IBM ®

New IBM IntelliStation Z Pro Models Feature Intel Itanium Processor and Microsoft Windows XP 64-Bit Edition

Overview

New models of the IntelliStation® Z Pro workstation deliver the reliability, scalability, and performance needed for the expanding demands of your e-business. These models feature the new Intel Itanium 64-bit processor and Microsoft™ Windows® XP 64-Bit Edition to tap into new opportunities as the first 64-bit processor in Itanium processor family. These models are available as tower systems.

Feel the Power

- Dual Itanium processors at 800 MHz

- 133 MHz front side bus (2 x 133 MHz maximum data bus speed)

- 100 MHz SDRAM, 16 GB³-capable

- AGP Pro slot (4x AGP)

- Choice of task-optimized 2D or 3D graphics adapters

- Ultra160 SCSI HDD

- CD-RW

Get the Big Picture

Your choice of graphics:

- Performance 2D: Matrox G450 4x AGP dual output

- Advanced 3D: NVIDIA Quadro2 Pro 4x AGP with 64 MB

Get All the Facts

Technical advances and rigorous testing combine to yield superior quality reliability and scalability. "Ask Engineering" and other e-services help ensure your applications are performing optimally

Reliability

The highly reliable Intellistation Z Pro 6894 systems feature a three-year limited warranty on parts and labor.

1. MHz only measures microprocessor internal clock speed, not application performance. Many factors affect application performance.
2. Copies of the IBM Statement of Limited Warranty can be obtained by contacting your reseller or calling: IBM. In the United States, call IBM at 800-772-2227. In Canada, call IBM at 800-565-3344. Telephone support may be subject to additional charges. For warranties including on-site labor, IBM sends a technician after attempting to diagnose and resolve the problem remotely.
3. Maximum memory may require replacement of standard memory with optional maximum modules.

Key Prerequisites

Monitor and supported operating system

Planned Availability Date

October 31, 2001

At a Glance

New models of the IntelliStation Z Pro workstation offers advanced technology, application compatibility, and system reliability. Features include:

- Dual Intel Itanium 64-bit processors at 800 MHz[1]

- Graphics:

  – Matrox Millennium G450
  – NVIDIA Quadro2 Pro

- High-performance 10,000 rpm Ultra160 SCSI HDD

- CD-RW drive

- Integrated Ethernet

- Tower models with eight slots, nine bays, 800 W power supply, and four fan zones

- Microsoft Windows XP 64-Bit Edition (U.S. English)

- System hardware limited warranty[2] — three years, parts and on-site labor

---

Description

The new IntelliStation Z Pro workstation delivers leadership technology, advanced industrial design, and IBM quality, service, and support.

General Product Attributes

- Intel Itanium microprocessor with 133 MHz front side bus speed (2 x 133 MHz maximum data bus speed) and Explicitly Parallel Instruction Computing (EPIC) technology

- 2 MB full-speed on-board L3 cache

- Sixteen SDRAM DIMM sockets providing up to 16 GB of memory-addressing capability

- AGP slot on system board that supports:

  − Matrox Millennium G450 Graphics Accelerator with 16 MB video memory

  − NVIDIA Quadro2 Pro with 64 MB video memory

- Five 64-bit PCI/66 MHz slots, two 64-bit PCI/33 MHz slots and one AGP 4x (Pro110) slot

- CD-RW drive

- 18.2 or 36.4 GB 10K rpm Ultra160 S.M.A.R.T. SCSI HDD

- 800-watt voltage-sensing power supply

- Tower with eight slots, nine bays, and four fan zones

- One 9-pin serial port, four USB ports, two 68-pin external U160 SCSI, and RJ-45 (Ethernet) port

- AC 97 audio, microphone in/out jacks

- IBM 104-key keyboard and a three-button mouse

Note: Refer to the **Additional Product Attributes** section for more information.

Advanced Industrial Design

Expansion Bays: Nine expansion bays

- Three accessible 5.25-inch half-high bays (one with CD-RW)

- One accessible 3.5-inch slim bay

- Five internal 3.5-inch slim bays (one with HDD)

Expansion Slots: Eight expansion card slots

- One AGP 4x slot with graphics adapter

- Five PCI/66 MHz 64-bit slots of which one slot is used for Ultra160

- Two PCI/33 MHz 64-bit slots

- Six available slots

Fans: Four fan zones:

- Zone 1 — Processor
- Zone 2 — Memory
- Zone 3 — I/O
- Zone 4 — Exhaust

Refer to the **Limitations** section for slot availability and card length restrictions.

System Software

The system is shipped with Microsoft Windows XP 64-Bit Edition (U.S. English)

- Preload image on the HDD

- Device drivers and diagnostics CD-ROM that includes PC-Doctor for IntelliStation Z Pro systems

Refer to the **Software Information** section for a full list of software shipped with the IntelliStation Z Pro system.

Refer to the **Limitations** section for additional device driver information.

Note: Applications and device drivers may vary from the retail version and may not include all functions and documentation. Not all applications are available separately; titles are subject to change. IBM makes no representation or warranties regarding non-IBM products. For non-IBM software, applicable third-party software licenses may apply.

Compatibility, Service, and Support

- Compatibility:
  − PCI
  − EIDE/SCSI
  − AGP
  − USB
  − Serial port

  For the latest information on software and hardware compatibility testing and certifications, visit:
  http://www4.pc.ibm.com/pwscompat

- Manufactured to meet IBM high quality standards
- Service and support: Three-year parts and labor, IBM On-Site Repair (IOR)

Accessibility by People with Disabilities

The following features support use by people with disabilities:

- Controls and latches are operable with one hand and minimal dexterity.

- Keys are discernible by touch without activating them.

- Ports and connectors support connection of industry-standard devices.

Product Positioning

The latest Intellistation Z Pro workstation with dual Itanium processors represents a new level of reliability and scalability. The architecture and design, based on the 64-bit Intel Itanium processor, supports larger model and data manipulation to help you achieve the highest levels of productivity and creativity. The new Z Pro models offer more computational performance than the typical Pentium® processors.

The new Z Pro Itanium models support the Microsoft Windows XP 64-Bit Edition operating system providing a migration path for UNIX® users. The price to performance ratio of the IntelliStation platform encourages more customer to migrate from other UNIX platforms.

The IntelliStation Z Pro workstation offers a choice of graphics to meet your specific needs. For 2D performance, the Matrox G450 4x AGP offers single- or dual monitor support at a cost-effective price. For those demanding applications that require advanced 3D graphics, the NVIDIA Quadro2 Pro 4x AGP with 64 MB is available.

Its nine bays and eight slots provide plenty of room for expansion. A powerful 800 watt power supply provides power to spare for the most robust configurations. And with 100 MHz SDRAM ECC memory, expandable up to 16 GB, you will not be short on memory.

Trademarks

IntelliStation is a registered trademark of International Business Machines Corporation in the United States or other countries or both.
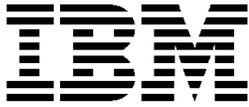
Pentium is a registered trademark of Intel Corporation.

Microsoft is a trademark of Microsoft Corporation.

Windows is a registered trademark of Microsoft Corporation.

UNIX is a registered trademark is a registered trademark of the Open Company in the United States and other countries.

Other company, product, and service names may be trademarks or service marks of others.

Additional Product Attributes

- Processor: Dual 800 MHz Itanium processors

- Memory:

    – IntelliStation® Z Pro 6894 minitower systems support only PC100 memory SDRAM.

    – Systems support up to 16 GB of SDRAM memory.

    – Systems support memory options using 256 MB, 512 MB, or 1 GB SDRAM RDIMM. Memory must be added four DIMMs at a time.

    Note: To achieve maximum memory capacity, standard memory replacement may be required with the currently supported memory DIMMs available from IBM that offer the largest capacity.

- HDDs:

    – Maximum of five internally mounted Ultra160 SCSI HDDs are supported.

    – Maximum internal HDD capacities assume the replacement of any standard HDD and the population of all HDD bays with the largest currently supported drives available from IBM.

    – The maximum internal HDD capacity of 182 GB can be supported using five 36.4 GB 10,000 rpm Ultra160 SCSI HDDs.

- Graphics:

    One AGP 4x slot supports only AGP-compliant graphics accelerators.   These systems are shipped with AGP-compliant Matrox Millennium G450 or NVIDIA Quadro2 Pro adapters.

- Operating system:

    Systems are preloaded with Microsoft™ Windows® XP 64-Bit Edition (U.S. English) and are compatible with the Linux Operating System. Visit the IBM Web site for additional details on compatibility.

Hardware and Software Information

Hardware Information

Monitors: IBM monitors supported by the IntelliStation Z Pro system will be reflected in the compatibility report to be made available to marketing and support channels when testing is complete.

2D Graphics

Matrox Millennium G450 Video Adapter: This 2D/3D class video adapter is used in high-performance 2D models. This adapter includes:

- Matrox G450 video chip

- 16 MB of 150 MHz DDR SDRAM

- Dual RAMDACs integrated into the video chip

- Flashable video BIOS

- Video port that supports various hardware multimedia upgrades

- DDC2B monitor connector

The Matrox Condor chip is a 100% compatible superset of the VGA function, supports all VGA modes, and contains all of the following advanced features.

Technical Capabilities

- 64-bit, 150 MHz DDR SDRAM interface

- 360 MHz, internal RAMDAC supporting a primary display resolution up to 2048 x 1536

- Matrox DualHead Display technology allows a single AGP adapter to independently support any two of the following displays: monitor, TV, analog flat panel, or digital flat panel

- AGP 4x support

- 256-bit DualBus architecture

- Supported 3D APIs: OpenGL and DirectX 3D rendering engine providing full-featured 3D at 2048 x 1536 in 32-bit color

- Characteristics of the 3D rendering engine:

    – 3D floating point setup engine

    – True alpha blending

    – Specular highlighting

    – Vertex and table fogging

    – Double and triple buffer for smooth animations

    – Optional 16- or 32-bit buffer for accurate depth rendering

    – Gouraud lighting for accurate lighting

    – Full scene antialiasing

    – Texturing

    – Color dither for crisp colors with a small amount of memory

    – Zooming

- Video processor that includes the following hardware features:

    – Vibrant color quality rendering using 32 bpp color accuracy

    – Color space conversion (YUV to RGBxx)

This announcement is provided for your information only. For additional information, contact your IBM representative, call 800-IBM-4YOU, or visit the IBM home page at: http://www.ibm.com.

- – Hardware scaling with X and Y interpolation for high-quality video playback

- – Chroma keying

- – Graphics overlay support for fast performance

- – Support for MPEG-1, video in/out, and TV tuner hardware upgrades

- High-resolution support up to 2048 x 1536 in single-monitor mode, 1280 x 1024 in dual-monitor mode

- Fastest 2D performance in the industry (WinBench99)

- Flashable video BIOS

- Multiple monitor and adapter support (up to four) in one system

- PC99, AGP 2.0, VESA VBE V2.0, and DDC2B compliance

- Advanced power management support (DPMS)

- Complete plug-and-play support

  The Matrox Millennium G450 graphics adapter supports dual monitors.

Display Modes: The Matrox Millennium G450 supports the following screen resolutions and refresh rate.

Resolution	Color Bits	Refresh Rate (Hz)
640 x 480	32	60 to 120
800 x 600	32	60 to 120
1024 x 768	32	60 to 120
1152 x 864	32	60 to 110
1280 x 1024	32	60 to 100
1600 x 1024	32	60 to 100
1600 x 1200	32	60 to 85
1920 x 1034	32	60I ─ HDTV
1600 x 1280	32	60 to 85
1920 x 1080	32	60 to 85
1920 x 1200	32	60 to 80
1792 x 1344	32	60 to 85
1800 x 1440	32	60 to 80
1856 x 1392	32	60 to 75
1920 x 1440	32	60 to 75
2048 x 1536	32	60 to 66

2D/3D Graphics

NVIDIA Quadro2 Pro (64 MB) Video Adapter: This 64 MB graphics adapter is based on the NVIDIA NV15GL graphics processing unit. The NV15GL is ideally suited for complex, graphically intense applications.

The NV15GL accelerates OpenGL geometry calculations and complex raster drawing operations in hardware. The NV15GL can process over 30 million triangles per second and has a peak frame buffer bandwidth of nearly 6.4 GB per second.

Technical Capabilities

- Single short form factor AGP/ATX card

- AGP 4x Version 2.0-compliant

- NVIDIA NV15GL featuring:

  - – Integrated geometry engine and raster engine in a single chip

  - – Microsoft Direct 3D hardware support

  - – OpenGL 3D hardware support

- – 64 MB unified memory

- – DVI-I and 15-pin d-shell monitor connector

- 32-bit RGBa true color 2D and 3D acceleration

- OpenGL 1.2 ICD with extensions

- OpenGL support

- Compliant with Microsoft/Intel PC98 and PC99 recommendations

- Video timings compliant with VESA DMT 1.0 and VESA GTF 1.0 specifications

- DDC2B monitor support

Display Modes ─ Analog Output

Resolution	Refresh Rate (Hz)	Bit Depth	Maximum Refresh Rate
320 x 200	60, 70, 72, 75	8, 16, 32	75
320 x 200	60, 70, 72, 75	8, 16, 31	75
400 x 300	60, 70, 72, 75	8, 16, 32	75
480 x 360	60, 70, 72, 75	8, 16, 32	75
512 x 384	60, 70, 72, 75	8, 16, 32	75
640 x 400	70, 72, 75, 85	8, 16, 32	85
640 x 480	60, 72, 75, 85	8, 16, 32	85
800 x 600	60, 72, 75, 85	8, 16, 32	85
1024 x 768	60, 72, 75, 85	8, 16, 32	85
1152 x 864	60, 72, 75, 85	8, 16, 32	85
1280 x 1024	60, 75, 85	8, 16, 32	85
1600 x 1200	60, 70, 75, 85	8, 16, 32	85
1792 X 1344	60, 75	8, 16	75
		32[4]	60
1856 x 1392	60, 75	8, 16	75
		32[4]	60
1920 x 1440	60, 75	8, 16	75
		32[4]	60
2048 x 1536	60, 75	8, 16	75
	32[4]	60	

[4] Requires a 16 MB frame buffer for the Windows desktop; 3D applications generally require more than 16 MB.

Software Information

The new IntelliStation Z Pro models were tested for compatibility with Microsoft Windows XP 64-Bit Edition and Linux operating systems.

Depending on the model, the following types of software are included with the system.

- Microcode

  Microcode is included in ROM on the system planar. Typically, this code cannot be changed without changing the planar memory. However, some systems and microcode are designed to upgrade the code through flash ROM.

- Microsoft Windows XP 64-Bit Edition (U.S. English) preloaded

- Device drivers

PC-Doctor Diagnostics (Watergate Software, Inc.): These diagnostic tools for isolating problems also provide information about your computer operating system environment and installed features. Support documentation is built into the help system.

Product Recovery CD: Product recovery CDs are included for systems preloaded with Microsoft Windows XP 64-Bit Edition to recover the preload image of the operating system. Device drivers must be loaded separately.

Education Support

No self-study or classroom courses are available specifically for the IBM IntelliStation Z Pro system.

Call IBM Education and Training at 800-IBM-TEACH (426-8322) for education catalogs, schedules, and enrollments.

Publications

The following publications are shipped with the IntelliStation Z Pro system.

Title	Part Number
IntelliStation User's Guide	24P2758
IntelliStation Diagnostic CD	24P3025
Safety Information Publication	24P2989

The *IntelliStation Z Pro Installation Guide* and *Hardware Maintenance Manual*, in U.S. English versions, are available from:

http://www.pc.ibm.com/support

Click workstations, then the workstation family, then Online publications.

Technical Information

HDD Specifications

	18.2 GB[5] Ultra160 SCSI	36.4 GB Ultra160 SCSI
Formatted capacity	18.2 GB	36.4 GB
Average read seek time (typical)	5.5 ms	5.5 ms
Average latency	2.99 ms	2.99 ms
Interface	SCSI	SCSI
S.M.A.R.T.	Enabled	Enabled
rpm	10,000	10,000

[5] GB equals one billion bytes when referring to HDD capacity; accessible capacity may be less.

CD-ROM/CD-RW Specifications

- Formatted capacity: 650 MB
- Average access time: 110 ms
- Data transfer rate: 2100-4800 KB/s (mode 1)
- Technology: Full constant angular velocity (CAV)
- Interface: EIDE
- Buffer: 8 MB

Mechanical Specifications: Dimensions/Weights

- Width: 254.6 mm (10 in)
- Depth: 645.2 mm (25.4 in)
- Height: 457.2 mm (18 in)
- Weight:
  - 38.8 kg (84.0 lb) (minimum configuration)
  - 38.8 kg (84.0 lb) (maximum configuration)

Electrical Power Specifications

- 800 watt supply continuous
- 110 or 220 V ac operation controlled by an auto-sense design
- Built-in overload and surge protection
- 100 to 127 (nominal) V ac; 50 to 60 Hz; 7.5 A (maximum)
- 200 to 240 (nominal) V ac; 50 to 60 Hz; 4.0 A (maximum)

Ambient Air Temperature Specifications

- System on: 10° to 35°C (50° to 95°F) at 0 to 2,134 m (0 to 7,000 ft)
- System off: 10° to 60°C (50° to 110°F) at 0 to 2,134 m (0 to 7,000 ft)

Noise Level Specifications: Declared Acoustical Noise Emissions (idle mode):

LWAd = 5.6 bels

Note: The noise emission level stated is the declared (upper limit) A-weighted sound power level, in bels, for a random sample of machines, typically configured and operating in idle mode (powered on, but no DASD read/write or other I/O activity). All measurements have been made in accordance with ANSI S12.10 and reported in conformance with ISO 9296.

Equipment Approvals

- FCC — Certified to comply with Part 15 FCC Rules, Class A limits
- ICES-003 — Canada
- NMB-003 — du Canada
- UL — UL 1950 Third Edition (U.S. legal — OSHA)
- IEC 950 Second Edition with 1,2, and 3 amendments
- CUL — C22. No. 950 — M93

Operating Environment:

- Temperature: 10° to 35°C (50° to 95°F)
- Relative humidity: 20% to 80%
- Wet bulb: calorific value: 700 Btu/hr (maximum configuration)
- Electrical power: 100 to 127 V ac, .51 kVA maximum
- Capacity of exhaust: 35 CFM (0.99 CMM)
- Noise level: 5.6 bels

Hardware Requirements

Monitors: IBM monitors supported by the IntelliStation Z Pro system will be reflected in the compatibility report to be made available to marketing and support channels when testing is complete.

Software Requirements

Compatibility: The IntelliStation Z Pro system has been tested for compatibility with the Microsoft Windows XP 64-Bit Edition and Linux operating systems. A documented compatibility report will be made available to marketing and support channels when testing is completed.

To view IntelliStation compatibility reports, visit:

http://www4.pc.ibm.com/pwscompat

For software not included in the compatibility test report, contact the manufacturer or place of purchase to validate compatibility.

Limitations

- Memory: All memory DIMMs installed in a system must be of the same speed and installed in sets of four

- Device drivers: Microsoft Windows XP 64-Bit Edition does not support CD/RW write function at this time.

Slot

1	64-bit full PCI adapter	Open slot (66 MHz)
2	64-bit full PCI adapter	Occupied with SCSI adapter
3	64-bit full PCI adapter	Open slot (66 MHz)
4	64-bit full PCI adapter	Open slot (66 MHz)
5	64-bit full PCI adapter	Open slot (66 MHz)
6	64-bit full PCI adapter	Open slot (33 MHz)
7	Full AGP Pro110 adapter	Occupied with AGP graphics adapter
8	64-bit full PCI adapter	Open slot (33 MHz)

Planning Information

Customer Responsibilities: The IntelliStation Z Pro system is designated as customer setup (CSU). CSU allowance is one day.

Cable Orders: Except for system power, keyboard, and mouse connections, there are no cabling requirements. All cables are provided with the system unit, and the instructions are provided as part of initial setup.

All SCSI models have an external Ultra160 SCSI port to enable external Ultra160 SCSI HDDs to be connected to the system.

All SCSI models including all SCSI AAP models have internal LVD cable to enable the installation of internal Ultra160 SCSI HDD. This is a 5-drop SCSI cable.

Installability: The IntelliStation system is designed to function in a vertical position.

Following the setup instructions, attach the keyboard and peripherals. Turn on the power. Setup is run after the computer has successfully completed its initial self-tests.

The setup utility resides in ROM. In some instances, you will be prompted to run this utility, or you can invoke it by pressing the F1 key during memory POST.

The IntelliStation Z Pro system has a universal power supply that operates with either 115 or 230 V ac. The power supply has an auto-sense design that automatically determines the correct operating voltage. All power supplies have built-in overload protection and surge protection.

Packaging: One box ─ system unit carton

- System unit
- Hardware assembly package:
  - Power cord (U.S. and Canada ─ 110 V ac)
  - Keyboard, mouse
  - IntelliStation User's Guide
  - Safety information publication:

- Operating system package:
  - Operating system CD
  - Product Recovery CD
  - Device driver CD

Note: Device driver CD does not contain a driver to support the CD/RW write function at this time.

Security, Auditability, and Control

Improved Asset Protection: The IntelliStation Z Pro systems have two key focus areas: better system security and better data protection. The IntelliStation Z Pro workstation is equipped with a range of features that address both of these focus areas.

System security includes theft deterrence and detection of system tampering.

The IntelliStation Z Pro workstation supports the following security features:

- Cover key lock
- Cover tamper detect switch
- Secure fixed DASD
- Power-on password
- Setup utility password (administrator password)
- Boot sequence control
- Boot without keyboard or mouse
- Serial port I/O control
- Secure access openings (vents, louvers)
- Vital product data stored in on-board flash ROM
- Write protection control circuit for flash ROM

To assist in security, system management, and asset management, the following system identifiers (vital product data) are provided:

- Machine type and model
- System serial number
- Manufacturing identifier

Data protection helps ensure data integrity and prevents its loss. The IntelliStation Z Pro workstation includes S.M.A.R.T. Analysis. All models have S.M.A.R.T. HDDs to warn users and network administrators when an HDD failure may be imminent by measuring parameters such as rotation speed and head wear. In the case of predictable failures, you can avoid costly data loss by backing up data and replacing the HDDs.

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

Terms and Conditions

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

IBM hardware products are manufactured from new parts. In some cases, the hardware product may have been previously installed.

Regardless, IBM warranty terms apply.

IBM Credit Corporation Financing: Yes

To obtain copies of the IBM Statement of Limited Warranty, contact your reseller or call IBM. In the United States, call IBM at 800-772-2227. In Canada, call IBM at 800-565-3344.

Warranty Period: System hardware — Three years on parts and labor

Warranty Service: IOR, 9 hours per day, Monday through Friday, excluding holidays, next-business-day response.

Optional features initially installed with a professional workstation carry the same warranty as the system. If installed after the initial system installation, they carry the balance of the system warranty or the optional feature warranty, whichever is greater.

International Warranty Service (IWS): IWS is available to customers who travel or need to move selected IBM products as identified by their four-digit IBM machine type to countries where their product is sold and serviced by IBM or an IBM authorized service provider. After you register with the IWS office, IBM will issue an IWS certificate that will be honored wherever the specific IBM product is sold and serviced. During the original warranty period, customers will be provided service through the service delivery methods available for their IBM product in the servicing country. Service procedures vary by country, and some service and or parts may not be available in all countries. Some countries have fees and restrictions that apply when service is provided.

For more information on IWS in the U.S. and Canada or to register your IBM product, contact IBM at 800-IWS-7426 (497-7426) or 248-740-1215.

Licensing: Programs included with this product are licensed under the terms and conditions of the IBM License Agreements that are shipped with the system.

Maintenance Service — ServiceElect (ESA)

ServiceElect Statement of Work (SOW — Z125-5510) provides hardware warranty service upgrades, maintenance and selected annuity support services in one agreement.

Warranty Service Upgrade: During the warranty period, Warranty Service Upgrade provides an enhanced level of service for an additional charge. This enhanced level of service provides a higher level of on-site service labor for all three years of the original warranty period. Parts are covered for three years by the original warranty.

The following Warranty Service Upgrade options are available.

- IOR/Exchange Services, 9 hours a day, 8:00 a.m. to 5:00 p.m. (local time zone), Monday through Friday, excluding holidays, 4-hour response objective[6]

- IOR, 24 hours a day, 7 days a week, 4-hour average response objective[6]

[6] Repair service includes a response objective and is not a guarantee.

Maintenance Service

- IOR, 9 hours a day, Monday through Friday, excluding holidays, next-business-day response

- IOR/Exchange Services, 9 hours a day, 8:00 a.m. to 5:00 p.m. (local time zone), Monday through Friday, excluding holidays, 4-hour response objective[6]

- IOR, 24 hours a day, 7 days a week, 4-hour average response objective[6]

ServicePac® for Warranty and Maintenance Options/Installation Services

The announced products may be eligible for IBM ServicePacs. ServicePac provides convenient prepackaged offerings for warranty service upgrades, maintenance services, and installation services.

Refer to the **Prices** section for information on the availability of ServicePac offerings.

For additional ServicePac information, visit:

http://www.ibm-svcpac.iws.ihost.com/sphome_r.htm

Maintenance Service (ICA)

Currently available maintenance services for existing ICA legacy contracts only. The preferred go-to-market offerings are ServiceElect. However, ICA legacy contracts will still be available for current customers until they are withdrawn.

Alternative Service (Warranty Service Upgrades): IOR, 24 hours a day, 7 days a week, 4-hour average response[6]

Maintenance Service

- IOR, 9 hours a day, Monday through Friday, excluding holidays, next-business-day response

- IOR, 24 hours a day, 7 days a week, 4-hour average response objective[6]

Mid-Range System Option: The 6894 minitower is an eligible machine for the Mid-Range System Option of the ICA.

Eligible Type	Discount	
	Three-Year	Five-Year
6895	5%	5%

Corporate Service Option: The 6894 minitower is an eligible machine for the Corporate Service Option of the ICA.

Option	Discount	
	Three-Year	Five-Year
Network	7%	7%
System	5%	5%

Extended Maintenance Option: No

Non-IBM Parts Support

Warranty Service: IBM is now shipping IBM machines with selected non-IBM parts that contain an IBM field replaceable unit (FRU) part number label. These parts are to be serviced during the IBM warranty period. IBM is covering the service on these selected non-IBM parts as an accommodation to their customers, and normal warranty service procedures for the IBM machine apply.

Warranty Service Upgrades and Maintenance Services: Under certain conditions, IBM Integrated Technology Services (ITS) services selected non-IBM parts at no additional charge for machines that are covered under a warranty service upgrade or maintenance services.

IBM Service will provide hardware problem determination on non-IBM parts (adapter cards, PCMCIA cards, disk drives, memory, and so forth), installed within IBM systems covered under the IBM warranty service upgrade or Maintenance Services and provide the labor to replace the failing parts at no additional charge. If IBM has Technical Service Agreements (TSA) with the manufacturers of the failing part, or if the failing part is an accommodations part (a part with an IBM FRU label), IBM may also source and replace the failing parts at no additional charge. For all other non-IBM parts, the customers are responsible for sourcing the parts, and installation labor will be provided at no additional charge, if the machine is covered under a warranty service upgrade or maintenance services.

IBM Hourly Service Rate Classification: One

Rental Offering: No

Field-Installable Features: Yes

Model Conversions: No

Customer Setup: Yes

Graduated Charges: No

Charges

Contact your IBM representative for charges information for this announcement.