IBM RISC System/6000 Model C20 Compact Server and Model Upgrade

If you're looking for a versatile server with the performance of PowerPC™ technology, a lot of expansion capability, and attractive price, then the Model C20 has just what you need. The Model C20 continues the Model C10 tradition of excellent price/performance in a compact configuration for low-end server and multiuser application environments. The Model C20 extends the use of PowerPC technology in the RISC System/6000® family with the 120MHz PowerPC 604™ processor.

The Model C20 has extensive growth capability with up to 256MB of memory, a total of five bays for a diskette drive, disk drives and media devices (tape drives and CD-ROM drive), and four available 32-bit Micro Channel® card slots for optional features.*

The PowerPC 604™ processor and its support electronics are packaged on a pluggable processor card that allows for rapid hardware upgrade from an existing Model C10. The same pluggable 1MB L2 cache memory option used in the Model C10 is available for applications requiring increased performance.

The Model C20 Compact Server and upgrade requires IBM's latest release of AIX® Version 4 (4.1.3).

Purchase Price $11,500

Planned Availability Date: July 7, 1995

The Model C10 to C20 upgrade is planned to be available July 31, 1995.

™ Trademark of International Business Machines Corporation
® Registered trademark of International Business Machines Corporation
* Model C20, unlike C10, does not include a base communication select option. All four Micro Channel slots are available.

IN BRIEF . . .

♦ Brings the power of the PowerPC 604 processor to this popular compact RS/6000® "mini-tower" server

♦ Offers high-performance

  • 16MB error checking and correction memory
  • 1.1GB SCSI-2 disk drive
  • CD-ROM Drive

♦ Provides large expansion in a small package with a total of

  • Five media and disk bays
  • Four Micro Channel slots
  • Up to 256MB of ECC memory

♦ Allows Model C10 systems to upgrade to the PowerPC 604

♦ Supports the latest release of AIX Version 4

For ordering and information, contact:
Your IBM representative, an IBM Authorized Business Partner, or IBM Direct at

| 800-IBM-CALL | Reference: RE001 |

Description

The Model C20 is a PowerPC 604-based system designed for commercial server applications. The system unit package is the same compact "mini-tower" configuration as the Model C10.

Standard features for the Model C20 include:

- 120MHz PowerPC 604 processor, packaged on a pluggable card.
- A socket for optional 1MB L2 Cache.
- Eight SIMM sockets for 16MB to 256MB of error checking and correction (ECC) memory. Memory SIMMS are installed in groups of four to provide memory interleaving for performance.
- Total of five bays:
  - 1.1GB SCSI-2 disk drive installed in one 3.5-inch bay
  - 2.88MB diskette drive installed in one diskette bay
  - CD-ROM drive installed in one 5.25-inch media bay
  - One available bay for additional 5.25-inch media devices (or 3.5-inch internal disks with disk drive mounting kit 6509)
  - One available bay for additional 3.5-inch disk devices
- Total of four Micro Channel slots for expansion including communications, graphics, and other attachment options. Micro Channel supports peak transfer rates up to 80MB/second.
- Integrated SCSI-2 I/O controller (8-bit) for up to four internal and two external SCSI or SCSI-2 devices.
- Standard ports/connectors:
  - One serial port standard, expandable to two serial ports with optional Serial Port Converter Cable
  - Parallel printer port
  - Keyboard, mouse, and tablet connectors
- Operator panel with key-operated three-position switch, reset switch, and LED indicators.

The following options may be selected at the time of initial order:

Memory: Selects to 32MB, 64MB, or 128MB

Note: Memory can also be added in increments of 8MB, 16MB, 32MB, 64MB, and 128MB, for a maximum of 256MB memory.

Disk Drive: Selects to 1.1GB SCSI-2 Fast/Wide Disk, 2.2GB Disk, or 2.2GB Fast/Wide Disk

Tape Drive: Selects from the base CD-ROM drive to 1.2GB ¼-inch Cartridge Tape Drive, 4GB 4-mm Tape Drive, or 5GB 8-mm Tape Drive

A model conversion for the Model C10 provides a processor card with the PowerPC 604 CPU.

High-Performance Compact Solution

The Model C20 supports business objectives by providing a high-performance, compact solution for server and multi-user commercial server applications.

With its standard 1.1GB disk drive, CD-ROM drive, 2.88MB diskette drive and integrated SCSI-2 controller, the Model C20 is a cost-effective server for retail, branch banking, wholesale, and plant floor applications. The memory subsystem provides error correction (ECC) memory and logic for data integrity and to minimize system downtime. Memory capacity of up to 256MB and internal disk capacity of up to 6.6GB, coupled with a variety of input/output devices, communications controllers, and other features are available to configure the system as a powerful entry to mid-range server for a broad spectrum of business solutions.

Interoperability and Upgradeability

The Model C20 with IBM's latest release of AIX Version 4 (4.1.3) offers interoperability with other IBM and other vendor systems, expanding the usefulness of those systems and maximizing the utility of the Model C20. The Model C20 with its PowerPC 604 processor offers outstanding integer processing and floating-point processing for commercial server applications. With its optional feature offerings, it can be configured as a file or communications server, or a multi-user system.

The PowerPC 604 Processor and its support electronics are packaged as a pluggable card for rapid replacement of the processor card and offered as a performance upgrade for the Model C10.

Openness and Productivity

The Model C20 supports AIXwindows® Environment/6000, based on the Massachusetts Institute of Technology (MIT) X Window System, and includes a graphical user interface based on OSF/Motif**. Through the use of industry-standard OSF/Motif, savings may be realized in end-user training and application development. Additionally, savings in hardware may be realized through the use of LAN-attached Xstations, to reduce cost per seat.

Adaptability and Flexibility

The Model C20 is designed to grow with the customer's requirements. Memory can be increased to a maximum of 256MB. An optional 1MB L2 Cache feature may be added to provide increased performance. A maximum of four internal and two external SCSI or SCSI-2 devices (8-bit) can be attached. Three internal disk drives may be installed in the Model C20. Additional external devices may be attached and by using the SCSI-2 Differential High-Performance External I/O Adapter (2420) or Enhanced SCSI-2 Differential Fast/Wide Adapter/A (2412) and external disk storage, up to 54.6GB of total disk storage may be configured, or up to 648GB with attached 7135 RAIDiant Arrays.

Four Micro Channel feature card slots provide for additional features such as communications processors, SCSI adapters for additional external storage expansion, and graphics adapters for graphical system management support.

System Management

A system installation and management facility is part of the operating system. The System Management Interface Tool (SMIT) facilitates the performance of system management tasks, such as software installation and configuration, device configuration and management, problem determination, and storage management. Support is also provided for the use of an ASCII terminal as the system console and remote installation of the system on a LAN.

AIX Version 4 for the RISC System/6000 is designed to meet the NCSC (National Computer Security Center) Trusted Computer System Evaluation Criteria (TCSEC) Class C2 as defined in U.S. Department of Defense Standard 5200.28-STD.

Supported Devices

Some devices require AIX Version 4 for Servers. Refer to **Operating System Environment** for specific support requirements.

Printers, plotters, ASCII terminals are all supported through standard ports. Refer to **Operating System Environment** for a list of supported devices.

External Storage

- IBM 3490 Enhanced Capability Magnetic Tape Subsystem (SCSI attach models only)
- IBM 3494 Tape Library Dataserver (SCSI models only)
- IBM 3514 Model 212 High Availability External Disk Array[1]
- IBM 3514 Model 213 High Availability External Disk Array[1]
- IBM 3590 High Performance Tape Subsystem (SCSI attach models only)
- IBM 3995 Optical Library DataServer Model A63, 063 and 163
- IBM 7131 Model 105 SCSI Multi-Storage Tower
- IBM 7134 Model 010 High Density SCSI Disk Subsystem
- IBM 7135 RAIDiant Array Model 210
- IBM 7137 Disk Array Subsystem[1]
- IBM 7202 Model 900 Expansion Rack
- IBM 7203 Model 001 Portable Disk Unit
- IBM 7204 Model 320 320MB External Disk Drive
- IBM 7204 Model 001 1.0GB External Disk Drive
- IBM 7204 Model 215 2.0GB External Disk Drive
- IBM 7204 Model 010 1.0GB External Disk Drive
- IBM 7204 Model 315 2.0GB External Disk Drive
- IBM 7206 Model 001 2.0GB External 4-mm Tape Drive
- IBM 7206 Model 005 4.0GB External 4-mm Tape Drive
- IBM 7207 Model 001 150MB ¼-inch Tape Drive
- IBM 7207 Model 011 525MB External ¼-inch Cartridge Tape Drive
- IBM 7207 Model 012 1.2GB External ¼-inch Cartridge Tape Drive
- IBM 7208 Model 001 2.3GB 8-mm Tape Drive
- IBM 7208 Model 011 5.0GB 8-mm Tape Drive
- IBM 7209 Model 001 650MB R/W Optical Disk Drive
- IBM 7209 Model 002 1.19GB R/W Optical Disk Drive
- IBM 7210 Model 001 External CD-ROM Drive[2]
- IBM 7210 Model 005 External CD-ROM Drive
- IBM 7210 Model 010 External CD-ROM Drive
- IBM 7331 Model 205 8-mm Tape Library
- IBM 7332 Model 005 4-mm DDS-2 Tape Autoloader
- IBM 9333 Model 500 High Performance Disk Drive Subsystem[3]
- IBM 9333 Model 501 High Performance Disk Drive Subsystem[3]
- IBM 9333 Model 010 High Performance Disk Drive Subsystem[3]
- IBM 9333 Model 011 High Performance Disk Drive Subsystem[3]
- IBM 9334 Model 500 SCSI Expansion Unit[4]
- IBM 9334 Model 501 SCSI Expansion Unit[4]
- IBM 9334 Model 010 SCSI Expansion Unit[4]
- IBM 9334 Model 011 SCSI Expansion Unit[4]
- IBM 9348 Model 012 Magnetic Tape Unit (½-inch 9-Track Tape Drive)

[1] Disk arrays are attached using the SCSI-2 Differential High-Performance External I/O Controller (2420), IBM SCSI-2 Fast/Wide Differential Adapter/A (2416), or Enhanced SCSI-2 Differential Fast/Wide Adapter/A (2412).
[2] New installations should choose the IBM 7210 Model 005 External CD-ROM Drive. For existing installations, only later units of the IBM 7210 Model 001 External CD-ROM Drive

may be attached using the integrated SCSI-2 port. Earlier units of the IBM 7210 Model 001 External CD-ROM Drive should be attached using an optional SCSI-2 High-Performance External I/O Controller (2410). These early units may be identified as having a "Type A" front bezel (as described in the *7210 External CD-ROM Drive Operator Guide*) with the Eject button in the upper right corner. The later units ("Type B" front bezel) have the Eject button in the lower right corner.
[3] Requires Feature Code 6212
[4] Requires dedicated SCSI I/O Controller

XStations

- IBM 7010 Model 120
- IBM 7010 Model 130
- IBM 7010 Model 140
- IBM 7010 Model 150
- IBM 7010 Model 160

*IBM Displays (Featuring a Trinitron** CRT)*

	Feature Number	Fixed-Image Size (Measured Diagonally)
P50 Color Monitor	3612	13.6 in/346 mm
P70 Color Monitor	3613	15.9 in/403 mm
P200 Color Monitor	3614	19.1 in/486 mm
POWERdisplay 16S	3603	14.8 in/375 mm
POWERdisplay 16	3600	14.8 in/375 mm
POWERdisplay 17	3607	16.1 in/409 mm
POWERdisplay 19	3606	17.3 in/439 mm
POWERdisplay 20	3608	19.1 in/486 mm
IBM 1091-051 Color Display (1024 x 1280 72Hz Non-Interlaced (NI))		14.8 in/375 mm
IBM 5081-016 Color Display (1024 x 1280 60Hz only)		14.9 in/377 mm
IBM 6091 16-inch Color Monitor (1280 x 1024 77Hz)		14.8 in/375 mm
IBM 6091 19-inch Color Display (1280 x 1024 60Hz NI and 1280 x 1024 67Hz NI)		17.3 in/439 mm
IBM 6091-19i 19-inch Color Display (1280 x 1024 60Hz, 77Hz)		17.3 in/439 mm
IBM 6091 23-inch Color Display (1280 x 1024 60Hz NI only)		21.4 in/544 mm

Input Devices

- IBM 6094-010 Dial (Requires 6094 feature #4060 for attachment to a standard serial port. 6094 feature #4061 may also be required.)

- IBM 6094-020 Lighted Programmable Function Keyboard (requires 6094 feature #4060 for attachment to a standard Serial Port. 6094 feature #4061 may also be required.)

- IBM 6094 Spaceball Model 30

- IBM 6093 Tablet Model 011 (requires 6093 cable feature #4015)

- IBM 6093 Tablet Model 012 (requires 6093 cable feature #4015)

Product Positioning

The Model C20 offers the first use of the PowerPC 604 technology in the compact "mini-tower" server configuration of the RS/6000™ family.

Relative to the RISC System/6000 Model C10, the C20 offers a significantly faster PowerPC processor: 120MHz PowerPC 604 versus the 80MHz PowerPC 601®.

The optional 1MB L2 Cache (same as used on C10) may be added for even higher performance.

In terms of expansion capability, the Model C20 offers much in common with the IBM RISC System/6000 Models 380 and 390 but at a lower price and performance level.

The C20 is supported only on AIX Version 4.1 and not on AIX Version 3.2.5. Certain features not supported on AIX Version 4.1 must be removed before upgrading from Model C10 to Model C20.

Taken together, the C20′s capability makes it ideal for use as a commercial server for use in small companies, a small LAN server, or a distributed enterprise server in applications such as retail in-store processing, branch banking, or other branch operations environments.

Publications

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

Title	Order Number
7009 Compact Server Operator Guide	SA23-2715
7009 Compact Server Hardware Setup Procedure	SA23-2717
Documentation Overview	SC23-2456
System Unit Safety Information	SA23-2652

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

Title	Order Number
7009 Compact Server Operator Guide	SA23-2715
7009 Compact Server Service Guide	SA23-2716
7009 Compact Server Hardware Setup Procedure	SA23-2717
Documentation Overview	SC23-2456
System Unit Safety Information	SA23-2652
IBM RISC System/6000 Site and Hardware Planning Information	SA38-0508
POWERstation™ and POWERserver™ Common Diagnostics and Service Information Manual	SA23-2765
IBM RISC System/6000 Adapters, Devices, and Cable Information	SA23-2764
Customer Support Information	SA23-2690
Problem Solving Guide and Reference	SC23-2204
Quick Reference	SC23-2401
Getting Started	GC23-2521

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

Width	191 mm (7.5 in)
Width with Pedestal	241 mm (9.5 in)
Depth	432 mm (17 in)
Height	394 mm (15.5 in)
Weight	16-18 kg (35-39.5 lb)
Thermal Output	544 BTUs/hour (maximum configuration)
	160 joules/second (maximum configuration)

Noise Rating

- 5.7 Bel sound power (operating — upper limit, typical configuration)
- 5.3 Bel sound power (idle — upper limit, typical configuration)
- 39dBA sound pressure — operating (mean one-meter position)
- 38dBA sound pressure — idle (mean one-meter position)

EMC Conformance Classification

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

Environmental: The Model C20 was developed in compliance with corporate policy letter number 139 (Environmental Affairs).

Environmental Impact Assessment: 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.	UL
Canada	CNL (CSA or cUL)
Germany/Europe	GS Mark (Safety, TUV, EN60, 950)

Operating Environment

- Temperature: 16° to 32°C (60° to 90°F)
- Relative Humidity: 8% — 80%
- Wet Bulb: 23°C (73°F)
- Operating Voltages:
  - 100-127 VAC 50/60 Hz
  - 200-240 VAC 50/60 Hz
- Power Supply Output: 272 Watts
- Power Source Loading: 0.250 kVA (maximum configuration)

Hardware Requirements: A RISC System/6000-supported ASCII terminal or a supported display, display adapter and keyboard are required for operating the Model C20.

Software Requirements: The Model C20 and model upgrade requires the latest release of IBM′s AIX Version 4.1.

Customers migrating from AIX Version 3 should consult AIX Version 4 operating environment to determine migration procedures, application support, and compatibility.

Limitations

Model Conversion Adapter Support: A model conversion from a Model C10 using AIX 3.2.5 will require purchase of an operating system upgrade to AIX 4.1 and either a migration install or a complete install of AIX 4.1. In addition, the following adapter features are not currently supported by AIX 4.1 and will need to be removed when upgrading to C20:

- Fiber Channel Adapter/266
- IBM Network Terminal Accelerators
- Block Multiplexor Channel Adapter
- S/390® ESCON® Channel Emulator
- ESCON Control Unit Adapter
- System/370™ Channel Emulator/A
- Artic960 Coprocessor
- TURBOWAYS™ 100 ATM Adapter
- Digital Trunk Adapter
- Digital Trunk Dual Adapter
- IBM Realtime Interface Co-Processor: Multiport/2 Adapter
- IBM Realtime Interface Co-Processor: Portmaster® Adapter/A

Storage Limits: Storage configurations can be maximized for various combinations of storage adapters and subsystems (for example, all SCSI, all serial-link, SCSI and serial-link in combination). The following chart shows maximum disk capacity for example configurations. The "Assumptions" section defines each controller/subsystem combination. The "Limit Values" column shows the individual maximum number of each controller or subsystem supported.

Assumptions:

- SCSI-2 SE or SCSI-2 Fast/Wide SE Controller: One/9334-SE

    9334-SE: 4x2.41GB = 9.6GB

- SCSI-2 Differential of SCSI-2 Fast/Wide Differential Controller: Up to two 9334-DIF

    9334-DIF: 4x2GB = 8GB

- SCSI-2 Differential or SCSI-2 Fast/Wide Differential Controller: Up to two 7137 Disk Array Subsystems or two 7135 RAIDiant Arrays

    Each 7137: 33.55GB (RAID 0) or 29.35GB (RAID 5)
    Each 7135: 108GB

- Serial Controller: Up to four 9333

    Each 9333: 4x2GB = 8GB

Description	Limit Values
Integrated SCSI for Internal Media and Disk Drives	3 SCSI-2 Fast/Wide Differential Controllers
	3 SCSI-2 Fast/Wide SE Controllers
4 I/O Slots	3 SCSI-2 Differential Controllers
	3 SCSI-2 SE Controllers
1 Slot for LAN/WAN/COMM	3 SCSI-2 SE + SCSI-2 Diff+ SCSI-2 F/W SE + SCSI-2 Fast/Wide Diff
	2 Serial Controllers
	6 RAID Subsystems (7135 or 7137)

Calculated Storage Limits

Internal SCSI	External SCSI-SE (9334-SE)	External SCSI-DE (9334-DIF)	Serial (9333)	RAID Array	Total Storage Disk
6.6GB	—	—	—	—	6.6GB
6.6GB	28.8GB	—	—	—	35.4GB
6.6GB	—	48GB	—	—	54.6GB
6.6GB	—	—	64GB	—	70.6GB
6.6GB	—	—	—	201.3GB (7137)	207.9GB
6.6GB	—	—	—	648GB (7135)	654.6GB

Memory Configurations: The Model C20 achieves exceptional performance while using memory SIMM devices. This exceptional performance is accomplished by interleaving memory access across two banks of double-word wide memory. Memory is addressed in groups of four SIMM devices. The Model C20 requires that memory SIMMs be installed in groups of four. The same size SIMM must be used in each group of four SIMMs.

Planning Information

Cable Orders: No additional cables are required with the base machine. Up to two external SCSI or SCSI-2 devices may be attached to the integrated SCSI-2 controller with a maximum total external cable length of 2.5 meters.

Cables Required for Use with Displays: Refer to the following table to determine the appropriate IBM cable feature number to order for the Model C20 if a graphics adapter is installed.

Displays	GXT150M™	Gt4e Gt4i Gt4xi
P50	4213	N/S*
P70	4234	4236
P200	4234	4236
6091-16	4214	Included*
6091-19i	4214	Included*
POWERdisplay 16	4214	Included*
POWERdisplay 17	4214	Included*
POWERdisplay 19	4214	Included*
POWERdisplay 20	4214	Included*
5081-16	4214	Included*
6091-19	4214	Included*
6091-23	4214	Included*
1091-051	4229	N/S
POWERdisplay 16S	4229	N/S
8508	4213	N/S
6314/6317/6319	4213	N/S
6324/6325/6327	4213	N/S
9521/9524/9527	4213	N/S

* N/S = this display/adapter combination is not supported. Included = included with the adapter.

Security, Auditability, and Control

Security and auditability features of the Model C20 series include:

- Physical security provided by a key lock that helps prevent cover removal and unauthorized IPL of operating system when locked

- Security Cable accessory

- Internal SCSI jumpers to enable/disable external SCSI connector

This product also uses 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.

Terms and Conditions

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

Volume Orders: 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.

Warranty Period: One year

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-IBMSERV (426-7378). 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 Type	Discount	
	Three-Year	Five-Year
7009	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.

	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 Support Services: Installation and technical support is provided by the AIX Systems Centers via the AIX Family of Services. These new fee services enhance customer productivity by providing voice and electronic access into IBM for answering customers' questions related to installation, usage, and suspected software defects. For more details on the AIX Family of Services, contact the AIX Support Family Project Office at 800-CALLAIX (225-5249).

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 Models 42T and 42W. Customers can initially install their own machines or choose to have IBM perform this service for an additional fee. IBM continues to install and service all MES features and model conversions.

Graduated Charges: The announced product is in Processor Group D5 for software with graduated charges.

Licensed Internal Code: Yes

Educational Allowance: A 20% education 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

IBM RISC System/6000 7009 Model C20

Purchase Price	Monthly MMC*	Monthly Optional Support Line
$11,500	$115	$110

Description	Feature Number	Purchase Price	Monthly MMC
Enhanced SCSI-2 Differential Fast/Wide Adapter/A	2412	$1,370	N/A
Quad Speed Tray Loading CD-ROM	2616	695	N/A
Asynchronous Terminal/ Printer Cable EIA232	2934	45	N/A
X.25 Att Cable X.21─6 Meter	2976	150	N/A
X.25 Att Cable V.24─6 Meter	2977	150	N/A
X.25 Att Cable V.35─6 Meter	2978	239	N/A

Description	Feature Number	Purchase Price	Monthly MMC
1.1GB SCSI-2 Disk Drive	3030	$1,400	N/A
2.2GB SCSI-2 Disk Drive	3031	2,200	N/A
1.1GB SCSI-2 Fast/Wide Disk Drive	3032	1,400	N/A
2.2GB SCSI-2 Fast/Wide Disk Drive	3033	2,200	N/A
1.1GB to 1.1GB SCSI-2 Fast/Wide Disk Drive Select	3059	0	N/A
1.1GB to 2.2GB SCSI-2 Fast/Wide Disk Drive Select	3069	800	N/A
1.1GB to 2.2GB SCSI-2 Disk Drive Select	3089	800	N/A
P50 Color Monitor	3612	895	$ 9
P70 Color Monitor	3613	1,650	17
P200 Color Monitor	3614	2,995	30
13W3 to 13W3 Display Cable	4234	100	N/A
13W3 to 3W3 Display Cable	4236	100	N/A
Interposer, 16 to 8-Bit SCSI Cable Converter	6513	50	N/A
Southern Hemisphere Specify for P50, P70, P200 Color Monitors	9004	0	N/A
1.1GB Base SCSI-2 Disk Drive	9130	0	N/A
Base Quad Speed Tray Loading CD-ROM	9606	0	N/A

* Minimum Maintenance Charge

Model Conversion Purchase Price

Model From	To	Model Conversion Purchase Price
C10	C20	$2,995*

* A Model C10 being converted must have a minimum of 1GB of SCSI-2 disk and either a CD-ROM drive or tape drive. Parts removed or replaced become the property of IBM and must be returned.

Call Now to Order

To order or to request more information, contact:

IBM Direct: IBM Direct, our national direct marketing organization, can add your name to the mailing list for IBM product catalogs.

Phone: 800-IBM-CALL
Fax: 800-2IBM-FAX
Internet: ibm_direct@vnet.ibm.com
Mail: IBM Direct
Dept. RE001
P.O. Box 16848
Atlanta, GA 30321-0848

Reference: RE001

To identify your local IBM Authorized Business Partner or IBM representative, call 800-IBM-4YOU.

Note: Shipments will begin after the planned availability date.