



Personal Systems Reference

IBM Monitors and *IBM* ThinkVision Monitors

May 2004 - Version 275



IBM® E Series Essential CRT Monitors - US models				
Name	≈ E54	E54	E54	E54
Case color	Pearl white	Business black	Pearl white	Business black
Type-model	6331-M2N	6331-N2N	6331-07N	6331-47N
CRT size and type	15" FST CRT		15" FST CRT	
Viewable image size	13.8" / 350mm		13.8" / 350mm	
Dot pitch	0.28mm diagonal / shadow mask		0.28mm diagonal / 0.24mm horizontal / shadow mask	
Phosphor type	P22		P22	
Max view area (inches)	10.3 x 7.7" (w/h)		11.1 x 8.3" (w/h)	
Max view area (mm)	262 x 196mm (w/h)		282 x 211mm (w/h)	
Video input	Analog		Analog	
Frequency	Multiscanning		Multiscanning	
Vertical refresh rate range	50 to 120Hz		50 to 120Hz	
Horizontal line rate range	30 to 69kHz		30 to 69 kHz	
Clock rate	110Mpels/sec (MHz)		110Mpels/sec (MHz)	
Optimum addressability	800x600 at 85Hz		800x600 at 85Hz	
Max 85Hz flicker free mode	1024x768		1024x768	
Maximum addressability	1280x1024		1280x1024	
720x400 (presets)	70		70	
640x480 (presets)	60, 75, 85		60, 75, 85	
800x600 (presets)	60, 75, 85		60, 75, 85	
960x529 (presets)	-		-	
1024x768 (presets)	60, 70, 75, 85		60, 75, 85	
1280x1024 (presets)	60		-	
Presets/user settings	13 / 8		10 / 8	
Emission	MPR-II, FCC-B		MPR-II, FCC-B	
TCO-compliant	No		No	
ISO 9241-3 and -8 ¹	Yes		Yes	
On screen display	Yes		Yes (5 languages)	
User controls	Digital front mounted controls		Digital front mounted controls	
Borderless operation	Yes		Yes	
Brightness/contrast control	Yes		Yes	
Horizontal size/position	Yes		Yes	
Vertical size/position	Yes		Yes	
Geometry reset/recall	Yes		Yes	
Controls lock/unlock	Yes		Yes	
Display mode information	No		No	
Pincushion	Yes		Yes	
Trapezoidal	Yes		Yes	
Image rotation	Yes (manual)		Yes (manual)	
Keystone and balance	Yes		Yes	
Geometry reset	Yes		Yes	
User color settings	9300K, 6500K, User1		9300K, 6500K, User1	
Color point adjustment/reset	Yes		Yes	
Moire control	Yes		Yes	
Manual degauss	Yes		Yes	
Video signal cable	One 1.8m captive with 15-pin D shell		One 1.8m captive with 15-pin D shell	
Power cord	1.8m detached		1.5m detached	
Anti-reflective treatment	Yes		Yes	
Anti-static treatment	Yes		Yes	
Self diagnosis function	Yes		Yes	
Dimensions (H x W x D)	15.4" x 14.6" x 15.7"		15.2" x 14.6" x 15.4"	
Dimensions (H x W x D)	391mm x 371mm x 399mm		387mm x 370mm x 391mm	
Weight	28.2 lbs (12.8 kg)		26.4 lbs (12.0 kg)	
VESA DDC2B ²	DDC2B		DDC2B	
VESA DPMS compliant	DPMS		DPMS	
Power management	ENERGY STAR ³		ENERGY STAR	
Limited warranty ⁴	3 year		3 year	
Available date	November 2000		January 2002 November 2001	

<p align="center">LIMITED WARRANTY</p> <ul style="list-style-type: none"> ↻ 3 year limited warranty⁴ ↻ International Warranty Service⁵ ↻ IBM Express Maintenance at 1-800-IBM-SERV (426-7378) ↻ Replacement normally arrives in two business days ↻ IBM pays all shipping costs for valid warranty claims⁶ ↻ Service upgrade options:⁷ <ul style="list-style-type: none"> • On site exchange M-F 8-5 with next day response (ServicePac[®] part number 30L9179) • On site exchange 7 day x 24 hr with 4 hour response (ServicePac part number 30L9183) ↻ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴ 	<p align="center">STANDARD FEATURES</p> <ul style="list-style-type: none"> Universal power supply Anti-static screen Anti-glare screen Tilt/swivel stand Automatic degauss Northern hemisphere Separate power cord 	<ul style="list-style-type: none"> • IBM E Series Essential CRT Monitors provide essential features at attractive prices
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See footnotes for important warranty information
 ≈ Model 6331-M2N withdrawn from marketing effective February 2002

IBM® E Series Essential CRT Monitors			
Name	E74	E74	E74
Case color	Pearl white	Business black	Business black
Type-model	⊖ 6332-0HN	6332-4HN	6332-UHN
US Govt model (TAA) ¹⁰	No	No	Yes¹⁰
CRT size and type	17" FST CRT		
Viewable image size	16.0" / 406mm		
Dot pitch	Horizontal dot pitch 0.23mm, diagonal dot pitch 0.27mm		
Max view area (W x H)	12.79 x 9.6"		
Max view area (W x H)	325 x 244mm		
Video input	Analog		
Frequency	Multiscanning		
Vertical refresh rate range	50 to 120Hz		
Horizontal line rate range	30 to 69kHz		
Clock rate	110Mpels/sec (MHz)		
Optimum addressability	1024x768 at 85Hz		
Maximum flicker free mode	1024x768 at 85Hz		
Maximum addressability	1280x1024 at 60Hz		
720x400 (presets)	70, 85		
640x480 (presets)	60, 75, 85		
800x600 (presets)	75, 85		
960x529 (presets)	75		
1024x768 (presets)	75, 85		
1280x1024 (presets)	-		
Presets/user settings	10 / 8		
On Screen Display	Yes (6 languages)		
OSD user controls	Digital front panel controls		
Brightness/contrast control	Yes		
Horizontal size/position	Yes		
Vertical size/position	Yes		
Geometry reset/recall	Yes		
Pincushion / balanced pinc	Yes		
Image rotation	Yes		
Picture zoom	Yes		
Language select	Yes		
User color settings	9300K, 6500K, User1		
R, G, B, gain adjustment	Yes		
Moire reduction	Yes		
Manual degauss	Yes		
Twin video input	No		
Video signal cable	One 1.5m captive with 15-pin D shell		
Power cord	1.8m detached		
Anti-reflective treatment	Yes		
Anti-static treatment	Yes		
Dimensions (H x W x D)	15.7" x 15.7" x 16.2"		
Dimensions (H x W x D)	400mm x 398mm x 412mm		
Weight	33 lbs (15 kg)		
VESA DDC1/DDC2B ²	DDC2B		
VESA DPMS compliant	Yes		
Power management	ENERGY STAR ³		
Emission standards	MPR-II, FCC-B		
TCO 99-compliant	No		
ISO 9241 capable	Parts 3, 7, 8 ¹		
Limited warranty ⁴	3 year		
Available date	May 2001	May 2001	August 2003
<p>LIMITED WARRANTY</p> <ul style="list-style-type: none"> ↪ 3 year limited warranty⁴ ↪ International Warranty Service⁵ ↪ IBM Express Maintenance at 1-800-426-7378 ↪ Replacement normally arrives in two business days, excluding holidays ↪ IBM pays all shipping costs for valid warranty claims⁵ ↪ Service upgrade options:⁷ <ul style="list-style-type: none"> • 3 year, on site exchange Mon-Fri 9-5 with next day response (ServicePac® 30L9179) • 3 year, on site exchange 7 day x 24 hr with 4 hour response (ServicePac 30L9183) • 4 year, on site exchange Mon-Fri 9-5 with next day response (ServicePac 69P9172) • 4 year, on site exchange 7 day x 24 hr with 4 hour response (ServicePac 69P9173) ↪ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴ 		<p>STANDARD FEATURES</p> <ul style="list-style-type: none"> Universal power supply Anti-static screen Anti-glare screen Tilt/swivel stand Automatic degauss Northern hemisphere Separate power cord 	
		<ul style="list-style-type: none"> • IBM E Series Essential CRT Monitors provide essential features at attractive prices 	

See footnotes for important warranty information

⊖ US model announced August 12, 2003; previous models on May 2001

⊖ US model withdrawn effective February 2004

IBM® E Series Essential CRT Monitors - US models			
Name	E74M Multimedia Color Monitor		E74M Multimedia Color Monitor
Case color	Pearl white	Business black	Pearl white Business black Business black
Type-model	≈< 6517-07N	≈< 6517-47N	≈< 6517-97N ≈< 6517-67N 6517-6LN
CRT size and type	17" FST CRT		17" FST CRT
Viewable image size	15.9" / 404mm		15.9" / 404mm
Dot pitch	0.23mm horizontal, 0.27mm diagonal		0.23mm horizontal, 0.27mm diag
Max view area in (W x H)	12.97 x 9.77" / 329.5 x 248.2mm		12.79 x 9.56" / 325 x 243mm
Video input	Analog		Analog
Frequency	Multiscanning		Multiscanning
Vertical refresh rate range	50 to 160Hz		50 to 160Hz
Horizontal line rate range	30 to 69kHz		30 to 70kHz
Clock rate	110Mpels/sec (MHz)		110Mpels/sec (MHz)
Optimum addressability	1024x768 at 85Hz		1024x768 at 85Hz
Maximum flicker free mode	1024x768 at 85Hz		1024x768 at 85Hz
Maximum addressability	1280x1024 at 60Hz		1280x1024 at 60Hz
Display presets	640x480 at 60, 75, 85Hz 720x400 at 70, 85Hz 800x600 at 75, 85Hz 960x529 at 75Hz 1024x768 at 75, 85Hz		640x480 at 60, 75, 85Hz 720x400 at 70, 85Hz 800x600 at 75, 85Hz 960x529 at 75Hz 1024x768 at 75, 85Hz
Presets / user settings	10 / 10		10 / 10 10 / 20
On screen display (OSD)	Yes (5 languages)		Yes (5 languages) Yes (11 languages)
OSD user controls	Digital front panel		Digital front panel
OSD features	Brightness and contrast Image size and position, image geometry Color settings (2 preset + 1 user) Geometry reset/recall Controls lock/unlock Monitor model information Manual degauss		Brightness and contrast Image size and position Image geometry Color settings (2 preset + 1 user) Geometry reset/recall, pincushion, trapezoid, moire, rotation Manual degauss
Speakers	Stereo speakers integrated into sides of monitor		Stereo speakers integrated into sides of monitor
Speaker power	1 watt per channel		1 watt per channel / 60Hz to 10kHz frequency response
Microphone	Integrated microphone (electret condensor)		Integrated microphone (electret condensor / 100Hz to 5kHz)
Auxiliary microphone in	3.5mm mono (left side)		3.5mm mono (left side)
Audio in	3.5mm stereo (rear)		3.5mm stereo (rear)
Headphone out	3.5mm stereo (left side) (speakers are muted if plug is inserted)		3.5mm stereo (left side) (speakers are muted if plug is inserted)
Microphone out	3.5mm mono (rear)		3.5mm mono (rear)
Audio OSD controls	Volume, treble, bass, balance, microphone (enable/disable)		Volume, treble, bass, balance, microphone (enable/disable), speaker mute
Audio signal cables	Stereo cable (for audio in jack on monitor) Mono cable (for microphone out jack on monitor)		Stereo cable (for audio in jack on monitor) Mono cable (for microphone out jack on monitor)
Video signal cable	One 1.5m captive with 15-pin D shell		One 1.5m captive with 15-pin D shell
Power cord	One 1.8m detached		One 1.8m detached
Anti-reflective treatment	Yes		Yes (and anti-glare)
Anti-static treatment	No		Yes
Self diagnosis function	No		No
Dimensions (H x W x D)	17.2 x 18.3 x 17.4"		17.1 x 18.3 x 17.4" 15.7 x 17.7 x 16.4"
Weight	38.3 lbs		436mm x 465mm x 442mm 339mm x 450mm x 416mm
Power consumption	120 watts max		37.4 lbs (17.0 kg) 33.4 lbs (15.2 kg)
Emission	MPR-II, FCC-B		MPR-II, FCC-B
Environmental label	No		TCO 99 TCO 95 TCO 99
ISO 9241-3 -8 ¹	Yes		Yes
VESA DDC1/DDC2B ²	DDC1/DDC2B		DDC1/DDC2B
VESA DPMS compliant	DPMS		DPMS
Power management	ENERGY STAR ³		ENERGY STAR ³
Limited warranty ⁴	3 year		3 year
Available / withdrawn date	Nov 00 / Oct 01 Nov 00 / Apr 2001		Sep 01 / Sep 02 Apr 01 / Sep 02 August 2002

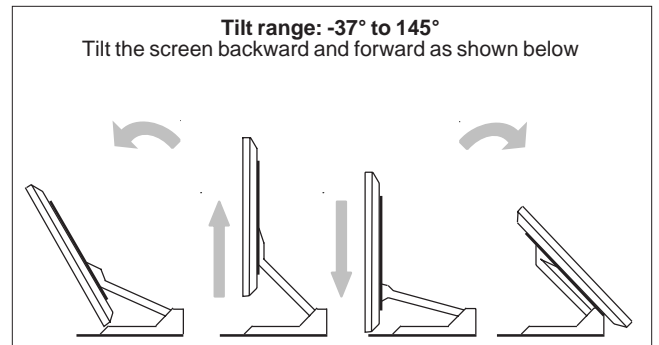
<p align="center">LIMITED WARRANTY</p> <ul style="list-style-type: none"> ≈< 3 year limited warranty⁴ ≈< International Warranty Service⁵ ≈< IBM Express Maintenance at 1-800-426-7378 ≈< Replacement normally arrives in two business days, excluding holidays ≈< IBM pays all shipping costs for valid warranty claims⁶ ≈< Service upgrade options:⁷ <ul style="list-style-type: none"> • 3 year, on site exchange Mon-Fri 9-5 with next day response (ServicePac® 30L9179) • 3 year, on site exchange 7 day x 24 hr with 4 hour response (ServicePac 30L9183) • 4 year, on site exchange Mon-Fri 9-5 with next day response (ServicePac 69P9172) • 4 year, on site exchange 7 day x 24 hr with 4 hour response (ServicePac 69P9173) ≈< 24x7³ day toll-free support for warranty issues during the warranty period⁴ 	<ul style="list-style-type: none"> • IBM E Series Essential CRT Monitors provide essential features at attractive prices
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See footnotes for important warranty information
≈< Withdrawn from marketing

IBM® T Series Flat Panel Monitors - US models

Name	T560 LCD TFT Color Monitor	• Exceptional flat panel design provides space savings.
Case color	Pearl White Business black	• The T560 is a hybrid monitor having both analog and digital interfaces via one analog connector and one DVI-D connector on the back of the monitor. This allows one monitor to connect to different types of graphics adapters. It tilts backward 145 degrees allowing someone across a desk from the user to view the image. It also allows the user to choose between portrait and landscape viewing.
Type-model	≈< 6656-HW2 6656-HG2	• The T560 replaces the T56.
Stand (base)	Included	
Orientation	Landscape or portrait (includes Pivot® software)	
Screen	Active Matrix TFT (Thin Film Transistor)	
Viewable image size (diag)	15.0" / 380.1mm	
Pixel pitch (mm)	.30mm	
Max view area (inches)	12.1" x 9.1"	
Max view area (mm)	304.1mm x 228.1mm	
Minimum viewing angle	120° horizontal (+/-60°), 90° vertical (+/-45°)	
Video input	Digital or analog (two connectors)	
Dual input	Dual input (two different PCs attach to two different connectors; one PC shows image; select via button on monitor)	

Frequency	Multi-frequency
Max addressability	1024x768
Video input (maximum)	79MHz maximum pixel rate
Corresponding scr refresh	1024x768 at 75Hz
Vertical frequency	56 to 75Hz
Horizontal frequency	31.5 to 61kHz
Display colors (maximum)	16.7 million simultaneous colors
Preset display modes	VGA: 640x350 70Hz 640x480 60, 67, 75Hz 720x400 70Hz SVGA: 800x600 56, 60, 72, 75Hz 832x624 75Hz (Apple) XGA: 1024x768 60, 70, 75Hz
Presets / user settings	IBM presets: 13 / user settings: 10
Brightness	250 nits or cd/m ²
Contrast ratio	300:1
Cell response time	45ms (typical)
Scaling	Can expand image of lower addressability to full screen of 1024x768

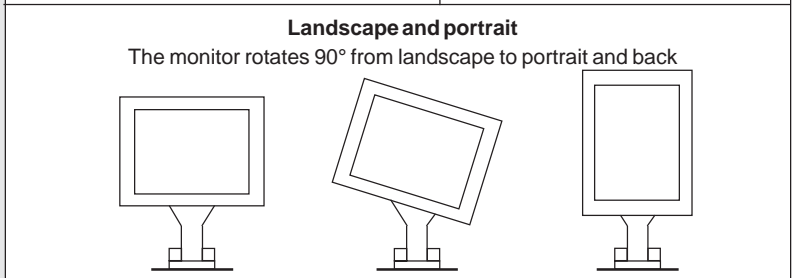


On screen display	On screen display with digital user controls (5 languages)
Control features	Brightness Image setup User color settings (3 preset + 1 user) Image horizontal and vertical position On Screen Display (OSD) language selection, menu position, display time, size Information screen, lockable settings
Monitor connector	Two connectors: one analog 15-pin D-shell, one Digital Visual Interface (DVI-D)
Signal cables	Two cables: (1) detachable 3.0 m analog, 15-pin D-shell attaches to graphics adapter, 15-pin D-shell to monitor (2) detachable 3.0 m digital, DVI-D attaches to graphics adapter, DVI-D attaches to monitor All cables match color of monitor
Anti-reflective / anti-glare	Anti-reflective / anti-glare
Dimensions (with stand)	(In landscape orientation) 14.4"W x 9.3"D x 17.2"H (at maximum lift) or 12.3"H (at minimum lift) (In landscape orientation) 365.2mm x 235mm x 435.8mm (at maximum lift) or 312mm (at minimum lift)
Weight (with stand)	10.8 lbs / 4.9 kg
Stand	Lift, 0 to 4.9" in landscape, 0 to 3.9" in portrait / tilting, 37° forward, 145° backward / no swivel / detachable
Mounting features	Wall or desk mounting using optional IBM Radial Arm (not included) or third-party accessories meeting the VESA FPMPI standard
Security	Security keyhole for attachment of optional cable lock

VESA DDC1/DDC2B ²	Yes
VESA DPMS compliant	DPMS
Power management	ENERGY STAR ³ / NUTEK
Ergonomics	ISO 13406 Part 2 ¹
Emission standards	MPR-2 / MPR-3A / FCC class B
Environmental label	TCO 99
Power supply	100-240Vac (universal) / external / 30 watts typical
Ship group	Monitor, attached tilt stand, User Guide, installation diskette (set-up test pattern, .inf, .icm files), analog signal cable, digital signal cable, external power supply, 1.8-meter power cord, Pivot Pro Software CD-ROM for 90°, 180°, and 270° image rotation
Limited warranty ⁴	3 year (includes parts, labor and backlight)
Available date	September 2001 (6656-HW2 withdrawn effective July 2003)

LIMITED WARRANTY
<ul style="list-style-type: none"> ↪ 3 year limited warranty⁴ ↪ International Warranty Service registration available⁵ ↪ IBM Express Maintenance at 1-800-IBM-SERV (426-7378) ↪ Replacement normally arrives in two business days, excluding holidays ↪ IBM pays all shipping costs for valid warranty claims⁶ ↪ Service upgrade options:⁷ <ul style="list-style-type: none"> • On site exchange Mon-Fri 9-5 with next day response (ServicePac® part number 30L9179) • On site exchange 7 day x 24 hr with 4 hour response (ServicePac part number 30L9183) ↪ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴

OPTIONS			
Radial Arm Kit ⁹	19K4464	For the most up-to-date compatibility information, visit ibm.com/options	
Apple attach dongle	96G2694		
15-Inch Flat-Panel Speaker Bezel	22P8986		



See footnotes for important warranty information
US models announced September 18, 2001
≈ Withdrawn from marketing

IBM® T Series Flat Panel Monitors - US models	
<p>Name Case color Type-model Graphics adapter included</p> <p>Orientation</p> <p>Screen Viewable image size (diag) Pixel pitch (mm) Max view area HxW (inches) Max view area HxW (mm) Viewing angle Video input</p>	<p>≈<T221 LCD TFT Color Monitor Business black 9503-DG1 Matrox® G200 MMS / 32-bit PCI adapter / 32MB SGRAM / 250MHz RAMDAC / monitor attached by two standard monitor cables to two 60-pin connectors on adapter Landscape (portrait supported with optional third party arms [attached to VESA mount]) Active Matrix TFT (Thin Film Transistor) Liquid Crystal Display 22.2" / 564mm 0.125 11.8" x 18.8" 298.8mm x 478.1mm 170° vertical, 170° horizontal Digital</p> <p>T221 LCD TFT Color Monitor Business black 9503-DG3 None (requires a DVI-D compliant graphics card; to date only the ATI® FireGL4 has been tested)</p> <p>Landscape (portrait supported with optional third party arms [attached to VESA mount])</p> <p>• Exceptional flat panel design provides space savings</p>
<p>Max addressability Video input (native) Video input (DOS / VGA) Vertical frequency Horizontal frequency Display modes</p> <p>Display colors (maximum) Brightness Contrast ratio Cell response time Pixel density Total pixels</p>	<p>3840x2400 (QUXGA-Wide) 3840x2400 at 40.93Hz (104.78MHz maximum pixel rate) 960x1200 at 55.74Hz (70.98MHz maximum pixel rate) up to 85Hz depending on mode up to 80kHz depending on mode VGA 640x480 to 3200x2400 after x5 scaling (to 85Hz) SVGA 800x600 to 3200x2400 after x4 scaling (to 85Hz) Matrox VGA 960x1200 to 1920x2400 after x2 scaling (to 55.7Hz) XGA 1024x768 to 3072x2304 after x3 scaling (to 85Hz) SXGA 1280x1024 to 2560x2048 after x2 scaling (to 75Hz) UXGA 1600x1200 to 3200x2048 after x2 scaling (to 60Hz) QUXAG-W to 3840x2400 (to 40.9Hz) 16.7 million simultaneous colors 235 nits or cd/m² (typical) 400:1 (typical) 50ms (typical) 204 pixel density per inch (80 per cm) 9,216,000 (9.2 million) total pixels / 3840 x 2400 = 9,216,000</p>
<p>On screen display (OSD) User controls</p>	<p>Yes (brightness level, input type (single, dual, 4-vertical stripes), refresh/addressability) Power, brightness, on screen display</p>
<p>Monitor connectors</p> <p>Signal cables</p> <p>Signal cable length and color Anti-reflective Anti-glare Dimensions with stand (HxWxD) Weight with stand Tilt stand Mounting Security</p>	<p>Two LFH-60 60-pin connectors / each connector has two DVI-60-pin interfaces (not the industry standard DVI-D connector; a 60-pin connector with dual DVI signals) Two DVI cables / DVI-60-pin connectors at each end</p> <p>Two cables / DVI-D for PC attachment and DVI-60-pin for monitor attachment</p> <p>1.8 meters in length, black color Anti-reflective Anti-glare 17.2" x 21.5" x 7.7"; 437 x 547 x 196mm 26.4 lbs / 12 kg Tilting, 5° forward, 30° backward / detachable Meets VESA Flat Panel Monitor Physical Mounting Interface Standard (FPMPI®, 100mm x 100mm) Security keyhole for attachment of optional cable lock</p>
<p>Power supply</p> <p>VESA DDC2B² VESA DPMS-compliant ISO 13406 Part 2¹ Emission standards TCO 95/99 environmental label Ship group</p> <p>Operating system support</p>	<p>One universal 160 watt external AC adapter / 135 to 150 watts typical / 1.8 meter power cord No Yes Yes MPR-2 / MPR-3A / FCC class A No Monitor, attached tilt stand, two signal cables, external power supply, power cords, User's Guide, installation CD-ROM, (DG1 only: graphics PCI adapter) Requires Microsoft® Windows® 2000 / compatible with Linux 2.2x kernels with ATI FireGL4 adapter in November 2001</p>
<p>Limited warranty⁴ Available date</p>	<p>3 year (includes backlight) October 2001 / Model 9503-DG1 withdrawn January 2003</p>
<ul style="list-style-type: none"> • Crams 9.2 million pixels in a viewing area of two 8 1/2" x 11" pages • High resolution of 3840x2400 (QUXGA-Wide) allows for large amounts of data to be displayed on the screen, almost 12 times more than on a 1024x768 (XGA) monitor • Additional support for a 960x1200 strip DOS mode for setup and system debug • 204 pixel per inch (80 per cm) density, over 5.75 times more finely detailed than a 15-inch XGA monitor; allows very clear or precise images without line breakup or pixelation • Wide screen 16:10 screen format for ergonomic viewing of images in a landscape orientation • The T221 can be configured to driven from 1-, 2- or 4-headed graphics adapters. A single headed adapter (the configuration for most adapters) can drive it from 640x480 up to 1600x1200 depending on the adapter's capability (the modes are scaled up by the nearest integer value to fit on the screen; so 640x480 is scaled up by a factor of 5). A 2-headed adapter (such as the FireGL4) can drive the T221 as two vertical stripes, each 1920x2400, and a 4-headed adapter (such as the Matrox G200 MMS) can drive it as either 4 stripes each 960x2400 or 4 tiles, each 1920x1200). 	<p style="text-align: center;">LIMITED WARRANTY⁴</p> <ul style="list-style-type: none"> ⇒ 3 year parts and labor ⇒ International Warranty Service⁵ ⇒ IBM Express Maintenance at 1-800-426-7378 ⇒ Replacement normally arrives in two business days (excluding holidays) ⇒ IBM pays all shipping costs for valid warranty claims⁶ ⇒ Service upgrade options:⁷ <ul style="list-style-type: none"> • On site exchange Mon-Fri 9-5 with next day response (ServicePac® part number 21P2089) • On site exchange 7 day x 24 hr with 4 hour response (ServicePac part number 21P2090) ⇒ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴

See footnotes for important warranty information
≈< Withdrawn effective January 2003

IBM® T Series Flat Panel Monitors - US model		POSITIONING
Name	T221 LCD TFT Color Monitor	<ul style="list-style-type: none"> • Performance—Advanced flat panel design features provides space savings and performance. • Precision graphics with possible uses of medical imaging, mapping, oil exploration, and graphic design
Case color	Business black	
Type-model	9503-DG5	<p style="text-align: center;">FEATURES</p> <ul style="list-style-type: none"> • Crams 9.2 million pixels in a viewing area of two 8 1/2" x 11" pages • High resolution of 3840x2400 (QUXGA-Wide) allows for large amounts of data to be displayed on the screen, almost 12 times more than on a 1024x768 (XGA) monitor • 204 pixel per inch (80 per cm) density, over 5.75 times more finely detailed than a 15-inch XGA monitor; allows very clear or precise images without line breakup or pixelation • Wide screen 16:10 screen format for ergonomic viewing of images in a landscape orientation • Depending on the adapter's capability, the T221 can be configured to be driven from 1-, 2- or 4-headed graphics adapters. Using a single DVI output, it can be driven in industry standard modes from 640x480 to 1600x1200 (the modes are scaled up by the nearest integer value to fit on the screen; so 640x480 is scaled up by a factor of 5) or it can be driven in it's native 3840x2400 resolution at up to 13Hz refresh rate. Two headed adapters, such as the NVIDIA® Quadro® FX 1000, by dividing the screen into two stripes, each 1920x2400, can drive the T221 at up to 25Hz refresh rate. A graphics card such as the NVIDIA FX 2000 or 3000 using a single, dual-link DVI output, can drive the T221 at up to 25Hz without needing to divide up the screen.
Graphics adapter included	None	
Orientation	Landscape (portrait supported with optional third party arms [attached to VESA mount])	
Screen	Active Matrix Thin Film Transistor (TFT) Liquid Crystal Display	
Viewable image size (diag)	22.2" / 564mm	
Pixel pitch (mm)	0.125	
Max view area (inches)	11.8" x 18.8" (HxW)	
Max view area (mm)	298.8mm x 478.1mm (HxW)	
Viewing angle	170° (+/- 85°) vertical, 170° (+/- 85°) horizontal	
Video input	Digital (dual-link DVI with converter box or up to 4 single-link DVI)	
Max addressability	3840x2400 (QUXGA-Wide)	
Video input (native)	3840x2400 at 48Hz (165MHz maximum pixel rate per DVI link)	
Vertical frequency	up to 85Hz depending on mode	
Horizontal frequency	up to 118kHz depending on mode	
Display modes	VGA 640x480 to 3200x2400 after x5 scaling (to 85Hz) SVGA 800x600 to 3200x2400 after x4 scaling (to 85Hz) XGA 1024x768 to 3072x2304 after x3 scaling (to 85Hz) SXGA 1280x1024 to 2560x2048 after x2 scaling (to 75Hz) UXGA 1600x1200 to 3200x2400 after x2 scaling (to 60Hz) QUXGA-W 3840x2400 (to 48 Hz)	
Display colors (maximum)	16.7 million simultaneous colors	
Brightness	235 nits or cd/m ² (typical)	
Contrast ratio	400:1 (typical)	
Cell response time	50ms (typical)	
Pixel density	204 pixel density per inch (80 per cm)	
Total pixels	9,216,000 (9.2 million) total pixels / 3840 x 2400 = 9,216,000	
On screen display (OSD)	Yes (brightness level, input type, information)	
User controls	Power, brightness, on screen display	
Monitor connectors	Two LFH-60 60-pin connectors / each connector has two DVI-60-pin interfaces (not the industry standard DVI-D connector; a single 60-pin connector with two, single-link DVI signals)	
Signal cables (four cables ship standard)	Two possible configurations from four standard cables: (a) dual-link DVI configuration requires std converter box, (b) single-link configuration does not require converter box (a) 1. Dual-link signal cable (PC to converter box; DVI-D at each end), 2.0 meters, black 2. Converter signal cable (converter box to monitor; DVI-60-pin at each end), 0.65 meters, black (b) 1. Single-link DVI to 60-pin cable (PC to monitor without converter box; DVI-D for PC attachment and DVI-60-pin for monitor attachment; the PC end has two single-link DVI connectors for a dual head card), 1.8 meters, black 2. Single-link DVI to 60-pin cable (same as above)	
Converter box	Standard converter box used with dual-link DVI configuration (the box contains a buffer to dis-interleave the dual-link DVI data, then assemble a line of data and transmits it to the T221 as left-half and right-half screen data which is the same format as the single-link DVI configuration which requires a dual head graphics adapter)	
USB interface	Converter box has a USB 1.1 connector for standard USB cable to use the Color Management Utility (downloadable from Web) and Firmware Update Utility	
Anti-reflective	Anti-reflective	
Anti-glare	Anti-glare	
Dimensions with stand	17.3" x 21.5" x 7.7"; 439 x 547 x 196mm (HxWxD)	
Weight with stand	25.1 lbs / 11.4 kg	
Tilt stand	Tilting, 5° forward, 30° backward / detachable	
Mounting	Meets VESA Flat Panel Monitor Physical Mounting Interface Standard (FPMPMI®, 100mm x 100mm)	
Security	Security keyhole for attachment of optional cable lock	
Power supply	One universal 160 watt external AC adapter / 135 to 150 watts typical / 1.8 meter power cord	
VESA DDC2B ²	No	
VESA DPMS-compliant	DPMS	
Power management	ENERGY STAR ³	
Ergonomics	ISO 13406 Part 2 ¹	
Emission standards	MPR-2 / MPR-3A / FCC class A	
Environmental label	TCO 95	
Ship group	Monitor, attached tilt stand, four DVI signal cables, one external power supply, power cord, USB cable, converter box, T221 User's Guide, Converter Box User's Guide	
Operating system support	Microsoft® Windows® 2000 and XP / compatible with Linux 2.4x kernels and later	
Graphics adapter support	DVI-compliant adapters including ATI® FireGL4, NVIDIA Quadro4 900XGL or 980XGL, NVIDIA QuadroFX 1000 or 2000 or 3000	
Limited warranty ⁴	3 year (includes backlight)	<p style="text-align: center;">LIMITED WARRANTY⁴</p> <ul style="list-style-type: none"> ↪ 3 year parts and labor ↪ International Warranty Service⁵ ↪ IBM Express Maintenance at 1-800-426-7378 ↪ Replacement normally arrives in two business days (excluding holidays) ↪ IBM pays all shipping costs for valid warranty claims⁶ ↪ Service upgrade options:⁷ <ul style="list-style-type: none"> • On site exchange Mon-Fri 9-5 with next day response (ServicePac® part number 21P2089) • On site exchange 7 day x 24 hr with 4 hour response (ServicePac part number 21P2090) ↪ 24x7⁸ day toll-free support for warranty issues during the warranty period⁴
Available date	September 2003	

See footnotes for important warranty information
US model announced September 2, 2003

IBM® ThinkVision CRT Monitors - US model

Name	C170
Case color	Business black
Type-model	6737-66N
Stand	Tilt-swivel stand
CRT size and type	17" full flat shadow mask (flat screen) CRT
Viewable image size	16.0" / 406.4mm
Dot pitch	0.25mm diagonal / 0.22 horizontal
Max view area (inches)	12.79 x 9.6"
Max view area (mm)	325 x 244mm
Video input	Analog

Frequency	Multiscanning
Vertical refresh rate range	50 to 160Hz
Horizontal line rate range	30 to 85kHz
Clock rate	135Mpels/sec

Optimum addressability	1024x768 at 85Hz
Max 75Hz flicker free mode	1280x1024
Maximum addressability	1600x1200
720x400 text (preset)	70
640x480 (presets)	60, 85
800x600 (preset)	75, 85
1024x768 (preset)	75, 85
1280x1024 (preset)	75
1152x864 (preset)	75
1600x1200	No preset
Presets/loads/user	IBM presets: 9; factory loads: 0; user settings: 15

On screen display (OSD) Control features	On screen display with digital user controls (5 languages) Picture position, size, shape, and alignment (including pincushion, pincushion balance, trapezoid, parallelogram) Digital brightness and contrast Color tint control, selectable color points (9300K, 6500K, 5000K), and color reset Picture tilt and moire effects Video input level (0.7V or 1.0V) Manual degauss
Other features	Information screen displaying resolution, model name, and microcode / borderless operation / menu position

Video signal cable	1.8m (6 ft) captive with 15-pin D shell (black)
Anti-reflective treatment	Yes
Anti-static treatment	Yes
Dimensions (H x W x D)	16.9" x 16.3" x 16.5"
Dimensions (H x W x D)	430mm x 414mm x 420mm
Weight	35.3 lbs (16.0 kg)
Viewing adjustments	Forward vertical tilt: +10°; backward vertical tilt: -4°; horizontal swivel +45°/-45°

VESA DDC1/DDC2B ²	DDC2B
VESA DPMS compliant	DPMS
Power management	ENERGY STAR ³
Emission	MPR-II, FCC-B
Environmental label	TCO 99
ISO 9241-3 ¹	Yes
Ship group	Monitor, attached tilt-swivel stand, Quick Start Guide, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8m (6 ft) power cord (black)
Power supply	100-240Vac (universal), 70 watts typical, 50-60Hz
Limited warranty ⁴	3 year
Available date	June 2003

POSITIONING

- Perfect balance of price and performance

FEATURES

- Flat shadow mask technology for clear images on the entire screen with low distortion and low glare
- A 17-inch full flat-screen CRT with a viewable image size of 406.4mm (16 inches) incorporating a 0.25mm diagonal dot pitch and a 0.22mm horizontal dot pitch
- An optimal flicker-free addressability of 1024x768 at 85Hz with a maximum addressability of 1600x1200
- Incorporates IBM ThinkVantage Design that enhances usability and complements the system design
- Matching design to IBM systems
- Quick and easy monitor adjustments using new designed on screen display
- Replacement for the IBM G78 Monitor

LIMITED WARRANTY

- ↔ **3 year limited warranty⁴**
- ↔ **International Warranty Service⁵**
- ↔ **IBM Rapid Replacement Service at 1-800-426-7378 (customer mail-in service)**
- ↔ **Replacement normally arrives in two business days, excluding holidays**
- ↔ **IBM pays all shipping costs for valid warranty claims⁶**
- ↔ **Service upgrade options:⁷**
 - **3 year, on site exchange, Mon-Fri 9-5 with next day response**
(ServicePac® part number 30L9179)
 - **3 year, on site exchange, 7 day x 24 hr with 4 hour response**
(ServicePac part number 30L9183)
 - **4 year, on site exchange, Mon-Fri 9-5 with next day response**
(ServicePac part number 69P9172)
 - **4 year, on site exchange, 7 day x 24 hr with 4 hour response**
(ServicePac part number 69P9173)
- ↔ **Post warranty maintenance services available**
- ↔ **24x7⁸ day toll-free support for warranty issues during the warranty period⁴**

See footnotes for important warranty information
US model announced May 21, 2003

IBM® ThinkVision CRT Monitors - US model

Name	C190
Case color	Business black
Type-model	6739-60N
Stand	Tilt-swivel stand
CRT size and type	19" full flat shadow mask (flat screen) CRT
Viewable image size	18.0" / 457.3mm
Dot pitch	0.25mm diagonal / 0.22 horizontal
Max view area (inches)	14.4 x 10.8"
Max view area (mm)	365.8 x 274.5mm
Video input	Analog

Frequency	Multiscanning
Vertical refresh rate range	50 to 160Hz
Horizontal line rate range	30 to 96kHz
Clock rate	202Mpels/sec

Optimum addressability	1280x1024 at 85Hz
Max 75Hz flicker free mode	1600x1200
Maximum addressability	1600x1200
720x400 text (preset)	70
640x480 (presets)	60, 85
800x600 (presets)	75, 85
1024x768 (presets)	75, 85
1280x1024 (presets)	75, 85
1600x1200 (preset)	75
Presets/loads/user	IBM presets: 10; factory loads: 5; user settings: 13

On screen display (OSD) Control features	On screen display with digital user controls (5 languages) Picture position, size, shape, and alignment (including pincushion, pincushion balance, trapezoid, parallelogram) Digital brightness and contrast Color tint control, selectable color points (9300K, 6500K, 5500K), and color reset Picture tilt and moire effects Manual degauss
Other features	Information screen displaying resolution, model name, and microcode / borderless operation / menu position

Video signal cable	1.8m (6 ft)captive with 15-pin D shell (black)
Anti-reflective treatment	Yes
Anti-static treatment	Yes
Dimensions (H x W x D)	18.4" x 18.0" x 18.0"
Dimensions (H x W x D)	468mm x 456mm x 458mm
Weight	46.8 lbs (21.25 kg)
Viewing adjustments	Forward vertical tilt: 5°; backward vertical tilt: 15°; horizontal swivel +90°/-90°

VESA DDC1/DDC2B ²	DDC2B
VESA DPMS compliant	DPMS
Power management	ENERGY STAR ³
Emission	MPR-II, FCC-B
Environmental label	TCO 99
ISO 9241-3 ¹	Yes
Ship group	Monitor, detached tilt-swivel stand, Quick Start Guide, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, 1.8m (6 ft) power cord (black)
Power supply	90-264Vac, 100 watts typical, 50-60Hz
Limited warranty ⁴	3 year
Available date	June 2003

POSITIONING

- Perfect balance of price and performance

FEATURES

- Flat shadow mask technology for clear images on the entire screen with low distortion and low glare
- A 19-inch full flat-screen CRT with a viewable image size of 457.3mm (18 inches) incorporating a 0.25mm diagonal dot pitch and a 0.22mm horizontal dot pitch
- An optimal flicker-free addressability of 1280x1024 at 85Hz with a maximum addressability of 1600x1200
- Incorporates IBM ThinkVantage Design that enhances usability and complements the system design
- Matching design to IBM systems
- Quick and easy monitor adjustments using new designed on screen display
- Replacement for the IBM G97 Monitor

LIMITED WARRANTY

- ↔ **3 year limited warranty⁴**
- ↔ **International Warranty Service⁵**
- ↔ **IBM Rapid Replacement Service at 1-800-426-7378 (customer mail-in service)**
- ↔ **Replacement normally arrives in two business days, excluding holidays**
- ↔ **IBM pays all shipping costs for valid warranty claims⁶**
- ↔ **Service upgrade options:⁷**
 - **3 year, on site exchange, Mon-Fri 9-5 with next day response**
(ServicePac® part number 30L9179)
 - **3 year, on site exchange, 7 day x 24 hr with 4 hour response**
(ServicePac part number 30L9183)
 - **4 year, on site exchange, Mon-Fri 9-5 with next day response**
(ServicePac part number 69P9178)
 - **4 year, on site exchange, 7 day x 24 hr with 4 hour response**
(ServicePac part number 69P9179)
- ↔ **Post warranty maintenance services available**
- ↔ **24x7⁸ day toll-free support for warranty issues during the warranty period⁴**

See footnotes for important warranty information
US model announced May 21, 2003

IBM® ThinkVision CRT Monitors - US model

Name	C220p	<p style="text-align: center;">POSITIONING</p> <ul style="list-style-type: none"> • Accurate colors and crystal clear images <p style="text-align: center;">FEATURES</p> <ul style="list-style-type: none"> • Full flat aperture grill CRT monitor delivers bright, clear images with low distortion and low glare • A 22-inch flat-screen CRT with a viewable image size of 508mm (20 inches) incorporating a 0.24mm aperture grill pitch • An optimal flicker-free addressability of 1600x1200 at 85Hz with a maximum addressability of 2048x1536 at 80Hz • Incorporates IBM ThinkVantage Design that enhances usability and complements the system design • Two video inputs for either 15-pin D-shell or DVI-A connection • Matching design to IBM systems • Quick and easy monitor adjustments using on-screen display controls • Replacement for the IBM P275 Monitor
Case color	Business black	
Type-model	6735-60N	
Stand	Tilt-swivel stand	
CRT size and type	22" (559mm) aperture grille CRT (flat screen)	
Viewable image size (max)	20.0" (508mm) diagonal; 12.0" (304mm) height; 16.0" (406mm) width	
Aperture grille pitch	0.24mm	
Max view area (inches)	15.9 x 11.9" (width x height)	
Max view area (mm)	406 x 304mm (width x height)	
Video input	Analog	
Frequency	Multiscanning	
Vertical refresh rate range	50 to 160Hz	
Horizontal line rate range	30 to 130kHz	
Clock rate	360Mpels/sec (360MHz)	
Optimum addressability	1600x1200 at 85Hz	
Maximum addressability	2048x1536 at 80Hz	
720x400 text (preset)	70	
640x480 (presets)	60, 85	
800x600 (presets)	75, 85	
1024x768 (presets)	75, 85	
1280x1024 (presets)	75, 85	
1600x1200 (presets)	75, 85	
1792x1344 (preset)	85	
1920x1440 (presets)	75, 85	
2048x1536 (presets)	75, 80	
Presets/loads/user	IBM presets: 8; factory loads: 8; user settings: 16	
On screen display (OSD) Control features	On screen display with digital user controls (5 languages; English, French, Italian, German, Spanish) Picture position, size, shape, and alignment (including pincushion, pincushion balance, trapezoid, parallelogram, zoom, rotation) Digital brightness and contrast Color tint control, selectable color points (9300K, 6500K, 5500K), and color reset Picture tilt and moire effects Manual degauss Convergence and purity	
Other features	Information screen displaying resolution, refresh rate, product details / borderless operation / menu position	
Monitor connectors	Two video input connectors: analog 15-pin D-shell [blue] and DVI-A [white] / selection by OSD or front switch	
Video signal cable	1.8m (6 ft) detachable cable / DVI-A on one end and 15-pin D-shell on other end (either end can go to a compatible connector on a monitor or a system) / black color	
Anti-reflective treatment	1/4-wave anti-reflective film	
Anti-static treatment	Yes	
Dimensions (H x W x D)	20.3" x 20.2" x 19.1"	
Dimensions (H x W x D)	516mm x 513mm x 484mm	
Weight	67.2 lb (30.5 kg)	
Viewing adjustments	Forward vertical tilt: 5°; backward vertical tilt: 15°; horizontal swivel +90°/-90°	
VESA DDC1/DDC2B ²	DDC2B	
VESA DPMS compliant	DPMS	
Power management	ENERGY STAR ³ / meets FEMP guidelines for standby power consumption	
Emission	MPR-II, FCC-B	
Environmental label	TCO 99	
ISO 9241-3 ¹	ISO 9241 Parts 3, 7, and 8 for front-of-screen ergonomics	
Ship group	Monitor, detached tilt-swivel stand, videl signal cable, Setup Guide, Safety and Warranty Book, CD with multilingual User's Guide and monitor installation files, separate 1.8m (6 ft) power cord (black)	
Power supply	90-264Vac (universal), 130 watts typical, 47-63Hz	
Limited warranty ⁴	3 year	
Available date	February 2004	

<p style="text-align: center;">LIMITED WARRANTY</p> <ul style="list-style-type: none"> ↔ 3 year limited warranty⁴ ↔ International Warranty Service⁵ ↔ IBM Rapid Replacement Service at 1-800-IBM-SERV (426-7378) ↔ Replacement normally arrives in two business days, excluding holidays ↔ IBM pays all shipping costs for valid warranty claims⁶ ↔ Service upgrade options:⁷ <ul style="list-style-type: none"> • 3 year, on site exchange, Mon-Fri 9-5 with next day response (ServicePac[®] part number 30L9179) • 3 year, on site exchange, 7 day x 24 hr with 4 hour response (ServicePac part number 30L9183) • 4 year, on site exchange, Mon-Fri 9-5 with next day response (ServicePac part number 69P9188) • 4 year, on site exchange, 7 day x 24 hr with 4 hour response (ServicePac part number 69P9189) ↔ Post warranty maintenance services available ↔ 24x7[®] day toll-free support for warranty issues during the warranty period⁴ 	<p style="text-align: center;">OPTIONS</p> <table border="0"> <tr> <td>Video signal cable 15-pin D-shell to 15-pin D-shell</td> <td style="text-align: right;">61H0227</td> </tr> <tr> <td>Video signal cable DVI-A to DVI-A</td> <td style="text-align: right;">04N7529</td> </tr> </table>	Video signal cable 15-pin D-shell to 15-pin D-shell	61H0227	Video signal cable DVI-A to DVI-A	04N7529
Video signal cable 15-pin D-shell to 15-pin D-shell	61H0227				
Video signal cable DVI-A to DVI-A	04N7529				

See footnotes for important warranty information
US model announced February 3, 2004

IBM® Flat Panel Monitors - US models

Name	L150 Flat Panel Monitor		
Case color	Business black	Pearl white	Business black
Type-model	6636-AB1	6636-AW1*	6636-AK1
US Govt model (TAA) ¹⁰	No	No	Yes ¹⁰
Stand	Tilt stand included		
Screen	LCD Active Matrix TFT (Thin Film Transistor)		
Viewable image size (diag)	15.0" / 381mm (diagonal)		
Pixel pitch (mm)	.297mm		
Max view area (inches)	12.0" x 9.0" (horizontal x vertical)		
Max view area (mm)	304mm x 228mm (horizontal x vertical)		
Minimum viewing angle	115° (+/- 57.5°) vertical, 150° (+/- 75°) horizontal		
Video input	Analog		
Dual input	No		
Frequency	Multi-frequency		
Max addressability	1024x768		
Video input (maximum)	1024x768 at 75Hz (80MHz maximum pixel rate)		
Corresponding scr refresh	1024x768 at 60Hz		
Vertical frequency	55 to 75Hz		
Horizontal frequency	30 to 63kHz		
Display colors (maximum)	More than 16 million simultaneous colors		
Preset display modes	VGA: 640x480 60, 72, 75Hz 640x350 70Hz 720x400 70Hz SVGA: 800x600 60, 72, 75Hz XGA: 1024x768 60, 70, 75Hz		
Presets / user settings	IBM presets: 11; user settings: 10		
Brightness	250 nits or cd/m ² (typical)		
Contrast ratio	400:1 (typical)		
Cell response time	35ms (typical)		
Scaling	Can expand image of lower addressability to full screen of 1024x768		
On screen display	On screen display with digital user controls (5 languages)		
Control features	Direct access (buttons on front) for auto adjustment and brightness; contrast; image horizontal and vertical position; user color settings (3 preset + 1 user); on screen display (OSD) language selection; menu position; information screen; image setup; image size to show normal or expanded format; reset of geometry and color point to factory default settings; lockable settings		
Monitor connector	One connector: analog 15-pin D-shell [blue]		
Signal cable	Analog cable, detachable, 15-pin D-shell at each end (for analog connector), 1.8 meter, matches color of monitor		
Anti-reflective / anti-glare	Anti-reflective / anti-glare		
Dimensions	14.6"H x 14.3"W x 8.4"D / 370mm height x 364mm width x 214mm depth		
Weight	10.6 lbs / 4.8 kg		
Viewing adjustments	Tilt: 40° back, 4° forward / detachable stand		
Mounting features	Wall or desk mounting using the IBM Radial Arm ⁹ or third-party accessories meeting the VESA FPMPI [®] std (100mm)		
Security	Security keyhole for attachment of optional cable lock		
VESA DDC2B ²	Yes		
VESA DPMS compliant	DPMS		
Power management	ENERGY STAR ³		
Ergonomics	ISO 13406 Part 2 ¹		
Emission standards	MPR-2 / MPR-3A / FCC Class B		
Environmental label	TCO 99		
Ship group	Monitor; attached stand; Setup Guide; Safety and Warranty Information; CD with multilingual User's Guide, set-up test pattern, and monitor installation files; analog signal cable; 1.8m black power cord		
Power supply	100-240Vac (universal) / integrated (no external brick-like power supply) / 30 watts typical (2 watts for "active off")		
Limited warranty ⁴	3 year (includes backlight)		
Available date	August 2003	October 2003	September 2003

POSITIONING

- Essential—Exceptional flat panel design that provides space savings
- TFT essential models offer space savings and IBM quality at entry level prices

FEATURES

- All-purpose 15-inch flat panel LCD monitor incorporates IBM ThinkVantage Design that enhances usability and complements the system design
- Addressability of 1024x768 provides crisp screen images
- Stand tilts for comfortable viewing
- Direct access for automatic image setup and brightness
- Quick and easy monitor adjustments using new designed on-screen-display
- Matching design to IBM ThinkCentre and ThinkPad systems
- A great replacement for a 15" or 17" CRT monitor
- Scaling allows full screen viewing of resolutions less than 1024x768
- Integrated power supply eliminates the bulky power adapter for improved cable management
- Lockable digital controls
- Integrated cable management in stand for clutter-free desktop
- Replacement for the IBM T541 Monitor

LIMITED WARRANTY

- ↔ **3 year limited warranty⁴**
- ↔ **International Warranty Service⁵**
- ↔ **IBM Rapid Replacement Service at 1-800-IBM-SERV (426-7378)**
- ↔ **Replacement normally arrives in two business days, excluding holidays**
- ↔ **IBM pays all shipping costs for valid warranty claims⁶**
- ↔ **Service upgrade options:⁷**
 - **3 year, on site exchange, Mon-Fri 9-5 with next day response** (ServicePac[®] part number 30L9179)
 - **3 year, on site exchange, 7 day x 24 hr with 4 hour response** (ServicePac part number 30L9183)
 - **4 year, on site exchange, Mon-Fri 9-5 with next day response** (ServicePac part number 69P9182)
 - **4 year, on site exchange, 7 day x 24 hr with 4 hour response** (ServicePac part number 69P9183)
- ↔ **24x7⁸ day toll-free support for warranty issues during the warranty period⁴**

OPTIONS

IBM Radial Arm⁹ 19K4464

* Pearl white models available upon special request for Retail Store System customers only; supply may require 13 week leadtime from committed order; order quantities may be subject to a 1100 unit minimum; contact supply planning for details

See footnotes for important warranty information
US models announced July 22, 2003

IBM® Flat Panel Monitors - US models

Name	L150 Flat Panel Monitor
Case color	Business black
Type-model	9418-AB1
US Govt model (TAA) ¹⁰	No
Stand	Tilt stand included
Screen	LCD Active Matrix TFT (Thin Film Transistor)
Viewable image size (diag)	15.0" / 381mm (diagonal)
Pixel pitch (mm)	.297mm
Max view area (inches)	12.0" x 9.0" (horizontal x vertical)
Max view area (mm)	304mm x 228mm (horizontal x vertical)
Minimum viewing angle	100° (+55/- 45°) vertical, 130° (+/- 65°) horizontal
Video input	Analog
Dual input	No

Frequency	Multi-frequency
Max addressability	1024x768
Video input (maximum)	1024x768 at 75Hz (80MHz maximum pixel rate)
Corresponding scr refresh	1024x768 at 60Hz
Vertical frequency	55 to 75Hz
Horizontal frequency	30 to 63kHz
Display colors (maximum)	More than 16 million simultaneous colors
Preset display modes	VGA: 640x480 60, 72, 75Hz 640x350 70Hz 720x400 70Hz SVGA: 800x600 60, 72, 75Hz XGA: 1024x768 60, 70, 75Hz

Presets / user settings	IBM presets: 11; user settings: 13
Brightness	250 nits or cd/m ² (typical)
Contrast ratio	400:1 (typical)
Cell response time	35ms (typical)
Scaling	Can expand image of lower addressability to full screen of 1024x768

On screen display	On screen display with digital user controls (5 languages)
Control features	Direct access (buttons on front) for auto adjustment and brightness; contrast; image horizontal and vertical position; user color settings (3 preset + 1 user); on screen display (OSD) language selection; menu position; information screen; image setup; image size to show normal or expanded format; reset of geometry and color point to factory default settings; lockable settings

Monitor connector	One connector: analog 15-pin D-shell [blue]
Signal cable	Analog cable, detachable, 15-pin D-shell at each end (for analog connector), 1.8 meter, matches color of monitor
Anti-reflective / anti-glare	Anti-reflective / anti-glare
Dimensions	14.6"H x 14.3"W x 8.4"D / 370mm height x 364mm width x 214mm depth
Weight	10.6 lbs / 4.8 kg
Viewing adjustments	Tilt: 40° back, 4° forward / detachable stand
Mounting features	Wall or desk mounting using the IBM Radial Arm ⁹ or third-party accessories meeting the VESA FPMPI [®] std (100mm)
Security	Security keyhole for attachment of optional cable lock

VESA DDC2B ²	Yes
VESA DPMS compliant	DPMS
Power management	ENERGY STAR ³
Ergonomics	ISO 13406 Part 2 ¹
Emission standards	MPR-2 / MPR-3A / FCC Class B
Environmental label	TCO 99
Ship group	Monitor; attached stand; Setup Guide; Safety and Warranty Information; CD with multilingual User's Guide, set-up test pattern, and monitor installation files; analog signal cable; 1.8m black power cord
Power supply	100-240Vac (universal) / integrated (no external brick-like power supply) / 30 watts typical (2 watts for "active off")
Limited warranty ⁴	1 year (includes backlight)
Available date	May 2004

• **This small and medium business (SMB) model is part of the IBM US Think Express Program**

POSITIONING

- Essential—Exceptional flat panel design that provides space savings
- TFT essential models offer space savings and IBM quality at entry level prices

FEATURES

- All-purpose 15-inch flat panel LCD monitor incorporates IBM ThinkVantage Design that enhances usability and complements the system design
- Addressability of 1024x768 provides crisp screen images
- Stand tilts for comfortable viewing
- Direct access for automatic image setup and brightness
- Quick and easy monitor adjustments using new designed on-screen-display
- Matching design to IBM ThinkCentre and ThinkPad systems
- A great replacement for a 15" or 17" CRT monitor
- Integrated power supply eliminates the bulky power adapter for improved cable management
- Lockable digital controls
- Integrated cable management in stand for clutter-free desktop
- Replacement for the IBM T541 Monitor

LIMITED WARRANTY

- ⇒ **1 year limited warranty⁴**
- ⇒ **International Warranty Service⁵**
- ⇒ **IBM Rapid Replacement Service at 1-800-426-7378 (customer mail-in service)**
- ⇒ **Replacement normally arrives in two business days, excluding holidays**
- ⇒ **IBM pays all shipping costs for valid warranty claims⁵**
- ⇒ **Service upgrade options:⁷**
 - **1 year, on site exchange, Mon-Fri 9-5 with next day response** (ServicePac[®] part number 29R5148)
 - **1 year, on site exchange, 7 day x 24 hr with 4 hour response** (ServicePac part number 29R5152)
 - **2 year, on site exchange, Mon-Fri 9-5 with next day response** (ServicePac part number 29R5149)
 - **2 year, on site exchange, 7 day x 24 hr with 4 hour response** (ServicePac part number 29R5153)
 - **3 year, on site exchange, Mon-Fri 9-5 with next day response** (ServicePac part number 29R5150)
 - **3 year, on site exchange, 7 day x 24 hr with 4 hour response** (ServicePac part number 29R5154)
 - **4 year, on site exchange, Mon-Fri 9-5 with next day response** (ServicePac part number 29R5151)
 - **4 year, on site exchange, 7 day x 24 hr with 4 hour response** (ServicePac part number 29R5155)
- ⇒ **24x7⁸ day toll-free support for warranty issues during the warranty period⁴**

OPTIONS

IBM Radial Arm⁹ 19K4464

See footnotes for important warranty information
US model announced May 11, 2004

IBM® Flat Panel Monitors - US models		POSITIONING
Name	L150p Flat Panel Monitor	<ul style="list-style-type: none"> Performance—Advanced flat panel design features provides space savings and performance. TFT performance models offer tilt, swivel, and height adjustments, plus analog and digital system attachments
Case color	Business black	
Type-model	6636-HB1	<p>DESCRIPTION</p> <ul style="list-style-type: none"> The L150p is a hybrid monitor. It has both an analog (15-pin D-shell) and digital (Digital Visual Interface [DVI-D]) connector on the back of the monitor. This allows one monitor to connect to different types of graphics adapters; this can be from one analog input and one digital input (it can not accept two analog inputs). <p>FEATURES</p> <ul style="list-style-type: none"> All-purpose 15-inch flat panel LCD monitor incorporates IBM ThinkVantage Design that enhances usability and complements the system design Addressability of 1024x768 provides crisp screen images Ergonomic stand swivels, tilts and provides height adjustment for comfortable viewing Direct access for automatic image setup, brightness and input selection Quick and easy monitor adjustments using new designed on-screen-display Matching design to IBM ThinkCentre and ThinkPad systems A great replacement for a 15" or 17" CRT monitor Scaling allows full screen viewing of resolutions less than 1024x768 Includes dual input connection for attachment to two systems concurrently (analog and digital) Integrated power supply eliminates the bulky power adapter for improved cable management Integrated cable management in stand for clutter-free desktop Replacement for the IBM T541H Monitor
US Govt model (TAA) ¹⁰	No	
Stand	Tilt/swivel and height adjustable stand included	
Screen	LCD Active Matrix TFT (Thin Film Transistor)	
Viewable image size (diag)	15.0" / 381mm (diagonal)	
Pixel pitch (mm)	.297mm	
Max view area (inches)	12.0" x 9.0" (horizontal x vertical)	
Max view area (mm)	304mm x 228mm (horizontal x vertical)	
Minimum viewing angle	115° (+/- 57.5°) vertical, 150° (+/- 75°) horizontal	
Video input	Digital or analog (two separate connectors)	
Dual input	Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)	
Frequency	Multi-frequency (supports sync on green)	
Max addressability	1024x768	
Video input (maximum)	1024x768 at 75Hz (80MHz maximum pixel rate)	
Corresponding scr refresh	1024x768 at 60Hz	
Vertical frequency	55 to 75Hz	
Horizontal frequency	30 to 63kHz	
Display colors (maximum)	More than 16 million simultaneous colors	
Preset display modes	VGA: 640x480 60, 72, 75Hz 640x350 70Hz 720x400 70Hz SVGA: 800x600 60, 72, 75Hz XGA: 1024x768 60, 70, 75Hz	
Presets / user settings	IBM presets: 11; user settings: 13	
Brightness	250 nits or cd/m ² (typical)	
Contrast ratio	400:1 (typical)	
Cell response time	35ms (typical)	
Scaling	Can expand image of lower addressability to full screen of 1280x1024	
On screen display	On screen display with digital user controls (5 languages)	
Control features	Direct access (buttons on front) for auto adjustment, brightness, and input select; contrast; image horizontal and vertical position; user color settings (3 preset + 1 user); on screen display (OSD) language selection; menu position; information screen; image setup; image size to show normal or expanded format; reset of geometry and color point to factory default settings; lockable settings	
Monitor connectors	Two connectors: (1) analog 15-pin D-shell [blue], (2) Digital Visual Interface (DVI-D) for digital (not analog) attach [white]	
Signal cable	Analog cable, detachable, 15-pin D-shell at each end (for analog connector), 1.8 meter, matches color of monitor / for digital attachment, a video cable with DVI-D on both ends must be supplied by the customer	
Anti-reflective / anti-glare	Anti-reflective / anti-glare	
Dimensions	12.4"H min lift (17.3" max lift) x 14.3"W x 9.3"D / 315mm min lift (440mm max lift) height x 364mm width x 237mm depth	
Weight	11.7 lbs / 5.3 kg	
Viewing adjustments	Tilt: 30° back, 0° forward / lift: 4.9" (125mm) / swivel: +/-135° / detachable stand	
Mounting features	Wall or desk mounting using the IBM Radial Arm ⁹ or third-party accessories meeting the VESA FPMPI® std (100mm)	
Security	Security keyhole for attachment of optional cable lock	
VESA DDC2B ²	Yes	
VESA DPMS compliant	DPMS	
Power management	ENERGY STAR ³	
Ergonomics	ISO 13406 Part 2 ¹	
Emission standards	MPR-2 / MPR-3A / FCC Class B	
Environmental label	TCO 99	
Ship group	Monitor; attached stand; Setup Guide; Safety and Warranty Information; CD with multilingual User's Guide, set-up test pattern, and monitor installation files; analog signal cable; 1.8m black power cord	
Power supply	100-240Vac (universal) / integrated (no external brick-like power supply) / 30 watts typical (2 watts for "active off")	
Limited warranty ⁴	3 year (includes backlight)	
Available date	August 2003	
	September 2003	
<p align="center">LIMITED WARRANTY</p> <ul style="list-style-type: none"> ↪ 3 year limited warranty⁴ ↪ International Warranty Service⁵ ↪ IBM Rapid Replacement Service at 1-800-IBM-SERV (426-7378) ↪ Replacement normally arrives in two business days, excluding holidays ↪ IBM pays all shipping costs for valid warranty claims⁶ ↪ Service upgrade options:⁷ <ul style="list-style-type: none"> • 3 year, on site exchange, Mon-Fri 9-5 with next day response (ServicePac[®] part number 30L9179) • 3 year, on site exchange, 7 day x 24 hr with 4 hour response (ServicePac part number 30L9183) • 4 year, on site exchange, Mon-Fri 9-5 with next day response (ServicePac part number 69P9182) • 4 year, on site exchange, 7 day x 24 hr with 4 hour response (ServicePac part number 69P9183) ↪ 24x7³ day toll-free support for warranty issues during the warranty period⁴ 		<p align="center">OPTIONS</p> <p>IBM Radial Arm⁹ 19K4464</p>

See footnotes for important warranty information
US models announced July 22, 2003

IBM® Flat Panel Monitors - US models

Name	L170 Flat Panel Monitor Business black		
Case color	Business black		
Type-model	6734-AB0	6734-AK0	6734-AC0
US Govt model (TAA) ¹⁰	No	Yes ¹⁰	No
Stand	Tilt stand included		
Screen	LCD Active Matrix TFT (Thin Film Transistor)		
Viewable image size (diag)	17.0" / 432mm (diagonal)		
Pixel pitch (mm)	.264mm		
Max view area (inches)	13.3" x 10.6" (horizontal x vertical)		
Max view area (mm)	338mm x 270mm (horizontal x vertical)		
Minimum viewing angle	120° (+/- 60°) vertical, 140° (+/- 70°) horizontal		
Video input	Analog		
Dual input	No		
Frequency	Multi-frequency		
Max addressability	1280x1024		
Video input (maximum)	1280x1024 at 75Hz (135MHz maximum pixel rate)		
Corresponding scr refresh	1280x1024 at 60Hz		
Vertical frequency	55 to 76Hz		
Horizontal frequency	31 to 81kHz		
Display colors (maximum)	More than 16 million simultaneous colors		
Preset display modes	VGA: 640x480	60, 72, 75Hz	
	720x400	70Hz	
	SVGA: 800x600	60, 72, 75Hz	
	832x624	75Hz	
	XGA: 1024x768	60, 70, 75Hz	
	1152x864	75Hz	
	SXGA: 1280x1024	60, 75Hz	
Presets / user settings	IBM presets: 14; user settings: 15		
Brightness	250 nits or cd/m ² (typical)		300 nits or cd/m ² (typical)
Contrast ratio	350:1 (typical)		400:1 (typical)
Cell response time	25ms (typical)		16ms (typical)
Scaling	Can expand image of lower addressability to full screen of 1280x1024		
On screen display	On screen display with digital user controls (5 languages)		
Control features	Direct access (buttons on front) for auto adjustment and brightness; contrast; image horizontal and vertical position; user color settings (3 preset + 1 user); on screen display (OSD) language selection; menu position; information screen; image setup; image size to show normal or expanded format; reset of geometry and color point to factory default settings; lockable settings		
Monitor connector	One connector: analog 15-pin D-shell [blue]		
Signal cable	Analog cable, detachable, 15-pin D-shell at each end (for analog connector), 1.8 meter, matches color of monitor		
Anti-reflective / anti-glare	Anti-reflective / anti-glare		
Dimensions	16.2"H x 15.7"W x 8.6"D / 411mm height x 400mm width x 218mm depth		
Weight	11.7 lbs / 5.3 kg		
Viewing adjustments	Tilt: 40° back, 4° forward / detachable stand		
Mounting features	Wall or desk mounting using the IBM Radial Arm ⁹ or third-party accessories meeting the VESA FPMPI [®] std (100mm)		
Security	Security keyhole for attachment of optional cable lock		
VESA DDC2B ²	Yes		
VESA DPMS compliant	DPMS		
Power management	ENERGY STAR ³		
Ergonomics	ISO 13406 Part 2 ¹		
Emission standards	MPR-2 / MPR-3A / FCC Class B		
Environmental label	TCO 99		
Ship group	Monitor, attached stand, Setup Guide, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, analog signal cable, 1.8m black power cord		
Power supply	100-240Vac (universal) / integrated (no external brick-like power supply) / 45 watts typical (3 watts for "active off")		
Limited warranty ⁴	3 year (includes backlight)		
Available date	May 2003	September 2003	May 2004

POSITIONING

- Essential—Exceptional flat panel design that provides space savings
- TFT essential models offer space savings and IBM quality at entry-level prices

FEATURES

- All-purpose 17-inch flat panel LCD monitor incorporates IBM ThinkVantage Design that enhances usability and complements the system design
- Addressability of 1280x1024 provides crisp screen images
- Stand tilts for comfortable viewing
- Direct access for automatic image setup and brightness
- Quick and easy monitor adjustments using new designed on-screen-display
- Matching design to IBM systems
- A great replacement for a 17" or 19" CRT monitor
- Scaling allows full screen viewing of resolutions less than 1280x1024
- Integrated power supply eliminates the bulky power adapter for improved cable management
- Lockable digital controls
- Integrated cable management in stand for clutter-free desktop
- Replacement for the IBM T710 Monitor

LIMITED WARRANTY

- ↔ **3 year limited warranty⁴**
- ↔ **International Warranty Service⁵**
- ↔ **IBM Rapid Replacement Service at 1-800-IBM-SERV (426-7378)**
- ↔ **Replacement normally arrives in two business days, excluding holidays**
- ↔ **IBM pays all shipping costs for valid warranty claims⁶**
- ↔ **Service upgrade options:⁷**
 - **3 year, on site exchange, Mon-Fri 9-5 with next day response** (ServicePac[®] part number 30L9179)
 - **3 year, on site exchange, 7 day x 24 hr with 4 hour response** (ServicePac part number 30L9183)
 - **4 year, on site exchange, Mon-Fri 9-5 with next day response** (ServicePac part number 69P9186)
 - **4 year, on site exchange, 7 day x 24 hr with 4 hour response** (ServicePac part number 69P9187)
- ↔ **24x7⁸ day toll-free support for warranty issues during the warranty period⁴**

OPTIONS

IBM Radial Arm⁹ 19K4464

See footnotes for important warranty information

¹⁰ US model announced May 11, 2004; previous model on April 22 or August 12, 2003

IBM® Flat Panel Monitors - US models

Name **L170 Flat Panel Monitor**
 Case color **Business black**
 Type-model **9818-AC0**
 US Govt model (TAA)¹⁰ **No**
 Stand **Tilt stand included**
 Screen **LCD Active Matrix TFT (Thin Film Transistor)**
 Viewable image size (diag) **17.0" / 432mm (diagonal)**
 Pixel pitch (mm) **.264mm**
 Max view area (inches) **13.3" x 10.6" (horizontal x vertical)**
 Max view area (mm) **338mm x 270mm (horizontal x vertical)**
 Minimum viewing angle **135° (+75°/- 60°) vertical, 150° (+/- 75°) horizontal**
 Video input **Analog**
 Dual input **No**

Frequency **Multi-frequency**
 Max addressability **1280x1024**
 Video input (maximum) **1280x1024 at 75Hz (135MHz maximum pixel rate)**
 Corresponding scr refresh **1280x1024 at 60Hz**
 Vertical frequency **55 to 76Hz**
 Horizontal frequency **31 to 81kHz**
 Display colors (maximum) **More than 16 million simultaneous colors**
 Preset display modes

VGA: 640x350 70Hz
 640x480 66 (Mac), 60, 72, 75Hz
 720x400 70Hz
 SVGA: 800x600 60, 72, 75Hz
 832x624 75Hz (Mac)
 XGA: 1024x768 60, 70, 75, 75 (Mac) Hz
 1152x864 75Hz
 1152x870 75Hz
 1152x900 66Hz
 SXGA: 1280x1024 60, 72, 75, 76 (Sun) Hz

Factory presets / user sett **Factory presets: 21; user locations: 15**
 Brightness **300 nits or cd/m² (typical)**
 Contrast ratio **500:1 (typical)**
 Cell response time **13ms (typical)**
 Scaling **Can expand image of lower addressability to full screen of 1280x1024**

On screen display **On screen display with digital user controls (5 languages)**
 Control features **Direct access (buttons on front) for auto adjustment and brightness; contrast; image horizontal and vertical position; user color settings (3 preset + 1 user); on screen display (OSD) language selection; menu position; information screen; image setup; image size to show normal or expanded format; reset of geometry and color point to factory default settings; lockable settings**
 Monitor connector **One connector: analog 15-pin D-shell [blue]**
 Signal cable **Analog cable, detachable, 15-pin D-shell at each end (for analog connector), 1.8 meter, matches color of monitor**
 Anti-reflective / anti-glare **Anti-reflective / anti-glare**
 Dimensions **16.2"H x 15.7"W x 8.6"D / 411mm height x 400mm width x 218mm depth**
 Weight **13.2 lbs / 6.0 kg**
 Viewing adjustments **Tilt: 40° back, 4° forward / detachable stand**
 Mounting features **Wall or desk mounting using the IBM Radial Arm⁹ or third-party accessories meeting the VESA FPMPI[®] std (100mm)**
 Security **Security keyhole for attachment of optional cable lock**

VESA DDC2B² **Yes**
 VESA DPMS compliant **DPMS**
 Power management **ENERGY STAR³**
 Ergonomics **ISO 13406 Part 2¹**
 Emission standards **MPR-2 / MPR-3A / FCC Class B**
 Environmental label **TCO 99**
 Ship group **Monitor, attached stand, Setup Guide, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, analog signal cable, 1.8m black power cord**
 Power supply **100-240Vac (universal) / **integrated** (no external brick-like power supply) / 30 watts typical (1 watt for "active off")**
 Limited warranty⁴ **1 year (includes backlight)**
 Available date **May 2004**

• This small and medium business (SMB) model is part of the IBM US Think Express Program

POSITIONING

- Essential—Exceptional flat panel design that provides space savings
- TFT essential models offer space savings and IBM quality at entry-level prices

FEATURES

- All-purpose 17-inch flat panel LCD monitor incorporates IBM ThinkVantage Design that enhances usability and complements the system design
- Addressability of 1280x1024 provides crisp screen images
- Stand tilts for comfortable viewing
- Direct access for automatic image setup and brightness
- Quick and easy monitor adjustments using new designed on-screen-display
- Matching design to IBM systems
- A great replacement for a 17" or 19" CRT monitor
- Scaling allows full screen viewing of resolutions less than 1280x1024
- Integrated power supply eliminates the bulky power adapter for improved cable management
- Lockable digital controls
- Integrated cable management in stand for clutter-free desktop
- Replacement for the IBM T710 Monitor

LIMITED WARRANTY

- ↪ **1 year limited warranty⁴**
- ↪ **International Warranty Service⁵**
- ↪ **IBM Rapid Replacement Service at 1-800-426-7378 (customer mail-in service)**
- ↪ **Replacement normally arrives in two business days, excluding holidays**
- ↪ **IBM pays all shipping costs for valid warranty claims⁶**
- ↪ **Service upgrade options:⁷**
 - **1 year, on site exchange, Mon-Fri 9-5 with next day response** (ServicePac[®] part number 29R5148)
 - **1 year, on site exchange, 7 day x 24 hr with 4 hour response** (ServicePac part number 29R5152)
 - **2 year, on site exchange, Mon-Fri 9-5 with next day response** (ServicePac part number 29R5149)
 - **2 year, on site exchange, 7 day x 24 hr with 4 hour response** (ServicePac part number 29R5153)
 - **3 year, on site exchange, Mon-Fri 9-5 with next day response** (ServicePac part number 29R5150)
 - **3 year, on site exchange, 7 day x 24 hr with 4 hour response** (ServicePac part number 29R5154)
 - **4 year, on site exchange, Mon-Fri 9-5 with next day response** (ServicePac part number 29R5151)
 - **4 year, on site exchange, 7 day x 24 hr with 4 hour response** (ServicePac part number 29R5155)
- ↪ **24x7[®] day toll-free support for warranty issues during the warranty period⁴**

OPTIONS

IBM Radial Arm⁹ 19K4464

See footnotes for important warranty information
US model announced May 11, 2004

IBM® Flat Panel Monitors - US models		POSITIONING
Name	L170p Flat Panel Monitor	<ul style="list-style-type: none"> Performance—Advanced flat panel design features provides space savings and performance. TFT performance models offer tilt, swivel, and height adjustments, plus analog and digital system attachments.
Case color	Business black	
Type-model	6734-HB0	<p>DESCRIPTION</p> <ul style="list-style-type: none"> The L170p is a hybrid monitor. It has both an analog (15-pin D-shell) and digital (Digital Visual Interface [DVI-D]) connector on the back of the monitor. This allows one monitor to connect to different types of graphics adapters; this can be from one analog input and one digital input (it can not accept two analog inputs).
US Govt model (TAA) ¹⁰	No	
Stand	Tilt/swivel and height adjustable stand included	<p>FEATURES</p> <ul style="list-style-type: none"> All-purpose 17-inch flat panel LCD monitor incorporates IBM ThinkVantage Design that enhances usability and complements the system design Addressability of 1280x1024 provides crisp screen images Ergonomic stand swivels, tilts and provides height adjustment for comfortable viewing Direct access for automatic image setup, brightness and input selection Quick and easy monitor adjustments using new designed on-screen-display Matching design to IBM systems A great replacement for a 17" or 19" CRT monitor Scaling allows full screen viewing of resolutions less than 1280x1024 Includes dual input connection for attachment to two systems concurrently (analog and digital) Integrated power supply eliminates the bulky power adapter for improved cable management Integrated cable management in stand for clutter-free desktop Replacement for the IBM T750 Monitor
Screen	LCD Active Matrix TFT (Thin Film Transistor)	
Viewable image size (diag)	17.0" / 432mm (diagonal)	
Pixel pitch (mm)	.264mm	
Max view area (inches)	13.3" x 10.6" (horizontal x vertical)	
Max view area (mm)	338mm x 270mm (horizontal x vertical)	
Minimum viewing angle	170° (+/- 85°) vertical, 170° (+/- 85°) horizontal	
Video input	Digital or analog (two separate connectors)	
Dual input	Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)	
Frequency	Multi-frequency (supports sync on green)	
Max addressability	1280x1024	
Video input (maximum)	1280x1024 at 75Hz (135MHz maximum pixel rate)	
Corresponding scr refresh	1280x1024 at 60Hz	
Vertical frequency	55 to 76Hz	
Horizontal frequency	31 to 81kHz	
Display colors (maximum)	More than 16 million simultaneous colors	
Preset display modes	VGA: 640x480 60, 66, 72, 75Hz 640x350 70Hz 720x400 70Hz SVGA: 800x600 60, 72, 75Hz 832x624 75Hz XGA: 1024x768 60, 70, 75Hz 1152x864 75Hz 1152x870 75Hz 1152x900 66Hz SXGA: 1280x1024 60, 72, 75, 76 (Sun) Hz	
Presets / user settings	IBM presets: 20; user settings: 15	
Brightness	250 nits or cd/m ² (typical)	
Contrast ratio	500:1 (typical)	
Cell response time	25ms (typical)	
Scaling	Can expand image of lower addressability to full screen of 1280x1024	
On screen display	On screen display with digital user controls (5 languages)	
Control features	Direct access (buttons on front) for auto adjustment, brightness, and input select; contrast; image horizontal and vertical position; user color settings (3 preset + 1 user); on screen display (OSD) language selection; menu position; information screen; image setup; image size to show normal or expanded format; reset of geometry and color point to factory default settings; lockable settings	
Monitor connectors	Two connectors: (1) analog 15-pin D-shell [blue], (2) Digital Visual Interface (DVI-D) for digital (not analog) attach [white]	
Signal cable	Analog cable, detachable, 15-pin D-shell at each end (for analog connector), 1.8 meter, matches color of monitor / for digital attachment, a video cable with DVI-D on both ends must be supplied by the customer	
Anti-reflective / anti-glare	Anti-reflective / anti-glare	
Dimensions	14.1"H min lift (18.0" max lift) x 15.7"W x 9.3"D / 357mm min lift (457mm max lift) height x 400mm width x 237mm depth	
Weight	12.6 lbs / 5.7 kg	
Viewing adjustments	Tilt: 30° back, 0° forward / lift: 3.9" (100mm) / swivel: +/-135° / detachable stand	
Mounting features	Wall or desk mounting using the IBM Radial Arm ⁹ or third-party accessories meeting the VESA FPMPI [®] std (100mm)	
Security	Security keyhole for attachment of optional cable lock	
VESA DDC2B ²	Yes	
VESA DPMS compliant	DPMS	
Power management	ENERGY STAR ³	
Ergonomics	ISO 13406 Part 2 ¹	
Emission standards	MPR-2 / MPR-3A / FCC Class B	
Environmental label	TCO 99	
Ship group	Monitor, attached stand, Setup Guide, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, analog signal cable, 1.8m black power cord	
Power supply	100-240Vac (universal) / integrated (no external brick-like power supply) / 40 watts typical (3 watts for "active off")	
Limited warranty ⁴	3 year (includes backlight)	
Available date	May 2003 September 2003	
<p>LIMITED WARRANTY</p> <ul style="list-style-type: none"> ↻ 3 year limited warranty⁴ ↻ International Warranty Service⁵ ↻ IBM Rapid Replacement Service at 1-800-IBM-SERV (426-7378) ↻ Replacement normally arrives in two business days, excluding holidays ↻ IBM pays all shipping costs for valid warranty claims⁶ ↻ Service upgrade options:⁷ <ul style="list-style-type: none"> • 3 year, on site exchange, Mon-Fri 9-5 with next day response (ServicePac[®] part number 30L9179) • 3 year, on site exchange, 7 day x 24 hr with 4 hour response (ServicePac part number 30L9183) • 4 year, on site exchange, Mon-Fri 9-5 with next day response (ServicePac part number 69P9186) • 4 year, on site exchange, 7 day x 24 hr with 4 hour response (ServicePac part number 69P9187) ↻ 24x7⁹ day toll-free support for warranty issues during the warranty period⁴ 		<p>OPTIONS</p> <p>IBM Radial Arm⁹ 19K4464</p>

See footnotes for important warranty information

¹⁰ US model announced August 12, 2003; previous model on April 22, 2003

IBM® Flat Panel Monitors - US models	POSITIONING
<p>Name L180p Flat Panel Monitor Case color Business black Type-model 9180-HB9 US Govt model (TAA)¹⁰ No Stand Tilt/swivel and height adjustable stand included Screen LCD Active Matrix TFT (Thin Film Transistor) Viewable image size (diag) 18.1" / 460mm (diagonal) Pixel pitch (mm) .2805mm Max view area 14.8" x 11.8" / 359mm x 287mm (horizontal x vertical) Minimum viewing angle 170° (+/- 85°) vertical, 170° (+/- 85°) horizontal Video input Digital or analog (two separate connectors) Dual input Dual input (two different PCs attach to two different connectors; one PC shows image; select via button) Bezel width 17mm (left and right sides)</p>	<p>• Performance—Advanced flat panel design features provides space savings and performance. • TFT performance models offer tilt, swivel, and height adjustments, plus analog and digital system attachments.</p> <p>DESCRIPTION</p> <p>• The L180p is a hybrid monitor. It has both an analog (15-pin D-shell) and digital or analog (Digital Visual Interface [DVI-I]) connector on the back of the monitor. This allows one monitor to connect to different types of graphics adapters; this can be from one analog input and one digital or analog input (it can accept two analog inputs).</p>
<p>Frequency Multi-frequency (supports sync on green) Max addressability 1280x1024 Video input (maximum) 1280x1024 at 75Hz (135MHz maximum pixel rate) Corresponding scr refresh 1280x1024 at 60Hz Vertical frequency 55 to 75Hz Horizontal frequency 31 to 81kHz Display colors (maximum) More than 16 million simultaneous colors Preset display modes VGA: 640x480 60, 66, 75Hz 640x350 70Hz 720x400 70Hz SVGA: 800x600 60, 75Hz 832x624 75Hz XGA: 1024x768 60, 70, 75Hz 1152x870 75Hz 1152x900 66Hz SXGA: 1280x1024 60, 75Hz Presets / user settings IBM presets: 15; user settings: 10 Brightness 250 nits or cd/m² (typical) Contrast ratio 350:1 (typical) Cell response time 30ms (typical) Scaling Can expand image of lower addressability to full screen of 1280x1024</p>	<p>FEATURES</p> <ul style="list-style-type: none"> • All-purpose 18.1-inch flat panel LCD monitor incorporates IBM ThinkVantage Design that enhances usability and complements the system design • Ultra narrow bezel of 17mm minimizes distance between screen images in a multiple monitor environment • Built-in handle for quick and easy mounting • Addressability of 1280x1024 provides crisp screen images • Ergonomic stand swivels, tilts and provides height adjustment for comfortable viewing • Direct access for automatic image setup, brightness and input selection • Matching design to IBM systems • A great replacement for a 17" or 19" CRT monitor • Scaling allows full screen viewing of resolutions less than 1280x1024 • Integrated power supply eliminates the bulky power adapter for improved cable management • Integrated cable management in stand for clutter-free desktop • Replacement for the IBM T860 monitor
<p>On screen display On screen display with digital user controls (6 languages) Control features Direct access (buttons on front) for auto adjustment, brightness, and input select; contrast; image horizontal and vertical position; user color settings (3 preset + 1 user); on screen display (OSD) language selection; menu position; information screen; image setup; image size to show normal or expanded format; reset of geometry and color point to factory default settings; lockable settings</p> <p>Monitor connectors Two connectors: (1) analog 15-pin D-shell [blue], (2) Digital Visual Interface (DVI-I) for digital or analog attach [white] Signal cables Two cables: (1) detachable, 15-pin D-shell at each end (for analog connector), 3.0 meter, matches color of monitor (2) detachable digital, DVI-D at each end (for digital connector), 3.0 meter, matches color of monitor</p> <p>Anti-reflective / anti-glare Anti-reflective / anti-glare Dimensions (with stand) 13.8"H min lift (17.7" max lift) x 15.6"W x 10.2"D / 350mm min lift (450mm max lift) height x 396mm width x 259mm depth Weight 16.5 lb / 7.5kg Viewing adjustments Tilt: 30° back, 0° forward / lift: 3.9" (100mm) / swivel: +/-135° / detachable stand Mounting features Wall or desk mounting using the IBM Radial Arm⁹ or third-party accessories meeting the VESA FPMPI[®] std (100mm) Security Security keyhole for attachment of optional cable lock (Kensington[®] lock-compatible)</p>	
<p>VESA DDC2B² Yes VESA DPMS compliant DPMS Power management ENERGY STAR³ Ergonomics ISO 13406 Part 2¹ Emission standards MPR-2 / MPR-3A / FCC Class B Environmental label TCO 99 Ship group Monitor, attached stand, Setup Guide, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, analog signal cable, digital signal cable, 1.8m black power cord Power supply 100-240Vac (universal) / integrated (no external brick-like power supply) / 55 watts typical (3 watts for "active off") Limited warranty⁴ 3 year (includes backlight) Available date March 2004</p>	

LIMITED WARRANTY	OPTIONS
<ul style="list-style-type: none"> ↻ 3 year limited warranty⁴ ↻ International Warranty Service⁵ ↻ IBM Rapid Replacement Service at 1-800-IBM-SERV (426-7378) ↻ Replacement normally arrives in two business days, excluding holidays ↻ IBM pays all shipping costs for valid warranty claims⁶ ↻ Service upgrade options:⁷ <ul style="list-style-type: none"> • 3 year, on site exchange, Mon-Fri 9-5 with next day response (ServicePac[®] part number 30L9179) • 3 year, on site exchange, 7 day x 24 hr with 4 hour response (ServicePac part number 30L9183) • 4 year, on site exchange, Mon-Fri 9-5 with next day response (ServicePac part number 69P9186) • 4 year, on site exchange, 7 day x 24 hr with 4 hour response (ServicePac part number 69P9187) ↻ 24x7⁹ day toll-free support for warranty issues during the warranty period⁴ 	<p>IBM Radial Arm⁹ 19K4464</p> <p>IBM ThinkVision L180p/T860 Speaker/USB Hub 19K1901</p> <ul style="list-style-type: none"> • Speaker and USB port solution • Two one-watt stereo speakers with volume control • Four downstream USB ports (Version 1.1) to connect four additional USB devices to computer • Attaches to bottom bezel of monitor • Uses no desk space • Volume control knob • Headphone jack provides private listening • Microphone jack • Utilizes the existing power from the monitor • Stealth black color

See footnotes for important warranty information
US model announced March 9, 2004

IBM® Flat Panel Monitors - US models	POSITIONING
<p>Name L190p Flat Panel Monitor Case color Business black Type-model 2704-HB7 US Govt model (TAA)¹⁰ No Stand Tilt/swivel and height adjustable stand included Screen LCD Active Matrix TFT (Thin Film Transistor) Viewable image size (diag) 19.0" / 483mm (diagonal) Pixel pitch (mm) .294mm Max view area (inches) 14.8" x 11.8" (horizontal x vertical) Max view area (mm) 376mm x 301mm (horizontal x vertical) Minimum viewing angle 170° (+/- 85°) vertical, 170° (+/- 85°) horizontal Video input Digital or analog (two separate connectors) Dual input Dual input (two different PCs attach to two different connectors; one PC shows image; select via button)</p>	<p>• Performance—Advanced flat panel design features provides space savings and performance. • TFT performance models offer tilt, swivel, and height adjustments, plus analog and digital system attachments.</p>
<p>Frequency Multi-frequency (supports sync on green) Max addressability 1280x1024 Video input (maximum) 1280x1024 at 76Hz (135MHz maximum pixel rate) Corresponding scr refresh 1280x1024 at 60Hz Vertical frequency 55 to 76Hz Horizontal frequency 31 to 81kHz Display colors (maximum) More than 16 million simultaneous colors Preset display modes VGA: 640x480 60, 66 (Mac), 72, 75Hz 640x350 70Hz 720x400 70Hz SVGA: 800x600 60, 72, 75Hz 832x624 75Hz XGA: 1024x768 60, 70, 75 (Mac), 75Hz 1152x864 75Hz 1152x870 75Hz 1152x900 66Hz SXGA: 1280x1024 60, 72, 75, 76 (Sun) Hz Presets / user settings IBM presets: 21; user settings: 15 Brightness 250 nits or cd/m² (typical) Contrast ratio 500:1 (typical) Cell response time 25ms (typical) Scaling Can expand image of lower addressability to full screen of 1280x1024</p>	<p>DESCRIPTION</p> <p>• The L190p is a hybrid monitor. It has both an analog (15-pin D-shell) and digital (Digital Visual Interface [DVI-D]) connector on the back of the monitor. This allows one monitor to connect to different types of graphics adapters; this can be from one analog input and one digital input (it can not accept two analog inputs).</p>
<p>On screen display On screen display with digital user controls (5 languages) Control features Direct access (buttons on front) for auto adjustment, brightness, and input select; contrast; image horizontal and vertical position; user color settings (3 preset + 1 user); on screen display (OSD) language selection; menu position; information screen; image setup; image size to show normal or expanded format; reset of geometry and color point to factory default settings; lockable settings Monitor connectors Two connectors: (1) analog 15-pin D-shell [blue], (2) Digital Visual Interface (DVI-D) for digital (not analog) attach [white] Signal cables Two cables: (1) detachable, 15-pin D-shell at each end (for analog connector), 1.8 meter, matches color of monitor (2) detachable digital, DVI-D at each end (for digital connector), 2.0 meter, matches color of monitor Anti-reflective / anti-glare Anti-reflective / anti-glare Dimensions 15.2"H min lift (18.4" max lift) x 17.4"W x 9.3"D / 387mm min lift (467mm max lift) height x 441mm width x 237mm depth Weight 16.8 lb / 7.6kg Viewing adjustments Tilt: 30° back, 0° forward / lift: 3.2" (80mm) / swivel: +/- 135° / detachable stand Mounting features Wall or desk mounting using the IBM Radial Arm⁹ or third-party accessories meeting the VESA FPMPI[®] std (100mm) Security Security keyhole for attachment of optional cable lock</p>	<p>FEATURES</p> <ul style="list-style-type: none"> • All-purpose 19-inch flat panel LCD monitor incorporates IBM ThinkVantage Design that enhances usability and complements the system design • Addressability of 1280x1024 provides crisp screen images • Ergonomic stand swivels, tilts and provides height adjustment for comfortable viewing • Direct access for automatic image setup, brightness and input selection • Quick and easy monitor adjustments using new designed on-screen-display • Matching design to IBM systems • A great replacement for a 17" or 19" CRT monitor • Scaling allows full screen viewing of resolutions less than 1280x1024 • Includes dual input connection for attachment to two systems concurrently (analog and digital) • Integrated power supply eliminates the bulky power adapter for improved cable management • Integrated cable management in stand for clutter-free desktop
<p>VESA DDC2B² Yes VESA DPMS compliant DPMS Power management ENERGY STAR³ Ergonomics ISO 13406 Part 2¹ Emission standards MPR-2 / MPR-3A / FCC Class B Environmental label TCO 99 Ship group Monitor, attached stand, Setup Guide, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, analog signal cable, digital signal cable, 1.8m black power cord Power supply 100-240Vac (universal) / integrated (no external brick-like power supply) / 40 watts typical (3 watts for "active off") Limited warranty⁴ 3 year (includes backlight) Available date November 2003</p>	
<p>LIMITED WARRANTY</p> <ul style="list-style-type: none"> ↔ 3 year limited warranty⁴ ↔ International Warranty Service⁵ ↔ IBM Rapid Replacement Service at 1-800-IBM-SERV (426-7378) ↔ Replacement normally arrives in two business days, excluding holidays ↔ IBM pays all shipping costs for valid warranty claims⁶ ↔ Service upgrade options:⁷ <ul style="list-style-type: none"> • 3 year, on site exchange, Mon-Fri 9-5 with next day response (ServicePac[®] part number 30L9179) • 3 year, on site exchange, 7 day x 24 hr with 4 hour response (ServicePac part number 30L9183) • 4 year, on site exchange, Mon-Fri 9-5 with next day response (ServicePac part number 69P9188) • 4 year, on site exchange, 7 day x 24 hr with 4 hour response (ServicePac part number 69P9189) ↔ 24x7⁹ day toll-free support for warranty issues during the warranty period⁴ 	<p>OPTIONS</p> <p>IBM Radial Arm⁹ 19K4464</p>

See footnotes for important warranty information
 US model announced November 18, 2003

IBM® Flat Panel Monitors - US model

Name **L200p Flat Panel Monitor**
 Case color **Business black**
 Type-model **6736-HB0**
 Stand **Tilt/swivel and height adjustable stand included**
 Screen LCD Active Matrix TFT (Thin Film Transistor)
 Viewable image size (diag) **20.1" / 511mm** (diagonal)
 Pixel pitch (mm) .255mm
 Max view area (inches) 16.0" x 12.0" (horizontal x vertical)
 Max view area (mm) 408mm x 306mm (horizontal x vertical)
 Minimum viewing angle 176° (+/- 88°) vertical, 176° (+/- 88°) horizontal
 Video input **Digital or analog (two separate connectors)**
 Dual input **Dual input** (two different PCs attach to two different connectors; one PC shows image; select via button)

Frequency Multi-frequency (supports sync on green)
 Max addressability 1600x1200
 Video input (analog max) 1600x1200 at 75Hz (205MHz maximum pixel rate)
 Video input (digital max) 1600x1200 at 60Hz (162MHz maximum pixel rate)
 Corresponding scr refresh 1600x1200 at 60Hz
 Vertical frequency 56 to 85Hz
 Horizontal frequency *Analog: 31 to 94kHz; Digital: 31 to 75kHz*
 Display colors (maximum) 16.7 million simultaneous colors
 Preset display modes
 VGA: 640x480 60, 66, 75, 85Hz
 640x350 70Hz
 720x400 70Hz
 SVGA: 800x600 56, 60, 70, 72, 85Hz
 832x624 75Hz
 XGA: 1024x768 60, 70, 75, 85Hz
 1152x870 75Hz
 1152x900 66Hz
 SXGA: 1280x1024 60, 75Hz
 UXGA: 1600x1600 60, 75Hz

Presets / user settings IBM presets: 22; user settings: 10
 Brightness 250 nits or cd/m² (typical)
 Contrast ratio 400:1 (typical)
 Cell response time 25ms (typical)
 Scaling Can expand image of lower addressability to full screen of 1600x1200

On screen display On screen display with digital user controls (5 languages)
 Control features Direct access (buttons on front) for auto adjustment, brightness, and input select; contrast; image horizontal and vertical position; user color settings (3 preset + 1 user); on screen display (OSD) language selection; menu position; display time; information screen; image setup; image size to show normal or expanded format; reset of geometry and color point to factory default settings; lockable settings

Monitor connectors Two connectors: (1) analog 15-pin D-shell [blue], (2) Digital Visual Interface (DVI-I) for analog or digital attach [white]
 Signal cable Two cables: (1) detachable, 15-pin D-shell at each end (for analog connector), 1.8 meter, matches color of monitor
 (2) detachable digital, DVI-D at each end (for digital connector), 1.8 meter, matches color of monitor

Anti-reflective / anti-glare Anti-reflective / anti-glare
 Dimensions 15.5"H min lift (18.6" max lift) x 18.4"W x 10.2"D / 393mm min lift (473mm max lift) height x 468mm width x 259mm depth
 Weight 20.9 lbs / 9.5 kg
 Viewing adjustments Tilt: 30° back, 0° forward / lift: 3.1" (80mm) / swivel: +/-135° / detachable stand
 Mounting features Wall or desk mounting using the IBM Radial Arm⁹ or third-party accessories meeting the VESA FPM PMI standard
 Security Security keyhole for attachment of optional cable lock

VESA DDC2B² Yes
 VESA DPMS compliant DPMS
 Power management ENERGY STAR³
 Ergonomics ISO 13406 Part 2¹
 Emission standards MPR-2 / MPR-3A
 Environmental label TCO 99
 Ship group Monitor, attached stand, Setup Guide, Safety and Warranty Information, CD with multilingual User's Guide and monitor installation files, analog signal cable, digital signal cable, 1.8m black power cord
 Power supply 100-240Vac (universal) / **integrated** (no external brick-like power supply) / 65 watts typical (3 watts for "active off")
 Limited warranty⁴ **3 year** (includes backlight)
 Available date February 2003

POSITIONING

- Performance—Advanced flat panel design features provides space savings and performance.
- TFT performance models offer tilt, swivel, and height adjustments, plus analog and digital system attachments

DESCRIPTION

- The L200p is a hybrid monitor. It has both an analog (15-pin D-shell) and digital or analog (Digital Visual Interface [DVI-I]) connector on the back of the monitor. This allows one monitor to connect to different types of graphics adapters.

FEATURES

- 20.1-inch flat panel monitor is designed for advanced graphics applications
- Addressability of 1600x1200 provides crisp screen images
- Ergonomic stand swivels, tilts and provides height adjustment for comfortable viewing
- Quick and easy monitor adjustments using new designed on-screen-display
- A great replacement for a 19" or 21" CRT monitor
- Scaling allows full screen viewing of resolutions less than 1600x1200
- Includes dual input connection for attachment to two systems concurrently (analog and digital or two analog)
- Hybrid connection provides analog or digital system attachment for flexibility and investment protection
- Auto-setup button provides quick and easy screen adjustment for optimal viewing
- Integrated power supply eliminates the bulky power adapter for improved cable management
- Lockable digital controls

LIMITED WARRANTY

- ↻ **3 year limited warranty⁴**
- ↻ **International Warranty Service⁵**
- ↻ **IBM Rapid Replacement Service at 1-800-IBM-SERV (426-7378)**
- ↻ **Replacement normally arrives in two business days, excluding holidays**
- ↻ **IBM pays all shipping costs for valid warranty claims⁶**
- ↻ **Service upgrade options:⁷**
 - **3 year, on site exchange, Mon-Fri 9-5 with next day response** (ServicePac⁸ part number 30L9179)
 - **3 year, on site exchange, 7 day x 24 hr with 4 hour response** (ServicePac part number 30L9183)
 - **4 year, on site exchange, Mon-Fri 9-5 with next day response** (ServicePac part number 69P9186)
 - **4 year, on site exchange, 7 day x 24 hr with 4 hour response** (ServicePac part number 69P9187)
- ↻ **24x7⁹ day toll-free support for warranty issues during the warranty period⁴**

OPTIONS

IBM Radial Arm⁹ 19K4464

Warranty information: For a copy of applicable product warranties, write to: Warranty Information, P.O. Box 12195, RTP, NC, 27709, Attn: Dept JDJA/B203. IBM makes no representation or warranty regarding third party products or services.

- ¹ Compliance with ISO 9241 Part 3, ISO Part 7, ISO Part 8, and/or ISO 13406 Part 2 is dependent on a complete ISO-capable platform of a system unit, monitor, video subsystem, operating system and fonts.
- ² Requires attachment to suitably configured system with similarly enabled operating system.
- ³ As an ENERGY STAR partner, IBM has determined that this product meets the ENERGY STAR guidelines for energy efficiency. Requires attachment to suitably configured system.
- ⁴ For terms and conditions or a copy of IBM's Statement of Limited Warranty, call 1 800 772-2227 in the U.S. Copies available upon request. Telephone support may be subject to additional charges. For onsite labor, customer may be asked certain diagnostic questions before a technician is sent.
- ⁵ International Warranty Service is available in any country in which this product is sold and serviced. Service delivery methods and parts availability vary by country, may be different from that in the country of purchase, and are subject to change without notice. Fees and restrictions may apply in some countries.
- ⁶ IBM pays all shipping costs for warranty repairs during limited warranty period.
- ⁷ These repair and exchange services are available for machines normally used for business, professional or trade purposes rather than personal, family or household purposes. Subject to IBM ServicePac Maintenance Service Agreement. Not all machine types and models are covered. Service period begins with the equipment date of purchase. Service must be purchased during the original limited product warranty period. Service levels are response time objectives and are not guarantees; service levels may exclude some holidays. On-site service provided after IBM attempts to resolve the problem. For critical service requests, a service technician is scheduled to arrive at your location within two hours, four hours, or the next business day (depending on service) after remote problem determination is completed. For the 9x5x4 service, calls dispatched after

1:00pm local time can expect the service technician to arrive by the morning of the following business day. For non-critical service requests, a service technician will arrive by the end of the following business day. If a machine problem turns out to be a Customer Replaceable Unit (CRU), IBM will express ship the part to you for quick replacement. External peripherals require their own separate service coverage; they are not covered under the attached machine's ServicePac. Service activation is required immediately following purchase. For failing non-IBM machines, customer must provide replacement part unless IBM has a Technical Support Agreement with the manufacturer. Service does not cover accessories, supply items and certain parts such as batteries, frames and covers. For information on IBM ServicePac for Warranty and Maintenance Options, visit www.ibm.com/services/its/us/servicepac.html. For a Worldwide ServicePac product matrix, visit www-1.ibm.com/services/its/us/source/spacpmww.pdf.

- ⁸ Telephone support may be subject to additional charges, even during the limited warranty period. If a machine is listed as having "On-site service for select repairs", this means that onsite service is available only for the replacement of select parts. For all other warranty repairs, IBM will provide the customer a replacement part for customer installation. The parts for which onsite service is available varies by machine, but may include the processor, power supply, heat sink, system board, or base cover. For IBM machines with EasyServ or Courier service, IBM will attempt to diagnose and resolve the problem remotely before sending a courier.
- ⁹ Designed for business environment; radial arm must be installed in accordance with instructions provided.



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May 2004
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