Type-model	Processor	Speed GHz	Memory	Screen	Disk GB[8]	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	Security chip	Preload	Workhorse (W) or Global (G) or Entry (E)	Avail date
2684-H6U	Celeron®	2.0	128MB	14.1" XGA	20GB	CD	None	Modem	10/100	No	Windows XP Pro	No	Oct 2003
2684-H8U	Celeron	2.0	128MB	14.1" XGA	20GB	CD	None	Modem	10/100	No	Windows XP Home	Entry	Oct 2003
2684-H4U	Celeron	2.0	128MB	14.1" XGA	30GB	Combo	None	Modem	10/100	No	Windows XP Home	No	Oct 2003

Positioning	*Mainstream performance and features; two-spindle system*
Processor	**Mobile Intel® Celeron 2.0GHz** with 400MHz system bus
L2 cache	**256KB** /on die (at processor speed) / ECC
Memory	**128MB** std / 1GB max[7] / **PC2100** 266MHz DDR-SDRAM / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available
Diskette drive	None standard / use optional USB-based diskette drive
CD	*Some:* CD-ROM / 24X-10X[9] speed / fixed, not removable
Combo	*Some:* Combo / 24X/10X/24X/8X[21] speed / fixed, not removable
Ultrabay™ 2000	None
Disk	**20** or **30GB**[8], 4200 rpm, 9.5mm, S.M.A.R.T. / removable and upgradable / 9.5mm high bay
Display	**14.1"** (358.1mm) **XGA (1024x768) TFT color** / Active Matrix / 150 nits / easy-open cover to unlatch and open with one hand (two latches)
Graphics controller	**ATI® RADEON™ IGP 330M** / integrated in northbridge / 16MB DDR-SDRAM
Graphics - external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)
TrackPoint®	TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap
Touch pad	No UltraNav™ multi-pointing system
ThinkLight™	None
Dimensions[3]	12.3 x 10.0 x 1.53" / 313mm x 254mm x 38.9mm
Approximate weight[2]	with optical drive and battery: *H6U/H8U:* 5.9 lb (2.67kg); *H4U:* 6.0 lb (2.72kg)
Case material	*Color:* black; *All:* Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion 6-cell / intelligent
Battery - life[10]	Up to 2.1 hrs
Architecture	**ATI RADEON IGP 330M chipset** / **IGP 330M** northbridge (memory controller, graphics controller,PCI bus) / **ALi® M1535+** southbridge (ATA-100 EIDE, Low Pin Count [LPC] interface, USB, parallel, audio) / PCI 2.1, 32-bit 33MHz (TI® PCI1510 CardBus controller) / LPC bus 33MHz (PC87392 Super I/O for parallel)
Port replicator	No port replicator support
Docking station	No docking station support
PC Card Std slots	One Type II or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door
Ports	Two USB (Version 1.1) / parallel / external monitor (DB-15) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial or infrared port
Video out	None
IEEE 1394	None
Wireless antenna	None / can upgrade to wireless via optional PC Cards
Mini PCI	No Mini PCI slot (Communications Bay)
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible
Modem	56K[6] V.90 (V.92-designed[29]) modem in CDC / Agere® chipset
Ethernet	10/100 ethernet on planar / Broadcom® BCM5901 (PHY/MAC) / PXE / Wake on LAN®
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / mono speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm; mono) / headphone jack (3.5 mm; stereo) / no line-in jack
Security	Power-on password / hard disk password / supervisor password / security keyhole
Security chip	None
Limited warranty[12]	**1 year** - EasyServ™,[19] onsite pickup and delivery courier service
Service options	Service upgrades[22] provide up to five years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)

SOFTWARE[14]

Windows XP Home models
- Microsoft® Windows® XP Home Edition[20]
- ◇ Disk-to-Disk Recovery (in hidden protected area)

Windows XP Pro models
- Microsoft Windows XP Professional[20]
- ◇ Disk-to-Disk Recovery (in hidden protected area)

Preloaded (all)
- Access IBM
- Access Connections
- Adobe Acrobat Reader
- IBM Rapid Restore™ PC
- IBM RecordNOW and DLA by Veritas® (combo model)
- InterVideo WinDVD (combo model)
- Norton® AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- IBM Update Connector™,[15]

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

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Universal 72 watt AC adapter
PC 2001 and PXE 2.0-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
IBM Rapid Restore PC available to protect software image and data
International Warranty Service[17]
24 hour x 7 day[18] toll-free hardware support during the warranty[12]

ServicePac®,[22] 1yr IOR 9x5 NBD 30L9188
ServicePac 2 yr IOR 9x5 NBD 30L9189
ServicePac 3 yr IOR 9x5 NBD 30L9195
ServicePac 4 yr IOR 9x5 NBD 30L9194
ServicePac 5 yr IOR 9x5 NBD 30L9196
ServicePac 2 yr P&L P/U Depot 30L9191
ServicePac 3 yr P&L P/U Depot 30L9192
ServicePac 4 yr P&L P/U Depot 69P9195
ServicePac 5 yr P&L P/U Depot 69P9197
Other ServicePac options at **ibm.com**/services/its/us/source/ wamomxeu.pdf
Post-warranty annual maintenance agreements at **ibm.com**/services/its/us/source/ maspspleu.pdf

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128MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	ThinkPad R40e Li-Ion Battery (6-cell)	08K8218
256MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	Multiple Multiple Battery Charger II	22P9040
512MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad 72W AC Adapter	02K6699
30GB Hard Disk 9.5mm (4200 rpm)	09N4268	ThinkPad 72W AC/DC Combo Adapter	22P9010
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	IBM USB Keyboard with UltraNav	31P8950
IBM 4GB Microdrive™ with PC Card	09N4280	ThinkPad Monitor Stand 2001	22P5265
IBM 128MB USB 2.0 Memory Key	22P9229	IBM 11a/b/g Wireless CardBus Adapter	31P9101
IBM 256MB USB 2.0 Memory Key	22P9025	IBM H Rate Wireless LAN PC Card 128	09N9904
IBM USB Portable Diskette Drive	05K9276	IBM iLV200 Value Data/Video Projector	0038A03
IBM USB Portable CD-ROM	33L5151	IBM iLC300 Conference Room Projector	0039A03
IBM USB 2.0 Portable CD-RW Drive	22P5297	IBM Optical 3-Button Travel Wheel Mouse	31P7410
IBM USB Serial Parallel Adapter	22P5298	IBM Optical 3-Button ScrollPoint® Mouse	31P7405
GemPC400 Smart Card Reader/Writer	31P8901	Nylon Carrying Case	10K0207
IBM Turbo 16/4 Token-Ring PC Card 2	34L1401	Leather Carrying Case	10K0209
Ericsson® GC82 EDGE PC Card Wireless	58P8782	Other options at **ibm.com**/pc/us/accessories	

See footnotes for important warranty information
US models announced October 7, 2003
US models withdrawn effective April 2004

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Type-model	Processor	Speed GHz	Memory	Screen	Disk GB[8]	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	Security chip	Preload	Workhorse (W) or Global (G) or Entry (E)	Avail date
2684-KJU	Celeron®	2.2	128MB	14.1" XGA	20GB	CD	None	Modem	10/100	No	Windows XP Home	Entry	Apr 2004
2684-KAU	Celeron	2.2	256MB	14.1" XGA	30GB	Combo	None	Modem	10/100	No	Windows XP Pro	No	Apr 2004
2684-KNU	Celeron	2.2	256MB	14.1" XGA	20GB	CD	None	Modem	10/100	No	Windows XP Pro	No	Apr 2004

Positioning	*Mainstream performance and features; two-spindle system*
Processor	**Mobile Intel**® **Celeron 2.2GHz** with 400MHz system bus
L2 cache	**256KB** / on die (at processor speed) / ECC
Memory	**128MB** or **256MB** std / 1GB max[7] / **PC2100** 266MHz DDR1 / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket avail
Diskette drive	None standard / use optional USB-based diskette drive
CD	*Some:* CD-ROM / 24X-10X[9] speed / fixed, not removable
Combo	*Some:* Combo / 24X/10X/24X/8X[21] speed / fixed, not removable
Ultrabay™ 2000	None
Disk	**20** or **30GB**[8], 4200 rpm, 9.5mm, S.M.A.R.T. / removable and upgradable / 9.5mm high bay
Display	**14.1"** (358.1mm) **XGA (1024x768) TFT color** / Active Matrix / 150 nits / easy-open cover to unlatch and open with one hand (two latches)
Graphics controller	**ATI**® **RADEON**™ **IGP 330M** / integrated in northbridge / 16MB DDR1 (DDR-SDRAM)
Graphics - external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)
TrackPoint®	TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap
Touch pad	No UltraNav™ multi-pointing system
ThinkLight™	None
Dimensions[3]	12.3 x 10.0 x 1.53" / 313mm x 254mm x 38.9mm
Approximate weight[2]	with optical drive and battery: *KJU/KNU:* 5.9 lb (2.67kg); *KAU:* 6.0 lb (2.72kg)
Case material	*Color:* black; *All:* Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion 6-cell / intelligent
Battery - life[10]	Up to 2.1 hrs
Architecture	**ATI RADEON IGP 330M chipset** / **IGP 330M** northbridge (memory controller, graphics controller, PCI bus) / **ALi**® **M1535+** southbridge (ATA-100 EIDE, Low Pin Count [LPC] interface, USB, parallel, audio) / PCI 2.1, 32-bit 33MHz (TI® PCI1510 CardBus controller) / LPC bus 33MHz (PC87392 Super I/O for parallel)
Port replicator	No port replicator support
Docking station	No docking station support
PC Card Std slots	One Type II or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door
Ports	Two USB (Version 1.1) / parallel / external monitor (DB-15) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial or infrared port
Video out	None
IEEE 1394	None
Wireless antenna	None / can upgrade to wireless via optional PC Cards
Mini PCI	No Mini PCI slot (Communications Bay)
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible
Modem	56K[6] V.90 (V.92-designed[29]) modem in CDC / Agere® chipset
Ethernet	10/100 ethernet on planar / Broadcom® BCM5901 (PHY/MAC) / PXE / Wake on LAN®
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / mono speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm; mono) / headphone jack (3.5 mm; stereo) / no line-in jack
Security	Power-on password / hard disk password / supervisor password / security keyhole
Security chip	None
Limited warranty[12]	**1 year** - EasyServ™[19] onsite pickup and delivery courier service
Service options	Service upgrades[22] provide up to five years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)

SOFTWARE[14]

Windows XP Home models
- Microsoft® Windows® XP Home Edition[20]
- ◇ Disk-to-Disk Recovery (in hidden protected area)

Windows XP Pro models
- Microsoft Windows XP Professional[20]
- ◇ Disk-to-Disk Recovery (in hidden protected area)

Preloaded (all)
- Access IBM
- Access Connections
- Adobe Acrobat Reader
- IBM Rapid Restore™ PC
- IBM RecordNOW and Drive Letter Access powered by Sonic products (combo model)
- InterVideo WinDVD (combo model)
- Norton® AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- IBM Update Connector™,[15]

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Universal 72 watt AC adapter
PC 2001 and PXE 2.0-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
IBM Rapid Restore PC available to protect software image and data
International Warranty Service[17]
24 hour x 7 day[18] toll-free warranty support during the warranty[12]

ServicePac®,[22] 1yr IOR 9x5 NBD
30L9188
ServicePac 2 yr IOR 9x5 NBD
30L9189
ServicePac 3 yr IOR 9x5 NBD
30L9195
ServicePac 4 yr IOR 9x5 NBD
30L9194
ServicePac 5 yr IOR 9x5 NBD
30L9196
ServicePac 2 yr P&L P/U Depot
30L9191
ServicePac 3 yr P&L P/U Depot
30L9192
ServicePac 4 yr P&L P/U Depot
69P9195
ServicePac 5 yr P&L P/U Depot
69P9197
Other ServicePac options at
ibm.com/services/its/us/source/wamomxeu.pdf
Post-warranty annual maintenance agreements at
ibm.com/services/its/us/source/maspspleu.pdf

128 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	ThinkPad R40e Li-Ion Battery (6-cell)	08K8218	
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	Multiple Multiple Battery Charger II	22P9040	
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad 72W AC Adapter	02K6699	
30GB Hard Disk 9.5mm (4200 rpm)	09N4268	ThinkPad 72W AC/DC Combo Adapter	22P9010	
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	IBM USB Keyboard with UltraNav	31P8950	
IBM 4GB Microdrive™ with PC Card	09N4280	ThinkPad Monitor Stand 2001	22P5265	
IBM 128MB USB 2.0 Memory Key	22P9229	IBM 11a/b/g Wireless CardBus Adapter	31P9101	
IBM 256MB USB 2.0 Memory Key	22P9025	IBM M400 Projector	0037A04	
IBM USB Portable Diskette Drive	05K9276	IBM E400 Projector	0038A04	
IBM USB Portable CD-ROM	33L5151	IBM C400 Projector	0039A04	
IBM USB 2.0 Portable Combo Drive	22P9194	IBM Optical 3-Button Travel Wheel Mouse	31P7410	
IBM USB Serial Parallel Adapter	22P5298	IBM Optical 3-Button ScrollPoint® Mouse	31P7405	
GemPC400 Smart Card Reader/Writer	31P8901	Nylon Carrying Case	10K0207	
Kensington® Microsaver® Security Cable	73P2582	Leather Carrying Case	10K0209	
Ericsson® GC82 EDGE PC Card Wireless	58P8782	Other options at **ibm.com**/pc/us/accessories		

See footnotes for important warranty information
US models announced April 6, 2004
US models withdrawn effective October 2004

Type-model	Processor	Speed GHz	Memory	Screen	Disk GB[8]	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	Security chip	Preload	Workhorse (W) or Global (G) or Entry (E)	Avail date
2684-4YU	Celeron®	1.7	128MB	14.1" XGA	20GB	CD	11b Wi-Fi[32]	Modem	10/100	No	Windows XP Pro	No	Mar 2003
2684-HYU	Celeron	2.0	128MB	14.1" XGA	20GB	CD	11b Wi-Fi	Modem	10/100	No	Windows XP Pro	No	Oct 2003

These educational models of the ThinkPad R40e notebook are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and/or teachers.

These models for education are for sale direct from IBM or through an Authorized Education Reseller.
The models for education are not available for resale to any other organization or individual.

Positioning	*Mainstream performance and features; two-spindle system*
Processor	**Mobile Intel**® **Celeron 1.7 or 2.0GHz** with 400MHz system bus
L2 cache	**256KB** / on die (at processor speed) / ECC
Memory	**128MB** std / 1GB max[7] / **PC2100** 266MHz DDR-SDRAM / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available
Diskette drive	None standard / use optional USB-based diskette drive
CD	CD-ROM / 24X-10X[9] speed / fixed, not removable
Ultrabay™ 2000	None
Disk	**20GB**[8], 4200 rpm, 9.5mm, S.M.A.R.T. / removable and upgradable / 9.5mm high bay
Display	**14.1"** (358.1mm) **XGA (1024x768) TFT color** / Active Matrix / 150 nits / easy-open cover to unlatch and open with one hand (two latches)
Graphics controller	**ATI**® **RADEON**™ **IGP 330M** / integrated in northbridge / 16MB DDR-SDRAM
Graphics - external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)
TrackPoint®	TrackPoint pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass / soft dome TrackPoint cap / ships with classic dome and soft rim TrackPoint cap
Touch pad	No UltraNav™ multi-pointing system
ThinkLight™	None
Dimensions[3]	12.3 x 10.0 x 1.53" / 313mm x 254mm x 38.9mm
Approximate weight[2]	with optical drive and battery: 5.9 lb (2.7kg)
Case material	*Color:* black; *All:* Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion 6-cell / intelligent
Battery - life[10]	Up to 2.1 hrs
Architecture	**ATI RADEON IGP 330M chipset** / **IGP 330M** northbridge (memory controller, graphics controller, PCI bus) / **ALi**® **M1535+** southbridge (ATA-100 EIDE, Low Pin Count [LPC] interface, USB, parallel, audio) / PCI 2.1, 32-bit 33MHz (TI® PCI1510 CardBus controller) / LPC bus 33MHz (PC87392 Super I/O for parallel)
Port replicator	No port replicator support
Docking station	No docking station support
PC Card Std slots	One Type II or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door
Ports	Two USB (Version 1.1) / parallel / external monitor (DB-15) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial or infrared port
Video out	None
IEEE 1394	None
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable
11b Wi-Fi[32]	11b Wi-Fi[32] wireless[4], Mini PCI, Intersil® Prism 2.5 chipset
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible
Modem	56K[6] V.90 (V.92-designed[29]) modem in CDC / Agere® chipset
Ethernet	10/100 ethernet on planaer / Broadcom® BCM5901 (PHY/MAC) / PXE / Wake on LAN®
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / mono speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm; mono) / headphone jack (3.5 mm; stereo) / no line in jack
Security	Power-on password / hard disk password / supervisor password / security keyhole
Security chip	None
Limited warranty[12]	**1 year** - EasyServ™[19] onsite pickup and delivery courier service
Service options	Service upgrades[22] provide up to five years of onsite or depot repair service coverage from date of ThinkPad purchase (including warranty period)

SOFTWARE[14]

Windows XP Pro models
- Microsoft Windows XP Professional[20]
- ◇ Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Access IBM
- Access Connections
- Adobe Acrobat Reader
- IBM Rapid Restore™ PC
- Norton® AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- IBM Update Connector™[15]

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant

License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Universal 72 watt AC adapter
PC 2001 and PXE 2.0-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
IBM Rapid Restore PC available to protect software image and data
International Warranty Service[17]
24 hour x 7 day[18] toll-free hardware support during the warranty[12]

ServicePac®, [22] 1yr IOR 9x5 NBD 30L9188
ServicePac 2 yr IOR 9x5 NBD 30L9189
ServicePac 3 yr IOR 9x5 NBD 30L9195
ServicePac 4 yr IOR 9x5 NBD 30L9194
ServicePac 5 yr IOR 9x5 NBD 30L9196
ServicePac 2 yr P&L P/U Depot 30L9191
ServicePac 3 yr P&L P/U Depot 30L9192
ServicePac 4 yr P&L P/U Depot 69P9195
ServicePac 5 yr P&L P/U Depot 69P9197
Other ServicePac options at **ibm.com**/services/its/us/source/wamomxeu.pdf
Post-warranty annual maintenance agreements at **ibm.com**/services/its/us/source/maspspleu.pdf

128 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	ThinkPad R40e Li-Ion Battery (6-cell)	08K8218
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	Multiple Multiple Battery Charger II	22P9040
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad 72W AC Adapter	02K6699
30GB Hard Disk 9.5mm (4200 rpm)	09N4268	ThinkPad 72W AC/DC Combo Adapter	22P9010
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816	IBM USB Keyboard with UltraNav	31P8950
IBM 4GB Microdrive™ with PC Card	09N4280	ThinkPad Monitor Stand 2001	22P5265
IBM 128MB USB 2.0 Memory Key	22P9229	IBM 11a/b/g Wireless CardBus Adapter	31P9101
IBM 256MB USB 2.0 Memory Key	22P9025	IBM H Rate Wireless LAN PC Card 128	09N9904
IBM USB Portable Diskette Drive	05K9276	IBM iLM300 MicroPortable Projector	0037A03
IBM USB Portable CD-ROM	33L5151	IBM iLV200 Value Data/Video Projector	0038A03
IBM USB 2.0 Portable CD-RW Drive	22P5297	IBM iLC300 Conference Room Projector	0039A03
Portable 40GB USB 2.0 with Rapid Restore	09N4255	IBM Optical 3-Button Travel Wheel Mouse	31P7410
IBM USB Serial Parallel Adapter	22P5298	IBM Optical 3-Button ScrollPoint® Mouse	31P7405
GemPC400 Smart Card Reader/Writer	31P8901	Nylon Carrying Case	10K0207
IBM Turbo 16/4 Token-Ring PC Card 2	34L1401	Leather Carrying Case	10K0209
Ericsson® GC82 EDGE PC Card Wireless	58P8782	Other options at **ibm.com**/pc/us/accessories	

See footnotes for important warranty information
US model announced October 7, 2003; previous model on March 25, 2003
US models withdrawn effective October 2003 or April 2004

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Type-model	Processor	Speed GHz	Memory	Screen	Graphics memory	Disk GB[8]	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	IEEE 1394 port	Security Chip	Workhorse (W) or Global (G) Preload or Entry (E)	Avail date
2681-1AU	Celeron®	1.6	128MB	13.3" XGA	16MB	20G	CD	11a/b Wi-Fi[27]	Modem	10/100			XP Pro	Jan 2003
2681-28U	Celeron	1.6	128MB	14.1" XGA	16MB	20G	Combo	Open; wireless upg[36]	Modem	10/100	1394		XP Pro	Jan 2003
2681-37U	Celeron	1.6	128MB	15.0" XGA	16MB	20G	CD	Open; wireless upg	Modem	10/100	1394		XP Pro	Jan 2003
2681-C8U	Pentium® 4-M	1.9	128MB	14.1" XGA	16MB	20G	CD	Open; wireless upg	Modem	10/100	1394		XP Pro	E	Jan 2003
2681-DBU	Pentium 4-M	1.9	256MB	15.0" XGA	16MB	20G	DVD	11a/b Wi-Fi	Modem	10/100			XP Pro	Jan 2003
2681-DCU	Pentium 4-M	1.9	256MB	15.0" XGA	16MB	20G	DVD	Open; wireless upg	Modem	10/100	1394		XP Pro	Jan 2003
2681-F9U	Pentium 4-M	2.0	256MB	14.1" XGA	16MB	20G	DVD	Open; wireless upg	Modem	10/100		Yes	XP Pro	W	Jan 2003
2681-FFU	Pentium 4-M	2.0	256MB	14.1" XGA	16MB	40G	Combo	Open; wireless upg	Modem	10/100	1394		XP Pro	Jan 2003
2681-FCU	Pentium 4-M	2.0	256MB	14.1" XGA	16MB	40G	DVD	11b Wi-Fi[32]	Modem	10/100		Yes	XP Pro	Jan 2003
2681-GMU	Pentium 4-M	2.0	256MB	15.0" XGA	32MB	40G	Combo	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	Jan 2003
2681-GHU	Pentium 4-M	2.0	256MB	15.0" XGA	32MB	40G	DVD	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	W	Jan 2003
2681-K3U	Pentium 4-M	2.2	256MB	15.0" XGA	32MB	40G	DVD	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	W	Jan 2003
2681-L7U	Pentium 4-M	2.2	256MB	15.0" SXGA+	32M	60G	Combo	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro		Jan 2003

Positioning	*Best blend of portability and essential features; two-spindle system*
Processor	**Mobile Intel® Celeron 1.6GHz** with 400MHz frontside bus or **Mobile Intel Pentium 4 Processor-M 1.9, 2.0, or 2.2GHz** with enhanced Intel SpeedStep™ technology[1] and 400MHz frontside bus
L2 cache	*Celeron:* **256KB**; *Pentium 4-M:* **512KB**; *All:* on die (at processor speed) / ECC
Memory	**128** or **256MB** std / 1GB max[7] / **PC2100** 266MHz DDR-SDRAM / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available
Diskette drive	None standard / use optional Ultrabay™-based or USB-based diskette drive
CD	*Some:* CD-ROM / 24X-10X[9] speed / bootable / removable from Ultrabay 2000
DVD	*Some:* DVD-ROM / 8X-3.3X[9] speed / bootable / removable from Ultrabay 2000
Combo	*Some:* DVD-ROM/CD-RW / 24X/10X/24X/8X[21] speed / removable from Ultrabay 2000
Ultrabay 2000	One modular bay for interchangeable devices / **Ultrabay Plus**-compatible /12.7 mm high
Disk	**20GB[8]**, **40GB,** or **60GB,** 4200 rpm, 9.5mm, S.M.A.R.T. / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay 2000
Display	*Some:* **13.3"** (337.8mm) **XGA (1024x768) TFT color** / Active Matrix / 150 nits / *Some:* **14.1"** (358.1mm) **XGA (1024x768) TFT color** / Active Matrix / 150 nits / *Some:* **15.0"** (381mm) **XGA (1024x768) TFT color** / Active Matrix / 150 nits / *Some:* **15.0"** (381mm) **SXGA+ (1400x1050) TFT color** / Active Matrix / 150 nits / *All:* Easy-open cover to unlatch and open with one hand (two latches)
Graphics controller	*Some:* **ATI® Mobility™ RADEON™** / **AGP 4X** / **16MB** DDR-SDRAM *Some:* **ATI Mobility RADEON 7500** / **AGP 4X** / **32MB** DDR-SDRAM
Graphics - external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*13.3/14.1" models:* 12.3" x 10" x 1.5"; *15.0" models:* 13" x 10.5" x 1.6"
Approximate weight[2]	with optical drive and battery: *13.3" models:* 6.2 lb; *14.1" models:* 6.0 lb; *15.0":* 6.7 lb
Case material	*Color:* Black; *All:* ABS plastic
Battery - type	Lithium Ion 8-cell / intelligent / supports unique 2nd battery in Ultrabay 2000
Battery - life[10]	*13.3" models:* 3.8 hrs; *14.1" models:* 3.8 to 4.0 hrs; *15.0" models:* 3.4 to 3.6 hrs
Architecture	**Intel 845MP** chipset / 82845MP Memory Controller Hub (MCH-M) / 82801DBM ICH4-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB, Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1510 CardBus controller, TSB43AB21 1394 (some), Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared)
PC Card Std slots	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door
Ports	Two USB (Version 2.0) / parallel / external monitor (DB-15) / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial port
Video out	S-video out port (TV out) / one industry standard connector
IEEE 1394	*Some:* IEEE 1394 (FireWire) port / 4-pin connector
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable
11a/b Wi-Fi[27]	*Some:* 11a/b Wi-Fi[27] wireless[4], Mini PCI, Atheros™ AR5001X chipset, UltraConnect™ antenna built in both sides of display, Wi-Fi-certified
Wireless upg[36]	*Some:* UltraConnect™ antenna built in both sides of display for wireless Mini PCI options
11b Wi-Fi[32]	*Some:* 11b Wi-Fi[32] wireless[4], Mini PCI, Intersil® Prism 2.5 chipset, UltraConnect™ antenna built in both sides of display, Wi-Fi-certified
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible
Modem	*All:* 56K[6] V.90 (V.92-designed[29]) modem in CDC / Agere® chipset
Ethernet	10/100 ethernet on motherboard / Intel 82562EZ chip (physical layer)
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1891A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack
Security	Power-on password / hard disk password / supervisor password / security keyhole *Some:* **IBM Embedded Security Subsystem 2.0[33]** / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security[16] / TCG-compliant
Limited warranty[12]	**1 year** - EasyServ™[19] onsite pickup and delivery / service upgrades[22] available

128MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032
Ultralight 8X Max DVD Ultrabay 2000	22P9102
CD-RW/DVD Combo IV Ultrabay 2000	22P6991
Second HDD Adapter for Ultrabay 2000	08K6068
ThinkPad Removable Diskette Drive	08K9603
IBM USB Portable Diskette Drive	05K9276
40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816
Optical 3-Button Travel Wheel Mouse	31P7410
ThinkPad R32/R40 Series Li-Ion Battery	02K7052
Ultrabay 2000 Li-Ion battery	02K6646
ThinkPad Multiple Battery Charger II	22P9040
IBM USB Keyboard with UltraNav	31P8950
IBM USB 2.0 Portable CD-RW Drive	22P5297
ThinkPad 72W AC Adapter	02K6699

SOFTWARE[14]

Windows XP Pro models
- Microsoft® Windows® XP Professional[20]
- ◇ Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Access IBM
- Adobe Acrobat Reader
- IBM Rapid Restore™ PC
- IBM RecordNOW and DLA by Veritas (combo models)
- InterVideo WinDVD (DVD models)
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- IBM Update Connector™[15]

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (models with security chip)

License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Universal 72 watt AC adapter
Asset ID (system-specific info in chip accessed over network)
PC 2001 and PXE 2.0-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
IBM Rapid Restore PC available to protect software image and data
International Warranty Service[17]
24 hour x 7 day[18] toll-free hardware support during the warranty[12]

ServicePac®[22] 1yr IOR 9x5 NBD
  30L9188
ServicePac 3 yr IOR 9x5 NBD
  30L9195
ServicePac 3yr P&L P/U Depot
  30L9192
ServicePac 5yr P&L P/U Depot
  69P9197
Other ServicePac options at **ibm.com**/services/its/us/source/wamomxeu.pdf

IBM 1GB Microdrive™   07N5574
Cisco Aironet Wirless 802.11b Mini PCI   31P8301
IBM 11a/b/g Wireless Mini PCI Adapter   31P9701
IBM 11a/b/g Wireless CardBus Adapter   31P9101
ThinkPad 72W AC Adapter   02K6699
ThinkPad Port Replicator II   74P6733
ThinkPad Mini Dock   287810U
Optical 3-Button Travel Wheel Mouse   31P7410
Other options at **ibm.com**/pc/us/accessories

See footnotes for important warranty information
US models announced January 28, 2003
US models withdrawn effective October 2003 or January 2004

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Type-model	Processor	Speed GHz	Memory	Screen	Graphics memory	Disk GB[8]	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	IEEE 1394 port	Security chip	Preload	Workhorse (W) or Global (G) or Entry (E)	Avail date
2681-4GU	Celeron®	1.8	128MB	14.1" XGA	16MB	20G	Combo	Open; wireless upg[36]	Modem	10/100	1394	No	XP Pro	No	May 2003
2681-5AU	Celeron	1.8	256MB	15.0" XGA	16MB	30G	Combo	Open; wireless upg	Modem	10/100	1394	No	XP Pro	No	May 2003
2681-59U	Celeron	1.8	128MB	15.0" XGA	16MB	30G	DVD	Open; wireless upg	Modem	10/100	1394	No	XP Pro	No	May 2003
2681-69U	Celeron	2.0	128MB	14.1" XGA	16MB	30G	Combo	Open; wireless upg	Modem	10/100	1394	No	XP Pro	No	Oct 2003
2681-7FU	Celeron	2.0	128MB	15.0" XGA	16MB	30G	Combo	Open; wireless upg	Modem	10/100	1394	No	XP Pro	No	Oct 2003

Positioning	*Mainstream performance and features; two-spindle system*
Processor	**Mobile Intel**® **Celeron 1.8** or **2.0GHz** with 400MHz system bus
L2 cache	**256KB** / on die (at processor speed) / ECC
Memory	**128** or **256MB** std / 1GB max[7] / **PC2100** 266MHz DDR-SDRAM / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available

Diskette drive	None standard / use optional Ultrabay™-based or USB-based diskette drive
CD	*Some:* CD-ROM / 24X-10X[9] speed / bootable / removable from Ultrabay 2000
DVD	*Some:* DVD-ROM / 8X-3.3X[9] speed / bootable / removable from Ultrabay 2000
Combo	*Some:* DVD-ROM/CD-RW / 24X/10X/24X/8X[21] speed / removable from Ultrabay 2000
Ultrabay 2000	One modular bay for interchangeable devices / **Ultrabay Plus**-compatible /12.7 mm high
Disk	**20** or **30GB**[8]**,** 4200 rpm, 9.5mm, S.M.A.R.T. / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay 2000

Display	*Some:* **14.1"** (358.1mm) **XGA (1024x768) TFT color** / Active Matrix / 150 nits
	Some: **15.0"** (381mm) **XGA (1024x768) TFT color** / Active Matrix / 150 nits
	All: easy-open cover to unlatch and open with one hand (two latches)
Graphics controller	**ATI**® **Mobility**™ **RADEON**™ / **AGP 4X** / **16MB** DDR-SDRAM
Graphics - external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B

Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions

Dimensions[3]	*14.1" models:* 12.3" x 10" x 1.5"; 313mm x 254mm x 38.9mm
	15.0" models: 13" x 10.5" x 1.6"; 329mm x 267.5mm x 40.5mm
Approximate weight[2]	with optical drive and battery: *14.1" models:* 6.1 lb (2.77kg);
	15.0" models: 6.6 to 6.7 lb (2.99 to 3.04kg)
Case material	*Color:* black; *All:* Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion 8-cell / intelligent / supports unique 2nd battery in Ultrabay 2000
Battery - life[10]	3.95 hrs

Architecture	**Intel 845MP** chipset / 82845MP Memory Controller Hub (MCH-M) / 82801DBM ICH4-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB, Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1510 CardBus controller, TSB43AB21 1394 (some), Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared)
PC Card Std slots	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door
Ports	Two USB (Version 2.0) / parallel / external monitor (DB-15) / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial port

Video out	S-video out port (TV out) / one 4-pin industry standard connector
IEEE 1394	IEEE 1394 (FireWire) port / 4-pin connector
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable
Wireless upg[36]	Wireless upgradable with wireless Mini PCI options
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible
Modem	56K[6] V.90 (V.92-designed[29]) modem in CDC / Agere® chipset
Ethernet	10/100 ethernet on motherboard / Intel 82562EZ chip (physical layer)
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1891A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack
Security	Power-on password / hard disk password / supervisor password / security keyhole
Security chip	None

Limited warranty[12]	**1 year** - EasyServ™,[19] onsite pickup and delivery / service upgrades[22] available

128 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	ThinkPad R32/R40 Series Li-Ion Battery	02K7052
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	Ultrabay 2000 Li-Ion battery	02K6646
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad Multiple Battery Charger II	22P9040
CD-RW/DVD Combo IV Ultrabay 2000	22P6991	30GB Hard Disk 9.5mm (4200rpm)	09N4268
Ultralight 8X Max DVD Ultrabay 2000	22P9102	40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816
24X-10X CD-ROM Ultrabay 2000 Drive	05K9233	80GB Hard Disk 9.5mm (4200 rpm)	08K9869
Second HDD Adapter for Ultrabay 2000	08K6068	IBM 1GB Microdrive™ with PC Card	07N5574
ThinkPad Multi-Burner Ultrabay 2000 Drive	22P7015	IBM 64MB USB 2.0 Memory Key	22P9024
ThinkPad Slim Drive Adpr for Ultrabay 2000	62P4557	IBM 256MB USB 2.0 Memory Key	22P9025
ThinkPad Removable Diskette Drive	08K9603	Cisco Aironet Wireless 802.11b Mini PCI	31P8301
IBM USB Portable Diskette Drive	05K9276	IBM 11a/b/g Wireless Mini PCI Adapter	31P9701
IBM USB 2.0 Portable CD-RW Drive	22P5297	IBM 11a/b/g Wireless CardBus Adapter	31P9101
IBM USB 2.0 Portable 40GB Hard Disk	09N4255	ThinkPad 72W AC Adapter	02K6699
IBM USB Serial Parallel Adapter	22P5298	ThinkPad 72W AC/DC Combo Adapter	22P9010
IBM Optical 3-Button Travel Wheel Mouse	31P7410	GemPC400 Smart Card Reader/Writer	31P8901
IBM Optical 3-Button ScrollPoint® Mouse	31P7405	IBM USB Keyboard with UltraNav	31P8950
IBM iLM300 MicroPortable Projector	0037A03	ThinkPad Ultrabay Plus Numeric Keypad	22P7330
IBM iLV200 Value Data/Video Projector	0038A03	ThinkPad Port Replicator II	74P6733
IBM iLC300 Conference Room Projector	0039A03	ThinkPad Mini Dock	287810U
ThinkPad Monitor Stand 2001	22P5265	Other options at **ibm.com**/pc/us/accessories	

SOFTWARE[14]

Windows XP Pro models
- Microsoft® Windows® XP Professional[20]
- ◇ Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Access IBM
- Access Connections
- Adobe Acrobat Reader
- IBM Rapid Restore™ PC
- IBM RecordNOW and DLA by Veritas (combo models)
- InterVideo WinDVD (DVD models)
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- IBM Update Connector™,[15]

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (models with security chip)

License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Universal 72 watt AC adapter
Asset ID (system-specific info in chip accessed over network)
PC 2001 and PXE 2.0-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
IBM Rapid Restore PC available to protect software image and data
International Warranty Service[17]
24 hour x 7 day[18] toll-free hardware support during the warranty[12]

ServicePac®, [22] 1yr IOR 9x5 NBD 30L9188
ServicePac 2 yr IOR 9x5 NBD 30L9189
ServicePac 3 yr IOR 9x5 NBD 30L9195
ServicePac 4 yr IOR 9x5 NBD 30L9194
ServicePac 5 yr IOR 9x5 NBD 30L9196
ServicePac 2 yr P&L P/U Depot 30L9191
ServicePac 3 yr P&L P/U Depot 30L9192
ServicePac 4 yr P&L P/U Depot 69P9195
ServicePac 5 yr P&L P/U Depot 69P9197
Other ServicePac options at **ibm.com**/services/its/us/source/wamomxeu.pdf
Post-warranty annual maintenance agreements at **ibm.com**/services/its/us/source/maspspleu.pdf

See footnotes for important warranty information
US models announced October 7, 2003; previous models on May 21, 2003
US models withdrawn effective January 2004 or April 2004

Type-model	Processor	Speed GHz	Memory	Screen	Graphics memory	Disk GB[8]	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	IEEE 1394 port	Security Chip	Workhorse (W) or Global (G) or Entry (E) Preload	Avail date
2681-J7U	Pentium® 4-M	2.2	128MB	14.1" XGA	16MB	30G	CD	Open; wireless upg[36]	Modem	10/100	1394		XP Pro	E	May 2003
2681-J8U	Pentium 4-M	2.2	256MB	14.1" XGA	16MB	40G	Combo	Open; wireless upg	Modem	10/100	1394		XP Pro	No	May 2003
2681-JCU	Pentium 4-M	2.2	256MB	14.1" XGA	16MB	30G	DVD	Open; wireless upg	Modem	10/100		Yes	XP Pro	No	May 2003
2681-J9U	Pentium 4-M	2.2	256MB	14.1" XGA	16MB	30G	DVD	Cisco® 802.11b	Modem	10/100		Yes	XP Pro	No	May 2003
2681-JQU	Pentium 4-M	2.2	256MB	14.1" XGA	16MB	40G	DVD	11b Wi-Fi[32]	Modem	10/100		Yes	XP Pro	No	May 2003
2681-JDU	Pentium 4-M	2.2	256MB	14.1" XGA	16MB	40G	Combo	11a/b Wi-Fi[27]	Modem	10/100		Yes	XP Pro	No	May 2003
2681-JEU	Pentium 4-M	2.2	256MB	14.1" XGA	16MB	40G	DVD	11a/b Wi-Fi	Modem	10/100		Yes	XP Pro	No	May 2003
2681-KAU	Pentium 4-M	2.2	256MB	15.0" XGA	32MB	40G	Combo	11a/b Wi-Fi	Modem	10/100	1394	Yes	XP Pro	No	May 2003
2681-KMU	Pentium 4-M	2.2	256MB	15.0" XGA	32MB	40G	DVD	Cisco 802.11b	Modem	10/100	1394	Yes	XP Pro	No	May 2003
2681-JHU	Pentium 4-M	2.2	256MB	14.1" XGA	32MB	60G	Combo	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	No	May 2003
2681-QCU	Pentium 4-M	2.4	256MB	15.0" SXGA+	32M	60G	Combo	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	No	May 2003
2681-KLU	Pentium 4-M	2.2	256MB	15.0" XGA	32MB	40G	Combo	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	No	May 2003
2681-KPU	Pentium 4-M	2.2	256MB	15.0" XGA	16MB	20G	DVD	Open; wireless upg	Modem	10/100	1394		XP Pro	No	May 2003
2681-KQU	Pentium 4-M	2.2	256MB	15.0" XGA	16MB	30G	DVD	11a/b Wi-Fi	Modem	10/100		Yes	XP Pro	No	May 2003
2681-Q5U	Pentium 4-M	2.4	256MB	15.0" SXGA+	32M	40G	DVD	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	No	May 2003
2681-Q6U	Pentium 4-M	2.4	256MB	15.0" SXGA+	32M	60G	Combo	11a/b Wi-Fi	Modem	10/100	1394	Yes	XP Pro	No	May 2003

Positioning	*Best blend of portability and essential features; two-spindle system*
Processor	**Mobile Intel® Pentium 4 Processor-M 2.2** or **2.4GHz** with enhanced Intel SpeedStep™ technology[1] and 400MHz frontside bus
L2 cache	**512KB**; *All:* on die (at processor speed) / ECC
Memory	**128** or **256MB** std / 1GB max[7] / **PC2100** 266MHz DDR-SDRAM / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available
Diskette drive	None standard / use optional Ultrabay™-based or USB-based diskette drive
CD	*Some:* CD-ROM / 24X-10X[9] speed / bootable / removable from Ultrabay 2000
DVD	*Some:* DVD-ROM / 8X-3.3X[9] speed / bootable / removable from Ultrabay 2000
Combo	*Some:* DVD-ROM/CD-RW / 24X/10X/24X/8X[21] speed / removable from Ultrabay 2000
Ultrabay 2000	One modular bay for interchangeable devices / **Ultrabay Plus**-compatible /12.7 mm high
Disk	**20, 30, 40,** or **60GB**[8], 4200 rpm, 9.5mm, S.M.A.R.T. / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay 2000
Display	*Some:* **14.1"** (358.1mm) **XGA (1024x768) TFT color** / Active Matrix / 150 nits *Some:* **15.0"** (381mm) **XGA (1024x768) TFT color** / Active Matrix / 150 nits *Some:* **15.0"** (381mm) **SXGA+ (1400x1050) TFT color** / Active Matrix / 150 nits *All:* Easy-open cover to unlatch and open with one hand (two latches)
Graphics controller	*Some:* **ATI® Mobility™ RADEON™** / **AGP 4X** / **16MB** DDR-SDRAM *Some:* **ATI Mobility RADEON 7500** / **AGP 4X** / **32MB** DDR-SDRAM
Graphics - external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.1" models:* 12.3" x 10" x 1.5"; *15.0" models:* 13" x 10.5" x 1.6"
Approximate weight[2]	with optical drive and battery: *14.1" models:* 6.0 lb; *15.0":* 6.7 lb
Case material	*Color:* Black; *All:* Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion 8-cell / intelligent / supports unique 2nd battery in Ultrabay 2000
Battery - life[10]	*14.1" models:* 3.8 to 4.0 hrs; *15.0" models:* 3.4 to 3.6 hrs
Architecture	**Intel 845MP** chipset / 82845MP Memory Controller Hub (MCH-M) / 82801DBM ICH4-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB, Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1510 CardBus controller, TSB43AB21 1394 (some), Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared)
PC Card Std slots	One Type I, one Type II, one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door
Ports	Two USB (Version 2.0) / parallel / external monitor (DB-15) / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial port
Video out	S-video out port (TV out) / one industry standard connector
IEEE 1394	*Some:* IEEE 1394 (FireWire) port / 4-pin connector
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable
Wireless upg[36]	*Some:* Wireless upgradable with wireless Mini PCI options
11a/b Wi-Fi[27]	*Some:* 11a/b Wi-Fi[27] wireless[4], Mini PCI, Atheros™ AR5001X chipset, UltraConnect™ antenna built in both sides of display, Wi-Fi-certified
11b Wi-Fi[32]	*Some:* 11b Wi-Fi[32] wireless[4], Mini PCI, Intersil™ Prism 2.5 chipset, UltraConnect™ antenna built in both sides of display, Wi-Fi-certified
Cisco 802.11b	*Some:* 802.11b wireless[4], Mini PCI, Cisco® Aironet® Wireless 802.11b, Prism 2.0 chipset, UltraConnect™ antenna built in both sides of display, Wi-Fi-certified
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible
Modem	*All:* 56K[6] V.90 (V.92-designed[29]) modem in CDC / Agere® chipset
Ethernet	10/100 ethernet on motherboard / Intel 82562EZ chip (physical layer)
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1891A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack
Security	Power-on password / hard disk password / supervisor password / security keyhole *Some:* **IBM Embedded Security Subsystem 2.0**[33] / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security[16] / TCG-compliant
Limited warranty[12]	**1 year** - EasyServ™,[19] onsite pickup and delivery / service upgrades[22] available

128MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816
256MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	ThinkPad Multiple Battery Charger II	22P9040
512MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad R32/R40 Series Li-Ion Battery	02K7052
CD-RW/DVD Combo IV Ultrabay 2000	22P6991	Ultrabay 2000 Li-Ion battery	02K6646

SOFTWARE[14]

Windows XP Pro models
- Microsoft® Windows® XP Professional[20]
- ◇ Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Access IBM
- Adobe Acrobat Reader
- IBM Rapid Restore™ PC
- IBM RecordNOW and DLA by Veritas (combo models)
- InterVideo WinDVD (DVD models)
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- IBM Update Connector™,[15]

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (models with security chip)

License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Universal 72 watt AC adapter
Asset ID (system-specific info in chip accessed over network)
PC 2001 and PXE 2.0-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
IBM Rapid Restore PC available to protect software image and data
International Warranty Service[17]
24 hour x 7 day[18] toll-free hardware support during the warranty[12]

ServicePac®,[22] 1yr IOR 9x5 NBD 30L9188
ServicePac 3 yr IOR 9x5 NBD 30L9195
ServicePac 3yr P&L P/U Depot 30L9192
ServicePac 5yr P&L P/U Depot 69P9197
Other ServicePac options at **ibm.com**/services/its/us/source/wamomxeu.pdf

Cisco Aironet Wirless 802.11b Mini PCI 31P8301
IBM 11a/b/g Wireless Mini PCI Adapter 31P9701
IBM 11a/b/g Wireless CardBus Adapter 31P9101
ThinkPad 72W AC Adapter 02K6699
ThinkPad Port Replicator II 74P6733
ThinkPad Mini Dock 287810U
Second HDD Adapter for Ultrabay 2000 08K6068
Other options at **ibm.com**/pc/us/accessories

See footnotes for important warranty information
US models announced May 21, 2003
US models withdrawn effective January 2004

Type-model	Processor	Speed GHz	Memory	Screen	Graphics memory	Disk GB[8]	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	IEEE 1394 port	Security Chip	Workhorse (W) or Global (G) Preload model		Avail date
2682-FAU	Pentium® 4-M	2.0	256MB	14.1" XGA	16MB	20G	DVD	Open; wireless upg[36]	Modem	10/100			XP Pro	W G	Jan 2003
2682-F9U	Pentium 4-M	2.0	256MB	14.1" XGA	16MB	20G	DVD	Open; wireless upg	Modem	10/100		Yes	XP Pro	W	Jan 2003
2682-FEU	Pentium 4-M	2.0	256MB	14.1" XGA	16MB	20G	DVD	Cisco® 802.11b	Modem	10/100		Yes	XP Pro	W	Jan 2003
2682-K2U	Pentium 4-M	2.2	256MB	15.0" XGA	16MB	40G	DVD	Open; wireless upg	Modem	10/100			XP Pro	W G	Jan 2003
2682-K4U	Pentium 4-M	2.2	256MB	15.0" XGA	16MB	40G	DVD	Cisco 802.11b	Modem	10/100		Yes	XP Pro	W G	Jan 2003
2682-GHU	Pentium 4-M	2.0	256MB	15.0" XGA	32MB	40G	DVD	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	W	Jan 2003
2682-GLU	Pentium 4-M	2.0	256MB	15.0" XGA	32MB	40G	DVD	Cisco 802.11b	Modem	10/100	1394	Yes	XP Pro	W	Jan 2003
2682-K3U	Pentium 4-M	2.2	256MB	15.0" XGA	32MB	40G	DVD	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	W	Jan 2003
2682-J8U	Pentium 4-M	2.2	256MB	14.1" XGA	16MB	40G	Combo	Open; wireless upg	Modem	10/100	1394		XP Pro		May 2003
2682-JAU	Pentium 4-M	2.2	256MB	14.1" XGA	16MB	40G	Combo	Cisco 802.11b	Modem	10/100	1394		XP Pro		May 2003

2682 models have a 3 year limited warranty (other 2681 ThinkPad R40 systems have a 1 year limited warranty)

Positioning	*Best blend of portability and essential features; two-spindle system*
Processor	**Mobile Intel® Pentium 4 Processor-M 2.0, or 2.2GHz** with enhanced Intel SpeedStep™ technology[1] and 400MHz frontside bus
L2 cache	**512KB** / on die (at processor speed) / ECC
Memory	**256MB** std / 1GB max[7] / **PC2100** 266MHz DDR-SDRAM / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available

Diskette drive	None standard / use optional Ultrabay™-based or USB-based diskette drive
DVD	*Some:* DVD-ROM / 8X-3.3X[9] speed / bootable / removable from Ultrabay 2000
Combo	*Some:* DVD-ROM/CD-RW / 24X/10X/24X/8X[21] speed / removable from Ultrabay 2000
Ultrabay 2000	One modular bay for interchangeable devices / **Ultrabay Plus**-compatible /12.7 mm high
Disk	**20GB**[8] or **40GB**, 4200 rpm, 9.5mm high, S.M.A.R.T. / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay 2000

Display	*Some:* **14.1"** (358.1mm) **XGA (1024x768) TFT color** / Active Matrix / 150 nits /
	Some: **15.0"** (381mm) **XGA (1024x768) TFT color** / Active Matrix / 150 nits /
	All: Easy-open cover to unlatch and open with one hand (two latches)

Graphics controller	*Some:* **ATI® Mobility™ RADEON™ / AGP 4X / 16MB** DDR-SDRAM
	Some: **ATI Mobility RADEON 7500 / AGP 4X / 32MB** DDR-SDRAM
Graphics - external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B

Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions

Dimensions[3]	*14.1" models:* 12.3" x 10" x 1.5"; *15.0" models:* 13" x 10.5" x 1.6"
Approximate weight[2]	with optical drive and battery: *14.1" models:* 6.0 lb; *15.0" models:* 6.7 lb
Case material	*Color:* Black; *All:* Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion 8-cell / intelligent / supports unique 2nd battery in Ultrabay 2000
Battery - life[10]	*14.1" wireless models:* 3.8 hrs; *14.1" non-wireless models:* 4.0 hrs;
	15" wireless models: 3.4 hrs; *15" non-wireless models:* 3.6 hrs

Architecture	**Intel 845MP** chipset / 82845MP Memory Controller Hub (MCH-M) / 82801DBM ICH4-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB, Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1510 CardBus controller, TSB43AB21 1394 (some), Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared)
PC Card Std slots	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door
Ports	Two USB (Version 2.0) / parallel / external monitor (DB-15) / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial port

Video out	S-video out port (TV out) / one industry standard connector
IEEE 1394	*Some:* IEEE 1394 (FireWire) port / 4-pin connector
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable
Wireless upg[36]	*Some:* Wireless upgradable with wireless Mini PCI options
Cisco 802.11b	*Some:* 802.11b wireless[4], Mini PCI, Cisco® Aironet® Wireless 802.11b, Prism 2.0 chipset, UltraConnect™ antenna built in both sides of display, Wi-Fi-certified
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible
Modem	*All:* 56K[6] V.90 (V.92-designed[29]) modem in CDC / Agere® chipset
Ethernet	10/100 ethernet on motherboard / Intel 82562EZ chipset (physical layer)
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1891A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack
Security	Power-on password / hard disk password / supervisor password / security keyhole
	Some: **IBM Embedded Security Subsystem 2.0**[33] / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security[16] / TCG-compliant

Limited warranty[12]	**3 years**/1 year battery - EasyServ™[19] onsite pickup and delivery

128MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	ThinkPad R32/R40 Series Li-Ion Battery	02K7052
256MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	Ultrabay 2000 Li-Ion battery	02K6646
512MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad Multiple Battery Charger II	22P9040
CD-RW/DVD Combo IV Ultrabay 2000	22P6991	40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816
24X-10X CD-ROM Ultrabay 2000 Drive	05K9233	GemPC400 Smart Card Reader/Writer	31P8901
Second HDD Adapter for Ultrabay 2000	08K6068	Cisco Aironet Wireless 802.11b Mini PCI	31P8301
ThinkPad Multi-Burner Ultrabay 2000 Drive	22P7015	IBM 11a/b/g Wireless Mini PCI Adapter	31P9701
ThinkPad Removable Diskette Drive	08K9603	IBM 11a/b/g Wireless CardBus Adapter	31P9101
IBM USB Portable Diskette Drive	05K9276	ThinkPad 72W AC Adapter	02K6699
IBM USB 2.0 Portable CD-RW Drive	22P5297	ThinkPad 72W AC/DC Combo Adapter	22P9010
IBM USB Serial Parallel Adapter	22P5298	ThinkPad Port Replicator II	74P6733
IBM iLV200 Value Data/Video Projector	0038A03	ThinkPad Mini Dock	287810U
IBM Optical 3-Button Travel Wheel Mouse	31P7410	Other options at **ibm.com**/pc/us/accessories	

SOFTWARE[14]

Windows XP Pro models
- Microsoft® Windows® XP Professional[20]
- ✧ Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Access IBM
  - Access Connections
  - Access Help
  - Access Support
- Adobe Acrobat Reader
- IBM Rapid Restore™ PC
- IBM RecordNOW and DLA by Veritas (combo models)
- InterVideo WinDVD (DVD models)
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- IBM Update Connector™,[15]

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (models with security chip)

License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Universal 72 watt AC adapter
Asset ID (system-specific info in chip accessed over network)
PC 2001 and PXE 2.0-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
IBM ImageUltra™ Services available
IBM Rapid Restore PC available to protect software image and data
International Warranty Service[17]
24 hour x 7 day[18] toll-free hardware support during the warranty[12]

ServicePac®,[22] 2 yr IOR 9x5 NBD
    30L9190
ServicePac 3 yr IOR 9x5 NBD
    30L9197
ServicePac 4 yr IOR 9x5 NBD
    69P9198
ServicePac 5 yr IOR 9x5 NBD
    69P9200
ServicePac 4 yr P&L P/U Depot
    69P9199
ServicePac 5 yr P&L P/U Depot
    69P9201
Other ServicePac options at
  ibm.com/services/its/us/source/ wamomxeu.pdf
Post-warranty annual maintenance agreements at
  ibm.com/services/its/us/source/ maspspleu.pdf

See footnotes for important warranty information
US models announced on January 28 or May 21, 2003
US models withdrawn effective January 2004

Type-model	Processor	Speed GHz	Memory	Screen	Graphics memory	Disk GB[8]	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	IEEE 1394 port	Security Chip	Preload	Small and medium business	Avail date
2896-4WU	Celeron®	1.8	256MB	14.1" XGA	16MB	20GB	DVD	Open; wireless upg[36]	Modem	10/100		Yes	XP Pro	Yes	May 2003
2896-5WU	Celeron	1.8	256MB	15.0" XGA	16MB	20GB	DVD	Open; wireless upg	Modem	10/100		Yes	XP Pro	Yes	May 2003
2896-FZU	Pentium® 4-M	2.0	256MB	14.1" XGA	16MB	20GB	DVD	Open; wireless upg	Modem	10/100		Yes	XP Pro	Yes	May 2003
2896-GZU	Pentium 4-M	2.0	256MB	15.0" XGA	32MB	20GB	DVD	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	Yes	May 2003

These small and medium business (SMB) models are part of the IBM US ThinkPad Express Program

Positioning	*Best blend of portability and essential features; two-spindle system*
Processor	**Mobile Intel® Celeron 1.8GHz** with 400MHz frontside bus or **Mobile Intel Pentium 4 Processor-M 2.0GHz** with enhanced Intel SpeedStep™ technology[1] and 400MHz frontside bus
L2 cache	*Celeron:* **256KB**; *Pentium 4-M:* **512KB**; *All:* on die (at processor speed) / ECC
Memory	**256MB** std / 1GB max[7] / **PC2100** 266MHz DDR-SDRAM / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available
Diskette drive	None standard / use optional Ultrabay™-based or USB-based diskette drive
DVD	DVD-ROM / 8X-3.3X[9] speed / bootable / removable from Ultrabay 2000
Ultrabay 2000	One modular bay for interchangeable devices / **Ultrabay Plus**-compatible /12.7 mm high
Disk	**20GB**[8], 4200 rpm, 9.5mm, S.M.A.R.T. / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay 2000
Display	*Some:* **14.1"** (358.1mm) **XGA (1024x768) TFT color** / Active Matrix / 150 nits *Some:* **15.0"** (381mm) **XGA (1024x768) TFT color** / Active Matrix / 150 nits *All:* Easy-open cover to unlatch and open with one hand (two latches)
Graphics controller	*Some:* **ATI® Mobility™ RADEON™ / AGP 4X / 16MB** DDR-SDRAM *Some:* **ATI Mobility RADEON 7500 / AGP 4X / 32MB** DDR-SDRAM
Graphics - external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.1" models (WxDxH):* 12.3" x 10" x 1.5"; 313mm x 254mm x 38.9mm *15.0" models (WxDxH):* 13" x 10.5" x 1.6"; 329mm x 267.5mm x 40.5mm
Approximate weight[2]	with optical drive and battery: *14.1" models:* 6.0 lb (2.8kg); *15.0":* 6.7 lb (3.1kg)
Case material	*Color:* Black; *All:* Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion 8-cell / intelligent / supports unique 2nd battery in Ultrabay 2000
Battery - life[10]	*14.1" models:* 3.8 to 4.0 hrs; *15.0" models:* 3.4 to 3.6 hrs
Architecture	**Intel 845MP** chipset / 82845MP Memory Controller Hub (MCH-M) / 82801DBM ICH4-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB, Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1510 CardBus controller, TSB43AB21 1394 (some), Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared)
PC Card Std slots	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door
Ports	Two USB (Version 2.0) / parallel / external monitor (DB-15) / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial port
Video out	S-video out port (TV out) / one industry standard connector
IEEE 1394	*Some:* IEEE 1394 (FireWire) port / 4-pin connector
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable
Wireless upg[36]	Wireless upgradable with wireless Mini PCI options
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible
Modem	56K[6] V.90 (V.92-designed[29]) modem in CDC / Agere[®] chipset
Ethernet	10/100 ethernet on motherboard / Intel 82562EZ chip (physical layer)
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1891A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack
Security	Power-on password / hard disk password / supervisor password / security keyhole **IBM Embedded Security Subsystem 2.0**[33] / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security[16] / TCG-compliant
Limited warranty[12]	**1 year** - EasyServ™,[19] onsite pickup and delivery / service upgrades[22] available

SOFTWARE[14]

Windows XP Pro models
- Microsoft® Windows® XP Professional[20]
- ◇ Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Access IBM
- Adobe Acrobat Reader
- IBM Rapid Restore™ PC
- InterVideo WinDVD (DVD models)
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- IBM Update Connector™,[15]

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Universal 72 watt AC adapter
Asset ID (system-specific info in chip accessed over network)
PC 2001 and PXE 2.0-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
IBM Rapid Restore PC available to protect software image and data
International Warranty Service[17]
24 hour x 7 day[18] toll-free hardware support during the warranty[12]

ServicePac®, [22] 1yr IOR 9x5 NBD
    30L9188
ServicePac 2 yr IOR 9x5 NBD
    30L9189
ServicePac 3 yr IOR 9x5 NBD
    30L9195
ServicePac 4 yr IOR 9x5 NBD
    30L9194
ServicePac 5 yr IOR 9x5 NBD
    30L9196
ServicePac 2 yr P&L P/U Depot
    30L9191
ServicePac 3 yr P&L P/U Depot
    30L9192
ServicePac 4 yr P&L P/U Depot
    69P9195
ServicePac 5 yr P&L P/U Depot
    69P9197
Other ServicePac options at
    ibm.com/services/its/us/source/ wamomxeu.pdf
Post-warranty annual maintenance agreements at
    ibm.com/services/its/us/source/ maspspleu.pdf

128 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	ThinkPad R32/R40 Series Li-Ion Battery	02K7052
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	Ultrabay 2000 Li-Ion battery	02K6646
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad Multiple Battery Charger II	22P9040
Ultralight 8X Max DVD Ultrabay 2000	22P9102	IBM USB Keyboard with UltraNav	31P8950
CD-RW/DVD Combo IV Ultrabay 2000	22P6991	40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816
24X-10X CD-ROM Ultrabay 2000 Drive	05K9233	GemPC400 Smart Card Reader/Writer	31P8901
Second HDD Adapter for Ultrabay 2000	08K6068	ThinkPad Monitor Stand 2001	22P5265
ThinkPad Multi-Burner Ultrabay 2000 Drive	22P7015	Cisco Aironet Wirless 802.11b Mini PCI	31P8301
ThinkPad Removable Diskette Drive	08K9603	IBM 11a/b/g Wireless Mini PCI Adapter	31P9701
IBM USB Portable Diskette Drive	05K9276	IBM 11a/b/g Wireless CardBus Adapter	31P9101
IBM USB 2.0 Portable CD-RW Drive	22P5297	ThinkPad 72W AC Adapter	02K6699
IBM USB Serial Parallel Adapter	22P5298	ThinkPad 72W AC/DC Combo Adapter	22P9010
Optical 3-Button Travel Wheel Mouse	31P7410	ThinkPad Port Replicator II	74P6733
IBM iLV200 Value Data/Video Projector	0038A03	ThinkPad Mini Dock	287810U
IBM ThinkPad Ultrabay Plus Carrier	22P5737	IBM 1GB Microdrive™ with PC Card	07N5574
IBM ThinkPad Ultrabay Plus c500 Cradle	22P5738	IBM Optical 3-Button Travel Wheel Mouse	31P7410
ThinkPad Ultrabay Plus Numeric Keypad	22P7330	Other options at **ibm.com**/pc/us/accessories	

See footnotes for important warranty information
US models announced April 22, 2003
US models withdrawn effective October 2003

(R40B) © IBM Corp. October 2003

Type-model	Processor	Speed GHz	Memory	Screen	Graphics memory	Disk GB[8]	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	IEEE 1394 port	Security chip	Preload	Avail date
2896-72U	Celeron®	2.0	256MB	15.0" XGA	16MB	30GB	Combo	Open; wireless upg[36]	Modem	10/100	1394		XP Pro	Oct 2003
2896-J2U	Pentium® 4-M	2.2	256MB	14.1" XGA	32MB	30GB	CD	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	Oct 2003
2896-J3U	Pentium 4-M	2.2	256MB	14.1" XGA	32MB	40GB	Combo	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	Oct 2003
2896-J4U	Pentium 4-M	2.2	256MB	14.1" XGA	32MB	60GB	Combo	11a/b Wi-Fi[27]	Modem	10/100	1394	Yes	XP Pro	Oct 2003
2896-N2U	Pentium 4-M	2.4	256MB	14.1" XGA	32MB	30GB	CD	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	Oct 2003
2896-N3U	Pentium 4-M	2.4	256MB	14.1" XGA	32MB	40GB	Combo	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	Oct 2003
2896-N4U	Pentium 4-M	2.4	256MB	14.1" XGA	32MB	60GB	Combo	11a/b Wi-Fi[27]	Modem	10/100	1394	Yes	XP Pro	Oct 2003
2896-Q3U	Pentium 4-M	2.4	256MB	15.0" SXGA+	32MB	40GB	Combo	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	Oct 2003
2896-Q4U	Pentium 4-M	2.4	256MB	15.0" SXGA+	32MB	60GB	Combo	11a/b Wi-Fi[27]	Modem	10/100	1394	Yes	XP Pro	Oct 2003
2896-P2U	Pentium 4-M	2.4	256MB	15.0" XGA	32MB	30GB	CD	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	Oct 2003
2896-P3U	Pentium 4-M	2.4	256MB	15.0" XGA	32MB	40GB	Combo	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	Oct 2003

These small and medium business (SMB) models are part of the IBM US Think Express Program

Positioning	Mainstream performance and features; two-spindle system
Processor	**Mobile Intel® Celeron 2.0GHz** with 400MHz system bus or **Mobile Intel Pentium 4 Processor-M 2.2** or **2.4GHz** with enhanced Intel SpeedStep™ technology[1] and 400MHz system bus
L2 cache	*Celeron:* **256KB**; *Pentium 4-M:* **512KB**; *All:* on die (at processor speed) / ECC
Memory	**256MB** std / 1GB max[7] / **PC2100** 266MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available
Diskette drive	None standard / use optional Ultrabay™-based or USB-based diskette drive
CD	*Some:* CD-ROM / 24X-10X[9] speed / bootable / removable from Ultrabay 2000
Combo	*Some:* DVD-ROM/CD-RW / 24X/10X/24X/8X[21] speed / removable from Ultrabay 2000
Ultrabay 2000	One modular bay for interchangeable devices / **Ultrabay Plus**-compatible /12.7 mm high
Disk	**30GB**[8], **40GB**, or **60GB** / 4200 rpm, 9.5mm, S.M.A.R.T. / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay 2000
Display	*Some:* **14.1"** (358.1mm) **XGA (1024x768) TFT color** / Active Matrix / 150 nits *Some:* **15.0"** (381.0mm) **XGA (1024x768) TFT color** / Active Matrix / 150 nits *Some:* **15.0"** (381.0mm) **SXGA+ (1450x1050) TFT color** / Active Matrix / 150 nits
Graphics controller	*Some:* **ATI® Mobility™ RADEON™ / AGP 4X / 16MB** DDR1 (DDR-SDRAM) *Some:* **ATI Mobility RADEON 7500 / AGP 4X / 32MB** DDR1 (DDR-SDRAM)
Graphics - external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.1" models (WxDxH):* 12.3" x 10" x 1.5"; 313mm x 254mm x 38.9mm *15.0" models (WxDxH):* 13" x 10.5" x 1.6"; 329mm x 267.5mm x 40.5mm
Approximate weight[2]	with optical drive and batt: *14.1" models:* 6.0 to 6.1 lb (2.7kg); *15.0":* 6.6 to 6.7 lb (3.0kg)
Case material	*Color:* black; *All:* Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion 8-cell / intelligent / supports unique 2nd battery in Ultrabay 2000
Battery - life[10]	*14.1" and 15" XGA models:* 3.8 to 4.0 hrs; *15.0" SXGA+ models:* 3.4 to 3.6 hrs
Architecture	**Intel 845MP** chipset / 82845MP Memory Controller Hub (MCH-M) / 82801DBM ICH4-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB, Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1510 CardBus controller, TSB43AB21 1394 (some), Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared)
PC Card Std slots	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door
Ports	Two USB (Version 2.0) / parallel / external monitor (DB-15) / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial port
Video out	S-video out port (TV out) / one 4-pin industry standard connector
IEEE 1394	IEEE 1394 (FireWire) port / 4-pin connector
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable
Wireless upg[36]	*Some:* wireless upgradable with wireless Mini PCI options
11a/b Wi-Fi[27]	*Some:* 11a/b Wi-Fi[27] wireless[4], Mini PCI, Atheros™ AR5001X chipset
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible
Modem	56K[6] V.90 (V.92-designed[29]) modem in CDC / Agere® chipset
Ethernet	10/100 ethernet on motherboard / Intel 82562EZ chip (physical layer)
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1891A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm) / headphone input jack (3.5 mm) / no line in jack
Security	Power-on password / hard disk password / supervisor password / security keyhole *Some:* **IBM Embedded Security Subsystem 2.0**[33] / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security[16] / TCG-compliant
Limited warranty[12]	**1 year** - EasyServ™[19] onsite pickup and delivery / service upgrades[22] available

128MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	ThinkPad R32/R40 Series Li-Ion Battery	02K7052
256MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	Ultrabay 2000 Li-Ion battery	02K6646
512MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	ThinkPad Multiple Battery Charger II	22P9040
CD-RW/DVD Combo IV Ultrabay 2000	22P6991	40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816
Ultralight 8X Max DVD Ultrabay 2000	22P9102	80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273
Second HDD Adapter for Ultrabay 2000	08K6068	Cisco Aironet Wireless 802.11b Mini PCI	31P8301
Multi-Burner Plus Ultrabay Enhanced Drive	73P3312	IBM 11a/b/g Wireless Mini PCI Adapter	31P9701
ThinkPad Slim Drive Adpr for Ultrabay 2000	62P4557	IBM 11a/b/g Wireless CardBus Adapter	31P9101
ThinkPad Removable Diskette Drive	08K9603	ThinkPad 72W AC/DC Combo Adapter	22P9010
IBM USB Portable Diskette Drive	05K9276	ThinkPad Port Replicator II	74P6733
IBM USB 2.0 Portable Multi-Burner Drive	22P9163	ThinkPad Mini Dock	287810U
ThinkPad 72W AC Adapter	02K6699	Other options at **ibm.com**/pc/us/accessories	

SOFTWARE[14]

Windows XP Pro models
- Microsoft® Windows® XP Professional[20]
- ◇ Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Access IBM
- Access Connections
- Adobe Acrobat Reader
- IBM Rapid Restore™ PC
- InterVideo WinDVD (combo models)
- IBM RecordNOW and DLA by Veritas (combo models)
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- IBM Update Connector™.[15]

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Universal 72 watt AC adapter
Asset ID (system-specific info in chip accessed over network)
PC 2001 and PXE 2.0-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
IBM Rapid Restore PC available to protect software image and data
International Warranty Service[17]
24 hour x 7 day[18] toll-free warranty support during the warranty[12] via 800-IBM-SERV (426-7378)

ServicePac®,[22] 1yr IOR 9x5 NBD
30L9188
ServicePac 2 yr IOR 9x5 NBD
30L9189
ServicePac 3 yr IOR 9x5 NBD
30L9195
ServicePac 4 yr IOR 9x5 NBD
30L9194
ServicePac 5 yr IOR 9x5 NBD
30L9196
ServicePac 2 yr P&L P/U Depot
30L9191
ServicePac 3 yr P&L P/U Depot
30L9192
ServicePac 4 yr P&L P/U Depot
69P9195
ServicePac 5 yr P&L P/U Depot
69P9197
Other ServicePac options at **ibm.com**/services/its/us/source/wamomxeu.pdf
Post-warranty annual maintenance agreements at **ibm.com**/services/its/us/source/maspspleu.pdf

See footnotes for important warranty information
US models announced October 7, 2003
US models withdrawn effective April 2004 or October 2004

Type-model	Processor	Speed GHz	Memory	Screen	Graphics memory	Disk GB[8]	Optical	Mini PCI Comm Bay wireless	CDC modem/ Bluetooth™	Ethernet on planar	IEEE 1394 port	Security Chip	Preload	Small and medium business	Avail date
2897-22U	Pentium® M	1.3	256MB	14.1" XGA	16MB	20G	DVD	Open; wireless upg[36]	Modem	10/100	1394	Yes	XP Pro	Yes	May 2003
2897-23U	Pentium M	1.3	256MB	14.1" XGA	16MB	20G	Combo	✳Intel 11b Wi-Fi[32]	Modem	10/100	1394	Yes	XP Pro	Yes	May 2003
2897-34U	Pentium M	1.3	256MB	14.1" XGA	32MB	40G	Combo	✳Intel 11b Wi-Fi	Modem	10/100	1394	Yes	XP Pro	Yes	May 2003
2897-55U	Pentium M	1.3	256MB	15.0" XGA	32MB	40G	Combo	Open; wireless upg	Modem	10/100	1394	Yes	XP Pro	Yes	May 2003
2897-54U	Pentium M	1.3	256MB	15.0" XGA	32MB	40G	Combo	✳Intel 11b Wi-Fi	Modem	10/100	1394	Yes	XP Pro	Yes	May 2003
2897-GWU	Pentium M	1.5	256MB	15.0" SXGA+	32MB	60G	Combo	11a/b Wi-Fi[27]	Modem	10/100	1394	Yes	XP Pro	Yes	May 2003
2897-93U	Pentium M	1.4	256MB	14.1" XGA	16MB	20G	Combo	✳Intel 11b Wi-Fi	Modem	10/100	1394	Yes	XP Pro	Yes	Oct 2003
2897-B4U	Pentium M	1.4	256MB	15.0" XGA	32MB	40G	Combo	✳Intel 11b Wi-Fi	Modem	10/100	1394	Yes	XP Pro	Yes	Oct 2003
2897-GAU	Pentium M	1.5	256MB	15.0" SXGA+	32MB	60G	Combo	✳Intel 11b Wi-Fi	Modem	10/100	1394	Yes	XP Pro	Yes	Oct 2003
2897-83U	Pentium M	1.4	256MB	15.0" XGA	16MB	20G	Combo	✳Intel 11b Wi-Fi	Modem	10/100	1394	Yes	XP Pro	Yes	Nov 2003

These small and medium business (SMB) models are part of the IBM US Think Express Program

Positioning	*Mainstream performance and features; two-spindle system*	
Processor	**Intel**® **Pentium**® **M Processor 1.3, 1.4,** or **1.5GHz** with enhanced Intel SpeedStep™ technology[1] and 400MHz system bus	**SOFTWARE**[14]
L2 cache	**1MB** / on die (at processor speed) / ECC	**Windows XP Pro models**
Memory	**256MB** std / 2GB max[7] / **PC2100** 266MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available	- Microsoft® Windows® XP Professional[20]

Windows XP Pro models

- Microsoft® Windows® XP Professional[20]
- ◇ Disk-to-Disk Recovery (in hidden protected area)

Diskette drive	None standard / use optional Ultrabay™-based or USB-based diskette drive
DVD	*Some:* DVD-ROM / 8X-3.3X[9] speed / bootable / removable from Ultrabay 2000
Combo	*Some:* DVD-ROM/CD-RW / 24X/10X/24X/8X[21] speed / removable from Ultrabay 2000
Ultrabay 2000	One modular bay for interchangeable devices / **Ultrabay Plus**-compatible /12.7 mm high
Disk	**20GB**[8], **40GB,** or **60GB,** 4200 rpm, 9.5mm / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay 2000

Preloaded
- Access IBM
  - Access Connections
- Adobe Acrobat Reader
- IBM Rapid Restore™ PC
- IBM RecordNOW and DLA by Veritas (combo models)
- InterVideo WinDVD (Combo, DVD)
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- IBM Update Connector™.[15]

Display	*Some:* **14.1"** (358.1mm) **XGA (1024x768) TFT color** / Active Matrix / 150 nits *Some:* **15.0"** (381.0mm) **XGA (1024x768) TFT color** / Active Matrix / 150 nits *Some:* **15.0"** (381.0mm) **SXGA+ (1400x1050) TFT color** / Active Matrix / 150 nits
Graphics controller	*Some:* **ATI**® **Mobility**™ **RADEON**™ / **AGP 4X** / **16MB** DDR1 (DDR-SDRAM) *Some:* **ATI Mobility RADEON 7500** / **AGP 4X** / **32MB** DDR1 (DDR-SDRAM)
Graphics - external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™ multi-pointing system / touch pad keyboard / Tap Zones
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions

License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Dimensions[3]	*14.1" models:* 12.3" x 10.0" x 1.53"; *15.0" models:* 13.0" x 10.5" x 1.59"
Approximate weight[2]	with optical drive and battery: *14.1" models:* 6.1 to 6.7 lb; *15.0":* 6.6 to 6.7 lb (3.0 to 3.4kg)
Case material	*Color:* Black; *All:* Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion 8-cell / intelligent / supports unique 2nd battery in Ultrabay 2000
Battery - life[10]	6.1 to 6.2 hr

Architecture	**Intel 855PM** chipset / 82855PM Memory Controller Hub (MCH-M) / 82801DBM ICH4-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB, Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1510 CardBus controller, TSB43AB21 1394 (some), Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared)
PC Card Std slots	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door
Ports	Two USB (Version 2.0) / parallel / external monitor (DB-15) / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial port

Universal 72 watt AC adapter
Asset ID™.[34] (system-specific info in chip accessed over network)
PC 2001 and PXE 2.0-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
IBM Rapid Restore PC available to protect software image and data
International Warranty Service[17]
24 hour x 7 day[18] toll-free warranty support during the warranty[12] via 800-IBM-SERV (426-7378)

Video out	S-video out port (TV out) / one 4-pin industry standard connector
IEEE 1394	IEEE 1394 (FireWire) port / 4-pin connector
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable
Wireless upg[36]	*Some:* Wireless upgradable with wireless Mini PCI options
11b Wi-Fi[32]	*Some:* 11b Wi-Fi[32] wireless[4], Mini PCI, Intel PRO/Wireless 2100 Network Connection 802.11b, Intel 82531 chipset
11a/b Wi-Fi[27]	*Some:* 11a/b Wi-Fi[27] wireless[4], Mini PCI, Atheros™ AR5001X chipset
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible
Modem	56K[6] V.90 (V.92-designed[29]) modem in CDC / Agere® chipset
Bluetooth™	None
Ethernet	10/100 ethernet on motherboard / Intel 82562EZ chip (physical layer) / PXE
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1891A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack
Security	Power-on password / hard disk password / supervisor password / security keyhole
Security chip	**IBM Embedded Security Subsystem 2.0**[33] / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security[16] / TCG-compliant

ServicePac®.[22] 1yr IOR 9x5 NBD
30L9188
ServicePac 2 yr IOR 9x5 NBD
30L9189
ServicePac 3 yr IOR 9x5 NBD
30L9195
ServicePac 4 yr IOR 9x5 NBD
30L9194
ServicePac 5 yr IOR 9x5 NBD
30L9196
ServicePac 2 yr P&L P/U Depot
30L9191
ServicePac 3 yr P&L P/U Depot
30L9192
ServicePac 4 yr P&L P/U Depot
69P9195
ServicePac 5 yr P&L P/U Depot
69P9197

Limited warranty[12]	**1 year** - EasyServ™.[19] onsite pickup and delivery / service upgrades[22] available

128 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	ThinkPad Port Replicator II	74P6733
256 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	ThinkPad Mini Dock	287810U
512 MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816
1GB PC2100 DDR-SDRAM CL2.5 SOD	10K0034	80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273
CD-RW/DVD Combo IV Ultrabay 2000	22P6991	ThinkPad R32/R40 Series Li-Ion Battery	02K7052
Second HDD Adapter for Ultrabay 2000	08K6068	Ultrabay 2000 Li-Ion battery	02K6646
ThinkPad Removable Diskette Drive	08K9603	ThinkPad Multiple Battery Charger II	22P9040
IBM USB Portable Diskette Drive	05K9276	IBM 11a/b/g Wireless CardBus Adapter	31P9101
IBM 4GB Microdrive™ with PC Card	09N4280	IBM 11a/b/g Wireless Mini PCI Adapter	31P9701
IBM 256MB USB 2.0 Memory Key	22P9025	Cisco Aironet Wireless 802.11b Mini PCI	31P8301
ThinkPad 72W AC Adapter	02K6699	Ericsson® GC82 EDGE PC Card Wireless	58P8782
ThinkPad 72W AC/DC Combo Adapter	22P9010	Other options at **ibm.com**/pc/us/accessories	

Other ServicePac options at
ibm.com/services/its/us/source/
wamomxeu.pdf
Post-warranty annual maintenance agreements at
ibm.com/services/its/us/source/
maspspleu.pdf

Type-model	Processor	Speed GHz	Memory	Screen	Graphics memory	Disk GB[8]	Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar	IEEE 1394 port	Security Chip	Workhorse (W) Global (G) Entry (E)		Avail date
													Preload		
2723-3XU	Pentium® M	1.3	256MB	14.1" XGA	32MB	40GB	Combo	✳Intel 11b Wi-Fi[32]	Modem	10/100	1394	Yes	XP Pro	W	Mar 2003
2723-3PU	Pentium M	1.3	256MB	14.1" XGA	32MB	40GB	Combo	11a/b Wi-Fi[27]	Modem	10/100	1394	Yes	XP Pro	W	Mar 2003
2723-6XU	Pentium M	1.3	256MB	15.0" SXGA+	32MB	40GB	Combo	✳Intel 11b Wi-Fi	Modem	10/100	1394	Yes	XP Pro	W	Mar 2003
2723-6PU	Pentium M	1.3	256MB	15.0" SXGA+	32MB	40GB	Combo	11a/b Wi-Fi	Modem	10/100	1394	Yes	XP Pro	W	Mar 2003
2723-BDU	Pentium M	1.4	256MB	15.0" SXGA+	32MB	40GB	Combo	✳Intel 11b Wi-Fi	Modem	10/100	1394	Yes	XP Pro		Nov 2003

These educational models of the ThinkPad R40 notebook are available only to public or private K-12 (or higher) accredited schools organized and operated exclusively for educational purposes for use by qualified students and/or teachers.

This model for education is for sale direct from IBM or through an Authorized Education Reseller.
The model or models for education are not available for resale to any other organization or individual.
2723 models have a 3 year limited warranty (other 2722 ThinkPad R40 systems have a 1 year limited warranty)

Positioning	*Mainstream performance and features; two-spindle system*
Processor	**Mobile Intel**® **Pentium**® **M Processor 1.3 or 1.4GHz** with enhanced Intel SpeedStep™ technology[1] and 400MHz frontside bus
L2 cache	**1MB** / on die (at processor speed) / ECC
Memory	**256MB** std / 2GB max[7] / **PC2100** 266MHz DDR1 (DDR-SDRAM) / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available
Diskette drive	None standard / use optional Ultrabay™-based or USB-based diskette drive
Combo	DVD-ROM/CD-RW / 24X/10X/24X/8X[21] speed / removable from Ultrabay 2000
Ultrabay 2000	One modular bay for interchangeable devices / **Ultrabay Plus**-compatible / 12.7 mm high
Disk	**40GB**[8], 4200 rpm, 9.5mm high / removable and upgradable / 9.5mm high bay / supports 2nd disk with optional HDD Adapter in Ultrabay 2000
Display	*Some:* **14.1"** (358.1mm) **XGA (1024x768) TFT color** / Active Matrix / 150 nits *Some:* **15.0"** (381mm) **XGA (1024x768) TFT color** / Active Matrix / 150 nits *Some:* **15.0"** (381.0mm) **SXGA+ (1400x1050) TFT color** / Active Matrix / 150 nits *All:* Easy-open cover to unlatch and open with one hand (two latches)
Graphics controller	**ATI**® **Mobility RADEON**® **7500 / AGP 4X / 32MB** DDR1 (DDR-SDRAM)
Graphics - external	External monitor support via analog DB-15 connector / up to 1600x1200 at 85Hz / DDC2B
Keyboard	87-key / Access IBM button / palm rest / pitch: 19mm; stroke: 2.7mm (std-size keys)
TrackPoint®	TrackPoint® pointing device, "Press-to-Select," Internet Scroll Bar[13], magnifying glass
Touch pad	UltraNav™ multi-pointing system / touch pad below keyboard / Tap Zones
ThinkLight™	Illuminates the keyboard to improve visibility in low-light conditions
Dimensions[3]	*14.1" models:* 12.3" x 10.0" x 1.53"; *15.0" models:* 13.0" x 10.5" x 1.59"
Approximate weight[2]	with optical drive and battery: *14.1" models:* 6.0 to 6.1 lb; *15.0":* 6.6 to 6.7 lb (3.0 to 3.4kg)
Case material	*Color:* Black; *All:* Acrylonitrile-Butadiene-Styrene (ABS) plastic
Battery - type	Lithium Ion 8-cell / intelligent / supports unique 2nd battery in Ultrabay 2000
Battery - life[10]	6.2 hr; *BDU:* 6.1 hr
Architecture	**Intel 855PM** chipset / 82855PM Memory Controller Hub (MCH-M) / 82801DBM ICH4-M I/O Controller Hub (ATA-100 EIDE, PCI bus, ethernet MAC, Low Pin Count (LPC) interface, USB, Firmware Hub) / PCI bus 2.2 32-bit, 33MHz (TI® PCI1510 CardBus controller, TSB43AB21 1394 (some), Mini PCI, external expansion) / LPC bus 33MHz (security chip; PC87392 Super I/O for diskette, parallel, infrared)
PC Card Std slots	One Type I, one Type II, or one Type III / CardBus 32-bit / PCMCIA 2.1 / integrated door
Ports	Two USB (Version 2.0) / parallel / external monitor (DB-15) / infrared (4Mbps) / RJ-11 (modem) / RJ-45 (ethernet) / no keyboard or mouse or serial port
Video out	S-video out port (TV out) / one 4-pin industry standard connector
IEEE 1394	IEEE 1394 (FireWire) port / 4-pin connector
Wireless antenna	UltraConnect™ Antenna built into the display cover for optimal wireless signal reception
Mini PCI	One Mini PCI type III slot (Communications Bay) / customer upgradable
11b Wi-Fi[32]	*Some:* 11b Wi-Fi[32] wireless[4], Mini PCI, Intel PRO/Wireless 2100, Intel 82531 chipset
11a/b Wi-Fi[27]	*Some:* 11a/b Wi-Fi[27] wireless[4], Mini PCI, Atheros™ AR5001X chipset
CDC	One Communications Daughter Card (CDC) socket (used by modem) / not accessible
Modem	56K[6] V.90 (V.92-designed[29]) modem in CDC / Agere® chipset
Bluetooth	None
Ethernet	10/100 ethernet on motherboard / Intel 82562EZ chipset (physical layer) / PXE
Audio support	Soft audio / ICH AC97 controller / DirectSound® support / AD1891A AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal mic / microphone input jack (3.5 mm) / headphone jack (3.5 mm) / no line in jack
Security	Power-on password / hard disk password / supervisor password / security keyhole
Security chip	**IBM Embedded Security Subsystem 2.0**[33] / hardware key storage / multi-factor authentication / local file encryption / enhances VPN security[16] / TCG-compliant
Limited warranty[12]	**3 years**/1 year battery - EasyServ™[19] onsite pickup and delivery / serv upgrades[22] avail

128MB PC2100 DDR-SDRAM CL2.5 SOD	10K0028	ThinkPad Port Replicator II	74P6733
256MB PC2100 DDR-SDRAM CL2.5 SOD	10K0030	ThinkPad Mini Dock	287810U
512MB PC2100 DDR-SDRAM CL2.5 SOD	10K0032	40GB HS Hard Disk 9.5mm (5400 rpm)	08K9816
1GB PC2100 DDR-SDRAM CL2.5 SOD	10K0034	80GB HS Hard Disk 9.5mm (5400 rpm)	09N4273
CD-RW/DVD Combo IV Ultrabay 2000	22P6991	GemPC400 Smart Card Reader/Writer	31P8901
Second HDD Adapter for Ultrabay 2000	08K6068	ThinkPad R32/R40 Series Li-Ion Battery	02K7052
ThinkPad Removable Diskette Drive	08K9603	Ultrabay 2000 Li-Ion battery	02K6646
IBM USB Portable Diskette Drive	05K9276	ThinkPad Multiple Battery Charger II	22P9040
IBM Portable USB 2.0 Multi-Burner Drive	22P9163	IBM 11a/b/g Wireless CardBus Adapter	31P9101
Optical 3-Button Travel Wheel Mouse	31P7410	IBM 11a/b/g Wireless Mini PCI Adapter	31P9701
IBM 4GB Microdrive™ with PC Card	09N4280	Cisco Aironet Wireless 802.11b Mini PCI	31P8301
IBM 128MB USB 2.0 Memory Key	22P9229	IBM M400 Projector	0037A04
IBM 256MB USB 2.0 Memory Key	22P9025	IBM E400 Projector	0038A04
ThinkPad 72W AC Adapter	02K6699	ThinkPad Monitor Stand 2001	22P5265
ThinkPad 72W AC/DC Combo Adapter	22P9010	Other options at **ibm.com**/pc/us/accessories	

SOFTWARE[14]

Windows XP Pro models
- Microsoft® Windows® XP Professional[20]
- ✧ Disk-to-Disk Recovery (in hidden protected area)

Preloaded
- Access IBM
  - Access Connections
- Adobe Acrobat Reader
- IBM Rapid Restore™ PC
- IBM RecordNOW and DLA
- InterVideo WinDVD
- Norton AntiVirus (OEM edition)
- PC-Doctor™
- ThinkPad Utilities
- IBM Update Connector™,[15]

Downloadable
- IBM Director Agent
- Software Delivery Assistant
- System Migration Assistant
- Client Security Software (for security chip)

License (CD not included)
- Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client

Universal 72 watt AC adapter
Asset ID™,[34] (system-specific info in chip accessed over network)
PC 2001 and PXE 2.0-compliant
ACPI 1.0b and 2.0-compliant
CIM and DMI 2.0-compliant
IBM ImageUltra™ Services available
IBM Rapid Restore PC available to protect software image and data
International Warranty Service[17]
24 hour x 7 day[18] toll-free warranty support during the warranty[12]

Ultrabay Plus integrated modular bay supports most Ultrabay 2000 devices including CD-RW/DVD Combo drive, diskette drive, or Zip drive; the optional Ultrabay Plus Device Carrier adds potential functionality by supporting the Ultrabay Plus Numeric Keypad and Cradle for the WorkPad® c500 Series

ServicePac®, [22] 2 yr IOR 9x5 NBD
    30L9190
ServicePac 3 yr IOR 9x5 NBD
    30L9197
ServicePac 4 yr IOR 9x5 NBD
    69P9198
ServicePac 5 yr IOR 9x5 NBD
    69P9200
ServicePac 4 yr P&L P/U Depot
    69P9199
ServicePac 5 yr P&L P/U Depot
    69P9201
Other ServicePac options at
  ibm.com/services/its/us/source/
  wamomxeu.pdf
Post-warranty annual maintenance agreements at
  ibm.com/services/its/us/source/
  maspspleu.pdf

See footnotes for important warranty information
US models announced March 25 or November 20, 2003
US models withdrawn effective January 2004 or October 2004

✳ Powered by the Intel Centrino™ mobile technology

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