

Options by IBM: Overview

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Announcement Number: 194-052

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Abstract

Some think IBM only offers IBM products...in reality, we offer literally hundreds of peripheral add-ons, add-ins and system enhancements for both IBM and non-IBM industry standard systems, to satisfy a wide variety of personal computing needs. Options(TM) by IBM(R) at a glance...

Storage: For everything from notebooks to desktops and LAN servers, IBM storage options give users all the file management and file backup solutions they need. CD-ROM drives give a secure and cost-effective way to store images, sound, video and graphics. PCMCIA hard drives and floppy diskette drives provide portability and user convenience.

Our storage solutions are among the best in the industry. The solutions come in a wide range of capacities that meet configuration requirements of most systems including IDE, SCSI and Micro Channel(R) buses.

Memory: To give your PC an edge, one of the most effective things to do is add memory. Options by IBM offers a full line of memory upgrade products that can significantly improve performance and productivity.

Think of speeding up performance with L2 cache and video graphics modules. Select from memory PCMCIA cards for laptop or mobile computers. Error Checking and Correcting (ECC) modules detect and correct all single-bit errors for reinforced accuracy. Advanced 64-bit bandwidth microprocessors with 8-byte DIMMs are available; or, for RAM expansion, select from a full line of parity memory modules.

Communication: With a wide range of communications products, Options by IBM can link a personal computer to other workstations, LANs, WANs, servers and mainframes.

IBM has industry standard adapters for Ethernet LANs and many solutions for token-ring networks, including high-speed adapters with ISA, Micro Channel and EISA format compatibility. PCMCIA and a MAU hub for token ring are also available. A broad selection of high-speed industry standard data/fax modems and a variety of modems with terminal emulation capability, including 3270 for PCMCIA, are also offered. One modem provides voice messaging, telephone answering, fax transmit/receive, and high-speed data modem communications.

Multimedia: Bring the excitement of sound, motion, images and music to PCs with Options by IBM! Our multimedia options provide ways to turn PCs into complete audio and video information centers.

A powerful audio environment complete with CD-quality sound can be created with Audiovation(TM). Competitively priced solutions featuring Sound Blaster(1) capability can make entertainment software come "alive." The digital and analog video products offer high-performance solutions for entertainment or business.

Accessory: Accessory options offer a variety of personal computer system components, such as the IBM Enhanced Keyboards and Enhanced Mouse, that support IBM and IBM-compatible computers and can have a big impact on productivity, user comfort and savings. For example, the DisplayMiser(2) shuts down the power to the monitor when no activity occurs for a specified time interval. It is a simple way to meet EPA Energy Star guidelines with currently installed monitors.

IN BRIEF . . .

Options by IBM are introduced today covering five major product categories:

- o Storage

- Hard disk drives, IDE and SCSI
- CD-ROMs
- PCMCIA
- SCSI adapters
- Server and desktop tape backup drives

- o Memory

- DIMMs
- Full ECC upgrades
- L2 Cache
- PCMCIA

- o Communications

- EISA, ISA and Micro Channel
- Ethernet
- LAN and WAN
- PCMCIA
- Token Ring

- o Multimedia

- CD-ROM
- MIDI
- Voice

- o Accessory

- Enhanced keyboards
- Enhanced mouse
- TrackPoint II(TM) keyboards

Benefits:

- o "New look" packaging
- o Competitive price and value
- o Leadership products -- timing and technology
- o 30-Day Money Back Guarantee
- o Highest quality standards
- o Certified ISA compatible
- o 24-Hour HelpCenter(R) Assistance (800-426-7299)

(TM) Trademark of International Business Machines Corporation

(R) Registered trademark of International Business Machines Corporation

(1) Registered trademark of Creative Labs, Inc.

(2) Trademark of Technology Marketing Partners

DESCRIPTION -- OPTIONS BY IBM

Storage

IBM storage products, from notebooks to desktops and LAN servers, give users choices to help with their file management solutions. Comprehensive file backup solutions are also available and meet the configuration requirements of most systems, including IDE, SCSI and Micro Channel buses.

As for reliability, our options provide storage solutions that are among the best in the industry; specifically, IBM disk drives made with patented IBM magnetoresistive technology, which maximizes the storage capacity per disk.

Options by IBM storage offerings include SCSI and IDE hard drives in a wide range of capacities. CD-ROM drives give a secure and cost-effective way to store images, sound, video and graphics. Choose from a variety of tape drive formats for file backup, PCMCIA hard drives for storage portability, and floppy diskette drives for user convenience.

Memory

Adding memory to PCs is one of the most effective things to do. This speeds application execution because data and instructions reside in RAM instead of on a disk, so the disk I/O is less.

Speed up performance with Options by IBM L2 memory cache modules. Adding these modules can make applications execute up to 20% faster. For RAM expansion, choose from a full line of parity memory modules. Error Checking and Correcting (ECC) modules detect and correct all single-bit errors for reinforced accuracy. Capitalize on advanced microprocessors with 64-bit bandwidths with 8-byte ECC SIMMs. "Soup up" notebooks with a wide selection of PCMCIA products such as IC DRAMS, which add memory capacity with very low power use, to conserve battery power.

Communication

With Options by IBM, no computer in a network ever has to stand alone. Our wide range of communications products will link them with other workstations, LANs, WANs, servers and mainframes.

IBM has industry standard adapters for Ethernet LANs, including twisted pair, thin-coax, and PCMCIA models, plus combination adapters. Choose from many solutions for token-ring networks, including high-speed adapters with ISA, Micro Channel and EISA format compatibility. PCMCIA and a MAU hub for token ring are also available.

The ISA WaveRunner digital modem for high-speed communications increases speed to 64Kbps with ISDN channels. A broad selection of high-speed industry standard data/fax modems is available. To hook up with mainframes, a variety of modems with

terminal emulation capability is offered, including 3270 for PCMCIA. With V.32bis DSP Data/Fax Modem voice messaging, telephone answering, fax transmit/receive, and high-speed data, modem communications can be added with one product.

Multimedia

IBM's multimedia options provide ways to turn PCs into complete audio and video information centers.

A powerful audio environment complete with CD-quality sound can be created with Audiovation. It employs an Mwave(TM)-based programmable Digital Signal Processor (DSP) and has a MIDI interface, multiple instrument voices, and digital-sampled sound. Also offered are competitively priced solutions featuring Sound Blaster capability to complement entertainment software.

Video is becoming a valuable business tool, and our digital and analog products provide needed capabilities. They provide high-performance video capture and playback or playthrough, scalable windows, a Windows(3) accelerator and audio performance when used with Sound Blaster.

Accessory

The personal computer system components that come in contact with the user's sense of touch, namely the keyboard and mouse, can have a big impact on productivity and comfort. Available through the Options by IBM Accessory product line are a variety of IBM Enhanced Keyboards and the Enhanced Mouse that support IBM and IBM-compatible computers produced by other manufacturers.

DisplayMiser is another accessory being introduced today. DisplayMiser conserves energy by shutting down the power to the monitor when no activity occurs for a specified time interval. DisplayMiser provides a simple way to meet EPA Energy Star guidelines with currently installed monitors.

(3) Windows is a trademark of Microsoft Corporation

SALES MANUAL ACCESS

The five Options by IBM categories are also available in the Sales Manual. To access the individual sections, use the specific machine type/model designations as follows:

Category	Machine Type/Model
Storage	95XX-0P9
Memory	95XX-0P7
Communication	95XX-0P5
Multimedia	95XX-0P1
Accessory	95XX-0P3

The Sales Manual is updated periodically.

SYSTEMS SUPPORTED MATRIX

Not all machine types or models are necessarily supported when "X" is indicated in the matrix. Limitations and/or conformance requirements may apply. (Refer to the Machine Requirements sections of the appropriate announcements for details.)

Rigorous tests in IBM laboratories and in independent testing laboratories examine our products for adherence to applicable interface specifications and a wide spectrum of representative system configurations.

Storage Products

.-----+-----+-----+-----+-----+-----+-----.						
Description		Value-	Think-			
(Part Number)	PS/2	Point	Pad	PS/1	AT	Other
-----+-----+-----+-----+-----+-----+-----						

270MB AT Hard Disk Drive (70G8487/ 70G8847)	X	X		X		Non-IBM
-----+-----+-----+-----+-----+-----+-----						
364MB AT Hard Disk Drive (70G8488/ 70G8848)	X	X		X		Non-IBM
-----+-----+-----+-----+-----+-----+-----						
527MB AT Hard Disk Drive (70G8486/ 70G8849)	X	X		X		Non-IBM
-----+-----+-----+-----+-----+-----+-----						
728MB AT Hard Disk Drive (70G8511/ 70G8850)					X	Non-IBM
-----+-----+-----+-----+-----+-----+-----						
170MB Fast SCSI-2 Hard Disk Drive (70G8480)	X	X		X		Non-IBM
-----+-----+-----+-----+-----+-----+-----						
340MB Fast SCSI-2 Hard Disk Drive (70G8481)	X	X		X		Non-IBM
-----+-----+-----+-----+-----+-----+-----						
540MB Fast SCSI-2 Hard Disk Drive (70G8491)	X	X		X		Non-IBM
-----+-----+-----+-----+-----+-----+-----						
1.0GB Fast						

SCSI-2 Hard Disk Drive (70G8492)	X	X		X		Non-IBM
-----+-----+-----+-----+-----+-----+-----						
2.0GB Fast SCSI-2 Hard Disk Drive (70G8493)	X	X		X		Non-IBM
-----+-----+-----+-----+-----+-----+-----						
2.0GB Fast/Wide SCSI-2 Hard Disk Drive (70G8494)	X					Non-IBM
-----+-----+-----+-----+-----+-----+-----						
105MB PCMCIA Hard Disk Drive (32G4199)			X			(a) Non-IBM
-----+-----+-----+-----+-----+-----+-----						
40MB PCMCIA Hard Disk Drive (70G8495)			X			(a) Non-IBM
-----+-----+-----+-----+-----+-----+-----						
Desktop Computer Hard Disk Drive Kit (70G8505)	X					
-----+-----+-----+-----+-----+-----+-----						
Floorstanding Computer Hard Disk Drive Kit (70G8506)	X					(b)
-----+-----+-----+-----+-----+-----+-----						
.-----+-----+-----+-----+-----+-----+-----.						

Description (Part Number)	PS/2	Value- Point	Think- Pad	PS/1	AT	Other
Model 3510						
Storage						
Enclosure						
Hard Disk						
Drive Kit						
(70G8507)						(c)
5.25-inch						
Diskette Drive						
(70G8500)		X		X	X	Non-IBM
3.5-inch						
Diskette Drive						
(70G8499)		X		X	X	Non-IBM
Enhanced						
Internal						
CD-ROM II						(b, d)
Drive						
(70G8503)	X	X		X		Non-IBM
Enhanced						
External						
CD-ROM II						(d)
Drive						
(3510705)	X	X		X		Non-IBM
ISA External						(d)
CD-ROM Drive						
(3509701)	X	X		X	X	Non-IBM
ISA Internal						(d)
CD-ROM Drive						

(70G8501)	X	X		X	X	Non-IBM
-----+	-----+	-----+	-----+	-----+	-----+	-----+
IBM External						
1.2GB 1/4-inch						
Tape Drive						(d)
(3450-001,						
74G8630)	X	X		X	X	Non-IBM
-----+	-----+	-----+	-----+	-----+	-----+	-----+
IBM External						
5/10GB 8 mm						
Tape Drive						(d)
(3445-001,						
74G8629)	X	X		X	X	Non-IBM
-----+	-----+	-----+	-----+	-----+	-----+	-----+
IBM 4/10GB 4 mm						
3.5-inch DAT						
Tape Option						
Kit						
(74G8632)	X					Non-IBM
-----+	-----+	-----+	-----+	-----+	-----+	-----+
IBM 4/10GB 4 mm						
5.25-inch DAT						(b, c,
Tape Option						d, e)
Kit						
(74G8631)	X					Non-IBM
-----+	-----+	-----+	-----+	-----+	-----+	-----+
DualStor						
250 Internal						
Tape Backup						
Unit						
(82G7094)	X	X		X		
-----+	-----+	-----+	-----+	-----+	-----+	-----+
IBM DualStor						
PS/2						
Installation						
Kit						

(82G7092)	X	X		X		
-----+	+	+	+	+	+	+
IBM SCSI-2						
Fast/Wide						
Adapter/A						
(70G8498)	X					
-----+	+	+	+	+	+	+
IBM PS/2						
Micro Channel						
SCSI Adapter						
with Cache						
(70G8497)	X					
-----+	+	+	+	+	+	+
IBM 16-Bit AT						
Fast SCSI						(d)
Adapter						
(70G8496)	X	X		X		Non-IBM
-----+	+	+	+	+	+	+

Memory Products

Note: IS = Compatible with IBM and non-IBM systems as specified in the Machine Requirements sections of the memory products announcements.

-----+	+	+	+	+	+	+	-----
Description		Value-	Think-				
(Part Number)	PS/2	Point	Pad	PS/1	AT	Other	
-----+	+	+	+	+	+	+	-----
Memory Upgrades							
-----+	+	+	+	+	+	+	-----
1MB - 70ns IS							
(30-pin)							
(92G7197)		X		X		Non-IBM	
-----+	+	+	+	+	+	+	-----
4MB - 70ns IS							

(30-pin)						
(92G7207)		X		X		Non-IBM
-----+						
4MB - 70ns IS						
(72-pin)						
(92G7201)		X				Non-IBM
-----+						
8MB - 70ns IS						
(72-pin)						
(92G7203)		X				Non-IBM
-----+						
16MB - 70ns IS						
(72-pin)						
(92G7204)		X				Non-IBM
-----+						
2MB - 85ns						
(72-pin)						
(92G7196)	X	X				
-----+						
2MB - 70ns						
(72-pin)						
(92G7198)	X	X				
-----+						
4MB - 70ns						
(72-pin)						
(92G7200)	X	X		X		
-----+						
8MB - 70ns						
(72-pin)						
(92G7202)	X	X				
-----+						
4MB - 80ns						
(72-pin)						
(92G7199)	X	X				
-----+						
8MB - 80ns						

(72-pin)							
(92G7428)	X	X					
-----+							
32MB - 70ns IS							
(72-pin)							
(Tall)							
(92G7205)		X					Non-IBM
-----+							
32MB - 70ns IS							
(72-pin)							
(Wide)							
(92G7206)		X					Non-IBM
-----+							
8MB ECC - 70ns							
(72-pin)							
(92G7208)	X						
-----+							
16MB ECC - 70ns							
(72-pin)							
(92G7209)	X						
-----+							
32MB ECC - 70ns							
(72-pin)							
(92G7210)	X						
-----+							
8MB - 70ns							
(168-Pin)							IBM and
(92G7211)							Non-IBM
-----+							
16MB - 70ns							
(168-Pin)							IBM and
(92G7212)							Non-IBM
-----+							
32MB - 70ns							
(168-Pin)							IBM and
(92G7213)							Non-IBM

-----+-----+-----+-----+-----+-----+-----						
.-----+-----+-----+-----+-----+-----+-----.						
Description (Part Number)	PS/2	Value- Point	Think- Pad	PS/1	AT	Other
-----+-----+-----+-----+-----+-----+-----						
Micro Channel (32-bit)						
4-14MB Memory Expansion Adapter (92G7214)	X					(d)
-----+-----+-----+-----+-----+-----+-----						
ISA Bus 0-8MB Memory Expansion Adapter (92G7215)	X	X		X	X	Non-IBM
-----+-----+-----+-----+-----+-----+-----						
128KB L2 Cache - Write Thru (92G7216)		X				
-----+-----+-----+-----+-----+-----+-----						
256KB L2 Cache - Write Thru (92G7218)		X				
-----+-----+-----+-----+-----+-----+-----						
128KB L2 Cache - Write Back (92G7217)		X				
-----+-----+-----+-----+-----+-----+-----						
256KB L2 Cache - Write Back (92G7219)		X				
-----+-----+-----+-----+-----+-----+-----						
128KB L2 Cache						

(92G7220)		X				
-----+-----+-----+-----+-----+-----+-----						
256KB L2 Cache						
(92G7221)		X				
-----+-----+-----+-----+-----+-----+-----						
512KB Video -						
70ns						
(92G7222)		X				
-----+-----+-----+-----+-----+-----+-----						
1MB Video -						
70ns						
(92G7223)		X				
-----+-----+-----+-----+-----+-----+-----						
1MB Video -						
60ns						
(92G7224)		X				
-----+-----+-----+-----+-----+-----+-----						
Memory Cards						
-----+-----+-----+-----+-----+-----+-----						
2MB Flash						(a)
PCMCIA			X			
(92G7225)						Non-IBM
-----+-----+-----+-----+-----+-----+-----						
4MB Flash						(a)
PCMCIA						
(92G7226)			X			Non-IBM
-----+-----+-----+-----+-----+-----+-----						
1MB SRAM						(a)
PCMCIA						
(92G7229)			X			Non-IBM
-----+-----+-----+-----+-----+-----+-----						
2MB SRAM						(a)
PCMCIA						
(92G7230)			X			Non-IBM
-----+-----+-----+-----+-----+-----+-----						
2MB Flash/1MB						

SRAM PCMCIA -					(a)
Combo					
(92G7231)			X		Non-IBM
-----+-----+-----+-----+-----+-----					

Communication Products

Description		Value-	Think-			
(Part Number)	PS/2	Point	Pad	PS/1	AT	Other
-----+-----+-----+-----+-----+-----+-----						
IBM PCMCIA						
14.4kbps/						
14.4kbps Data/						
Fax Modem with						(a)
Integrated DAA						
(73G7097)			X			Non-IBM
-----+-----+-----+-----+-----+-----+-----						
IBM PCMCIA						
2400bps/						
9600bps Data/						
Fax Modem with						(a)
Integrated DAA						
(73G7098)			X			Non-IBM
-----+-----+-----+-----+-----+-----+-----						
V.32bis DSP						
Data/Fax Modem						
(92G7501)		X		X		Non-IBM
-----+-----+-----+-----+-----+-----+-----						
IBM 14.4kbps						
Data/Fax Modem						
for ISA						
(92G7446)		X		X		Non-IBM
-----+-----+-----+-----+-----+-----+-----						
IBM External						
14.4kbps/						

14.4kbps Data/Fax Modem (7851 Model 1) (92G7447)	X	X		X		Non-IBM
-----+-----+-----+-----+-----+-----+-----						
IBM Four Slot PCMCIA Adapter for ISA (72G0485)		X				Non-IBM
-----+-----+-----+-----+-----+-----+-----						

Multimedia Products

Description (Part Number)	PS/2	Value- Point	Think- Pad	PS/1	AT	Other
-----+-----+-----+-----+-----+-----+-----						
IBM Audiovation Adapter (92G7463)		X	X	X	X	Non-IBM
-----+-----+-----+-----+-----+-----+-----						
IBM Audiovation Adapter/A (92G7464)	X		X			Non-IBM
-----+-----+-----+-----+-----+-----+-----						
IBM Audiovation Multimedia Upgrade Kit (92G7465)		X	X	X	X	Non-IBM
-----+-----+-----+-----+-----+-----+-----						
IBM Audiovation MIDI Pac (92G7466)	X	X	X	X	X	Non-IBM
-----+-----+-----+-----+-----+-----+-----						

Accessory Products

Description (Part Number)	PS/2	Value- Point	Think- Pad	PS/1	AT	Other
DisplayMiser (92G7460)	X	X		X	X	Non-IBM
IBM Enhanced Keyboard with TrackPoint II - PS Style (92G7461)	X	X	X	X		(a) Non-IBM
Quiet Touch Keyboard with TrackPoint II (92G7458)	X	X	X	X		(a) Non-IBM
Quiet Touch Numeric Keypad (92G7459)	X	X	X	X		(a) Non-IBM
IBM Enhanced Keyboard with Trackball - PS Style (92G7455)	X	X	X	X		(a) Non-IBM
IBM Enhanced Keyboard - PS Style (92G7453)	X	X	X	X		(a) Non-IBM
IBM Enhanced Keyboard with						

Trackball -						
AT Style						
(92G7456)					X	Non-IBM
-----+	-----+	-----+	-----+	-----+	-----+	-----+
IBM Enhanced						
Keyboard -						
AT Style						
(92G7454)					X	Non-IBM
-----+	-----+	-----+	-----+	-----+	-----+	-----+
Enhanced Mouse						(a)
(92G7457)	X	X	X	X		Non-IBM
-----+	-----+	-----+	-----+	-----+	-----+	-----+

- (a) PS/2 E (9533)
- (b) IBM External Storage Enclosure for SCSI Devices (3511)
- (c) IBM External CD-ROM Drive and Enclosure (3510)
- (d) IBM Industrial Computer (75xx)
- (e) IBM Expansion Unit (3550)

ANNOUNCEMENT LETTER SUMMARY

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Related Announcements

Withdrawal: Selected PC Features and Op194-058

DualStor Backup Programs 294-108

- * These documents are approximately 60 pages each. For convenience, a Table of Contents is included with the memory and storage announcements.