date.

Option	Discount Three-Year	Five-Year
Network	15%	20%
System	12%	17%

Extended Maintenance Option: The announced product is an eligible machine under the Extended Maintenance Option of the ICA.

IBM Software Support Services

The IBM AIX/6000 Support Family offers a number of technical support services designed to meet the varying system support requirements of our AIX/6000 and RISC System/6000 customers. These services provide timely, knowledgeable assistance and information from IBM specialists and experts. The various options of the services provide flexibility in defining the scope of services received from IBM.

The AIX/6000 Support family includes:

- *AIX/6000 SupportLine* — telephone access to a team of IBM specialists.

- *AIX/6000 Associate* — an analyst is assigned to work remotely with you and becomes familiar with your specific system(s) and requirements.

- *AIX/6000 ConsultLine* — you can schedule time with the experts to address highly technical topics, such as system design, performance evaluation, in-depth communications.

- *AIX/6000 Performance Management* — automated performance data collection software that continually monitors your system and transmits results back to the performance experts for evaluation.

- *AIX Technical Library/6000* — a library of service and support information on a CD-ROM updated and distributed quarterly.

- *AIX/6000 House Call* provides you with on-site assistance with such tasks as installation, problem assistance, software maintenance and updates.

The AIX/6000 Support family also includes packages of services designed to meet the needs of specific customer types:

- AIX/6000 New Customer Support Package
- AIX/6000 Growing Customer Support Package
- AIX/6000 Established Customer Support Package

For complete details on the AIX/6000 Support Family, refer to Services Announcement 693-004, dated March 16, 1993.

Product Availability Status: New product available

Field Installable Features: Yes

Model Conversions: Yes

Customer Setup: Yes

IBM provides customers an installation option on the RISC System/6000 3AT/3BT models. Customers can initially install their own machines or choose to have IBM perform this service for an additional fee. IBM will continue to install and service all MES features and model conversions.

Graduated Charges: The announced product is in Processor Group E5 for software with graduated charges.

Licensed Internal Code: Yes

Educational Allowance: A 20% educational allowance is available to qualifying institutions in accordance with the Attachment for Educational Allowance. The educational allowance may not be added to any other discount or allowance.

Charges

Description	Machine Type	Purchase Price	Monthly MMC[1]
IBM RISC System/6000			
Model 3AT	7030	$22,995	$235
Model 3BT	7030	26,500	274

Description	Machine Type	Purchase Price	Monthly MMC[1]	Removal Charge
Features are available on the M/T 7030 Model 3AT/3BT				
Non-locking Switch (Select)[2]	1101	0	0	0
Internal CD ROM-2	2603	$ 695	$15	$116
1.2GB 1/4-inch Internal Tape Drive	2630	1,995	16	116
4.0GB 4 mm Internal Tape Drive	6142	2,695	35	192
8 mm 5/10GB Internal Tape Drive	6147	5,395	50	116
1GB SCSI-2 Disk Drive	2555	1,800	35	116
2GB SCSI-2 Disk Drive	2580	3,500	25	116
2GB SCSI-2 Disk(Select)	2583	1,700	0	116
2GB SCSI-2 Fast/Wide Disk Drive(Select)	2588	1,700	0	116
S/370™ Block Multiplexer Channel Adapter	2759	3,500	35	116
Diagnostic Wrap Plugs	3750	114	0	0
32MB Memory	4067	4,000	0	116
64MB Memory	4069	6,400	0	116
64MB Memory(Select)	4071	2,400	0	116
128MB Memory Card	4090	15,000	0	116
128MB Memory Card (Select)	4092	11,000	0	116
256MB Memory Card	4095	32,000	0	116
256MB Memory Card (Select)	4096	28,000	0	116
Memory SIMMS Upgrade 128MB	5128	11,000	0	116
Memory SIMMS Upgrade 32MB	5032	2,400	0	116
Memory SIMMS Upgrade 64MB	5064	4,800	0	116
SCSI-2 External I/O Controller	2410	1,195	0	116
SCSI-2 Differential High-Performance External I/O Controller	2420	1,495	0	116
SCSI-2 Differential Y-Cable	2422	224	0	0
SCSI-2 Differential System to System Cable	2423	108	0	0
SCSI High-Performance External I/O Controller	2835	1,245	0	117
SCSI Controller Cable	2832	315	0	106
SCSI-2 Controller Cable	2836	195	0	0
SCSI Device-to-Device Cable	3130	78	0	106
Multi-Protocol Communications Adapter	2959	450	0	116
Async Cable EIA-232/V.24	2936	73	0	106
Printer/Terminal Interposer EIA-232	2937	29	0	106
PC Parallel Printer Cable	3100	48	0	106
FDDI Fiber Dual Ring Upgrade	2723	1,995	0	116
FDDI-STP Dual-Ring Upgrade	2726	1,495	0	116
Token-Ring High-Performance Network Adapter	2970	1,030	0	117

Description	Machine Type	Purchase Price	Monthly MMC[1]	Removal Charge
Ethernet High-Performance LAN Adapter	2980	$ 722	0	$117
Ethernet Thick/Thin Connector Interface	4221	325	0	116
Ethernet Twisted-Pair Connector Interface	4222	325	0	116
Ethernet 10BaseT Transceiver	4224	195	0	106
X.25 Interface Co-Processor/2	2960	1,570	0	117
X.25 Attachment Cable - X.21 — 3 meter	2965	104	0	106
X.25 Attachment Cable - V.24 — 3 meter	2966	104	0	106
X.25 Attachment Cable - V.35 — 3 meter	2967	192	0	106
X.25 Attachment Cable - X.21 — 6 meter	2976	150	0	116
X.25 Attachment Cable - V.24 — 6 meter	2977	150	0	116
X.25 Attachment Cable - V.35 — 6 meter	2978	239	0	116
4-Port Multiprotocol Communications Controller	2700	2,600	$29	117
4-Port Multiprotocol Interface Cable	2705	500	0	116
Multiprotocol Attachment Cable - X.21	2704	117	0	106
Multiprotocol Attachment Cable - V.35	2702	117	0	106
Multiprotocol Attachment Cable - EIA-232/V.24	2706	93	0	106
3270 Connection Adapter	2990	618	0	117
FDDI Fiber Single Ring Adapter	2724	3,995	34	116
FDDI-STP Single Ring Adapter	2725	3,495	30	116
S/390® ESCON® Channel Emulator	2754	17,500	125	106
Block Multiplexer Channel Adapter	2755	4,400	73	106
Block Multiplexer Channel Adapter Cable	2757	700	0	106
Block Multiplexer Channel Cable Assembly	2758	900	0	106
Graphics Input Device Adapter	2810	416	0	117
Graphics Input Device Cable	2811	67	0	106
POWER GXT150M Graphics Adapter	2650	2,195	0	116
TURBOWAYS 100 ATM Adapter	2984	1,995	0	0
TURBOWAYS 100 ATM Adapter Device Driver/6000	5063	0	0	0
POWER GT4xi (8-bit)	2711	5,995	90	116
POWER GT4xi (24-bit)	2712	8,995	130	116
RISC System/6000 ESCON Control Unit	2756	15,000	125	116
System/370™ Host Interface Adapter	2800	1,500	0	117
POWER Gt3i	2768	1,895	19	116
POWER Gt4i Graphics Adapter	2713	6,995	110	116

Description	Machine Type	Purchase Price	Monthly MMC[1]	Removal Charge
POWER Gt4i Graphics Adapter select from POWER GXT150M Graphics Adapter	2659	$ 4,800	0	$116
GTO Accelerator(Select)	2651	0	0	116
POWER Gt4e (Select)	2652	.1,770.0	.116	
POWER Gt4xi 8-Bit(Select)	2653	4,850	0	116
POWER Gt4xi 24-Bit(Select)	2654	6,800	0	116
7250 Attachment Adapter (Select)	2655	0	0	116
POWER Gt3i (Select)	2656	0	0	116
Color Graphics Display Adapter	2770	2,310	0	117
POWER Gt4e Graphics Adapter	2776	2,895	$29	116
7250 Attachment Adapter	2820	1,695	0	116
7235 POWER GTO Accelerator Feature	4350	995	30	116
POWERdisplay 17	3607	1,795	16	0
POWERdisplay 20	3608	2,995	25	0
POWERdisplay 20(Select)	3609	1,200	9	0
M-Video Capture Adapter	2400	2,250	42	117
Digital Trunk Adapter	6300	1,200	10	116
Digital Trunk Dual Adapter	6305	2,400	10	116
Audio Capture and Playback Adapter	6301	495	0	0
Keyboard - US 101 Keys	6010	265	0	106
Keyboard - 102 Keys (Belgian-Dutch/French)	6011	360	0	0
Keyboard - 102 Keys (Canadian French)	6012	280	0	106
Keyboard - 102 Keys (Danish)	6013	360	0	0
Keyboard -102 Keys (Finnish)	6014	360	0	0
Keyboard - 102 Keys (German)	6016	360	0	0
Keyboard - 102 Keys (French)	6015	360	0	0
Keyboard - 102 Keys (Italian)	6017	360	0	0
Keyboard - 102 Keys (Norwegian)	6019	360	0	0
Keyboard - 102 Keys (Portuguese)	6020	360	0	106
Keyboard - 102 Keys (Spanish)	6021	360	0	0
Keyboard - 102 Keys (Swiss)	6022	360	0	0
Keyboard - 102 Keys (U.K.- English)	6023	360	0	0
Keyboard - 102 Keys (Icelandic)	6024	360	0	0
Keyboard - 102 Keys (Turkish)	6025	360	0	0
Keyboard - 102 Keys (Greek)	6026	360	0	0
Keyboard - 106 Keys (Japanese-KANJI)	6030	325	0	0
Keyboard - 106 Keys (Korean)	6031	325	0	0
Keyboard - 106 Keys (Chinese Traditional -Taiwan)	6033	325	0	0
Keyboard - Dutch	6034	360	0	106
Keyboard - Turkish	6035	360	0	106
3-Button Mouse	9041	0	0	0
Keyboard - US 101 Keys	9010	0	0	0
Keyboard - 102 Keys (Belgian-Dutch/French)	9011	0	0	0

Description	Machine Type	Purchase Price	Monthly MMC[1]	Removal Charge
Keyboard - 102 Keys (Canadian French)	9012	0	0	$106
Keyboard - 102 Keys (Danish)	9013	0	0	0
Keyboard - 102 Keys (Finnish)	9014	0	0	0
Keyboard - 102 Keys (German)	9016	0	0	0
Keyboard - 102 Keys (French)	9015	0	0	0
Keyboard - 102 Keys (Italian)	9017	0	0	0
Keyboard - 102 Keys (Norwegian)	9019	0	0	0
Keyboard - 102 Keys (Portuguese)	9020	0	0	0
Keyboard - 102 Keys (Spanish)	9021	0	0	0
Keyboard - 102 Keys (Swiss)	9022	0	0	0
Keyboard - 102 Keys (U.K.-English)	9023	0	0	0
Keyboard - 102 Keys (Icelandic)	9024	0	0	0
Keyboard - 102 Keys (Turkish)	9025	0	0	0
Keyboard - 102 Keys (Greek)	9026	0	0	0
Keyboard - 106 Keys (Japanese-KANJI)	9030	0	0	0
Keyboard - 106 Keys (Korean)	9031	0	0	0
Keyboard - 106 Keys (Chinese Traditional -Taiwan)	9033	0	0	0
Keyboard - Dutch	9034	0	0	0
Keyboard - Turkish	9035	0	0	0
Language Group - U.S. English	9300	0	0	0
Software Preload (US, AP and EMEA)	5005	0	0	0
Power cord	9800	0	0	0
Power cord	9986	0	0	0
Ethernet Thick/Thin Connector (Specify)	9000	0	0	116
Ethernet Twisted-Pair Connector (Specify)	9001	0	0	116
3.5-inch Diskette (Specify)	9221	0	0	106
32MB Memory (Specify)	9235	0	0	116
1GB SCSI-2 Disk (Specify)	9249	0	0	116
POWER GXT150M (Specify)	9650	0	0	0
POWERdisplay 17 (Specify)	9612	0	0	0
CCS Custom Services Specify	0986	0	0	0
IBM RISC System/6000 Model 3BT	7030			
.5MB L2 Cache	4040	$2,000	0	116
1MB L2 Cache	4041	4,000	0	116

[1]   Minimum Maintenance Charge
[2]   Select features can only be ordered with the initial system plant order.

The following features are available on the M/T 7030 Model 3AT/3BT: The following features have been previously announced and are available on the Model 3AT and 3BT:

Description	Feature Number
Fibre Channel/266 Adapter	1906
SCSI-2 Fast/Wide Adapter/A	2415
SCSI-2 Fast/Wide Differential Adapter/A	
SCSI-2 Fast/Wide Differential System to System Cable (.6M)	2424
SCSI-2 Fast/Wide Differential System to System Cable (2.5M)	2425
SCSI-2 Fast/Wide Differential Y-Cable	2426
SCSI-2 Differential Y-Cable	2427

Model Conversion Purchase Prices:

Model		Model Conversion Purchase Price[3]
From	To	
3AT	3BT	$13,000
355	3AT[4]	
365	3AT[4]	
375	3AT[4]	
36T	3AT[4]	
37T	3AT[4]	
355	3BT[4]	
365	3BT[4]	
375	3BT[4]	
36T	3BT[4]	
37T	3BT[4]	

[3] Parts removed or replaced become the property of IBM and must be returned

[4] Refer to RPQs for pricing