



# IBM RS/6000 7012 Workstation/Server Model 397

## Overview

The RS/6000™ family of workstations and servers offers a range of powerful, scalable computing solutions. Operating system support is provided by AIX®, best-rated UNIX® operating system by noted industry consultant D.H. Brown. Many thousands of applications span commercial and technical needs.

### The RS/6000 7012

**Workstation/Server Model 397** is a powerful uniprocessor based on the POWER2 Super Chip (P2SC) implementation of the POWER Architecture. High levels of floating-point and integer power keep pace with your most demanding applications. The Model 397 has a 160MHz P2SC, a 32-bit RISC chip. The P2SC Level 1 instruction cache is 32KB and the Level 1 data cache is either 64KB or 128KB, depending on the number of memory cards installed. Two memory cards constitute a four-word memory system and support the 64KB data cache. Four memory cards installed make up an eight-word memory system and support the 128KB data cache. You can run large, complex jobs entirely in memory (up to 1GB) without the performance degradation from disk paging.

A high-performance Micro Channel® bus generates four Micro Channel slots and supports the high-speed, Data Streaming protocol.

This RS/6000 system will have a 1-2 user, full-function AIX Version 4 package included at no additional charge.

## Intended Customers

Customers who want advanced technical performance in a mid-range system for their application set. Mid-range commercial customers who want price/performance improvements in uniprocessor-based commercial applications such as database.

Typical application environments:

- Technical
  - Mechanical Computer-Aided Design
  - Engineering Analysis (Structures and Fluids)
  - Electrical Design and Analysis
  - Geoscience (Petroleum Exploration and Production)
  - Scientific Research (Physics, Math, Weather, Defense)
  - Biology and Chemistry Process
- Commercial
  - Departmental Server
  - Financial Analysis and Modeling
  - Data Mining and Analysis

## Key Prerequisites

- IBM-supported terminal or IBM-supported display, display adapter, and keyboard. POWERservers must have a console.
- AIX Versions 4.1.5, 4.2, or 4.3.

**Purchase Price:** \$29,900

**Planned Availability Date:**

October 31, 1997 (with AIX 4.1.5, 4.2, or 4.3)

December 5, 1997 (with #2850 GXT800M Graphics Adapter)

## At a Glance

### The P2SC Powers Your Most Formidable Applications With:

- **Outstanding memory access and capacity** — With extraordinary 2.56GB/second memory bandwidth and up to 1GB of memory capacity, process larger, more complex jobs entirely within memory to minimize performance reduction.
- **Exceptional speed, storage, and expansion features** — For outstanding I/O throughput, the Model 397 has a high-speed (80MB/second) 32-bit Micro Channel I/O bus with four expansion slots, two available disk/media bays, and an integrated SCSI-2 Fast/Wide controller.
- **Outstanding compatibility** — Supports thousands of AIX applications and many of IBM's Micro Channel-based 2D and 3D graphics accelerators.
- **Price/Performance** — Yields substantial performance improvements over Models 39x predecessor systems, making it an excellent price performer.
- **Investment protection** — Existing POWER2-based 3XX desktop systems can be upgraded to take advantage of the outstanding performance and expandability of the Model 397.

### For ordering, contact:

Your IBM representative, an IBM Business Partner, or IBM North America Sales Centers at

800-IBM-CALL

Reference: RE010

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## Description

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The Model 397 comes standard with a 160MHz P2SC processor. This 32-bit RISC chip has 32KB of Level 1 instructional cache and either 64KB or 128KB of data cache, depending on the number of memory cards installed (two or four).

The base Model 397 128MB of memory can be expanded to 1GB to help run large complex jobs entirely within memory without the performance degradation from disk paging. The Model 397 also features an extraordinary memory bandwidth of 2.56GB/second.

The Model 397 has an 80MB/second high-speed Micro Channel I/O bus to help enhance overall throughput. This bus has four available Micro Channel expansion slots that support the high-speed data streaming protocol for high-bandwidth data transfers.

To keep up with a growing business, this desktop uniprocessor offers flexible storage and expansion convenience with both SCSI-2 and Serial Storage Architecture (SSA) interfaces. SSA provides outstanding performance compared to SCSI-2, increased storage capacity, RAID-5 support, and high-availability configurations with dual ports for no single-point-of-failure.

The entry system comes with 4.5GB of 16-bit SCSI-2 internal storage that can be increased to over 27GB with additional internal SCSI-2 disk drives. If your needs continue to grow, you can add external disk storage of up to 1.5TB with external SCSI-2 storage devices or up to 3.4TB with external SSA storage devices.

Rounding out the 397 system are standard 20X (Max) SCSI-2 CD-ROM and 3.5-inch diskette drives, an integrated SCSI-2 Fast/Wide controller, two serial ports, one parallel port, Ethernet and tablet ports.

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## Product Positioning

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The Model 397 can help satisfy your overall requirements in scientific and technical computing. It is well suited to petroleum exploration and production, computational biology and chemistry, process engineering, mechanical engineering, and electronic design and analysis applications processing.

### **POWER2 Super Chip**

The P2SC is a powerful new innovation resulting from the integration of the eight-chip POWER2 technology into a single chip. This phenomenal integration in design and manufacturing delivers outstanding price/performance.

It is the most sophisticated single-chip processor yet announced by IBM, with six instructions per cycle execution capability, 160KB of on-chip cache, and a total transistor count of 15 million (about six million more than the next largest IBM microprocessor).

The P2SC technology provides the Model 397 with its extraordinary memory bandwidth (2.56GB/second) and fast floating-point execution.

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## Reference Information

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Refer to Hardware Announcement 197-273, dated October 6, 1997, for RS/6000 7030-397 Workstation Upgrade.

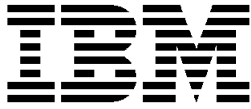
Refer to Software Announcement 297-399, dated October 6, 1997, for AIX Version 4.3.

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# IBM US Announcement Supplemental Information

October 6, 1997

## Feature Matrix

The following feature availability for machine type 7012 uses:

- **A** to indicate features that can be ordered on the specified models.
- **S** indicates a feature supported on the new model during a model conversion; these features will work on the new model, but additional quantities of these features cannot be ordered on the new model; they can only be removed.
- **N** indicates that the feature is not supported on the new model and must be removed during the model conversion.

As additional features are announced, supported, or withdrawn, this list will be updated. Contact your IBM representative for additional information.

Feature Number	3 9 7	A = Available S = Supported N = Not Supported, must be removed	Description
0949	N		MediaSTREAMER (TM) Order Indicator
0986	A		CCS Customer Service Specify (U.S.)
1101	A		Non-Locking Switch
1110	S		Keyboard U.S. English Soft Touch (U.S./Canada Only)
1906	N		Fibre Channel Adapter/266
2390	N		540MB SCSI-2 Disk Drive
2391	N		400MB to 540MB SCSI-2 Disk Drive Select
2392	N		160MB to 540MB SCSI-2 Disk Drive Select
2400	N		M-Video Capture Adapter (NTSC)
2402	S		Network Terminal Accelerator — 256 Session
2403	S		Network Terminal Accelerator — 2048 Session
2404	A		Ultimedia (R) Video I/O Adapter
2405	A		Ultimedia Video Compression/Decompression Card
2410	S		SCSI-2 High-Performance External I/O Controller
2412	A		Enhanced SCSI-2 Differential Fast/Wide Adapter/A
2415	A		SCSI-2 Fast/Wide Adapter/A
2416	A		SCSI-2 Differential Fast/Wide Adapter/A
2420	S		SCSI-2 Differential High-Performance External I/O Controller
2422	A		SCSI-2 Differential Y-Cable
2423	A		SCSI-2 Differential System to System Cable
2424	A		0.6M 16-bit SCSI-2 System to System Cable
2425	A		2.5M 16-bit SCSI-2 System to System Cable
2426	A		16-bit Y-Cable For SCSI-2 Differential Fast/Wide Adapter/A
2427	A		8-bit Y-Cable for SCSI-2 Differential Fast/Wide Adapter/A
2435	A		16-bit SCSI-2 Fast/Wide Adapter/A to Dual Ported Device Cable
2436	A		16-bit SCSI-2 Differential Fast/Wide Adapter/A to Dual Ported Device Cable
2437	A		8-bit SCSI-2 Fast/Wide Adapter/A to Dual Ported Device Cable
2438	A		8-bit SCSI-2 Differential Fast/Wide Adapter/A to Dual Ported Device Cable
2439	A		8-bit SCSI-2 Fast/Wide Adapter/A to Single-Ported Device Cable
2550	N		1GB SCSI Disk Drive
2553	N		160MB to 1GB SCSI Disk Drive Select
2555	S		1GB SCSI-2 Disk Drive
2556	S		400MB to 1GB SCSI-2 Disk Drive Select

Feature Number	3 9 7	A = Available S = Supported N = Not Supported, must be removed	Description
2558	S		160MB to 1GB SCSI-2 Disk Drive Select
2560	N		400MB SCSI Disk Drive
2563	N		160MB to 400MB SCSI Disk Drive Select
2580	S		2GB SCSI-2 Disk Drive
2581	S		160MB to 2GB SCSI-2 Disk Drive Select
2582	S		400MB to 2GB SCSI-2 Disk Drive Select
2586	S		2GB SCSI-2 Fast/Wide Disk Drive
2587	S		2GB to 2GB SCSI-2 Fast/Wide Disk Drive Select
2603	S		Internal CD-ROM-2
2604	S		600MB SCSI-2 Double Speed Tray-loading CD-ROM
2614	S		600MB SCSI-2 Double Speed Tray-loading CD-ROM Select
2616	S		Quad Speed Tray Loading CD-ROM
2617	S		Tray Loading CD-ROM Select
2618	S		8X Speed Tray Loading CD-ROM
2619	A		20X (Max) SCSI-2 CD-ROM Drive
2630	S		Internal 1.2GB 1/4-Inch Cartridge Tape Drive
2631	S		Internal 1.2GB 1/4-Inch Cartridge Tape Drive Select
2650	A		POWER GXT150M (TM) Graphics Adapter
2700	A		4-Port Multiprotocol Communications Controller
2702	A		Multiprotocol Attachment Cable — V.35
2704	A		Multiprotocol Attachment Cable — X.21
2705	A		4-Port Multiprotocol Interface Cable
2706	A		Multiprotocol Modem Attachment Cable — EIA-232/V.24
2706	A		EIA-232/V.24
2707	A		Eicon ISDN DIVA MCA Adapter
2711	N		POWER Gt4xi (TM) 8-bit Graphics Adapter
2712	S		POWER Gt4xi 24-bit Graphics Adapter
2713	N		POWER Gt4i (TM) 24-bit Graphics Adapter
2720	S		Fiber Distributed Data Interface Single-Ring Adapter
2722	S		FDDI Dual-Ring Upgrade Kit
2723	A		FDDI-Fiber Dual-Ring Upgrade
2724	A		FDDI-Fiber Single-Ring Adapter
2725	S		FDDI-STP Single-Ring Adapter
2726	S		FDDI-STP Dual-Ring Upgrade
2754	A		S/390 (R) ESCON (R) Channel Emulator
2755	A		Block Multiplexer Channel Adapter
2756	A		ESCON Control Unit Adapter
2757	A		Block Multiplexer Channel Adapter Cable
2758	A		Block Multiplexer Channel Cable Assembly
2759	A		System/370 (TM) Channel Emulator/A
2760	N		Grayscale Graphics Display Adapter
2768	S		POWER Gt3i (TM)
2770	N		Color Graphics Display Adapter
2776	S		POWER Gt4e (TM)
2777	N		POWER Gt3 (TM)
2780	N		High-Performance 8-bit 3D Color Graphics Processor
2781	N		High-Performance 24-bit 3D Color Graphics Processor
2782	N		24-bit Z-Buffer Solid Rendering Option
2783	N		24-bit Color Graphics Frame Buffer Upgrade
2790	N		POWER Gt4x (TM) 8-bit Feature
2791	N		POWER Gt4x 24-bit Feature
2792	N		POWER Gt4 (TM) 8-bit to 24-bit Upgrade
2794	N		POWER Gt4 Performance Upgrade
2795	N		POWER Gt4 8-bit Feature
2796	N		POWER Gt4 24-bit Feature
2800	N		System/370 Host Interface Adapter
2801	N		5086 Attachment Adapter
2802	N		5085 Attachment Adapter
2810	A		Graphics Input Device Adapter
2811	A		Graphics Input Device Cable
2820	A		IBM 7250 Attachment Adapter
2832	A		SCSI Controller Cable
2833	S		Integrated SCSI Controller Cable

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Feature Number	Description
3 9 7	A = Available S = Supported N = Not Supported, must be removed
2835	A SCSI High-Performance External I/O Controller
2836	A SCSI-2 Controller Cable
2850	A IBM POWER GXT800M Graphics Adapter
2914	S SCSI-2 Passthrough Terminator Cable (50-Pin)
2915	S SCSI Controller Passthrough Terminator Cable (60-Pin)
2915	S
2921	S ARTIC960 Coprocessor (1MB)
2922	S Cable Option EIA 232
2923	A Cable Option EIA 530 RS 422
2924	A ARTIC960 Coprocessor (4 MB)
2926	A Cable Option ISO 4902 V.36
2927	A Cable Option ISO 4903 X.21
2928	S ARTIC960 Coprocessor (8 MB)
2929	A ARTIC960 Coprocessor, 8-port EIA-232
2930	A 8-Port Asynchronous Adapter — EIA-232
2934	A Asynchronous Terminal/Printer Cable EIA-232
2935	A ARTIC960 Coprocessor, 6-port V.36
2936	A Asynchronous Cable EIA-232/V.24
2937	A Printer/Terminal Interposer — EIA-232
2938	A ARTIC960 Coprocessor, 8-port X.21
2939	A ARTIC960 8-port EIA-232 Cable
2940	A 8-Port Asynchronous Adapter — EIA-422A
2941	A ARTIC960 6-port V.36 Cable
2942	A ARTIC960 6-port X.21 Cable
2945	A Asynchronous Terminal Cable — EIA-422A
2950	S 8-Port Asynchronous Adapter — MIL-STD 188
2955	S 16-Port Asynchronous Adapter — EIA-232
2957	S 16-Port Asynchronous Adapter — EIA-422A
2959	S 1-Port Multiprotocol Communications Adapter
2960	A X.25 Interface Co-Processor/2 Adapter
2964	S IBM 10/100 Mbps Ethernet MC Adapter / UNI
2965	S X.25 Attachment Cable X.21 — 3-Meter (10-Ft.)
2966	S X.25 Attachment Cable V.24 — 3-Meter (10-Ft.)
2967	S X.25 Attachment Cable V.35 — 3-Meter (10-Ft.)
2970	S Token-Ring High-Performance Network Adapter
2972	A Auto Token-Ring LANstreamer (R. 32 MC Adapter)
2976	A X.25 Attachment Cable X.21 — 6-Meter (20-Ft.)
2977	A X.25 Attachment Cable V.24 — 6-Meter (20-Ft.)
2978	A X.25 Attachment Cable V.35 — 6-Meter (20-Ft.)
2980	A Ethernet High-Performance LAN Adapter
2984	S TURBOWAYS (TM) 100 ATM Adapter
2989	A TURBOWAYS 155 ATM Adapter
2990	S 3270 Connection Adapter
2992	A Ethernet/FDX 10 Mbps TP/AUI MC Adapter
2993	A Ethernet 10 Mbps BNC MC Adapter
2994	A IBM 10/100 Mbps Ethernet MC Adapter
2995	A Multipoint Interface Cable
2996	S 16-Port Interface Cable — EIA-232
2997	S 16-Port Interface Cable — EIA-422A
2999	N ATM-155 Video Streaming Adapter, MCA
3000	A 4.5GB SCSI-2 F/W 1-inch (25-mm) High Disk Drive
3009	A 9.1GB F/W SCSI Disk, Select
3010	A 9.1GB SCSI-2 F/W Disk Drive
3016	S 9.1GB SCSI-2 F/W Disk Drive Select
3032	S 1.1GB SCSI-2 F/W Disk Drive
3033	S 2.2GB SCSI-2 F/W Disk Drive
3034	S 4.5GB SCSI-2 F/W Disk Drive
3041	S 1.1GB SCSI-2 Fast/Wide Disk Drive Select (Must order quantity of two)
3044	S 2.2GB SCSI-2 Fast/Wide Disk Drive Select
3048	S 4.5GB SCSI-2 Fast/Wide Disk Drive Select
3100	A PC Parallel Printer Cable
3124	A Serial to Serial Port Cable for Drawer/Drawer
3125	A Serial to Serial Port Cable for Rack/Rack
3130	A SCSI Device to Device Cable
3600	S POWERdisplay 16
3601	S POWERdisplay 19
3607	S POWERdisplay 17
3608	S POWERdisplay 20
3612	S P50 Color Monitor
3613	A P70 Color Monitor
3614	A P200 Color Monitor
3615	A P201 Color Monitor
3750	A Service Publications and Wrap Plugs Kit
4040	N 0.5MB L2 Cache
4041	N 1MB L2 Cache
4045	N 0.5MB L2 Cache
4046	N 1MB L2 Cache
4047	A 128MB (4X 32MB) S6 Memory Card Select
4048	A 256MB (2X 128MB) S6 Memory Card Select
4049	A 512MB (2X 256MB) S6 Memory Card Select

Feature Number	Description
3 9 7	A = Available S = Supported N = Not Supported, must be removed
4050	N 64MB Processor Card SIMM Memory Select
4051	N 128MB Processor Card SIMM Memory Select
4052	N 256MB Processor Card SIMM Memory Select
4053	N 32MB Processor Card SIMM Memory
4054	N 64MB Processor Card SIMM Memory
4055	N 128MB Processor Card SIMM Memory
4056	N 256MB Processor Card SIMM Memory
4063	N 8MB HD3 Memory Card
4066	N 16MB HD3 Memory Card
4067	N 32MB HD3 Memory Card
4068	N 16MB to 32MB HD3 Memory Select
4069	N 64MB HD3 Memory Card
4071	N 32MB to 64MB HD3 Memory Select
4074	N 16MB to 64MB HD3 Memory Select
4086	A 32MB S6 Memory Card
4087	A 64MB S6 Memory Card
4088	A 128MB S6 Memory Card
4089	A 256MB S6 Memory Card
4090	N 128MB Memory Card
4091	N 16MB to 128MB Memory Select
4092	N 32MB to 128MB Memory Select
4095	N 256MB Memory Card
4096	N 32MB to 256MB Memory Select
4099	N 16MB to 256MB Memory Select
4213	A 13W3 to 15-Pin D-Shell Converter Cable
4214	A 13W3 to 60/77Hz Display Cable
4217	N 6091 Attachment Cable
4221	A Ethernet AUI/Thin Riser
4222	A Ethernet Twisted Pair Riser
4224	A Ethernet 10BaseT Transceiver
4227	A Sun Compatible Display Converter Cable
4229	A 13W3 to PowerDisplay 16S Display Cable
4234	A 13W3 to 13W3 Display Cable
4236	A 13W3 to 3W3 Display Cable
4350	N POWERgraphics GTO Accelerator Feature
5005	A Software Preinstall
5032	N 32MB Memory SIMM Kit
5033	A S6 Memory MES Upgrade Kit, 32MB TO 64MB
5034	A S6 Memory MES Upgrade Kit, 32MB TO 128MB
5035	A S6 Memory MES Upgrade Kit, 32MB TO 256MB
5036	A S6 Memory MES Upgrade Kit, 64MB TO 128MB
5037	A S6 Memory MES Upgrade Kit, 64MB TO 256MB
5038	A S6 Memory MES Upgrade Kit, 128MB TO 256MB
5064	N 64MB Memory SIMM Kit
5128	N 128MB Memory SIMM Kit
6010	S Keyboard — 101 Keys (U.S.)
6015	S Keyboard — 102 Keys (French)
6016	S Keyboard — 102 Keys (German)
6017	S Keyboard — 102 Keys (Italian)
6021	S Keyboard — 102 Keys (Spanish)
6030	S Keyboard — 106 Keys (Japanese — Kanji)
6041	A 3-Button Mouse
6141	S 5GB 8MM Tape Select
6142	A 4GB/8GB 4MM Internal Tape Drive
6145	S 4GB 4MM Tape Drive Select
6147	A 5GB/10GB 8MM Internal Tape Drive
6154	A 20/40GB 16-bit 8mm Internal Tape Drive
6157	S 20/40GB 16-bit 8mm Internal Tape Drive Select
6210	S High-Performance Disk Drive Subsystem Adapter (40MB/Sec)
6211	S High-Performance Disk Drive Subsystem Adapter (80MB/Sec)
6212	S High-Performance Subsystem Adapter (40/80MB/Sec)
6214	S High Performance 4-Port SSA Adapter
6216	A Enhanced 4-Port SSA Serial Adapter, MCA
6217	A IBM SSA 4-port RAID Adapter
6219	N MCA Multi-Initiator SSA Adapter
6222	N Fast Write Cache Option Card
6300	S Digital Trunk Adapter
6301	N M-Audio Capture Playback Adapter
6302	A IBM Ultimedia Audio Adapter
6305	A Digital Trunk Dual Adapter
6306	N IBM Speech Accelerator 1
6307	N IBM Speech Accelerator 2
6400	S 64-Port Asynchronous Controller
6401	S 16-Port Asynchronous Concentrator
6402	S RJ-45 to DB-25 Converter Cable
6509	A Media Bay Disk Drive Mounting Kit
6530	N 39H Rack Mounting Hardware
6531	N 19-Inch Equipment Rack Mounting Hardware
6532	N Rack Mount/Environmentally-Hardened Option

Feature Number	Description
3 9 7	A = Available S = Supported N = Not Supported, must be removed
6599	A Optional Keyboard Cable with Speaker
6600	A Quiet Touch Keyboard, US English, #103P
6601	A Quiet Touch Keyboard, French, #189
6602	A Quiet Touch Keyboard, Italian, #142
6603	A Quiet Touch Keyboard, German/Austrian, #129
6604	A Quiet Touch Keyboard, UK English, #166
6605	A Quiet Touch Keyboard, Spanish, #172
6606	A Quiet Touch Keyboard, Japanese, #194
6607	A Quiet Touch Keyboard, Brazilian Portuguese, #275
6608	A Quiet Touch Keyboard, Canadian French, #058
6609	A Quiet Touch Keyboard, Belgian/UK-Flemish, #120
6610	A Quiet Touch Keyboard, Belgian/French, #120
6611	A Quiet Touch Keyboard, Swedish/Finnish, #153
6612	A Quiet Touch Keyboard, Danish, #159
6613	A Quiet Touch Keyboard, Bulgarian, #442
6614	A Quiet Touch Keyboard, Swiss, French/German, #150f/g
6616	A Quiet Touch Keyboard, Norwegian, #155
6617	A Quiet Touch Keyboard, Dutch, #143
6618	A Quiet Touch Keyboard, Portuguese, #163
6619	A Quiet Touch Keyboard, Greek, #319
6620	A Quiet Touch Keyboard, Hebrew, #212
6621	A Quiet Touch Keyboard, Hungarian, #208
6622	A Quiet Touch Keyboard, Icelandic, #197
6623	A Quiet Touch Keyboard, Polish, #214
6624	A Quiet Touch Keyboard, Romanian, #446
6625	A Quiet Touch Keyboard, Slovakian, #245
6626	A Quiet Touch Keyboard, Czech, #243
6627	A Quiet Touch Keyboard, Turkish, #179
6628	A Quiet Touch Keyboard, Turkish, #440
6629	A Quiet Touch Keyboard, LA Spanish, #171
6630	A Quiet Touch Keyboard, Arabic, #238
6632	A Quiet Touch Keyboard, Serbian-Cyrillic, #118
6633	A Quiet Touch Keyboard, Korean, #413
6634	A Quiet Touch Keyboard, Chinese/U.S., #467
6635	A Quiet Touch Keyboard, French Canadian, #445
6636	A Quiet Touch Keyboard, Thai, #191
6638	A Quiet Touch Keyboard, Russian, #443
6639	A Quiet Touch Keyboard, Croatian, #105
6640	A Quiet Touch Keyboard, U.S. English IS09995, #103P (EMEA)
7002	S Realtime Interface Co-Processor: Multiport/2 Adapter (.5MB)
7004	S Realtime Interface Co-Processor: Multiport/2 Adapter (1MB)
7006	A Realtime Interface Co-Processor: Portmaster (R) Adapter/A (1MB)
7008	S Realtime Interface Co-Processor: Portmaster Adapter/A (2MB)
7022	S Realtime Interface Co-Processor: Multiport/2 4-Port RS-232 Interface Board
7024	S Realtime Interface Co-Processor: Multiport/2 6-Port RS-232-C Synchronous Interface Board
7026	S Realtime Interface Co-Processor: Multiport/2 8-Port RS-232 Interface Board
7028	S Realtime Interface Co-Processor: Multiport/2 8-Port RS-422-A Interface Board
7030	S Realtime Interface Co-Processor: Multiport/2 RS-232/RS-422 Interface Board
7042	A Realtime Interface Co-Processor: 8-Port RS-232 Interface Board/A
7044	A Realtime Interface Co-Processor: 8-Port RS-422 Interface Board/A
7046	A Realtime Interface Co-Processor: 6-Port V.35 Interface Board/A
7048	A Realtime Interface Co-Processor: 6-Port X.21 Interface Board/A
7102	S Realtime Interface Co-Processor: EIA RS-232-C Multiport Interface Cable
7104	S Realtime Interface Co-Processor: Synchronous Interface Cable
7106	A Realtime Interface Co-Processor: 6-Port V.35 Cable
7107	A Realtime Interface Co-Processor: V.35 Network Cable
7108	A Realtime Interface Co-Processor: 8-port EIA-232/422 Cable
7110	A Realtime Interface Co-Processor: 6-Port X.21 Cable
7111	A Realtime Interface Co-Processor: X.21 Network Cable
8128	A 128-Port Asynchronous Controller
8130	A Remote Asynchronous Node 16-Port EIA-232

Feature Number	Description
3 9 7	A = Available S = Supported N = Not Supported, must be removed
8131	A 128-Port Asynchronous Controller Cable, 4.5 Meter
8132	A 128-Port Asynchronous Controller Cable, 23cm (9-Inch)
8133	A RJ-45 to DB-25 Converter Cable
8135	A 64-Port to 128-Port Pin-Out Converter
8136	A Rack Mountable Remote Asynchronous Node 16-Port EIA-232
8137	A Enhanced Asynchronous Node 16-Port EIA-232
8138	A Enhanced Asynchronous Node 16-Port EIA-422
8A0836	N MG24 Graphics Adapter
9000	A Ethernet AUI/Thin Riser Specify
9001	A Ethernet Twisted Pair Riser Specify
9004	A Southern Hemisphere Designator for Monitors
9078	A Base 128MB (2X 64MB) S6 Memory
9116	S Transformer Specify, 115 to 127 VAC
9139	A Base 4.5GB F/W Disk
9218	S Internal CD-ROM-2 Specify
9221	A 3-1/2 Inch 1.44MB Diskette Drive Specify
9234	N 16MB HD3 Memory Specify
9235	N 32MB HD3 Memory Specify
9239	N 32MB Processor Card SIMM Memory Specify
9244	N 400MB SCSI Disk Drive Specify
9249	S 1GB SCSI-2 Disk Drive Specify
9263	S 2GB SCSI-2 Disk Drive Specify X2
9300	A Language Group Specify — U.S. English
9608	S Base 8X Speed Tray Loading CD-ROM
9619	A Base 20X (Max) SCSI-2 CD-ROM Drive
9712	A Language Group Specify — Canadian French
9800	A Power Cord Specify — United States/Canada
9892	N Power Cord Specify — Linecord to PDU
9986	A Power Cord Specify — Chicago (125V, 15A) (1.8M)(6 Ft.)

## Publications

The following publications are shipped with the product. Additional copies are available. To order, contact your IBM representative.

Title	Order Number
RS/6000™ 7012 300 Series Operator Guide	SA38-0544
RS/6000 7012 300 Series Installation and Service Guide	SA38-0545

The System Library Subscription Service (SLSS) is available by order number only. Customers currently subscribing to SLSS will receive publication updates automatically.

## Technical Information

### Specified Operating Environment

#### Physical Specifications

- Weight and Physical Size:
  - Width: 442 mm (17.4 in)
  - Depth: 478 mm (18.8 in)
  - Height: 102 mm (6.4 in)
  - Weight: 18.1 kg to 21.8 kg (40 lb to 48 lb)
- Voltage:
  - 100 V to 125 V Nominal, Auto Ranging
  - 200 V to 240 V Nominal, Auto Ranging
  - 50Hz/60Hz
- Power Supply: 250 watts (typical)
- Thermal Output: 403 Joules (1374 Btu per hour)
- Power Source Loading: 0.25 kVA

## Operating Environment

### EMC Conformance Classification

- U.S.A.: FCC Class A
- Germany: EN 55022 Class A
- Europe and New Zealand: CISPR 22 Class A — CEMARK A
- Japan: VCCI-1
- Temperature: 16° to 32°C (60.8° to 89.6°F)
- Relative humidity:
  - 8% to 80% (product power on, no tape media)
  - 20% to 80% (product power on, with tape media)
- Maximum wet bulb: 23°C (73°F)
- Noise emission: Declared (upper limit) sound power level for a random sample of machines:
  - Operating: 5.7 Bels
  - Idle: 5.5 Bels
- Mean Value of the A-Weighted Sound Pressure levels at one-meter (bystander) positions for a random sample of machines:
  - Operating: 45 dBa
  - Idle: 44 dBa

The Model 397 was developed in compliance with corporate policy letter number 139 (Environmental Affairs).

**Environmental Impact Assessment:** The Model 397 is in compliance with Corporate Standard C-S 3-0527-002 (1991-06) Control of Chemicals in IBM Facilities, Requirements, and Responsibilities.

### Product Safety/Country Testing/Certification

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

**Telecom Environmental Testing (Safety and EMC):** Homologation approval for specific countries has been initiated with the IBM Homologation and Type Approval (HT&A) organization in LaGaude.

This RS/6000 model and applicable features meet the environmental testing requirements of the country TELECOM and have been designed and tested in compliance with the Full Quality Assurance Approval (FQAA) process as delivered by the British Approval Board for Telecom (BABT), the UK Telecom Regulatory authority.

**Hardware Requirements:** IBM-supported terminal or IBM-supported display, display adapter, and keyboard. POWERservers must have a console.

AIX® Version 4.1.5, 4.2.1, or 4.3 is required.

### Limitations

- Memory cards must be installed in pairs or quads
- All installed memory cards must be of the same capacity

### POWER GXT800M Graphics Adapter (#2850)

- The POWER GXT800M must be placed in slot 3 of the Model 397. Its hardware design blocks portions of slots 1 and 2, limiting those slots to short adapters.

The GXT800M also has components that protrude into the space of slot 4, restricting the use of certain adapters as described below.

- No other graphics adapters may be installed in conjunction with the POWER GXT800M.
- The following adapters may be installed in slots 1 and 2 when the POWER GXT800M is installed:
  - Eicon ISDN DIVA MCA Adapter for PowerPC® Systems (#2707)
  - 3270 Connection Adapter — U.S. (#2990)
  - 3270 Connection Adapter — EMEA (#2991)
  - IBM Ultimedia Audio Adapter (#6302)
- The POWER GXT800M is mutually exclusive with the following adapters:
  - IBM Ultimedia Video I/O Adapter (#2404)
  - IBM Ultimedia Video Compression/Decompression Card (#2405)
  - Enhanced SCSI-2 Differential Fast/Wide Adapter/A (#2412)
  - IBM SCSI-2 Fast/Wide Adapter/A (#2415)
  - IBM SCSI-2 Differential Fast/Wide Adapter/A (#2416)
  - POWER GXT150M Graphics Adapter (#2650)
  - POWER Gt4xi 24-bit Graphics Adapter (#2712)
  - FDDI-Fiber Dual-Ring Upgrade (#2723)
  - FDDI-STP Dual-Ring Upgrade (#2726)
  - S/390 ESCON Channel Emulator (#2754)
  - ESCON Control Unit Adapter (#2756)
  - POWER Gt3i (#2768)
  - POWER Gt4e (#2776)
  - IBM 7250 Attachment Adapter (#2820)
  - ARTIC960 Coprocessor (1MB) (#2921)
  - ARTIC960 Coprocessor (4MB) (#2924)
  - ARTIC960 Coprocessor (8MB) (#2928)
  - ARTIC960 Coprocessor, 8-port EIA-232 (#2929)
  - ARTIC960 Coprocessor, 6-port V.36 (#2935)
  - ARTIC960 Coprocessor, 8-port X.21 (#2938)
  - 16-Port Asynchronous Adapter — EIA-232 (#2955)
  - 16-Port Asynchronous Adapter — EIA-422A (#2957)
  - TURBOWAYS 100 ATM Adapter (#2984)
  - IBM Realtime Interface Co-Processor: Multiport/2 Adapter (.5MB) (#7002)
  - IBM Realtime Interface Co-Processor: Multiport/2 Adapter (1MB) (#7004)
  - IBM Realtime Interface Co-Processor: Portmaster Adapter/A (1MB) (#7006)
  - IBM Realtime Interface Co-Processor: Portmaster Adapter/A (2MB) (#7008)
  - IBM Realtime Interface Co-Processor: Multiport/2 4-Port RS-232 Interface Board (#7022)
  - IBM Realtime Interface Co-Processor: Multiport/2 6-Port RS-232-C Synchronous Interface Board (#7024)

- IBM Realtime Interface Co-Processor: Multiport/2 8-Port RS-232 Interface Board (#7026)
- IBM Realtime Interface Co-Processor: Multiport/2 8-Port RS-422-A Interface Board (#7028)
- IBM Realtime Interface Co-Processor: Multiport/2 RS-232/RS-422 Interface Board (#7030)
- IBM Realtime Interface Co-Processor: 8-Port RS-232 Interface Board/A (#7042)
- IBM Realtime Interface Co-Processor: 8-Port RS-422 Interface Board/A (#7044)
- IBM Realtime Interface Co-Processor: 6-Port V.35 Interface Board/A (#7046)
- IBM Realtime Interface Co-Processor: 6-Port X.21 Interface Board/A (#7048)

**Planning Information**

**Cable Orders:** No additional cables are required.

**Security, Auditability, and Control**

This product uses the security and auditability features of host hardware, software and application software.

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

**Terms and Conditions**

This product is available for purchase under the terms of the IBM Customer Agreement (ICA).

IBM hardware products are manufactured from new parts, or new and used parts. In some cases, the hardware product may have been previously installed. Regardless, IBM's warranty terms apply.

**IBM Credit Corporation Financing:** Yes

**Warranty Period:** One year

**Warranty Service:** IBM On-Site Repair (IOR)

**Alternate Service:** IOR

**Maintenance Service:** IOR

**Usage Plan Machine:** No

**IBM Hourly Service Rate Classification:** Two

**Mid-Range System Option:** Yes

Eligible Type	Discount	
	Three-Year	Five-Year
7012-397	12%	17%

**Corporate Service Option:** Yes

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

**Extended Maintenance Option:** Yes

**Central Facility Maintenance Service (CFMS) Option:** No

When a type of service involves the exchange of a machine part, the replacement may not be new, but will be in good working order.

**Rental Offering:** No

**Product Availability Status:** Yes

**Field-Installable Features:** Yes

**Model Conversions:** Yes

**Customer Setup:** Yes

**Graduated Charges:** Yes

**Group number:** E5

**Licensed Machine Code:** IBM Licensed Machine Code provided with the RS/6000 7012 Model 397 is licensed for use by a customer on a specific machine, designated by serial number, under the terms and conditions of the IBM Agreement for Licensed Machine Code.

**Educational Allowance:** A reduced charge is available to qualified education customers. The educational allowance may not be added to any other discount or allowance.

**Charges**

**Machine Type:** 7012-397

Description	Purchase Price	MMMC*
RS/6000 Workstation/Server	\$29,900	\$269

\* Monthly Minimum Maintenance Charge

Description	Feature Number	Purchase Price	Initial MES/Both
20X (Max) SCSI-2 CD-ROM Drive	2619	\$ 550	Both
POWER GXT800M Graphics Adapter	2850	12,000	Both
9.1GB F/W SCSI Disk, Select	3009	1,350	Initial

<b>Description</b>	<b>Feature Number</b>	<b>Purchase Price</b>	<b>Initial MES/ Both</b>
128MB (4X 32MB) S6 Memory Card Select	4047	\$ 2,825	Initial
256MB (2X 128MB) S6 Memory Card Select	4048	3,840	Initial
512MB (2X 256MB) S6 Memory Card Select	4049	14,080	Initial
32MB S6 Memory Card	4086	1,600	Both
64MB S6 Memory Card	4087	3,200	Both
128MB S6 Memory Card	4088	5,120	Both
256MB S6 Memory Card	4089	10,240	Both
S6 Memory MES Upgrade Kit, 32MB to 64MB	5033	3,200	MES
S6 Memory MES Upgrade Kit, 32MB to 128MB	5034	5,120	MES
S6 Memory MES Upgrade Kit, 32MB to 256MB	5035	10,240	MES
S6 Memory MES Upgrade Kit, 64MB to 128MB	5036	5,120	MES
S6 Memory MES Upgrade Kit, 64MB to 256MB	5037	10,240	MES
S6 Memory MES Upgrade Kit, 128MB to 256MB	5038	10,240	MES
20/40GB 16-bit 8mm Internal Tape Drive	6154	6,250	Both
Optional Keyboard Cable with Speaker	6599	35	Both
Quiet Touch Keyboard, U.S. English, #103P	6600	100	Both
French, #189	6601	100	Both
Italian, #142	6602	100	Both
German/Austrian, #129	6603	100	Both
UK English, #166	6604	100	Both
Spanish, #172	6605	100	Both
Japanese, #194	6606	100	Both
Brazilian Portuguese, #275	6607	100	Both
Canadian French, #058	6608	100	Both
Belgian/UK-Flemish, #120	6609	100	Both
Belgian/French, #120	6610	100	Both
Swedish/Finnish, #153	6611	100	Both
Danish, #159	6612	100	Both
Bulgarian, #442	6613	100	Both
Swiss,French/German, #150f/g	6614	100	Both
Norwegian, #155	6616	100	Both
Dutch, #143	6617	100	Both
Portuguese, #163	6618	100	Both
Greek, #319	6619	100	Both
Hebrew, #212	6620	100	Both
Hungarian, #208	6621	100	Both
Icelandic, #197	6622	100	Both
Polish, #214	6623	100	Both
Romanian, #446	6624	100	Both
Slovakian, #245	6625	100	Both
Czech, #243	6626	100	Both
Turkish, #179	6627	100	Both
Turkish, #440	6628	100	Both
LA Spanish, #171	6629	100	Both
Arabic, #238	6630	100	Both
Serbian-Cyrillic, #118	6632	100	Both
Korean, #413	6633	100	Both
Chinese/US, #467	6634	100	Both
French Canadian, #445	6635	100	Both
Thai, #191	6636	100	Both
Russian, #443	6638	100	Both
Croatian, #105	6639	100	Both
U.S. English ISO9995, #103P(EMEA)	6640	100	Both
Enhanced Asynchronous Node 16-Port EIA-232	8137	1,595	Both
Enhanced Asynchronous Node 16-Port EIA-422	8138	1,795	Both
Base 128MB (2X 64MB) S6 Memory	9078	N/C	Initial
Base 4.5GB F/W Disk	9139	N/C	Initial
Base 20X (Max) SCSI-2 CD-ROM Drive	9619	N/C	Initial



The following previously announced features are available on the specified model.

<b>Description</b>	<b>Feature Number</b>	<b>Purchase Price</b>	<b>Initial MES/ Both</b>
CCS Customer Service Specify (US)	0986	\$ 0	Initial
Non-Locking Switch	1101	0	Initial
IBM Ultimedia Video I/O Adapter	2404	1,995	Both
Ultimedia Video Compression/ Decompression Card	2405	1,500	Both
Enhanced SCSI-2 Differential Fast/Wide Adapter/A	2412	1,370	Both
SCSI-2 Fast/Wide Adapter/A	2415	1,070	Both
SCSI-2 Differential Fast/Wide Adapter/A	2416	1,370	Both
SCSI-2 Differential Y-Cable	2422	224	Both
SCSI-2 Differential System to System Cable	2423	108	Both
0.6M 16-bit SCSI-2 System to System Cable	2424	108	Both
2.5M 16-bit SCSI-2 System to System Cable	2425	130	Both
16-bit Y-Cable For IBM SCSI-2 Differential Fast/Wide Adapter/A	2426	445	Both
8-bit Y-Cable for IBM SCSI-2 Differential Fast/Wide Adapter/A	2427	425	Both
16-bit IBM SCSI-2 Fast/Wide Adapter/A to Dual Ported Device Cable	2435	150	Both
16-bit IBM SCSI-2 Differential Fast/Wide Adapter/A to Dual Ported Device Cable	2436	150	Both
8-bit IBM SCSI-2 Fast/Wide Adapter/A to Dual Ported Device Cable	2437	125	Both
8-bit IBM SCSI-2 Differential Fast/Wide Adapter/A to Dual Ported Device Cable	2438	125	Both
8-bit IBM SCSI-2 Fast/Wide Adapter/A to Single-Ported Device Cable	2439	145	Both
POWER GXT150M Graphics Adapter	2650	1,895	Both
4-Port Multiprotocol Communications Controller	2700	2,600	Both
Multiprotocol Attachment Cable — V.35	2702	117	Both
Multiprotocol Attachment Cable — X.21	2704	117	Both
4-Port Multiprotocol Interface Cable	2705	500	Both
Multiprotocol Modem Attachment Cable EIA-232/V.24	2706	93	Both
Eicon ISDN DIVA MCA Adapter	2707	995	Both
FDDI-Fiber Dual-Ring Upgrade	2723	1,995	Both
FDDI-Fiber Single-Ring Adapter	2724	3,995	Both
S/390 ESCON Channel Emulator	2754	10,000	Both
Block Multiplexer Channel Adapter	2755	4,400	Both
ESCON Control Unit Adapter	2756	10,000	Both
Block Multiplexer Channel Adapter Cable	2757	700	Both
Block Multiplexer Channel Cable Assembly	2758	900	Both
System/370 Channel Emulator/A	2759	3,500	Both
Graphics Input Device Adapter	2810	416	Both
Graphics Input Device Cable	2811	67	Both
IBM 7250 Attachment Adapter	2820	1,695	Both
SCSI Controller Cable	2832	315	Both
SCSI High-Performance External I/O Controller	2835	1,245	Both
SCSI-2 Controller Cable	2836	195	Both
Cable Option EIA 530 RS 422	2923	575	Both
ARTIC960 Coprocessor (4MB)	2924	3,495	Both
Cable Option ISO 4902 V.36	2926	575	Both
Cable Option ISO 4903 X.21	2927	575	Both
ARTIC960 Coprocessor, 8-port EIA-232	2929	3,495	Both
8-Port Asynchronous Adapter — EIA-232	2930	832	Both
Asynchronous Terminal/Printer Cable EIA-232	2934	45	Both

Description	Feature Number	Purchase Price	Initial MES/Both
ARTIC960 Coprocessor, 6-port V.36	2935	\$3,495	Both
Asynchronous Cable EIA-232/V.24	2936	73	Both
Printer/Terminal Interposer — EIA-232	2937	29	Both
ARTIC960 Coprocessor, 8-port X.21	2938	3,495	Both
ARTIC960 8-port EIA-232 Cable	2939	365	Both
8-Port Asynchronous Adapter — EIA-422A	2940	936	Both
ARTIC960 6-port V.36 Cable	2941	510	Both
ARTIC960 6-port X.21 Cable	2942	325	Both
Asynchronous Terminal Cable — EIA-422A	2945	130	Both
X.25 Interface Co-Processor/2 Adapter	2960	1,570	Both
Auto Token-Ring LANstreamer 32 MC Adapter	2972	850	Both
X.25 Attachment Cable X.21 — 6-Meter (20-Ft.)	2976	150	Both
X.25 Attachment Cable V.24 — 6-Meter (20-Ft.)	2977	150	Both
X.25 Attachment Cable V.35 — 6-Meter (20-Ft.)	2978	239	Both
Ethernet High-Performance LAN Adapter	2980	722	Both
TURBOWAYS 155 ATM Adapter	2989	2,695	Both
Ethernet/FDX 10 Mbps TP/AUI MC Adapter	2992	595	Both
Ethernet 10 Mbps BNC MC Adapter	2993	595	Both
IBM 10/100 Mbps Ethernet MC Adapter	2994	795	Both
Multiport Interface Cable	2995	384	Both
4.5GB SCSI-2 F/W 1-inch (25-mm) High Disk Drive	3000	1,950	Both
9.1GB SCSI-2 F/W Disk Drive	3010	3,750	Both
PC Parallel Printer Cable	3100	48	Both
Serial to Serial Port Cable for Drawer/Drawer	3124	80	Both
Serial to Serial Port Cable for Rack/Rack	3125	80	Both
SCSI Device to Device Cable	3130	78	Both
P70 Color Monitor	3613	1,485	Both
P200 Color Monitor	3614	2,660	Both
P201 Color Monitor	3615	3,660	Both
Service Publications and Wrap Plugs Kit	3750	57	Both
13W3 to 15-Pin D-Shell Converter Cable	4213	100	Both
13W3 to 60/77Hz Display Cable	4214	105	Both
Ethernet AUI/Thin Riser	4221	325	MES
Ethernet Twisted Pair Riser	4222	325	MES
Ethernet 10BaseT Transceiver	4224	195	Both
Sun Compatible Display Converter Cable	4227	100	Both
13W3 to PowerDisplay 16S Display Cable	4229	165	Both
13W3 to 13W3 Display Cable	4234	100	Both
13W3 to 3W3 Display Cable	4236	100	Both
Software Preinstall	5005	0	Initial
3-Button Mouse	6041	75	Both
4GB/8GB 4MM Internal Tape Drive	6142	2,695	Both
5GB/10GB 8MM Internal Tape Drive	6147	5,395	Both
Enhanced 4-Port SSA Serial Adapter, MCA	6216	2,000	Both
SSA 4-port RAID Adapter	6217	3,250	Both
Ultimedia Audio Adapter	6302	295	Both
Digital Trunk Dual Adapter	6305	2,400	Both
Media Bay Disk Drive Mounting Kit	6509	20	Both
Realtime Interface Co-Processor: Portmaster Adapter/A (1MB)	7006	1,595	Both
Realtime Interface Co-Processor: 8-Port RS-232 Interface Board/A	7042	627	Both
Realtime Interface Co-Processor: 8-Port RS-422 Interface Board/A	7044	673	Both
Realtime Interface Co-Processor: 6-Port V.35 Interface Board/A	7046	1,227	Both
Realtime Interface Co-Processor: 6-Port X.21 Interface Board/A	7048	1,000	Both
Realtime Interface Co-Processor: 6-Port V.35 Cable	7106	848	Both

Description	Feature Number	Purchase Price	Initial MES/ Both
Realtime Interface Co-Processor: V.35 Network Cable	7107	\$ 150	Both
Realtime Interface Co-Processor: 8-port EIA-232/422 Cable	7108	375	Both
Realtime Interface Co-Processor: 6-Port X.21 Cable	7110	700	Both
Realtime Interface Co-Processor: X.21 Network Cable	7111	125	Both
128-Port Asynchronous Controller	8128	1,295	Both
Remote Asynchronous Node 16-Port EIA-232 (U.S.)	8130	1,495	Both
128-Port Asynchronous Controller Cable, 4.5 Meter	8131	60	Both
128-Port Asynchronous Controller Cable, 23cm (9-Inch)	8132	40	Both
RJ-45 to DB-25 Converter Cable	8133	120	Both
64-Port to 128-Port Pin-Out Converter	8135	45	Both
Rack Mountable Remote Asynchronous Node 16-Port EIA-232	8136	1,995	Both
Ethernet AUI/Thin Riser Specify	9000	N/C	Initial
Ethernet Twisted Pair Riser Specify	9001	N/C	Initial
Southern Hemisphere Designator for Monitors	9004	N/C	Both
3-1/2 Inch 1.44MB Diskette Drive Specify	9221	N/C	Initial
Language Group Specify			
U.S English	9300	N/C	Initial
Canadian French	9712	N/C	Initial
Power Cord Specify			
United States/Canada	9800	N/C	Initial
Chicago (125V, 15A) (1.8M)(6 FT.)	9986	N/C	Initial

The following features are supported, but are not orderable on the indicated MT-Model.

Description	Feature Number	Purchase Price	Initial MES/ Both
Keyboard — U.S. English Soft Touch (U.S./Canada Only)	1110	\$ 215	Supported
IBM Network Terminal Accelerator — 256 Session	2402	4,500	Supported
IBM Network Terminal Accelerator — 2048 Session	2403	7,500	Supported
SCSI-2 High-Performance External I/O Controller	2410	1,195	Supported
SCSI-2 Differential High-Performance External I/O Controller	2420	1,495	Supported
1GB SCSI-2 Disk Drive	2555	1,800	Supported
400MB to 1GB SCSI-2 Disk Drive Select	2556	300	Supported
160MB to 1GB SCSI-2 Disk Drive Select	2558	520	Supported
2GB SCSI-2 Disk Drive	2580	3,100	Supported
160MB to 2GB SCSI-2 Disk Drive Select	2581	1,820	Supported
400MB to 2GB SCSI-2 Disk Drive Select	2582	1,600	Supported
2GB SCSI-2 Fast/Wide Disk Drive	2586	3,100	Supported
2GB to 2GB SCSI-2 Fast/Wide Disk Drive Select	2587	0	Supported
Internal CD-ROM-2	2603	695	Supported
600MB SCSI-2 Double Speed Tray-loading CD-ROM	2604	695	Supported
600MB SCSI-2 Double Speed Tray-loading CD-ROM Select	2614	0	Supported
Quad Speed Tray Loading CD-ROM	2616	695	Supported
Tray Loading CD-ROM Select	2617	0	Supported
8X Speed Tray Loading CD-ROM	2618	550	Supported
Internal 1.2GB 1/4-Inch Cartridge Tape Drive	2630	1,995	Supported

<b>Description</b>	<b>Feature Number</b>	<b>Purchase Price</b>	<b>Initial MES/ Both</b>
Internal 1.2GB 1/4-Inch Cartridge Tape Drive Select	2631	\$1,300	Supported
Fiber Distributed Data Interface Single-Ring Adapter	2720	5,200	Supported
Fiber Distributed Data Interface Dual-Ring Upgrade Kit	2722	2,200	Supported
FDDI-STP Single-Ring Adapter	2725	3,495	Supported
FDDI-STP Dual-Ring Upgrade	2726	1,495	Supported
POWER Gt3i	2768	1,895	Supported
POWER Gt4e	2776	2,895	Supported
Integrated SCSI Controller Cable	2833	195	Supported
SCSI-2 Passthrough Terminator Cable (50-Pin)	2914	412	Supported
SCSI Controller Passthrough Terminator Cable (60-Pin)	2915	515	Supported
ARTIC960 Coprocessor (1MB)	2921	5,100	Supported
Cable Option EIA 232	2922	475	Supported
ARTIC960 Coprocessor (8MB)	2928	5,700	Supported
8-Port Asynchronous Adapter — MIL-STD 188	2950	1,040	Supported
16-Port Asynchronous Adapter — EIA-232	2955	1,125	Supported
16-Port Asynchronous Adapter — EIA-422A	2957	1,550	Supported
1-Port Multiprotocol Communications Adapter	2959	450	Supported
X.25 Attachment Cable X.21 — 3-Meter (10-Ft.)	2965	104	Supported
X.25 Attachment Cable V.24 — 3-Meter (10-Ft.)	2966	104	Supported
X.25 Attachment Cable V.35 — 3-Meter (10-Ft.)	2967	192	Supported
Token-Ring High-Performance Network Adapter	2970	1,030	Supported
TURBOWAYS 100 ATM Adapter	2984	1,995	Supported
3270 Connection Adapter — U.S.	2990	618	Supported
16-Port Interface Cable — EIA-232	2996	295	Supported
9.1GB SCSI-2 F/W Disk Drive Select	3016	1,980	Supported
1.1GB SCSI-2 F/W Disk Drive	3032	1,200	Supported
2.2GB SCSI-2 F/W Disk Drive	3033	1,770	Supported
4.5GB SCSI-2 F/W Disk Drive	3034	1,950	Supported
1.1GB SCSI-2 Fast/Wide Disk Drive Select (Must order quantity of two)	3041	300	Supported
2.2GB SCSI-2 Fast/Wide Disk Drive Select	3044	0	Supported
4.5GB SCSI-2 Fast/Wide Disk Drive Select	3048	180	Supported
POWERdisplay 16	3600	2,675	Supported
POWERdisplay 19	3601	3,950	Supported
POWERdisplay 17	3607	1,795	Supported
POWERdisplay 20	3608	2,995	Supported
P50 Color Monitor	3612	800	Supported
128MB (2X 64MB) S5 Memory Select	4021	0	Supported
256MB (2X 128MB) S5 Memory Select	4022	5,120	Supported
512MB (2X 256MB) S5 Memory Select	4023	15,360	Supported
32MB S5 Memory	4076	1,600	Supported
64MB S5 Memory	4077	3,200	Supported
128MB S5 Memory	4078	5,120	Supported
256MB S5 Memory	4079	10,240	Supported
Groupe-Bull Order Indicator	5051	0	Supported
Keyboard — 101 Keys (U.S.)	6010	195	Supported
Keyboard — 102 Keys (Belgian-Dutch/French)	6011	360	Supported
Keyboard — 102 Keys (Canadian French)	6012	280	Supported
Keyboard — 102 Keys (Danish)	6013	360	Supported
Keyboard — 102 Keys (Finnish)	6014	360	Supported
Keyboard — 102 Keys (French)	6015	360	Supported
Keyboard — 102 Keys (German)	6016	360	Supported
Keyboard — 102 Keys (Italian)	6017	360	Supported
Keyboard — 102 Keys (Brazilian)	6018	360	Supported
Keyboard — 102 Keys (Norwegian)	6019	360	Supported
Keyboard — 102 Keys (Portuguese)	6020	360	Supported
Keyboard — 102 Keys (Spanish)	6021	360	Supported

<b>Description</b>	<b>Feature Number</b>	<b>Purchase Price</b>	<b>Initial MES/ Both</b>
Keyboard — 102 Keys (Swiss)	6022	\$ 360	Supported
Keyboard — 102 Keys (U.K. English)	6023	360	Supported
Keyboard — 102 Keys (Icelandic)	6024	360	Supported
Keyboard — 102 Keys (Turkish)	6025	360	Supported
Keyboard — 102 Keys (Greek)	6026	360	Supported
Keyboard — 102 Keys (Hebrew)	6027	360	Supported
Keyboard — 102 Keys (Arabic)	6028	360	Supported
Keyboard — 106 Keys (Japanese Kanji)	6030	325	Supported
Keyboard — 106 Keys (Korean)	6031	325	Supported
Keyboard — 106 Keys (Chinese Traditional — Taiwan)	6033	325	Supported
Keyboard — Dutch #143 (Netherlands)	6034	360	Supported
Keyboard — Turkish #440	6035	360	Supported
5GB 8MM Tape Select	6141	4,700	Supported
4GB 4MM Tape Drive Select	6145	2,000	Supported
20/40GB 16-bit 8mm Internal Tape Drive Select	6157	5,700	Supported
High-Performance Disk Drive Subsystem Adapter (40MB/Sec)	6210	4,000	Supported
High-Performance Disk Drive Subsystem Adapter (80MB/Sec)	6211	4,000	Supported
High-Performance Subsystem Adapter (40/80MB/Sec)	6212	4,000	Supported
High Performance 4-Port SSA Adapter	6214	1,370	Supported
Digital Trunk Adapter	6300	1,200	Supported
64-Port Asynchronous Controller	6400	1,595	Supported
16-Port Asynchronous Concentrator	6401	1,365	Supported
RJ-45 to DB-25 Converter Cable	6402	88	Supported
Realtime Interface Co-Processor: Multiport/2 Adapter (.5MB)	7002	1,055	Supported
Realtime Interface Co-Processor: Multiport/2 Adapter (1MB)	7004	1,435	Supported
Realtime Interface Co-Processor: Portmaster Adapter/A (2MB)	7008	2,265	Supported
Realtime Interface Co-Processor: Multiport/2 4-Port RS-232 Interface Board	7022	362	Supported
Realtime Interface Co-Processor: Multiport/2 6-Port RS-232-C Synchronous In	7024	438	Supported
Realtime Interface Co-Processor: Multiport/2 8-Port RS-232 Interface Board	7026	442	Supported
Realtime Interface Co-Processor: Multiport/2 8-Port RS-422-A Interface Board	7028	541	Supported
Realtime Interface Co-Processor: Multiport/2 RS-232/RS-422 Interface Board	7030	470	Supported
Realtime Interface Co-Processor: EIA RS-232-C Multiport Interface Cable	7102	226	Supported
Realtime Interface Co-Processor: Synchronous Interface Cable	7104	257	Supported
Base 64MB (2X 32MB) S5 Memory Card	9079	N/C	Supported
Transformer Specify, 100 to 110 V AC	9115	N/C	Supported
Transformer Specify, 115 to 127 V AC	9116	N/C	Supported
Transformer Specify, 200 to 220 V AC	9117	N/C	Supported
Transformer Specify, 230 to 240 V AC	9118	N/C	Supported
Internal CD-ROM-2 Specify	9218	N/C	Supported
1GB SCSI-2 Disk Drive Specify	9249	N/C	Supported
2GB SCSI-2 Disk Drive Specify X2	9263	N/C	Supported
Base 8X Speed Tray Loading CD-ROM	9608	N/C	Supported

N/C = No Charge

### **Model Conversion Purchase Prices**

<b>From</b>	<b>To</b>	<b>Purchase Price<sup>1</sup></b>
380	397	\$17,500
390	397	17,500
39H	397	17,500

<sup>1</sup> Parts removed or replaced become the property of IBM and must be returned.

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