

# IBM RISC System/6000 43P Series

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### IBM Announcement Letter No. ZG95-0253 dated June 19, 1995.

See final section for details of availability and limitations.

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## **Title**

IBM RISC System/6000 43P Series

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## **Abstract**

The IBM RISC System/6000 43P Series provides rich desktop workstation function:

- Three models differing by speed and L2 cache, PowerPC 604 (TM)-based processors running at 100MHz, 120MHz, and 133MHz with a 256KB Asynchronous L2 cache standard on the 100MHz model and 512KB Synchronous cache standard on the 120MHz and 133MHz models.
- AIX Version 4.1 client and server licenses supported. Server licenses provide support for 1-16 users, and unlimited number of users
- Three levels of 2D graphics available. Lowest level integrated on motherboard, two higher ranges available as PCI cards, S15 and POWER GXT150P graphics display adapters, two PCI slots can support multiple graphics displays from a single system.
- Integrated Ethernet, 10BaseT, integrated on motherboard, no slots used.
- Standard FM quality audio integrated in system, no slots used.

The 43P Series provides superior system expansion:

- Three ISA slots and two PCI or ISA slots (shared)
- 16MB to 192MB system memory
- 540MB to 5GB internal SCSI-2 hard disk
- Five bays for internal diskette, SCSI-2 CD-ROM, SCSI-2 hard disks, and tape drives (diskette drive, quad speed CD-ROM drive, and one hard disk standard).
- External SCSI-2 connection to support attachment of external SCSI-2 devices.

\*\*Company, product, or service name may be a trademark or service mark of others.

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## **General Availability**

General Availability Date:

- July 7, 1995

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# Product Number

## Base Machine

| Description                    | Type/Model | Part Number |  |
|--------------------------------|------------|-------------|--|
| RISC System/6000 Model 43P-100 | 7248/100   | 7248100     |  |
| RISC System/6000 Model 43P-120 | 7248/120   | 7248120     |  |
| RISC System/6000 Model 43P-133 | 7248/132   | 7248132     |  |

The above models consist of the following features:

| Machine Type | Description   | Part Model | Number  |
|--------------|---|------------|---------|
| 7248         | RISC System/6000 43P-100<br>PowerPC 604/100 MHz system<br>256KB Asynchronous L2 Cache<br>Integrated E15 Graphics<br>SCSI-2 Quad Speed CD-ROM Drive<br>Microphone and Internal Speaker<br>1.44MB 3.5-inch Diskette Drive<br>3 Button Mouse<br>Selectable Required Features **<br>- SCSI-2 Disk Drive (540MB, 720MB, 1GB, 2GB configurations)<br>- Memory ( 16, 32, or 64 MB configurations)<br>- Enhanced Keyboard (Selectable)<br>- Country Pack (Line Cord)<br>- Language Pack | 100        | 7248100 |

| Machine Type | Description  | Part Model | Number  |
|--------------|--|------------|---------|
| 7248         | RISC System/6000 43P-120<br>PowerPC 604/120 MHz system<br>512KB Synchronous L2 Cache<br>Integrated E15 Graphics<br>SCSI-2 Quad Speed CD-ROM Drive<br>Microphone and Internal Speaker<br>1.44MB 3.5-inch Diskette Drive<br>3 Button Mouse<br>Selectable Required Features **<br>- SCSI-2 Disk Drive (540MB, 720MB, 1GB, 2GB configurations)<br>- Memory ( 16, 32, or 64 MB configurations)<br>- Enhanced Keyboard (Selectable)<br>- Country Pack (Line Cord)<br>- Language Pack | 120        | 7248120 |

| Machine Type | Description  | Part Model | Number  |
|--------------|--|------------|---------|
| 7248         | RISC System/6000 43P-133<br>PowerPC 604/133 MHz system<br>512KB Synchronous L2 Cache | 132        | 7248132 |

- Integrated E15 Graphics
- SCSI-2 Quad Speed CD-ROM Drive
- Microphone and Internal Speaker
- 1.44MB 3.5-inch Diskette Drive
- AIX 3 Button Mouse
- Selectable Required Features \*\*
  - SCSI-2 Disk Drive (540MB, 720MB, 1GB, 2GB configurations)
  - Memory ( 16, 32, or 64 MB configurations)
  - Enhanced Keyboard (Selectable)
  - Country Pack (Line Cord)
  - Language Pack

\*\* Selectable Required Features are individually priced with the 540 MB Hard Disk, 16 MB of Memory, Keyboard, Country Pack and Language Pack included in the base price.

### Selectable Required Features

A maximum select of one feature code for Hard Disk, Memory, Country Packs, Language Packs, and keyboards is allowed from this group. These items will be factory installed.

#### SCSI-2 Hard Disk Drives:

| Description                        | Ordering Number | Feature Code |
|------------------------------------|-----------------|--------------|
| 540MB Base Hard Disk select        | XHDD540         | 9393         |
| 720MB Hard Disk upgrade from 540MB | XHDD720         | 2385         |
| 1GB Hard Disk upgrade from 540MB   | XHDD1GB         | 2386         |
| 2GB Hard Disk upgrade from 540MB   | XHDD2GB         | 2387         |

#### Memory Options:

| Description  | Ordering Number | Feature Code |
|--|-----------------|--------------|
| 16MB Base Memory select<br>(two 8 MB Memory SIMMS)           | XMEM016         | 9081         |
| 32MB Memory select up from 16MB<br>( two 16 MB Memory SIMMS) | XMEM032         | 4084         |
| 64MB Memory select up from 16MB<br>(two 32 MB Memory SIMMS)  | XMEM064         | 4085         |

**Note:** The system requires 16 Megabytes (MB) of system memory expandable to 192MB on the system board. A maximum of 6 memory SIMMs can be installed, including the SIMMs ordered as part of the base system. Memory SIMMS must be installed in matched pairs.

#### 101/102-Key Enhanced Keyboard with Attach Cable

| Enhanced keyboard Language/Cty | Ordering Number | Feature Code |
|--------------------------------|-----------------|--------------|
| U.S. (English)                 | XKBEUSE         | 9310         |
| U.K. (English)                 | XKBEUKE         | 9323         |
| Arabic                         | XKBEARA         | 9328         |
| Belgium/Dutch                  | XKBEBEL         | 9311         |
| Bulgaria                       | XKBEBUL         | 9332         |
| Croatia                        | XKBECRO         | 9345         |
| Czechoslovakia                 | XKBECZH         | 9337         |
| Denmark                        | XKBEDEN         | 9313         |

|                    |   |      |
|--------------------|---|------|
| Netherlands        | XKBEDUT                                 | 9334 |
| Finland            | XKBEFIN                                 | 9314 |
| France             | XKBEFRA                                 | 9315 |
| Germany            | XKBEGER                                 | 9316 |
| Greece             | XKBEGRK                                 | 9326 |
| Hebrew             | XKBEHBW                                 | 9327 |
| Hungary            | XKBEHGN                                 | 9338 |
| Iceland*           | XKBEILD                                 | 9324 |
|                    | * Includes Key Cap's Partnumber 1391495 |      |
| Italy              | XKBEITA                                 | 9317 |
| Luxembourg         | XKBELUX                                 | 9322 |
| Norway             | XKBENOR                                 | 9319 |
| Poland             | XKBEPOL                                 | 9339 |
| Portugal           | XKBEPOR                                 | 9320 |
| Romania            | XKBEROM                                 | 9340 |
| Russian (Cyrillic) | XKBERUS                                 | 9346 |
| Slovakia           | XKBESLK                                 | 9309 |
| Slovenia           | XKBESLO                                 | 9347 |
| Spain              | XKBESPA                                 | 9321 |
| Sweden             | XKBESWE                                 | 9314 |
| Switzerland        | XKBESWS                                 | 9322 |
| Turkey (ID 179)    | XKBETUR                                 | 9325 |
| Turkey (ID 440)    | XKBETKY                                 | 9335 |

**Country Packs:**

Country Packs include the power cord.

| Country         | Ordering Number | Feature Code |
|-----------------|-----------------|--------------|
| -----           | -----           | -----        |
| Arabic          | CPK1ARA         | 9101         |
| Belgium/Dutch   | CPK1BED         | 9102         |
| Belgium/French  | CPK1BEF         | 9103         |
| Belgium/English | CPK1BEE         | 9104         |
| Denmark/Iceland | CPK1DEN         | 9105         |
| Egypt           | CPK1EGY         | 9106         |
| Europe          | CPK1EUL         | 9107         |
| Finland         | CPK1FIN         | 9108         |
| France          | CPK1FRA         | 9109         |
| Germany         | CPK1GER         | 9110         |
| Israel          | CPK1ISR         | 9111         |
| Italy           | CPK1ITA         | 9112         |
| Netherlands     | CPK1NET         | 9113         |
| Norway          | CPK1NOR         | 9114         |
| Portugal        | CPK1POR         | 9115         |
| South Africa    | CPK1SAF         | 9116         |
| Spain           | CPK1SPA         | 9117         |
| Sweden          | CPK1SWE         | 9118         |
| Swiss/French    | CPK1SFR         | 9119         |
| Swiss/German    | CPK1SGE         | 9120         |
| Swiss/Italian   | CPK1SIT         | 9121         |
| Swiss/English   | CPK1SUK         | 9122         |
| United Kingdom  | CPK1UKE         | 9123         |

**Language Packs**

Language Packs consist of system and user documentation in the languages listed below:

| Language   | Ordering Number | Feature Code |
|------------|-----------------|--------------|
| -----      | -----           | -----        |
| English-UK | LPK1UKE         | 9710         |
| Danish     | LPK1DEN         | 9701         |

|            |         |      |
|------------|---------|------|
| Dutch      | LPK1DUT | 9700 |
| Finnish    | LPK1FIN | 9702 |
| French     | LPK1FRA | 9703 |
| German     | LPK1GER | 9704 |
| Italian    | LPK1ITA | 9711 |
| Norwegian  | LPK1NOR | 9706 |
| Portuguese | LPK1POR | 9707 |
| Spanish    | LPK1SPA | 9708 |
| Swedish    | LPK1SWE | 9709 |

**Note:** If translations not available at time of shipment, English language publications will be shipped with the unit.

### **Additional Features:**

After configuring the required features, the customer may select additional Build-To-Order features based on customer needs from the following list. Internal features will be installed in the system prior to shipment from the factory. These items are supported for factory installation only. Select from "Options Available for Later Purchase" for options not being installed in the system unit.

#### **Software Pack(s)**

##### Client Pack for the 43P Series

This package consists of AIX Version 4.1 Operating System Preinstalled and on CD-ROM, publications, and the appropriate licenses.

| Ordering<br>Language  | Feature             | Number  | Code |
|-----------------------|---------------------|---------|------|
| -----                 |                     | -----   | ---- |
| AIX Version 4         | Belgian Dutch       | SPC1BED | 8351 |
| AIX Version 4         | Greek               | SPC1GRK | 8352 |
| AIX Version 4         | Belgian French      | SPC1BEF | 8353 |
| AIX Version 4         | Hungarian           | SPC1HGN | 8354 |
| AIX Version 4         | Slovak              | SPC1SLK | 8355 |
| AIX Version 4         | Bulgarian           | SPC1BUL | 8356 |
| AIX Version 4         | Italian             | SPC1ITA | 8357 |
| AIX Version 4         | Spanish             | SPC1SPA | 8358 |
| AIX Version 4         | Swedish             | SPC1SWE | 8360 |
| AIX Version 4         | Norwegian           | SPC1NOR | 8361 |
| AIX Version 4         | Swiss French        | SPC1SFR | 8362 |
| AIX Version 4         | Czech               | SPC1CZH | 8363 |
| AIX Version 4         | Polish              | SPC1POL | 8364 |
| AIX Version 4         | Swiss German        | SPC1SGE | 8365 |
| AIX Version 4         | Danish              | SPC1DEN | 8366 |
| AIX Version 4         | Portuguese          | SPC1POR | 8367 |
| AIX Version 4         | Turkish             | SPC1TUR | 8368 |
| AIX Version 4         | Dutch (Netherlands) | SPC1DUT | 8369 |
| AIX Version 4         | Romanian            | SPC1ROM | 8370 |
| AIX Version 4         | U.K. English        | SPC1UKE | 8350 |
| AIX Version 4         | Finnish             | SPC1FIN | 8371 |
| AIX Version 4         | U.S. English        | SPC1USE | 8372 |
| AIX Version 4         | French              | SPC1FRA | 8373 |
| AIX Version 4         | German              | SPC1GER | 8374 |
| AIX Version 4         | Croatian            | SPC1CRO | 8381 |
| AIX Version 4         | Slovenian           | SPC1SLO | 8382 |
| AIX Version 4         | Russian             | SPC1RUS | 8383 |
| <br>                  |                     |         |      |
| Bi-directional (BIDI) |                     |         |      |
| AIX Version 4         | Arabic              | SPC1ARA | 8375 |
| AIX Version 4         | Hebrew              | SPC1HBW | 8376 |

## AIX for Small Enterprises Pack for 43P Series

This package consists of, AIX Version 4.1 Server Operating System,(1 - 16 users) Preinstalled and on CDRom, publications, and the appropriate licenses.

| Ordering<br>Language  | Feature             | Number  | Code |
|-----------------------|---------------------|---------|------|
| -----                 |                     | -----   | ---- |
| AIX Version 4         | Belgian Dutch       | SPSEBED | 8551 |
| AIX Version 4         | Greek               | SPSEGRK | 8552 |
| AIX Version 4         | Belgian French      | SPSEBEF | 8553 |
| AIX Version 4         | Hungarian           | SPSEHGN | 8554 |
| AIX Version 4         | Slovak              | SPSESLK | 8555 |
| AIX Version 4         | Bulgarian           | SPSEBUL | 8556 |
| AIX Version 4         | Italian             | SPSEITA | 8557 |
| AIX Version 4         | Spanish             | SPSESPA | 8558 |
| AIX Version 4         | Swedish             | SPSEWE  | 8560 |
| AIX Version 4         | Norwegian           | SPSENR  | 8561 |
| AIX Version 4         | Swiss French        | SPSEFR  | 8562 |
| AIX Version 4         | Czech               | SPSECZH | 8563 |
| AIX Version 4         | Polish              | SPSEPOL | 8564 |
| AIX Version 4         | Swiss German        | SPSESGE | 8565 |
| AIX Version 4         | Danish              | SPSEDEN | 8566 |
| AIX Version 4         | Portuguese          | SPSEPOR | 8567 |
| AIX Version 4         | Turkish             | SPSETUR | 8568 |
| AIX Version 4         | Dutch (Netherlands) | SPSEDUT | 8569 |
| AIX Version 4         | Romanian            | SPSEROM | 8570 |
| AIX Version 4         | U.K. English        | SPSEUKE | 8550 |
| AIX Version 4         | Finnish             | SPSEFIN | 8571 |
| AIX Version 4         | U.S. English        | SPSEUSE | 8572 |
| AIX Version 4         | French              | SPSEFRA | 8573 |
| AIX Version 4         | German              | SPSEGER | 8574 |
| AIX Version 4         | Croatian            | SPSECRO | 8581 |
| AIX Version 4         | Slovenian           | SPSESLO | 8582 |
| AIX Version 4         | Russian             | SPSERUS | 8583 |
| Bi-directional (BIDI) |                     |         |      |
| AIX Version 4         | Arabic              | SPSEARA | 8575 |
| AIX Version 4         | Hebrew              | SPSEHBW | 8576 |

## AIX for Small Enterprises Pack (Unlimited Users) for 43P Series

This package consists of AIX Version 4.1 Server Unlimited Users Operating System Preinstalled and on CDRom, publications, and the appropriate licenses.

| Ordering<br>Language | Feature             | Number  | Code |
|----------------------|---------------------|---------|------|
| -----                |                     | -----   | ---- |
| AIX Version 4        | Belgian Dutch       | SPU1BED | 8651 |
| AIX Version 4        | Greek               | SPU1GRK | 8652 |
| AIX Version 4        | Belgian French      | SPU1BEF | 8653 |
| AIX Version 4        | Hungarian           | SPU1HGN | 8654 |
| AIX Version 4        | Slovak              | SPU1SLK | 8655 |
| AIX Version 4        | Bulgarian           | SPU1BUL | 8656 |
| AIX Version 4        | Italian             | SPU1ITA | 8657 |
| AIX Version 4        | Spanish             | SPU1SPA | 8658 |
| AIX Version 4        | Swedish             | SPU1SWE | 8660 |
| AIX Version 4        | Norwegian           | SPU1NOR | 8661 |
| AIX Version 4        | Swiss French        | SPU1SFR | 8662 |
| AIX Version 4        | Czech               | SPU1CZH | 8663 |
| AIX Version 4        | Polish              | SPU1POL | 8664 |
| AIX Version 4        | Swiss German        | SPU1SGE | 8665 |
| AIX Version 4        | Danish              | SPU1DEN | 8666 |
| AIX Version 4        | Portuguese          | SPU1POR | 8667 |
| AIX Version 4        | Turkish             | SPU1TUR | 8668 |
| AIX Version 4        | Dutch (Netherlands) | SPU1DUT | 8669 |

|                            |         |      |
|----------------------------|---------|------|
| AIX Version 4 Romanian     | SPU1ROM | 8670 |
| AIX Version 4 U.K. English | SPU1UKE | 8650 |
| AIX Version 4 Finnish      | SPU1FIN | 8671 |
| AIX Version 4 U.S. English | SPU1USE | 8672 |
| AIX Version 4 French       | SPU1FRA | 8673 |
| AIX Version 4 German       | SPU1GER | 8674 |
| AIX Version 4 Croatian     | SPU1CRO | 8681 |
| AIX Version 4 Slovenian    | SPU1SLO | 8682 |
| AIX Version 4 Russian      | SPU1RUS | 8683 |
|                            |         |      |
| Bi-directional (BIDI)      |         |      |
| AIX Version 4 Arabic       | SPU1ARA | 8675 |
| AIX Version 4 Hebrew       | SPU1HBW | 8676 |

**Memory Options:**

| Description      | Ordering Number | Feature Code |
|------------------|-----------------|--------------|
| -----            | -----           | -----        |
| 4MB Memory SIMM  | XSIMM04         | 4080         |
| 8MB Memory SIMM  | XSIMM08         | 4081         |
| 16MB Memory SIMM | XSIMM16         | 4082         |
| 32MB Memory SIMM | XSIMM32         | 4083         |

**Note:** The system requires 16 Megabytes (MB) of system memory expandable to 192MB on the system board. A maximum of 6 memory SIMMs can be installed in pairs, including the SIMMs ordered as part of the base system. Memory SIMMs must be installed in matched pairs.

**Graphics Adapters:**

Two optional graphics adapters may be selected for the 43P Series. IBM E15 graphics capability is integrated into the 43P Series.

| Description   | Ordering Number | Feature Code |
|---|-----------------|--------------|
| -----   | -----           | -----        |
| IBM S15 Graphics Adapter (Max One)                  | XGRS15E         | 2657         |
| IBM Power GXT150P Graphics Adapter<br>(Two allowed) | XGRI50E         | 2648         |
| Video Capture Enhancement**                         | XGRVCA1         | 2647         |

**Note:** \*\* The Video Capture Enhancement requires the IBM S15 Graphics Adapter and IBM Ultimedia Services Version 2.1 for AIX.

**Additional SCSI-2 Drives:**

A maximum of two bays (one 3.5-inch and two 5.25-inch ) are available after the initial configuration to install internal hard disks, CD-ROMS, or tape units.

| Description                    | Ordering Number | Feature Code |
|--------------------------------|-----------------|--------------|
| -----                          | -----           | -----        |
| 540MB SCSI-2 Hard Disk Drive   | XSC2540         | 2393         |
| 720MB SCSI-2 Hard Disk Drive   | XSC2720         | 2395         |
| 1GB SCSI-2 Hard Disk Drive     | XSC21GB         | 2397         |
| 2GB SCSI-2 Hard Disk Drive     | XSC22GB         | 3031         |
| 4GB 4mm Tape Drive *           | XTAP4GB         | 6152         |
| SCSI-2 Quad Speed CD-ROM Drive | XCDROM2         | 2616         |



\* A maximum of one additional media device (CD-ROM or tape drives) may be installed in the system.

### Miscellaneous Adapters/Items

Five slots are available. Two slots are Shared PCI (support either ISA or PCI adapters) and the remaining three slots support ISA only.

| Description  | Ordering Number | Feature Code |
|--|-----------------|--------------|
| 8 Port Async Communications (ISA - Bus Adapter)    | XI8P0ER         | 2931         |
| SCSI-2 Fast/Wide PCI-Bus Adapter                   | XIBFWER         | 2408         |
| 8 Bit External Cable Dual Port, plus terminator    | XIB8EDP         | 2111         |
| 8 Bit External Cable Single Port, plus terminator  | XIB8ESP         | 2113         |
| 16 Bit External Cable Single Port, plus terminator | XIB16SP         | 2115         |
| 16-Bit External Option to Option Cable (.3 Meter)  | XIB1605         | 2860         |
| Asynchronous Terminal/Printer Cable                | XASYN1E         | 2934         |
| 4/16-Bit Token Ring Adapter, ISA (Short)           | XCOMT2E         | 2971         |
| Ethernet Adapter, ISA (Short)                      | XCOME2E         | 2981         |
| X.25 Interface Co-Processor, ISA                   | XCOMX1E         | 2961         |
| X.25 Cable X.21-3 meter                            | XX25V21         | 2965         |
| X.25 Cable V.24-3 meter                            | XX25V24         | 2966         |
| X.25 Cable V.35-3 meter                            | XX25V35         | 2967         |
| X.25 Cable X.21-6 meter                            | XX25V16         | 2976         |
| X.25 Cable V.24-6 meter                            | XX25V46         | 2977         |
| X.25 Cable V.35-6 meter                            | XX25V56         | 2978         |

### Monitors:

The following monitors are orderable separately through CSM as machine type and model or through UPOS/OPAL as part number. In both systems, one of the below Country and Language Pack part number/feature codes must be specified on the order. For entity scheduling in CSM, the scheduling tie-in function must be used.

| Description           | Machine Type/Mod | Ordering Number | Maximum Viewable Screen Size, Measured Diagonally |
|-----------------------|------------------|-----------------|---|
| IBM 17S/S Sight&Sound | 7091-7S1         | X7091SS         | 403mm / 15.9"                                     |
| IBM 17V Color Monitor | 6327/022         | X632722         | 401mm / 15.8"                                     |
| IBM 15X Color Monitor | 9525/002         | X952502         | 347mm / 13.7"                                     |
| IBM 17X Color Monitor | 9527/012         | X952712         | 401mm / 15.8"                                     |
| IBM 21X Color Monitor | 9521/002         | X952102         | 486mm / 19.1"                                     |

The following monitors are supported and may be ordered with the 43P Series by specifying the appropriate feature codes.

| Description  | Feature | Maximum Viewable<br>Screen Size,<br>Measured<br>Diagonally | Ordering<br>Number |
|--|---------|--|--------------------|
| IBM P50 Color Monitor  | 3612    | 13.6   | X0P5015            |
| IBM P70 Color Monitor  | 3613    | 15.9   | X0P7017            |
| IBM P200 Color Monitor   | 3614    | 19.1   | XP20020            |
| POWERdisplay 17  | 3607    | 16.1   | X609117            |
| POWERdisplay 20  | 3608    | 19.1   | X609120            |
| Southern Hemisphere Specify<br>for P50, P70, P200 Color Monitors | 9004    |  | XDSPSTH            |

### Monitor Signal Cables:

|  | Feature | Ordering<br>Number |
|--|---------|--------------------|
| 13W3 to 13W3 Display Cable<br>(POWER GXT150P to P70/P200)  | 4234    | XIGR13W            |
| DDC 15 Pin to 13W3 Display Cable<br>(E15/S15 to P70/P200)  | 4238    | XIGR15E            |
| 13W3 to 3BNC Display Cable<br>(POWER GXT150P to 6091/16,19i)<br>and POWERdisplay 16,17,19,20)                | 4214    | XGRCAB1            |
| 15 Pin D-Shell to 5 BNC<br>(E15/S15 to POWERdisplay 17,19)   | 4217    | X6091CB            |
| 13W3 to 13W3 sun Compatible cable  | 4227    | XGRCAB3            |
| 13W3 to 5 BNC Display Cable<br>(POWER GXT150P to 1091-051 and<br>POWERdisplay 16s)                           | 4229    | XIGR135            |
| 13W3 to 15 Pin D shell cable<br>(POWER GXT150P to 8508,6314,6317,6319,<br>6327,9525,8517,<br>9521,9527, P50) | 4213    | XIGR15P            |

### Monitor Country Packs:

Country Packs include the power cord.

| Country         | Part Number | Feature<br>Code |
|-----------------|-------------|-----------------|
| Arabic          | CPK1ARA     | 9101            |
| Belgium/Dutch   | CPK1BED     | 9102            |
| Belgium/French  | CPK1BEF     | 9103            |
| Belgium/English | CPK1BEE     | 9104            |
| Denmark/Iceland | CPK1DEN     | 9105            |
| Egypt           | CPK1EGY     | 9106            |
| Europe          | CPK1EU1     | 9107            |
| Finland         | CPK1FIN     | 9108            |
| France          | CPK1FRA     | 9109            |
| Germany         | CPK1GER     | 9110            |
| Israel          | CPK1ISR     | 9111            |

|                |         |      |
|----------------|---------|------|
| Italy          | CPK1ITA | 9112 |
| Netherlands    | CPK1NET | 9113 |
| Norway         | CPK1NOR | 9114 |
| Portugal       | CPK1POR | 9115 |
| South Africa   | CPK1SAF | 9116 |
| Spain          | CPK1SPA | 9117 |
| Sweden         | CPK1SWE | 9118 |
| Swiss/French   | CPK1SFR | 9119 |
| Swiss/German   | CPK1SGE | 9120 |
| Swiss/Italian  | CPK1SIT | 9121 |
| Swiss/English  | CPK1SUK | 9122 |
| United Kingdom | CPK1UKE | 9123 |

### Language Packs

Language Packs consist of monitor documentation in the languages listed below:

| Language                    | Part Number | Feature Code |
|-----------------------------|-------------|--------------|
| English-UK                  | LPK1UKE     | 9710         |
| Danish                      | LPK1DEN     | 9701         |
| Dutch                       | LPK1DUT     | 9700         |
| Finnish                     | LPK1FIN     | 9702         |
| French                      | LPK1FRA     | 9703         |
| German                      | LPK1GER     | 9704         |
| Italian                     | LPK1ITA     | 9711         |
| Norwegian                   | LPK1NOR     | 9706         |
| Portuguese                  | LPK1POR     | 9707         |
| Spanish                     | LPK1SPA     | 9708         |
| Swedish                     | LPK1SWE     | 9709         |
| Windows NT Server Indicator |             | 5014         |

## Options Available for Later Purchase

The following options may be ordered individually and will not be installed in the system at the factory.

**Note: Warning: Order limits based upon system limitations are not being checked and your order may exceed allowable system configurations.**

### Memory Options:

| Description      | Ordering Number | Feature Code |
|------------------|-----------------|--------------|
| 4MB Memory SIMM  | XOSMM04         | 8201         |
| 8MB Memory SIMM  | XOSMM08         | 8202         |
| 16MB Memory SIMM | XOSMM16         | 8203         |
| 32MB Memory SIMM | XOSMM32         | 8204         |

The system requires 16 Megabytes (MB) of system memory expandable to 192MB on the system board. A maximum of 6 memory SIMMS can be installed, including the SIMMS ordered as part of the base system. SIMMS must be installed in matched pairs.

### Graphics Adapters and Multimedia Options:

Two optional graphics adapters may be selected for the 43P Series. E15 graphics capability is integrated the 43P Series.

Additional graphics adapters are provided for those users that require more demanding graphics capabilities than the integrated graphics included with the System Unit or for those users that have requirements for additional monitors attached to their systems.

| Ordering<br>Description<br>-----                              | Ordering<br>Number<br>----- | Feature<br>Code<br>----- |
|---|-----------------------------|--------------------------|
| IBM S15 Graphics Adapter<br>(Max one per system)              | XOGS15E                     | 8205                     |
| IBM Power GXT150P Graphics Adapter<br>(Max of two per system) | XOG150E                     | 8206                     |
| Video Capture Enhancement**                                   | XGRVCA1                     | 2647                     |
| Personal Microphone   | DOMICR1                     | 6308                     |
| Amplified Speakers (UK Power Supply)                          | XOSPKUK                     | 6406                     |
| Amplified Speakers (Euro Power Supply)                        | XOSPKEU                     | 6407                     |

**Note:** \*\* The Video Capture Enhancement requires the IBM S15 Graphics Adapter and IBM Ultimedia Services Version 2.1 for AIX. Complete information on Features 2647, 6308, 6406, and 6407 can be found in Announcement Letter ZG950258.

### Miscellaneous Adapters/Items

| Description<br>-----  | Ordering<br>Number<br>----- | Feature<br>Code<br>----- |
|---|-----------------------------|--------------------------|
| 8-Port Async Communications Adapter                                 | XO8P0ER                     | 8207                     |
| SCSI-2 Fast/Wide PCI-Bus Adapter                                    | XIBFWER                     | 2408                     |
| 8-Bit External Cable Dual Port,<br>plus terminator (for FC 2408)    | XIB8EDP                     | 2111                     |
| 8-Bit External Cable Single Port,<br>plus terminator (for FC 2408)  | XIB8ESP                     | 2113                     |
| 16-Bit External Cable Single Port,<br>plus terminator (for FC 2408) | XIB16SP                     | 2115                     |
| 16-Bit External Option to Option Cable<br>(.3 Meter)                | XIB1605                     | 2860                     |
| Asynchronous Terminal/Printer Cable                                 | XASYN1E                     | 2934                     |
| 4/16-Bit Token Ring Adapter, ISA (Short)                            | XOCMT1E                     | 8209                     |
| Ethernet Adapter, ISA (Short)                                       | XOCME2E                     | 8210                     |
| X.25 Interface Co-processor ISA                                     | XOCMX1E                     | 8211                     |
| X.25 Cable X.21 - 3 meters  | XO25V21                     | 8212                     |
| X.25 Cable V.24 - 3 meters  | XO25V24                     | 8213                     |
| X.25 Cable V.35 - 3 meters  | XO25V35                     | 8214                     |
| X.25 Cable X.21 - 6 meters  | XX25V16                     | 2976                     |
| X.25 Cable V.24 - 6 meters  | XX25V46                     | 2977                     |
| X.25 Cable V.35 - 6 meters  | XX25V56                     | 2978                     |
| 3COM Ethernet PCI 10/100  |                             | 8242                     |

**SCSI-2 Options (Internal):**

| Description                                | Ordering Number | Feature Code |
|--|-----------------|--------------|
| 540MB SCSI-2 Hard Disk Drive               | XOSC540         | 8215         |
| 720MB SCSI-2 Hard Disk Drive               | XOSC720         | 8216         |
| 1GB SCSI-2 Hard Disk Drive                 | XOSC1GB         | 8217         |
| 2GB SCSI-2 Hard Disk Drive                 | XOSC2GB         | 8218         |
| 4GB SCSI-2 tape drive                      | XOIT4GB         | 8219         |
| SCSI-2 Quad Speed CD-ROM Drive             | XOCDRM2         | 8221         |
| Mounting Kit (3.5" Hard Disk in 5.25" Bay) | XOMK35I         | 6509         |

**Note:** Mounting Kit required for third disk drive.

**External SCSI-2 Device Options**

**Note:** The following enclosure supports any of the following feature codes: 8215, 8216, 8217, 8218, 8219, and 8221.

| Description   | Ordering Number | Feature Code |
|---|-----------------|--------------|
| External 3510 SCSI Enclosure                                | XOECAB1         | 8222         |
| SCSI-2 Ext. Cable (card to option)*                         | XOECAB2         | 8223         |
| SCSI-2 Ext. Cable (long-option to option)*                  | XOECAB3         | 8224         |
| SCSI-2 Ext. Cable (short-option to option)*                 | XOECAB4         | 8225         |
| SCSI Active Terminator<br>(required with first cable order) | XOETERM         | 8226         |

**Note:** \*These cables attach to the external connector of the SCSI integrated on the system motherboard and are used to attach external SCSI devices such as the External 3510 SCSI enclosure.

**Security Device Options:**

| Description    | Ordering Number | Feature Code |
|----------------|-----------------|--------------|
| Tie-down Strap | XOTIEDS         | 8227         |

**Monitors:**

The following monitors are orderable separately through CSM as machine type and model or through UPOS/OPAL as part number. In both systems, one of the below Country and Language Pack part number/feature codes must be specified on the order. For entity scheduling in CSM, the scheduling tie-in function must be used.

| Description           | Machine Type/Mod | Part Number | Maximum Viewable Screen Size, Measured Diagonally |
|-----------------------|------------------|-------------|---|
| IBM 17S/S Sight&Sound | 7091-7S1         | X7091SS     | 403mm / 15.9"                                     |
| IBM 17V Color Monitor | 6327/022         | X632722     | 401mm / 15.8"                                     |
| IBM 15X Color Monitor | 9525/002         | X952502     | 347mm / 13.7"                                     |
| IBM 17X Color Monitor | 9527/012         | X952712     | 401mm / 15.8"                                     |

IBM 21X Color Monitor 9521/002 X952102 486mm / 19.1"

The following monitors are supported and may be ordered with the 43P Series by specifying the appropriate feature codes.

| Description  | Feature | Maximum Viewable<br>Screen Size,<br>Measured<br>Diagonally | Ordering<br>Number |
|--|---------|--|--------------------|
| IBM P50 Color Monitor  | 3612    | 13.6   | X0P5015            |
| IBM P70 Color Monitor  | 3613    | 15.9   | X0P7017            |
| IBM P200 Color Monitor   | 3614    | 19.1   | XP20020            |
| POWERdisplay 17  | 3607    | 16.1   | X609117            |
| POWERdisplay 20  | 3608    | 19.1   | X609120            |
| Southern Hemisphere Specify<br>for P50, P70, P200 Color Monitors | 9004    |  | XDSPSTH            |

Monitor Signal Cables:

| Description  | Feature | Ordering<br>Number |
|--|---------|--------------------|
| 13W3 to 13W3 Display Cable<br>(POWER GXT150P to P70/P200)  | 4234    | XIGR13W            |
| DDC 15 Pin to 13W3 Display Cable<br>(E15/S15 to P70/P200)  | 4238    | XIGR15E            |
| 13W3 to 3BNC Display Cable<br>(POWER GXT150P to 6091/16,19i)<br>and POWERdisplay 16,17,19,20)                | 4214    | XGRCAB1            |
| 15 Pin D-Shell to 5 BNC<br>(E15/S15 to POWERdisplay 17,19)   | 4217    | X6091CB            |
| 13W3 to 13W3 Sun Compatible Cable  | 4227    | XGRCAB3            |
| 13W3 to 5 BNC Display Cable<br>(POWER GXT150P to 1091-051 and<br>POWERdisplay 16s)                           | 4229    | XIGR135            |
| 13W3 to 15 Pin D shell Cable<br>(POWER GXT150P to 8508,6314,6317,6319,<br>6327,9525,8517,<br>9521,9527, 50P) | 4213    | XOGR15P            |

**101/102 or 106-Key Enhanced Keyboard with Attach Cable**

| Enhanced Keyboard<br>Language/Cty | Ordering<br>Number | Feature<br>Code |
|-----------------------------------|--------------------|-----------------|
| U.S. (English)                    | XOKEUSE            | 6010            |
| U.K. (English)                    | XOKEUKE            | 6023            |
| Arabic                            | XOBEARA            | 6028            |
| Belgium/Dutch                     | XOKEBEL            | 6011            |
| Bulgaria                          | XOKEBUL            | 6032            |
| Croatia                           | XOKECRO            | 6045            |
| Czechoslovakia                    | XOKECZH            | 6037            |
| Denmark                           | XOKEDEN            | 6013            |
| Netherlands                       | XOKEDUT            | 6034            |
| Finland                           | XOKEFIN            | 6014            |
| France                            | XOKEFRA            | 6015            |
| Germany                           | XOKEGER            | 6016            |
| Greece                            | XOKEGRK            | 6026            |
| Hebrew                            | XOKEHBW            | 6027            |

|                    |          |      |
|--------------------|----------|------|
| Hungary            | XOKEHGN  | 6038 |
| Iceland            | XOKEILD  | 6024 |
| Italy              | XOKEITA  | 6017 |
| Luxembourg         | XOKE LUX | 6022 |
| Norway             | XOKENOR  | 6019 |
| Poland             | XOKEPOL  | 6039 |
| Portugal           | XOKEPOR  | 6020 |
| Romania            | XOKEROM  | 6040 |
| Russian (Cyrillic) | XOKERUS  | 6046 |
| Slovakia           | XOKESLK  | 6009 |
| Slovenia           | XOKESLO  | 6047 |
| Spain              | XOKESPA  | 6021 |
| Sweden             | XOKESWE  | 6014 |
| Switzerland        | XOKESWS  | 6022 |
| Turkey (ID 179)    | XOKETUR  | 6025 |
| Turkey (ID 440)    | XOKETKY  | 6035 |

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## Highlights

The **RISC System/6000 43P Series** consists of three new models of PowerPC workstations running IBM's UNIX operating system, AIX Version 4.

- Provides industry leading integer performance in the entry workstation class.
    - The Model 43P Series is based on the PowerPC 604 processor which will run everything from mechanical design to banking applications faster than earlier IBM PowerPC systems.
  - Provides unmatched X Window performance for entry RISC workstations.
    - Faster X Window performance means your applications run faster.
  - Ideal workstation for all commercial UNIX workstation uses and 2D technical workstation applications.
  - IBM's 5th major PowerPC-based AIX workstation.
    - IBM's exploitation of the PowerPC processors gets better and better.
  - IBM's award winning AIX operating system supports over 10,000 business applications.
  - Superior expansion over Sun SS85 and HP 712/80
    - 5GB maximum internal hard disk capacity
    - 16MB to 192MB memory expansion
    - 5 Media slots provide superior expansion for second CD-ROM, hard disk or tape drives
-

## **Description**

The IBM RISC System/6000 43P Series workstations are full-size desktop members of the RISC System/6000 family, based on the PowerPC 604 microprocessor.

There are three models in the 43P Series based upon the different performance levels of the PowerPC 604 and L2 cache. The first model is based upon the 100MHz version of the PowerPC 604 and comes standard with a 256KB Asynchronous L2 cache. The other models are based upon the 120MHz and the 133MHz versions of the PowerPC 604 and come standard with a 512KB Synchronous L2 cache. The larger Synchronous L2 cache on the 120MHz and 133MHz versions provides significant performance advantages.

The 43P Series delivers the advanced technology of the PowerPC processor, with its processing power, in a remarkable open system. Designed from the ground up to adhere to industry standards like Industry Standard Architecture (ISA), Peripheral Component Interconnect (PCI), and Small Computer System Interface (SCSI-2), the 43P Series allows users to exploit PC components that adhere to these formats (AIX Device Drivers are required). The 43P Series provides an open, powerful system for solving today's and the complex problems of tomorrow.

### **43P Series Software**

The 43P Series versions offer:

- AIX Version 4.1 for Clients or AIX Version 4.1 for Servers (1 to 16 users) , or AIX Version 4.1 for Servers (Unlimited users)
- Support for remote IPL and LAN installation and management system package
- A subset of AIX 4.1 Client or AIX 4.1 Server may be pre-installed on all systems.

### **Investment Protection**

The 43P Series grows with you as your computing needs grow. The system is designed for easy user installation of additional memory, disk, tape, and network communications to protect your initial investment.

The 43P Series provides integrated graphics and Ethernet to provide a cost-effective package. It also provides three industry-standard ISA and two PCI or ISA shared slots that will accept a wide range of industry solutions (AIX Device Drivers are required).

The 43P Series has three 3.5-inch bays and two 5.25-inch bays and is designed to use industry-standard hard disk and memory options that can be easily installed by the user.

### **RISC System/6000 Model 43P-100 includes:**

- PowerPC 604/100 MHz system
- 256KB Asynchronous L2 Cache
- Integrated E15-type Graphics
- SCSI-2 Quad Speed CD-ROM Drive



- Microphone and Internal Speaker
- 1.44MB 3.5-inch Diskette Drive
- 3 Button Mouse
- Selectable Required Features\*\*
  - Disk Drive (540MB, 720MB, 1GB, 2GB configurations)
  - Memory (16, 32, or 64MB configurations)
  - Enhanced Keyboard (Selectable)

**RISC System/6000 Model 43P-120 includes:**

- PowerPC 604/120 MHz system
- 512KB Synchronous L2 Cache
- Integrated E15-type Graphics
- SCSI-2 Quad Speed CD-ROM Drive
- Microphone and Internal Speaker
- 1.44MB 3.5-inch Diskette Drive
- 3 Button Mouse
- Selectable Required Features\*\*
  - Disk Drive (540MB, 720MB, 1GB, 2GB configurations)
  - Memory (16, 32, or 64MB configurations)
  - Enhanced Keyboard (Selectable)

**RISC System/6000 Model 43P-133 includes:**

- PowerPC 604/133 MHz system
- 512KB Synchronous L2 Cache
- Integrated E15-type Graphics
- SCSI-2 Quad Speed CD-ROM Drive
- Microphone and Internal Speaker
- 1.44MB 3.5-inch Diskette Drive
- 3 Button Mouse
- Selectable Required Features\*\*
  - Disk Drive (540MB, 720MB, 1GB, 2GB configurations)
  - Memory (16, 32, or 64MB configurations)
  - Enhanced Keyboard (Selectable)

**Note:** Selectable Required Features are individually priced with the 540MB Hard Disk, 16MB of Memory, publications, line cord, and keyboard included in the base price.

## Graphics Features Overview

The 43P Series has three graphics options to fit a wide range of graphics requirements. The function of an E15 graphics solutions is integrated on the system board. This provides broad coverage for a wide range of business and commercial graphics applications and will meet the requirements for nongraphics intensive applications. The GXT150P is a high performance 2D graphics adapter that is designed to provide an effective solution for graphics intensive applications on the 43P Series and is our highest performance 2d solution. The S15 graphics adapter is a medium to high performance 2D graphics solution that also has video capability and support the attachment of the Video Enhancement Adapter (FC#2647). Details of these adapters are given in the paragraphs below. The 43P Series has integrated IBM E15-type graphics capability on the motherboard. E15-type graphics is a low-cost, medium-performance, 256 color (8 bit), DRAM-based graphics for use as an entry graphics solution. The IBM E15-type graphics employs the 64-bit S3 Vision864 graphics accelerator and the 16-bit 135 MHz S3 SDAC. The IBM E15-type graphics comes standard with a 2MB frame buffer, providing up to 1280 x 1024 resolution.

The 43P Series also has the capability to use PCI-based graphics adapters to provide advanced performance capabilities for graphics-intensive applications. The adapter choices depend upon the price/performance you require.

The adapters are:

### **The POWER GXT150P Graphics Adapter**

The POWER GXT150P Graphics Adapter is an 8-bit, 256-color adapter that attaches the PCI local bus interface. The POWER GXT150P is designed for 3D applications including: desktop publishing, X-window applications, 2D mechanical drafting, CASE, chemical and biological applications, and electrical CAD. When used with the AIX Softgraphics software, the POWER GXT150P provides a cost-effective 3D platform.

### **IBM S15 Graphics Adapter**

The IBM S15 Graphics Adapter is a high-performance VRAM-based PCI graphics adapter with integrated video coprocessor for use as a premium graphics solution. The IBM S15 Graphics Adapter comes with 2MB VRAM.

## Monitors and Monitor Cable Descriptions:

### **POWERdisplay 17 (Feature 3607):**

The POWERdisplay 17 is a high resolution graphics raster scan color display featuring a Trinitron\*\* CRT with a maximum viewable image size of 16.1 inches/409mm measured diagonally. 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. The anti-reflective CRT surface treatment virtually eliminates screen reflections while optimizing image quality.

The POWERdisplay 17 meets ISO 9241 Part 3 recommendations for Video Display Terminal (VDT) ergonomics and also meets Very Low Frequency Magnetic Field (VLMF), Extremely Low Frequency Magnetic Field (ELMF), Very Low Electrical Field (VLEF), and Extremely Low Electrical Field (ELEF) emission standards and virtually eliminates static discharge from the front of the screen. Operator controls for power, brightness, contrast, image tilt, horizontal and

vertical static convergence, geometry, vertical centering, and indicators are included in a front accessible panel. A tilt swivel base is standard. The display automatically synchronizes with various screen formats.

- Resolution: 1280 X 1024 at 77 Hz and 1024 x 768 at 75 Hz

**POWERdisplay 20 (feature 3608):**

The POWERdisplay 20 is a high-resolution multisync graphics raster scan color display intended for high-resolution graphics applications. The POWERdisplay 20 has a flexible analog Red/Green/Blue (RGB) interface. The display automatically synchronizes with various screen formats. It provides sharp, bright, realistic colors for users of graphics applications that require high-resolution displays. It offers a high-contrast antiglare treatment that results in strikingly clear images. The IBM POWERdisplay 20-inch monitor has an actual viewable screen size of 19.1 inches when measured diagonally.

- Maximum Resolution: 1600 x 1280 @ 60 Hz noninterlaced refresh rate
- Optimum Resolution: 1280 x 1024 @ 77 Hz noninterlaced refresh rate

**IBM P50 Color Monitor (feature 3612):**

The IBM P50 Color Monitor is a 15-inch high resolution color monitor featuring a Trinitron\*\* CRT for clear and sharp images and having a maximum viewable image of 13.6 inches/346mm measured diagonally. The anti-reflective CRT treatment on the P50 virtually eliminates reflections while optimizing image quality. The P50 is designed primarily for corporate customers, for whom picture quality, reliability and connectivity in a showcase environment is of paramount importance. The IBM P50 Color Monitor features On-Screen Display to assist in the operation of user controls by providing an indication of the real-time adjustments that are being made.

The IBM P50 meets ISO 9241 Part 3 recommendation for Video Terminal (VDT) ergonomics. The P50 meets both the U.S. Environmental Protection Agency (EPA) Energy Star program and the Swedish National Board for Industrial and Technical Development (NUTEK) power consumption requirements. The P50 meets the Swedish Board for Technical Accreditation (SWEDAC) and MPRII. The P50 meets Communication Federal Commission (FCC) Class B requirements. A tilt swivel base is standard with the P50 Color Monitor. The monitor automatically synchronizes with various screen formats.

- Maximum Resolution 1280x1024 at 60Hz non-interlaced refresh rate
- Optimum Resolution 1024x768 for up to 85Hz non-interlaced refresh rate

**P70 Color Monitor (feature 3613):**

The IBM P70 is a 17-inch high resolution multisync graphics raster scan color display featuring a Trinitron\*\* CRT for the clearest, sharpest image with a maximum viewable image of 15.9 inches/403mm measured diagonally. The IBM P70 Color Monitor is supplied with an anti-reflective CRT film treatment that virtually eliminates reflection while optimizing image quality. The IBM P70 is intended for high resolution graphics applications where high quality and reliability are of the utmost importance.

The IBM P70 Color Monitor features On Screen Display to assist in the operation of user controls by providing an indication of the real-time adjustments that are being made.

The IBM P70 meets ISO 9241 Part 3 recommendations for Video terminal (VDT) ergonomics. The P70 meets both the U.S. Environmental Protection Agency (EPA) Energy Star program and the Swedish National Board for Industrial and technical Development (NUTEK) power consumption requirements. The P70 meets the Swedish Board for Technical Accreditation (SWEDAC), MPRII and TCO-92. The P70 meets the Federal Communication Commission (FCC) Class B requirements. A tilt swivel base is standard with the P70 Color Monitor. The monitor automatically synchronizes with various screen formats.

- Maximum Resolution: 1280 x 1024 at 77Hz noninterlaced refresh rate

#### **P200 Color Monitor (3614):**

The IBM P200 is a 20-inch high resolution multisync graphics raster scan color display featuring a Trinitron\*\* CRT for the clearest, sharpest image with a maximum viewable image of 19.1 inches/486mm measured diagonally. The IBM P200 Color Monitor is supplied with a seven layer anti-reflective bonded panel that virtually eliminates reflection while optimizing image quality. The IBM P200 is intended for high resolution graphics applications where high quality and reliability are of the utmost importance.

The IBM P200 Color Monitor features an On-Screen Display to assist in the operation of user controls by providing an indication of the real-time adjustments that are being made.

The IBM P200 meets ISO 9241 Part 3 recommendations for Video Terminal (VDT) ergonomics. The P200 meets both the U.S. Environmental Protection Agency (EPA) Energy Star program and the Swedish National Board for Industrial and Technical Development (NUTEK) power consumption requirements. The P200 meets the Swedish Board for Technical Accreditation (SWEDAC), MPRII and TCO-92. The P200 meets the Federal Communication Commission (FCC) Class B requirements. A tilt swivel base is standard with the P200 Color Monitor. The monitor automatically synchronizes with various screen formats.

- Maximum resolution: 1600 x 1024 at 60 Hz noninterlaced refresh rate
- Optimum resolution: 1280 x 1024 at 77 Hz noninterlaced refresh rate

#### **Monitor Cables:**

The **13W3 to 15-Pin D-Shell Converter Cable** (feature 4213) allows a standard 15-pin display cable to be connected to a graphics adapter with a 13W3 connector. This feature is normally needed for use with displays that have an integrated (captured) cable with a 15-pin D-shell connector (for example, IBM GXT150P to 8508, 8517, 6314, 6317, 6319, 6327, 9525, 9521, 9527).

The **13W3 to 3-BNC Display Cable** (feature 4214) provides three separate BNC connectors to allow many IBM and non-IBM displays to attach to a graphics adapter with a 13W3 connector (for example, IBM GXT150P to 6091/16, 19i and POWERdisplay 16, 17, 19, 20).

The **15-Pin D-Shell to 5-BNC Cable (ID bits = 0100)** (feature 4217) allows five separate BNC connectors at the display to attach to a graphics adapter with a 15-Pin D-shell connector (for example, E15/S15 to POWERdisplay 17, 19).

The **Sun Compatible Display Converter Cable** (feature 4227) provides a method of attaching a Sun-compatible display (1152x900) to an appropriate graphics adapter. The cable converter is 12 inches long. Since this cable is not intended to be the primary connection between the adapter and the display, the original display cable is also required.

The **13W3 to 5-BNC Display Cable** (feature 4229) provides five separate BNC connectors to allow displays to attach to a graphics adapter with a 13W3 connector (for example, GXT150P to 1091-51 and POWERdisplay 16s).

The **13W3 to 13W3 Display Cable** (feature 4234) attaches displays with a 13W3 connector to a graphics adapter with a 13W3 connector (for example, GXT150P to P70/P200).

The **15-Pin D-Shell to 13W3 DDC Cable (ID Bits NONE)** (feature 4238) allows a display with a 13W3 connector to attach to a graphics adapter with a 15-Pin D-shell connector (for example, E15/S15 to P70/P200).

\*\*Company, product, or service name may be a trademark or service mark of others.

## **Supported Devices**

### **External Storage Machines**

- IBM 7203 Model 001 Portable Disk Unit
- IBM 7204 Model 010 1.0GB External Disk Drive
- IBM 7207 Model 011 525MB External 1/4-Inch Cartridge Tape Drive
- IBM 7207 Model 012 1.2GB External 1/4-Inch Cartridge Tape Drive
- IBM 7210 Model 005 External CD-ROM Drive SCSI I/O Controller) SCSI I/O Controller)

### **3D Input Device**

- IBM 6094 Spaceball Model 30

### **X Stations**

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

### **Dials**

- IBM 6094-010  
(Requires 6094 feature 4020 for attachment to a standard serial port.)

### **Lighted Programmable Function Keyboard**

- IBM 6094-020  
IBM 6094-020 requires 6094 feature 4020 for attachment to a standard Serial Port.

### **Tablets**

- IBM 6093 Tablet Model 011 (requires 6093 cable feature 4035)
- IBM 6093 Tablet Model 012 (requires 6093 cable feature 4035)

## Plotters

- IBM 6180 M1 Color
- IBM 6182 Color
- IBM 6185 Model 1 Color
- IBM 6185 Model 2 Color

## Printers

- IBM 2380-001 Personal Printer II
- IBM 2381-001 Personal Printer II
- IBM 2390-001 Personal Printer II
- IBM 2391-001 Personal Printer II
- IBM 2380 Plus Printer, emulating the 2380 Personal Printer for PPDS (IBM ASCII) (Note 8)
- IBM 2381 Plus Printer, emulating the 2381 Personal Printer for PPDS (Note 8)
- IBM 2390 Plus Printer, emulating the 2390 Personal Printer for PPDS (Note 8)
- IBM 2391 Plus Printer, emulating the 2391 Personal Printer for PPDS (Note 8)
- IBM 3812-002 Page Printer (Note 1)
- IBM 3816-01D and 01S Page Printer (Note 2)
- IBM 3930-03D and 03S Page Printer, emulating the HP LaserJet III Si
- IBM 4019-001 LaserPrinter (Note 3)
- IBM 4019-E01 LaserPrinter E (Note 3)
- IBM 4029-010 LaserPrinter 5E
- IBM 4029-020 LaserPrinter 6
- IBM 4029-022 LaserPrinter (Note 8)
- IBM 4029-030 LaserPrinter 10
- IBM 4029-042 LaserPrinter
- IBM 4029-040 LaserPrinter 10L
- IBM 4037 5E Page Printer, emulating the 4029 LaserPrinter for PCL emulation and for PPDS (IBM ASCII) (Note 8)
- IBM 4039-10R LaserPrinter 10R (Note 10)
- IBM 4039-10D LaserPrinter 10D (Note 10)
- IBM 4039-12L LaserPrinter 12L (Note 10)
- IBM 4039-12R LaserPrinter 12R (Note 10)
- IBM LaserPrinter 4039-12R, -12L, and -16L Plus, emulating the IBM 4039 LaserPrinter

- IBM 4039-16L LaserPrinter 16L (Note 10)
- Lexmark 4047 5E, emulating the IBM 4039 LaserPrinter
- IBM 4070 IJ Printer Model 1
- IBM 4072-001 ExecJet\* Printer
- IBM 4076 ExecJet II Printer (Notes 8, 9)
- IBM 4079-001 Color JetPrinter
- IBM 4201-002 Proprinter\* II
- IBM 4201-003 Proprinter III
- IBM 4202-002 Proprinter II XL
- IBM 4202-003 Proprinter III XL
- IBM 4207-002 Proprinter X24E
- IBM 4208-002 Proprinter XL24E
- IBM 4212-001 Proprinter 24P
- IBM 4216-031 Personal Page Printer II
- IBM 4224-301, 302, 3C2, and 3E3 Serial Printer
- IBM 4226-302 Printer
- IBM 4230 Impact Printer Models 4S3, 4I3, 5S3, and 5I3, emulating the Proprinter III XL
- IBM 4232-302 Impact Dot Matrix Printer, emulating the Proprinter II XL
- IBM 4232-302 Dot Matrix Printer emulating the IBM 4202
- IBM 4234-009 Line Dot Matrix Printer
- IBM 4234-13 Line Dot Matrix Printer
- IBM 5202-001 Quietwriter\* III (Note 4)
- IBM 5204-001 Quickwriter\* (Note 4)
- IBM 6252 Impactwriter AP2\* (7012: #2936, #2937, or #3100 required)
- IBM 6252 AS2 (7012: #2936, #2937, or #3100 required)
- IBM 6252 AP8 Impactwriter\* (Note 7)
- IBM 6252 AS8 Impactwriter\* (Note 7)
- IBM 6262 A12, A14, A22
- IBM 6408 Line Matrix Printer, emulating the IBM 4234
- IBM 6412 Model CTA Line Matrix Printer, emulating the IBM 4234 Line Dot Matrix Printer
- IBM 5327-011 Line Dot Matrix Kanji Printer
- IBM 5572 Model B02 Kanji Printer

- IBM 5575 Model B02, F02, and H02 Serial Dot Matrix Kanji Printer
- IBM 5577 Model B02, F02, and G02 Serial Dot Matrix Kanji Printer
- IBM 5579 Model H02 Kanji Printer
- IBM 5585 Model H01 Kanji Printer
- IBM 5587 Model G01 and H01 Page Kanji Printer
- IBM 5589 Model H01 Kanji Printer

The following non-IBM printers are also supported:

- HP LaserJet Series II\*\* (Note 11)
- HP LaserJet Series III\*\* (Note 11)
- HP LaserJet Series III Si\*\* (Note 11)
- Hewlett Packard LaserJet 4 (Note 11)
- TI Omnilaser 2115\*\*
- DATAPRODUCTS LZR 2665\*\*
- PRINTRONIX P9012\*\*
- DATAPRODUCTS BP 2000\*\*
- QMS\*\* Colorscript 100 Model 20

Printer notes:

1. Feature code #3155 for the IBM 3812 printer is required for attachment to the RISC System/6000 system.
2. Feature code #7652 for the IBM 3816 printer is required for attachment to the RISC System/6000 system.
3. When using the serial ports, the IBM 4019 requires feature code #9143 (System serial interface adapter) for attachment to the RISC System/6000 system.
4. The IBM RISC System/6000 system supports Code Page 850. The Code Page 850 cartridge must be installed on the IBM 5202 printer to fully utilize the full character sets of the system. For details on available cartridges, refer to the IBM 5202 Sales Manual. Other IBM printers have Code Page 850 resident.
5. For optimum system performance, high-speed serial printers should be attached to the native ports.
6. The parallel printer port is provided for the convenience character printer. High-speed printers or applications requiring a large amount of data transfer per page (e.g., high density graphics) should use the serial interface for optimum system performance.
7. Impactwriter A models emulate the IBM 4202-3 printer for traditional line printing of simple text and numbers. Graphics, all points addressable, and large characters cannot be printed.
8. For assistance with these printers and for the latest AIX virtual printer files (colon files), call Lexmark Customer Support. Virtual printer files (colon files) for the 4037 and 4076



printers are available from Lexmark. Colon files for these printers are distributed via:

- VM request machine DRIVERS at LEXCJN1 (for IBM customers, marketing reps, SEs)
  - Lexmark Internet file server: ftp.lexmark.com
  - Reader response card for the 4037 and 4076
9. Use the virtual printer files available from Lexmark for the PCL emulation mode of the 4076 printer. For PPDS (IBM ASCII), select emulation of the 2390 Personal Printer.
10. AIX support software for the LaserPrinter Integrated Network Option is provided with the Network Option cards (Features 5495, 5496, 5497 on the IBM 4039 LaserPrinter.)
11. AIX support software for the HP JetDirect Ethernet Card

#### **Printer Peripherals**

- 4033-001 IBM LAN Connection for Printers and Plotters (Token-Ring)
- 4033-002 IBM LAN Connection for Printers and Plotters (Ethernet, Twisted Pair)
- 4033-003 IBM LAN Connection for Printers and Plotters (Ethernet, Thick and Thin)

#### **ASCII Terminals**

The IBM 3151, 3161, 3162, 3163, and 3164 are supported in 3161 mode. Support for the IBM 3164 included color attributes.

- IBM 3151 Model 310/410(1)
- IBM 3161(1)
- IBM 3162(1)
- IBM 3163(1)
- IBM 3164(1)
- DEC VT100\*\*
- DEC VT220
- DEC VT320
- DEC VT330
- WYSE 30\*\*
- WYSE 50
- WYSE 60
- WYSE 350

(1) National language support is provided through the use of Cartridge 8859/1.2 inserted in the terminal and appropriate keyboard.

## Modems

Modem support is provided to allow communication through common carrier telephone networks using dial-up or leased lines with asynchronous protocols or the synchronous half-duplexed SDLC protocols. Not all features supported by the listed modems are supported by the AIX Version 4 for RISC System/6000 software.

| Modems                   | Protocols   | Standards            |
|--------------------------|-------------|----------------------|
| IBM 5865 9600bps         | SYNC        | EIA-232D, CCITT V.24 |
| IBM 7861 up to 19.2 Kbps | ASYNCR SYNC | EIA-232D, CCITT V.24 |

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## Product Positioning

The RS/6000 43P Series offers PowerPC 604 processors in three different clock rates; 100MHz, 120MHz and 133MHz. The 43P Series is offered in a new mechanical package from the Model 40P with one more bay, providing a 5-bay, 5-slot configuration. The 43P Series is a series of three products where the low end 100MHz offers superior system performance, graphics performance, and hard disk expansion from the RISC System/6000 Model 40P. The Model 40P provides 4 bays and the Model 43P 5 bays. The maximum internal storage capacity of the 43P Series is 5GB while the 40P is 4GB. The Model 40P should still be considered where entry price is a key purchasing consideration.

The second and third models of the RISC System/6000 43P Series, the 120MHz and the 133MHz execute the SPECint92 benchmarks faster than the RISC System/6000 Model 25W/T 66MHz and 80MHz versions. One difference between the Model 25W/T and the 43P Series is that the Model 25W/T supports AIX Version 3.2.5 and the 43P Series supports AIX Version 4.1.3.

The disk capacities (from 540MB to 5GB) and the memory range (16MB to 192MB) is the same for all three models of the 43P Series compared to a range of 16MB to 256MB for the Model 25W/T.

The 43P Series supports PCI and ISA bus architectures with 2 PCI and 3 ISA expansion slots. The Model 25T is a Micro Channel\*\* workstation.

The RS/6000 43P Series is offered with RS/6000 and PC displays from 15" to 21". The primary resolution is 1280 x 1024.

The 43P Series has the same graphics capability (IBM E15, S15 and IBM POWER GXT150P) as the Model 40P. Due to the superior tightly linked design of the IBM RS/6000 graphics, the performance of all these graphics adapters is faster than on the Model 40P. The E15 graphics is integrated on the motherboard, providing excellent X Window performance without using a PCI slot.

Unlike other systems where a faster processor doesn't yield faster graphics, the faster CPUs also provide faster graphics on the 43P Series. Currently, the Model 43P Series is supported only by 2D hardware. Any 3D application such as CATIA\*\*, Professional CADAM, or Pro-E\*\* requires the IBM Softgraphics Licensed Program Product to emulate 3D hardware. This 3D function is supported only with the IBM POWER GXT150P Graphics Adapter. For this reason, the 25T should still be considered for those mechanical CAD applications where 3D hardware such as the Gt4e (a Micro Channel display adapter) is required.

The existing RS/6000 Model 41T and the newly announced Model 42T provide 3D graphics hardware and should be selected for production 3D solids and advanced surfaces as well as visualization and simulation graphics.

The RS/6000 43P Series competes against Sun's SPARCstation 5/85 and HPs 700 models 712/80 and 715/100. The Model 43P exceeds the HP 715/100's integer performance (SPECint92) by 60%, the HP 712/80's integer by almost 90%, and the Sun SPARCstation 5/85 by over a factor of 2.7 -- all of these systems are comparably configured\*.

\*All configurations include 32MB memory and 1GB hard disk.

\*\*Company, product, or service name may be a trademark or service mark of others.

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## Publications

The following publications are shipped with the product.

| <u>Title</u>                             | <u>Part Number</u> |
|--|--------------------|
| System Library                           | 30H2377            |
| System Management Services Diskettes (2) | 30H2090            |
| Hardware Maintenance Manual              | 30H2409            |

The following publication is available to 43P Series authorized maintenance providers.

| <u>Title</u>                | <u>Order Number</u> | <u>Part Number</u> |
|-----------------------------|---------------------|--------------------|
| Hardware Maintenance Manual | S30H-2409           | 30H2409            |

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## Technical Information

### Specified Operating Environment

#### **Physical Specifications**

##### **IBM RISC System/6000 43P Series Base Machine:**

- PowerPC 604 100, 120, or 133 MHz Microprocessors
- L1 cache of 32KB
- Standard 256KB (Model 43P-100) or 512KB L2 cache (Models 43P-120 and 43P-133)
- Six memory connectors (accepts 4MB, 8MB, 16MB, or 32MB memory SIMMs)
- 5 X 5 cabinet (approximately 17.9 x 17.6 x 4.9 inches)
- Slots (5):
  - 3 ISA Adapter slots (2 full, 1 short)

- 2 additional PCI Adapter or ISA card slots (1 full, 1 short) (Shared)
- Five bays (three 3.5-inch and two 5.25-inch)
  - One 3.5-inch Diskette Drive Bay
  - Two 3.5-inch Hard Disk Drive Bays
  - Two 5.25-inch Bays for CD-ROM Drive, Hard Disk or other media devices
- Input/Output Ports:
  - Keyboard port
  - Mouse port
  - Two 9-pin serial ports
  - 25-pin parallel port
  - SCSI-2 port
  - Display port (15-Pin D-shell)
  - Microphone jack (stereo)
  - Headphone jack (stereo)
  - Two audio input/audio output stereo jacks
- Microphone and Internal Speaker
- 200-watt Power Supply
- Integrated E15-type graphics
- Integrated Ethernet 10BaseT

All possible configurations are shown in the following chart:

| BAYS  |  |
|---|--|
|   | BAY 1 (3.5-inch)<br>Diskette Drive<br>1.44MB   |
| BAY 2 (3.5-inch)<br>Hard Disk Drive<br>540MB to 2GB | BAY 4 (5.25-inch)<br>CD-ROM  |
| BAY 3 (3.5-inch)<br>Hard Disk Drive<br>540MB to 2GB | BAY 5 (5.25-inch)<br>Tape Drive,<br>CD-ROM Drive or<br>540MB, 720MB, 1GB SCSI<br>Hard Disk Drive |

### Mechanical Specifications

Size:

Horizontal Orientation

Vertical Orientation

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|                           |                   |
|---------------------------|-------------------|
| Depth: 447 mm (17.6 in.)  | 447 mm (17.6 in.) |
| Height: 124 mm ( 4.9 in.) | 477 mm (18.8 in.) |
| Width: 454 mm (17.9 in.)  | 215 mm ( 8.5 in.) |

**Weight:**

Minimum configuration: 12 kg (26 lb)  
Maximum configuration: 14.5 kg (32 lb)

**System Unit Carton**

Single Pack Dimensions..... 25.62 x 21.50 x 12.50 in.  
Single Pack Weight..... 42 lb  
Quantity per Pallet..... 6  
Multipack Dimensions..... Multipack does not apply  
Multipack Quantity..... Multipack does not apply  
Multipacks/Pallet..... Multipack does not apply  
Pallet Load Dimensions..... 48 x 40 x 32 in.  
Pallet Load Weight..... 275 lb \*  
Estimated Safe Stacking Height..... 4 high

\* 40 lb added for pallet

**Electrical Power Specifications**

200-watt power supply; dual voltage, controlled by a switch on the unit  
100-125 Vac (nominal); 50-60 Hz; 4 Amp (maximum)  
200-245 Vac (nominal); 50-60 Hz; 4 Amp (maximum)

**Environmental Specifications**

**Air Temperature:**

System on: 16 to 32 degrees C (61 to 90 degrees F)  
System off: 10 to 43 degrees C (50 to 109 degrees F)

**Humidity:**

8% to 80%; maximum altitude 2134 m (7000 ft)

**Acoustic Noise Emission Values**

**Average sound-pressure levels:**

At operator position: 43 dB operating, 43 dB idle  
At bystander position (1 meter): 40 dB operating, 40 dB idle

**Declared (upper limit) sound power levels:**

5.1 dB operating; 4.9 dB idle

**Note:** The noise emission level stated is declared (upper limit) a weighted sound power level (in bels) for a random sample of machines, typically configured and operating in idle mode (that is, powered on but no disk read/write or other I/O activity). These levels were measured in controlled acoustical environments according to procedures specified by the American National Standards Institute (ANSI) S12.10 and ISO 779, and are reported in conformance with ISO 9296.

## Hard Disk Drive Specifications

|                           |        |        |        |        |
|---------------------------|--------|--------|--------|--------|
| Formatted Capacity        | 540MB  | 720MB  | 1GB    | 2GB    |
| Average Media data Mb/Sec | 37     | 37     | 47     | 88     |
| Rate MB/sec               | 10     | 10     | 10     | 10     |
| Average Seek Time ms      | 13     | 13     | 12     | 9.3    |
| RTM                       | 4500   | 4500   | 5400   | 7200   |
| Sector Interleave         | 1:1    | 1:1    | 1:1    | 1:1    |
| Interface                 | SCSI-2 | SCSI-2 | SCSI-2 | SCSI-2 |
| Write Cache               | yes    | yes    | yes    | yes    |

MB = Million Bytes

Mb = Million Bits

GB = Giga Bytes

Actual user-accessible capacity may vary slightly based on different operating environments.

## Hardfile Cable Specification

### CD-ROM Specifications

Quad Speed CD-ROM Drive - 5.25"  
Tray loading CD-ROM mechanism supports 12 and 8 cm disks  
Operates in both Horizontal or Vertical positions  
SCSI-2 Interface  
Supports Standard and extended XA formats  
Multi-session capability supports Photo-CD applications  
Data capacity: 630MB or more  
Single Speed: 150KB  
Double Speed: 300KB  
Quad Speed: 600KB  
Access Time: <370ms  
Full Stroke access time: <600ms (1X), <450ms (4X)  
Buffer memory: 64KB  
Operating environment: 5-50C, 8-80% Rh

## 43P Series Business Audio Hardware Performance and Specifications

Sampling Rate: 48 KHz per Channel maximum  
Channel Bandwidth: 20 Hz to 20,000 Hz (+1/-3dB)  
Dynamic Range: 16-bit resolution  
S/(N+D) (Line Input) 80 db min(f=1 KHz, measured at line out)  
S/(N+D) (Microphone Input) 60 dB min(f=1 KHz, measured at line out)

### Line Input

Input Impedance: 4 K ohms (for use with 2 K ohm source impedances or lower)  
Signal Level: 2 V rms nominal  
Connector: Stereo 3.5mm 3-conductor mini phone jack with:

Tip: Left Channel  
Ring: Right Channel  
Sleeve: Ground

### **Microphone Input:**

Input Impedance: 3.8K ohms (for use with 50 to 1000 ohm microphones)

Phantom Power: Stereo .5 ma. for nominal operation at 2 VDC

Signal Level: 10 m Vrms nominal up to 50 m Vrms max

Connector: Stereo 3.5mm 3-conductor mini-phone jack with:  
Tip: Left Channel  
Ring: Right Channel  
Sleeve: Ground

### **CD-DA Input (Internal):**

Input Impedance: 3 K ohms  
Signal Level: 1 V rms nominal  
Connector: 1 x 4 MOLEX male connector

### **Line Output:**

Output Impedance: 1 K ohm (for use with 10 K ohm load impedances or higher)

Signal Level: 2 V rms nominal

Connector: Stereo 3.5mm 3-conductor mini phone jack with:  
Tip: Left Channel  
Ring: Right Channel  
Sleeve: Ground

### **Headphone Output:**

Output Impedance: 12 ohms

Signal Level: 1.5 V rms nominal

Connector: Stereo 3.5mm 3-conductor mini phone jack with:  
Tip: Left Channel  
Ring: Right Channel  
Sleeve: Ground

### **System Speaker Output:**

Output Impedance: 8 ohms (typ)  
Power Output: 1 Watt Max. (8 ohm load)

Connector: Mono 2 pin Berg type

## Operating Environment

Temperature: 16 to 32 degrees C (61 to 90 degrees F)  
Relative Humidity: 8% to 80% (maximum altitude 2134 m - 7000 ft)  
Wet Bulb: 23  
Heat output: 325 BTU (maximum configuration)  
185 BTU (minimum configuration)  
Electrical power: .52 KVA max 90 to 137 Vac  
.52 KVA max 180 to 265 Vac  
Capacity of Exhaust: 8.5 Cubic meter/min. 20 CFM  
Noise Level: 4.9 dB idle  
5.1 dB operating (with 44dB operating sound pressure)  
Leakage Current: 70 mA  
Starting Current: 23 Ampere

## Agency Approvals:

### EMC CONFORMANCE CLASSIFICATION

USA FCC Class B  
Japan VCCI Class 2  
Europe CISPR 22 Class B, CE94  
Korea MOC

### PRODUCT SAFETY/COUNTRY TESTING/CERTIFICATION

USA UL  
Canada CNL (CSA or CUL)  
Germany GS Mark (Safety, TUV)  
Europe EN60-950

## Environmental Impact Assessment:

43P Series was developed in compliance with corporate policy letter number 139 (Environmental Affairs).

Environmental Impact Assessment Number 818P.

Compliance with Corporate Standard C-S 3-0527-002 (1991-06) Control of Chemicals in IBM Facilities, Requirements and Responsibilities.

## Homologation:

Telecom Environmental Testing (Safety and EMC):

The 43P Series and applicable components meet the environmental testing requirements of the country Telecom. The testing and approval process is ongoing.

| Country | Safety  | EMC |
|---------|---------|-----|
| -----   | -----   | --- |
| Canada  | CSA     |     |
| Chile   | Telecom |     |



|             |                         |         |
|-------------|-------------------------|---------|
| Denmark     | DEMKO                   |         |
| 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 |
| Norway      | NEMKO                   |         |
| Spain       | Ministry of<br>Industry |         |
| Sweden      | SEMKO                   |         |
| Switzerland | SEV                     |         |
| U.K.        | BABT                    |         |

### ISO 9000:

ISO 9000 Registered IBM Locations:

Research Triangle Park, North Carolina, USA  
 Manufacturing ISO 9001

Greenock, Scotland  
 Manufacturing ISO 9001

Austin, Texas, USA  
 PC Co. ECAT Manufacturing ISO 9001  
 AIX Software Development ISO 9001  
 PPS Development ISO 9001

Compliance to the International Organization for Standardization (ISO) Standard 9241 Part 3 for front-of-screen ergonomics is provided when the following monitors form a part of an ISO-compliant system:

| Description                     | Maximum Viewable<br>Screen Size,<br>Measured<br>Diagonally |
|---------------------------------|--|
| -----                           | -----  |
| IBM 17S/S Sight & Sound Monitor | 15.9"  |
| IBM 15V Color Monitor           | 13.7"  |
| IBM 17V Color Monitor           | 15.8"  |
| IBM 21P Color Monitor           | 19.1"  |
| IBM 15P Color Monitor           | 13.7"  |
| IBM 17P Color Monitor           | 15.8"  |
| IBM P50 Color Monitor           | 13.6"  |
| IBM P70 Color Monitor           | 15.9"  |
| IBM P200 Color Monitor          | 19.1"  |

### Hardware Requirements

A system unit order must contain as a minimum 7 order items:

- System Model
- Country Pack
- Language Pack

- Software Pack
- Keyboard specify
- One Hard Disk
- Memory

A monitor order must contain 3 order items:

- Model code
- Country Pack
- Language Pack

A separate software order on ISMS is not required to obtain the Licensed software products that are part of the System configurations.

License material will be included in the software package shipped with the hardware.

### **Software Requirements**

The following operating systems are available:

- AIX Version 4.1 for Clients or AIX Version 4.1 for Servers (1-16 Users or Unlimited)

**Note:** AIX Version 4.1.3 or later is required.

### **Compatibility**

43P Series is designed to maintain compatibility with adapters and devices which fully support both the industry standard architecture (ISA) and Peripheral Component Interconnect (PCI) interfaces.

AIX Version 4.1 supports the full range of applications on the 43P Series. As a general guide, applications requiring features or communication hardware that is not available with the 43P Series should not be executed, as well as any applications that exceed the physical limits of available memory and storage. Attachment of external SCSI devices can be used to extend the capability of the 43P Series workstation.

### **Limitations**

- The 43P Series has 6 memory slots. The minimum memory configuration is 16MB and the maximum memory configuration is 192MB using 4MB, 8MB, 16MB or 32MB memory SIMMs installed in pairs.
- The 3 ISA slots can accommodate 2 full and one short ISA cards.
- The 43P Series supports 2 PCI or 2 additional ISA slots (one long and one short).
- Maximum data transfer rate of the CD-ROM is 600KB/sec.
- Maximum of 6 SCSI-2 devices can be attached (both internal and external).
- Keyboards are PS/2-style keyboards.
- Software Security Limitations:

- Security modes may be set in software under password control. A mechanical keylock is provided to secure the cover only.
- The External SCSI port can be disabled mechanically for security.

Ports:

- Serial ports use the compact 9-pin format in place of the 25-pin format.

Diagnostics:

- On Screen Diagnostics provide less cryptic messages than LEDs.
- No LEDs for failure information or error code readout.
- Diagnostics diskettes are provided with the system unit. Diagnostics cannot be run from the hard disk drive or while the normal operating system is running.

Data Protection and Reliability:

- Parity memory provides data protection. Previously announced RS/6000 models used Error Checking and Correction (ECC) memory.
- A UPS or surge protector can increase data reliability in the event of a power outage. The Emergency Power Off Warning signal (EPOW) which alerts the operating system to power failures is not provided.
- Requires AIX Version 4.1.3 or later.
- The Ethernet coax connection will not work in the top short slot.
- Audio support requires IBM Ultimedia Services Version 2.1 for AIX.
- Display required for all configurations.
- Diskless and Dataless system configurations are not supported.
- AIX concurrent diagnostics do not work on the 43P series.
- Server applications with high loads on the ISA Ethernet and Token Ring adapters may show degraded performance.
- The X.25 Interface Co-processor card requires AIX 4.1 Server.
- The 2.0 GByte SCSI-2 Hard Disk Drive is not supported in a 5.25 inch bay.

## **Planning Information**

### **Customer Responsibilities**

The 43P Series is designated as a unit for customer setup. Customer setup, service and programming publications are available. Customer setup allowance is one day. By following the setup instructions, the user attaches the keyboard, peripherals, and power cable. The pre-installed operating system may be loaded and operational. If the operating system does not come up, system documentation steps the user through start up procedures.

## **Cable Orders**

Power cord cable is provided in the ship group.

## **Installability**

The 43P Series system requires under one hour for installation. Installation includes unpacking, setting up, and powering on system. Additional time is required to install other memory, other features, and additional software products.

## **Problem Determination**

The Customer Problem Analysis and Resolution (CPAR) guides contain self-test and diagnostic procedures which assist the customer in isolating a defective machine element. During the warranty period, the failing element will be replaced on-site. An IBM Service Agreement is recommended outside of the warranty period.

## **Security, Auditability and Control**

Security features such as the following help protect the computer, the hardware inside, and the information stored on the hard disk:

- Cover lock and keys:  
Provide mechanical protection against unauthorized access to the inside of the computer.
- Tie-down feature:  
Provides the ability to secure the computer to a stationary object.
- Power-on Password:  
Helps prevent unauthorized use of the computer.
- Supervisory Password:  
Prevents the unauthorized changing of the startup-device sequence and other system configuration information, as well as the unauthorized use of system utility programs. When set, the supervisory password overrides the power-on password.

The AIX Version 4.1 operating system provides a system-lockup capability as an additional security measure. Check the operating system documentation for details.

This product uses the security and auditability features of the Operating System software. User management is responsible for evaluation, selection and implementation of security features, administrative procedures and appropriate controls in application systems and communications facilities.

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## **Charges**

Consult your IBM Marketing Representative.

Consult your IBM Marketing Representative.

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# Terms and Conditions

All Terms and Conditions are the same as those which apply to the IBM RISC System/6000.

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## External Attachment

### **Hardware Compatibility**

The IBM RISC System/6000 43P Series workstations are designed to maintain compatibility with adapters and devices which fully support both the industry standard architecture (ISA) and Peripheral Component Interconnect (PCI) interfaces.

**Note:** AIX Device Driver required.

### **Memory:**

The 43P Series supports 72-pin industry standard 4MB, 8MB, 16MB, and 32MB industry standard memory SIMMs.

#### Memory Description

-----  
4MB (70 ns) Memory SIMM (32-bit, 72-pin) Parity  
8MB (70 ns) Memory SIMM (32-bit, 72-pin) Parity  
16MB (70 ns) Memory SIMM (32-bit, 72-pin) Parity  
32MB (70 ns) Memory SIMM (32-bit, 72-pin) Parity

### **Hard Disk Drive:**

The 43P Series uses SCSI-2 interfaced hard disk drives in varied capacities in the industry standard 3.5-inch format. Internal hard disk drives available are 540MB, 720MB, 1GB, and 2GB. The 2GB hard disk is not supported in the 5.25" bay.

### **SCSI-2 Devices:**

SCSI Devices may be internal (maximum four) or external (maximum of 2) for a total maximum of six on the system. SCSI-2 devices are CD-ROMs, hard disk files and tape drives. A hard disk drive, for example, may be located internally or externally in a SCSI-2 Enclosure.

The first external SCSI device requires that the following be ordered:

- One 3510 SCSI-2 Enclosure
- SCSI-2 Active Terminator
- SCSI-2 External cable (System to Option)

### **Diskette Drive:**

The 43P Series uses the industry standard 'AT' interface 3.5-inch diskette drive of 1.44MB format.

**CD-ROM Drive:**

The CD-ROM is a 5.25-inch, 680MB, Quad-Speed, SCSI interface CD-ROM with a data rate of 600KB/sec. supporting CD-ROM XA format.

**Business Audio:**

43P Series uses the Crystal 4232 business audio chip.

**Mouse/Pointing Device:**

43P Series will support the IBM AIX compatible 3-button mouse.

**Serial Ports:**

43P Series has two 16550 9-pin connectors with RS232D electrical interface.

**Parallel Port:**

One Bi-directional ECP port.

**Keyboard:**

43P Series supports the IBM enhanced keyboard.

**Monitors:**

43P Series supports the IBM 6327, 9525, 9527 and 9521 monitors. For non-IBM monitors, the user must determine whether a selected graphics adapter has been tested with the non-IBM monitor.

**Software Compatibility**

AIX Version 4.1 supports the full range of applications on the 43P Series. As a general guide, applications requiring features or communication hardware that are not available with the 43P Series should not be executed, as well as any applications that exceed the physical limits of available memory and storage. Attachment of external SCSI devices can be used to extend the capability of the 43P Series workstation.

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## **Announcement Countries**

All European, Middle Eastern and African Countries.

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The data in this letter is subject to the disclaimer in Letter ZS90-0112, which is available from IBM on request.

Please note this is an international announcement letter. If applicable you should also refer to your local country complementary document to check for country specific information.

\*\*\*\*\* End of Document \*\*\*\*\*