Type-model Pro	Speed ocessor GHz Memory	Dis Screen GB		Mini PCI Comm Bay wireless	CDC	Ethernet on planar	1394	rity	warra	nited Wo	Global	(G) Ava		
1834-4EU Celeror 1834-5BU Celeror 1834-4AU Celeror 1834-56U Celeror 1834-NEU Pentiur 1834-C4U Pentiur	n® M 1.3 128MB n M 1.3 128MB n M 1.3 256MB	14.1" XGA 20G 15.0" XGA 20G 14.1" XGA 30G 15.0" XGA 30G 14.1" XGA 30G 14.1" XGA 30G	B CD B CD B Combo B Combo B CD B CD	None None None None *Intel 11b/g³² *Intel 11b/g *Intel 11b/g	Modem Modem Modem Modem Modem Modem	10/100 10/100	No No No No No No	No X No X No X No X No X No X	(P Home (P Home (P Pro (P Pro (P Home	1 yr 1 yr 1 yr 1 yr 1 yr 1 yr 1 yr	E ,	Apr 2004 Apr 2004 Apr 2004 Apr 2004 July 2004 July 2004 July 2004		
Positioning Processor L2 cache Memory	Mainstream performar Intel® Celeron M Proc Intel Pentium M Proc 2MB L2 cache) with en Celeron M: 512KB; Pe 128MB or 256MB std speed to 266MHz) / no two 200-pin SO-DIMM	essor 1.3GHz wessor 705 (1.5G hanced Intel Spentium M 705: 1I '2GB max ⁷ / PC n-parity / CL2.5	vith 400MHz Hz with 1M peedStep™ MB; Pentiur 2700 333M	system bus or B L2 cache) or technology ¹ and m <i>M 715:</i> 2 MB ; Hz DDR 1 (mer	d 400MH <i>All:</i> ECC nory con	z system ; troller lim	bus	- Mid Ho ≎Dis (in	Some XP For so of the control of the	indows 1 ²⁰ Recov otected	models s® XP ery l area)	6		
Diskette drive CD Combo Ultrabay Enhanced Disk	None standard / use o Some: CD-ROM / 24) Some: DVD-ROM/GI I None / no support for re 20GB ⁸ or 30GB (4200 9.5mm high bay / IBM Some: 14.1" (358.1m Some: 15.0" (381.0m	(-10X ⁹ speed / f -RW / 24X/24X, emovable Ultrab rpm), 9.5mm hig lard Disk Drive m) XGA (1024x' m) XGA (1024x'	xed, not rer /24X/8X ²¹ sp ay™ options h / removab • Shock Abs 768) TFT co 768) TFT co	novable / 12.7 r peed / fixed, not le and upgradal sorber lor / Active Mat lor / Active Mat	removal	nits	mm	- Mic Pro Dis (in Prelo Aco	crosoft Wir ofessional ² sk-to-Disk hidden pro caded (all) cess IBM cess Conn M Rescue	ndows Recov otected	XP ery l area) s	√ TM		
Graphics Graphics external Keyboard TrackPoint® Touch pad ThinkLight™ Dimensions³ Weight² Case material	Integrated Intel Extreuses main memory (up External monitor supposed 187-key / Access IBM by TrackPoint® pointing do No UltraNav™ multi-polluminates the keyboar 14.1" models (WxDxH, 15.0" models (WxDxH, with optical drive and by Color: black; All: Acr	o to 64MB) / 200 ort via analog DE utton / palm res evice, "Press-to inting system rd to improve vi : 12.4" x 10.2" x : 13.1" x 10.6" x attery: 14.1" mo /lonitrile-Butadi	2 / in 855G MHz 8-15 connec t / pitch: 19r -Select," Int sibility in low 1.35-1.46"; 1.47-1.58"; dels: 6.0 lb (jene-Styrene	M GMCH / tor / up to 1600x mm; stroke: 2.7 ernet Scroll Bai y-light condition 314mm x 260m 332mm x 269m 2.7kg); 15.0" mc e (ABS) plastic	mm (std- 13, magn s m x 34-3 m x 37-4	size key: ifying gla 7mm 0mm	s) ss	IBM Acc (ccc Inte No PC Thi Add IBM Dow IBM So	M RecordN cess powe ombo mode erVideo W rton AntiV c-Doctor™ inkPad Uti obe Reade M Update C nloadable M Director ftware Del	NOW a ered by els) inDVD irus (C lities er Connec (all) Agent ivery A	nd Driv V Sonic (comb EM ed	ve Letter product o model ition)		
Battery - type Battery - life¹0 Architecture Port replicator Docking station	No docking station sup	to 4.0 hr; 'Penti y 9-cell: up to 6. 32855GM Mem) Controller Hub terface, USB) / IHz (TI® PCI151 '392 Super I/O fort port	um M mode 0 hr ory Controll (ATA-100 E 0 CardBus o or parallel)	ls: up to 4.7 hr; er Hub (MCH-N IDE, PCI bus, e controller, Mini F	thernet M PCI) /			Licei - Lot Lot Think	nse (CD no tus® Smart tus Notes® kPad notel kVantage [†]	ot inclu Suite® Stand books®techr	Assistant cluded) a Millennium and alone Client as implement IBM thnologies and am/thinkvantage			
									0 7					
Limited warranty ¹² 128 MB PC2700 E 256 MB PC2700 E 512 MB PC2700 E 1GB PC2700 DDI IBM 4GB Microdri IBM USB Portable IBM USB 2.0 Corr IBM USB 2.0 Porta	nbo Drive able Multi-Burner Drive able 40GB Hard Disk nory Key 256MB nory Key 512MB tor	D 31P9828 T-10 31P9830 T-10 31P9834 T-10 31P9834 T-10 90N4280 K-10 90N	40/R50 Seri 40/R50 High hinkPad Mu ackPoint Ca ensington [®] N GGB HS Har GGB HS Har M 11a/b/g V hinkPad Cau hinkPad 72V M USB Tra	es Li-Ion Batter o Capacity Li-Ion Itiple Battery Chap Collection MicroSaver® Sed d Disk 9.5mm (9 d Disk 9.5mm (9 d Disk 9.5mm (9 Vireless CardBrying Case - Le V AC/DC Comb vel Keyboard w at ibm.com/pc	n Batt 9-cate arger II curity Cal 5400 rpm 5400 rpm 5400 rpm us Adapt eather so Adapte ith UltraN	cell 08K 22P 73P ole 73P i) 08K i) 73P i) 09N er 31P 73P 22P Nav 31P	8214 8197 9040 2698 2582 9816 3357 4273 9101 3600 9010 9490	Servi Servi Servi Servi Post- agree ib	icePac 5 y icePac 2 y icePac 3 y icePac 4 y icePac 5 y -warranty a ements at m.com/se aspspleu.p	rr IOR S rr P&L rr P&L rr P&L annual ervices	9x5 NE P/U Do P/U Do P/U Do P/U Do mainto	30L919 30L919 epot 30L919 epot 30L919 epot 69P919 epot 69P919		

						r ersonar dystems riererence (r erier)
Type-model Proces	Speed Graphics		Mini PCI Comm Bay wireless	CDC modem	Ethernet on	IEEE Workhorse (W) 1394 Security Global (G) Avail port chip Preload Entry (E) date
1830-46U Pentiur 1830-48U Pentiur 1830-56U Pentiur 1830-6FU Pentiur 1830-7DU Pentiur	m [®] M 1.4 256MB 14.1" XGA 7500 m M 1.4 256MB 14.1" XGA 7500 m M 1.4 256MB 14.1" XGA 7500	30G CD 30G DVD 30G Combo ÷ 40G Combo ÷ 40G Combo	Open; wireless upg ³⁶ Open; wireless upg *Intel 11b Wi-Fi ³² *Intel 11b Wi-Fi 11a/b/g Wi-Fi ³²	Modem Modem Modem Modem Modem	10/100 10/100 Gigabit Gigabit Gigabit	Yes XP Pro W Oct 2003 Yes XP Pro W G Oct 2003 1394 Yes XP Pro Oct 2003
Positioning Processor L2 cache Memory	Mainstream performance and feature Intel® Pentium® M Processor 1.4 or enhanced Intel SpeedStep™ techno 1MB / on die (at processor speed) / E 256MB std / 2GB max² / PC2700 33 two 200-pin SO-DIMM sockets / std	1.5GHz with logy ¹ and 400M ECC 3MHz DDR-SE	// //IHz system bus DRAM / non-parity / CL		-	SOFTWARE ¹⁴ Windows XP Pro models - Microsoft® Windows® XP Professional ²⁰ \$\times \text{Disk-to-Disk Recovery}
Diskette drive CD DVD Combo Ultrabay Enhanced Disk	None standard / use optional USB-b Some: CD-ROM / 24X-10X ⁹ speed Some: DVD-ROM / 8X-3.3X ⁹ speed Some: DVD-ROM/CD-RW / 24X/24 One modular bay for interchangeable 30GB ⁸ (4200 rpm) or 40GB (4200 rpm 9.5mm high bay / supports 2nd disk v IBM Hard Disk Drive Shock Absorb: 14.1" (358.1mm) XGA (1024 Some: 15.0" (381.0mm) XGA (1024 Some: 15.0" (381.0mm) XGA+ (14	/ bootable / ren / bootable / rer // bootable / rer x/24X/8X ²¹ spi e devices / Ultra n), 9.5mm high with optional 'Se per / IBM Activ x768) TFT col x768) TFT col 800x1050) TFT	novable from Ultrabay movable from Ultrabay eed / removable from U abay Slim-compatible / removable and upgra- econd HDD Adapter for re Protection System or / Active Matrix / 150 or / Active Matrix / 200 Coolor / Active Matrix /	Enhand Jltrabay 12.7 mm Idable / Ultrabay nits nits 200 nits	eed Renhan Anderson A	(in hidden protected area) Preloaded Access IBM Access Connections Adobe Acrobat Reader IBM Rapid Restore™ Ultra IBM RecordNOW and IBM Drive Letter Access (combo models) InterVideo WinDVD (combo, DVD) Norton AntiVirus (OEM edition) PC-Doctor™
•	FlexView display with wide v switching (IPS) technology Some: ATI® Mobility™ RADEON™ Some: ATI Mobility RADEON 9000 External monitor support via analog I	7500 / AGP 42 0 / AGP 4X / 32	X / 32MB DDR-SDRAN 2MB DDR-SDRAM	Л		 ThinkPad Utilities IBM Update Connector^{TM,15} Downloadable IBM Director Agent Software Delivery Assistant
Keyboard TrackPoint® Touch pad ThinkLight™	87-key / Access IBM button / palm ro TrackPoint® pointing device, "Press- UltraNav™ multi-pointing system / to Illuminates the keyboard to improve	est / pitch: 19m to-Select," Inte uch pad below	nm; stroke: 2.7mm (std ernet Scroll Bar ¹³ , magr keyboard / Tap Zones	-size key	ys) ass	 System Migration Assistant Client Security Software (for security chip) License (CD not included) Lotus® SmartSuite® Millennium and
Dimensions ³ Approximate weight ⁴ Case material Battery - type Battery - life ¹⁰	14.1" models (WxDxH): 12.4" x 10.2" 15.0" models (WxDxH): 13.1" x 10.6" with optical drive and battery: 46U/4& Color: black; All: Acrylonitrile-Buta Lithium Ion 6-cell / intelligent / suppo Model 7DU with SXGA+: up to 4.0 h	x 1.47-1.58"; 3 BU: 5.7 lb (2.6kg diene-Styrene orts unique 2nd	332mm x 269mm x 37-4 g); <i>56U:</i> 6.0 lb; <i>6FU/7D</i> 0 (ABS) plastic battery in Ultrabay Enha	10mm <i>U:</i> 6.6 lb anced	. 0,	Lotus Notes® Stand-alone Client
Architecture PC Card Std slots Ports	Intel 855PM chipset / 82855PM Mem 82801DBM ICH4-M I/O Controller Hu Low Pin Count [LPC] interface, USB, PCI4520A CardBus and 1394 contro (security chip; PC87392 Super I/O fo One Type I, one Type II, or one Type Two USB (Version 2.0) / parallel / ex RJ-11 (modem) / RJ-45 (ethernet) /	ub (ATA-100 EI [Bluetooth]) / F Iller, Mini PCI, e diskette, paral e III / CardBus ternal monitor	DE, PCI bus, ethernet I PCI bus 2.2 32-bit, 33M external expansion) / LP IlleI, infrared, [docking-b 32-bit/PCMCIA 2.1/i (DB-15) / infrared (4M)	Hz (TI® PC bus 30 ased po ntegrate	rts]) d door	
Video out IEEE 1394 Wireless antenna Mini PCI Wireless upg ³⁶ 11b Wi-Fi ³² 11a/b/g Wi-Fi ³² CDC Modem Bluetooth Ethernet	S-video out port (TV out) / one 4-pin Some: IEEE 1394 (FireWire) port / 4 UltraConnect™ Antenna built into the One Mini PCI type III slot (Communi Some: wireless upgradable with wire Some: 11b Wi-Fi³² wireless⁴, Mini PC Some: 11a/b/g Wi-Fi³² wireless⁴, Mini One Communications Daughter Carr 56K⁵ V.90 (V.92-designed²³) modem None Some: 10/100 ethernet on planar / In Some: Gigabit Ethernet on planar / In Soft audio / ICH AC97 controller / Di	tion i	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 BM ImageUltra™ Services available BM Rapid Restore Ultra available to protect software image and data international Warranty Service¹² 24 hour x 7 day¹8 toll-free warranty support during the warranty¹² via 800-IBM-SERV (426-7378)			
Security Security chip	stereo speakers / 1 watt / volume up microphone input jack (3.5 mm) / he Power-on password / hard disk pass IBM Embedded Security Subsyste authentication / local file encryption	, down, mute b adphone jack (sword / supervi em 2.0 33 / hardv	outtons / internal microp (3.5 mm) / no line in jac isor password / securit ware key storage / muli	ohone / ck y keyhol ti-factor	e	ServicePac ^{®, 22} 2 yr IOR 9x5 NBD 30L9190 ServicePac 3 yr IOR 9x5 NBD 30L9197 ServicePac 4 yr IOR 9x5 NBD
256MB PC2700 I 512MB PC2700 D 1GB PC2700 DD Second HDD Ada ThinkPad DVD-R CD-RW/DVD Cor Multi-Burner Ultra IBM USB Portabli IBM USB 2.0 Port ThinkPad 72W AG	3 years/1 yr battery - EasyServ ^{TM,19} of DDR-SDRAM CL2.5 SOD 31P9838 DDR-SDRAM CL2.5 SOD 31P9830 DDR-SDRAM CL2.5 SOD 31P9832 R-SDRAM CL2.5 SOD 31P9834 depter for Ultrabay Slim OM Ultrabay Slim Drive 73P3270 mbo Ultrabay Enhanced Drive 73P3282	T40/R50 Seri T40/R50 Seri T40/R50 Higl Ultrabay Slim 30GB Hard D 40GB HS Har 80GB HS Har Intel PRO/Wi IBM 11a/b/g V	nd delivery / service up- ies Li-Ion Battery 6-cell h Capacity Li-Ion Batt 9 n Li-Polymer Battery 3- isk 9.5mm (4200 rpm) rd Disk 9.5mm (5400 rp rd Disk 9.5mm (5400 rp reless 2200BG Mini PC Wireless Mini PCI Adap Wireless CardBus Adapt rt Replicator II ni Dock	grades ²² 08k	(8214 (8197 (8190)4268 (9816)4273 (2801 (29701 (29101)	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

	Speed	G	raphics		Mini PCI Comm Bay	CDC modem/	Etherne on	t IEEE 1394	Batte Sec cel	ery \	Workhor					
Type-model Proces 1829-6YU Pentium			7500 40GB		wireless Open; wireless upg ³	Bluetooth™ 6 Modem	•	•	•	warrant 1 year	ty Entry No Jan					
1829-7ZU Pentiun	nM 1.7 512MB 1	5.0" SXGA+	9000 60GB	Combo	Open; wireless upg k <i>Pad R50 systems h</i>	Mod/Blue	Gigabi	t 1394	Yes 9							
Positioning Processor	Mainstream perfo				ystem				SC	OFTWAR	RE ¹⁴					
	enhanced Intel S	peedStep™ t	echnology ¹ a		Hz system bus					ro mode						
L2 cache Memory		3 max7 / PC27	700 333MHz		DR-SDRAM) / non- socket / one socket		2.5/	Profe	ssional²¹ to-Disk l	Recovery	/					
Diskette drive Combo Ultrabay Enhanced Disk	One modular bay 40GB ⁸ (4200 rpm 9.5mm high bay /	RW / 24X/24X for interchan n) or 60GB (42 supports 2nd	/24X/8X ²¹ sp geable device 200 rpm), 9.5 I disk with op	eed / remes / Ultrab mm high / tional 'Se	rive ovable from Ultraba oay Slim-compatible removable and upg cond HDD Adapter fo Protection Syster	/ 12.7 mm ł radable / or Ultrabay	nigh Slim'/	Preload Acces Acces Adob	ded ss IBM ss Conn e Acroba	tected ar ections at Reade estore™ U	ŗ					
Display										IOW and S nDVD rus (OEI	I IBM Dr					
·	Some: ATI Mob	ility RADEO	N 9000 / AG	P 4X / 32	/ 32MB DDR1 (DDF MB DDR1 (DDR-SD r/up to 1600x1200 a	RAM)	C2B	ThinkIBM U		ities onnecto	r ^{тм,15}					
Keyboard TrackPoint® Touch pad ThinkLight™	TrackPoint®point UltraNav™ multi- Illuminates the ke	ting device, "İ pointing syst eyboard to im	Press-to-Sel em / touch pa prove visibili	ect," Inter ad below ty in low-l	<u> </u>	gnifying gľa	s) iss	IBM ISoftwSystem	em Migra	Agent very Ass tion Assi y Softwa	stant					
Dimensions ³ Approximate weight ⁴ Case material Battery - type Battery - life ¹⁰	Color: black; Al	and battery: (//: Acrylonitrile 9-cell / intellig	<i>6YU:</i> 6.6 lb (3 e-Butadiene- gent / suppoi	3.0kg); <i>72</i> Styrene (ts unique	<i>U/:</i> 6.8 lb (3.1kg) ABS) plastic 2nd battery in Ultraba	ay Enhance		secur Licens Lotus	rity chip) e (CD no ® Smart	ot include Suite® Mi Stand-al	ed) Illenniun					
PC Card Std slots Ports	Low Pin Count [L PCI4520A CardB (security chip; PC One Type I, one Two USB (Version	-M I/O Contro PC] interface Bus and 1394 887392 Super Type II, or on on 2.0) / paral	oller Hub (AT., USB, [Bluet controller, M I/O for diske e Type III / C lel / external	A-100 EIE cooth]) / Pe ini PCI, ex tte, parall cardBus 3 monitor (DE, PCI bus, etherne CI bus 2.2 32-bit, 33I tternal expansion) / L el, infrared, [docking 2-bit / PCMCIA 2.1 / DB-15) / infrared (4I	MHz (TI® .PC bus 33 -based por / integrated Mbps) /	ts])									
Video out IEEE 1394 Wireless antenna Mini PCI Wireless upg ³⁶ CDC Modem Bluetooth Ethernet	ntenna UltraConnect™ Antenna built into the display cover for optimal wireless signal reception One Mini PCI type III slot (Communications Bay) / customer upgradable Wireless upgradable with wireless Mini PCI options One Communications Daughter Card (CDC) socket (used by modem) / not accessible 56K6 V.90 (V.92-designed²9) modem in CDC / Agere® chipset									Universal 72 watt AC adapter Asset ID™.34 (system-specific info 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 availab IBM Rapid Restore Ultra available						
Audio support Security Security chip	stereo speakers microphone inpu Power-on passw IBM Embedded	/ 1 watt / volu t jack (3.5 mr ord / hard dis Security Su l	me up, dowr n) / headpho k password bsystem 2.0	n, mute bu ne jack (3 / supervis ³³ / hardw	port / AD1981B AC9 uttons / internal micro 3.5 mm) / no line in ja or password / secur are key storage / mu	ophone / ack ity keyhole ılti-factor	:	prote Interna 24 hou supp 800-l	ect softw tional W r x 7 day ort durin IBM-SEF	are imag arranty S ¹⁸ toll-fre g the wa RV (426-	e and da Service ¹⁷ e warra trranty ¹² 7378)	ata nty via				
Limited warranty ¹²					I security ¹⁶ / TCG-co rvice upgrades ²² ava					1yr IOR	30L9	D 9188				
128 MB PC2700 D 256 MB PC2700 D 512 MB PC2700 D 512 MB PC2700 DDI Second HDD Ada ThinkPad DVD-Ri CD-RW/DVD Con Multi-Burner Plus IBM 128 MB USB 2 IBM 256 MB USB 2 IBM 4GB Microdri IBM USB Portable IBM USB Portable IBM USB 2.0 Porta IBM USB 2.0 Porta IBM USB Serial P IBM M400 Project IBM C400 Project IBM Optical 3-Butt	DDR-SDRAM CL2 DDR-SDRAM CL2 R-SDRAM CL2.5 Poter for Ultrabay Som Ditrabay Sim Do Ultrabay Enhance 0.0 Memory Key 0.1 Memory Key 0.1 Memory Key 0.2 Memory Key 0.2 Memory Key 0.3 Memory Key 0.4 Memory Key 0.4 Memory Key 0.5 Memory Key 0.6 Memory Key 0.7 Memory Key 0.8 Memory Key 0.8 Memory Key 0.9 Memory Key 0.0 Memory K	.5 SOD 31PS .5 SOD 31PS SOD 31PS SOD 31PS SOD 31PS 20 SOD 31PS 73PS 22PS 22PS 22PS 22PS 22PS 22PS 22PS 2	9830 T40/I 9832 Ultra 9834 Think 4554 IBM I 3270 Tracl 3275 30GE 3312 40GE 9229 80GE 9025 Intel 4280 IBM 9194 Erics 9163 Think 7404 Think 3404 Think 3404 Think	R50 High bay Slim I (Pad Mult VSB Trav RPoint Ca B Hard Dis B Hard Dis B Hard Dis B Hard PRO/Wire RCB		9-cell 08K6 -cell 08K6 -cell 08K6 -cell 08K6 -cell 08K6 -cell 02Pe	3214 3197 3190 9040 9490 92698 4268 9816 4273 2801 9701 97101 3782 6699 9010	Service Service Service Service Service Service Post-wagreen	Pac 3 ylePac 5 ylePac 3 ylePac 3 ylePac 3 ylePac 5 ylePac	r IOR 9xt r IOR 9xt r IOR 9xt r IOR 9xt r P&L P/ r P&L P/ r P&L P/ r P&L P/ c nnual m	30LS 5 NBD 30LS 5 NBD 30LS 5 NBD 30LS U Depoi 30LS U Depoi 69PS J Depot 69PS aintenar	9195 9194 9196 t 9191 t 9192 t 9195 9197 nce				

Type-model Proces	Speed sor GHz Memor	v Screen	Graphics controller		Optical	Mini PCI Comm Bay wireless	CDC modem	Ethernet on planar		Securit chip	W y Preload	orkhors Global (Entry ((G) Ava				
1830-5AU Pentiun 1830-5CU Pentiun 1830-7CU Pentiun These	n [®] M 1.4 256ME n M 1.4 256ME n M 1.4 256ME educational mod	3 14.1" XGA 3 14.1" XGA 3 15.0" SXG dels of the TI	7500 7500 A+ 9000 hinkPad r	40G (40G (40G (otebo	Combo Combo Combo ok are	*Intel 11b Wi-Fi ³² 11a/b/g Wi-Fi ³² *Intel 11b Wi-Fi available only to pub	Modem Modem Modem Dlic or priv	Gigabit Gigabit Gigabit ate K-12 (1394 1394 1394 or hig	Yes Yes Yes her) ac	XP Pro XP Pro XP Pro ccredited	No No No	Oct 200 Oct 200 Oct 200				
This mo	odel for education	on is for sale or education	direct fro are not a	m IBN vailab	or thro le for re	al purposes for use bugh an Authorized I sale to any other org 336 ThinkPad R50 sy	Education ganization	Reseller. or individ	lual.								
Positioning	Mainstream pe	rformance a	nd feature	s; two	-spindle			,				VARE ¹⁴	1				
Processor Intel® Pentium® M Processor 1.4GHz with enhanced Intel SpeedStep™ technology¹ and 400MHz system bus L2 cache Memory MB / on die (at processor speed) / ECC Memory 256MB std / 2GB max² / PC2700 333MHz DDR-SDRAM / non-parity / CL2.5 / two 200-pin SO-DIMM sockets / std memory in one socket / one socket available									SOFTWARE ¹⁴ Windows XP Pro models - Microsoft® Windows® XP Professional ²⁰ \$\times \text{Disk-to-Disk Recovery}								
Diskette drive Combo Ultrabay Enhanced Disk											(in hidden protected area) Preloaded • Access IBM • Access Connections • Adobe Acrobat Reader • IBM Rapid Restore™ Ultra						
Display	Some: 15.0" (FlexVie switchi	381.0mm) S	XGA+ (14 vith wide v chnology	100x10 riewing	050) TF g angle	olor / Active Matrix / T color / Active Mat and high density us	rix / 200 n		IBM RecordNOW and IBM Driv Letter Access InterVideo WinDVD Norton AntiVirus (OEM edition) PC-Doctor™								
	Some: ATI Mo	bility RADI	EON 9000)/AG	P 4X / 3	1X / 32MB DDR-SD 32MB DDR-SDRAM tor/up to 1600x1200		/DDC2B	• IBN		l Utilities ate Conn able	ector ^{TM,}	15				
Keyboard TrackPoint® Touch pad ThinkLight™	87-key / Acces TrackPoint®po UltraNav™ mul	s IBM buttor inting device ti-pointing s	n / palm re e, "Press- ystem / to	est / pi to-Sel uch pa	itch: 19 ect," In ad belo	mm; stroke: 2.7mm ternet Scroll Bar ¹³ , m w keyboard / Tap Zo v-light conditions	(std-size nagnifying	keys)	IBM Director Agent Software Delivery Assistant System Migration Assistant Client Security Software (for security chip)								
Dimensions ³ Approximateweight ⁶ Case material Battery - type Battery - life ¹⁰	nsions ³ 14.1" models (WxDxH): 12.4" x 10.2" x 1.35-1.46"; 314mm x 260mm x 34-37mm 15.0" models (WxDxH): 13.1" x 10.6" x 1.47-1.58"; 332mm x 269mm x 37-40mm eximate weight ² with optical drive and battery: 5AU/5CU: 6.0 lb (2.7kg); 7CU: 6.6 lb (3.0kg) material Color: black; All: Acrylonitrile-Butadiene-Styrene (ABS) plastic ry - type Lithium Ion 6-cell / intelligent / supports unique 2nd battery in Ultrabay Enhanced								License (CD not included) - Lotus® SmartSuite® Millennium and Lotus Notes® Stand-alone Client								
Architecture PC Card Std slots Ports	82801DBM ICH Low Pin Count PCI4520A Card (security chip; F One Type I, on Two USB (Vers	I4-M I/O Cor [LPC] interfa IBus and 13 PC87392 Su e Type II, or sion 2.0) / pa	ntroller Huace, USB, 94 contro per I/O fo one Type arallel / ex	ib (AT. [Bluet Iler, Mi r diske e III / C tternal	A-100 E tooth]) / ini PCI, ette, para CardBus monito		33MHz (T / LPC bus ng-based .1 / integra (4Mbps) /	s 33MHz ports]) ated door	Univ	ersal 7	2 watt A	C adap	ter				
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 S-video out Set E1394 Wireless antenna Mini PCI Ultra Connect Mantenna built into the display cover for optimal wireless signal reception One Mini PCI type III slot (Communications Bay) / customer upgradable Some: 11b Wi-Fi ³² wireless ⁴ , Mini PCI, Intel PRO/Wireless 2100, Intel 82531 chipset Some: 11a/b/g Wi-Fi ³² wireless ⁴ , Mini PCI, Atheros TM AR5001X+ chipset One Communications Daughter Card (CDC) socket (used by modem) / not accessible 56K ⁶ V.90 (V.92-designed ²⁹) modem in CDC / Agere® chipset None Gigabit Ethernet on planar / Intel 82540EP chipset (MAC/PHY) / Wake on LAN® Soft audio / ICH AC97 controller / DirectSound® support / AD1981B AC97 codec / stereo speakers / 1 watt / volume up, down, mute buttons / internal microphone /								pset ssible	Universal 72 watt AC adapter Asset ID ^{™,34} (system-specific info 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 availat IBM Rapid Restore PC available t protect software image and data International Warranty Service ¹⁷ 24 hour x 7 day ¹⁸ toll-free warrant support during the warranty¹² vii 800-IBM-SERV (426-7378)								
Security Security chip	microphone inp Power-on pass IBM Embedde	out jack (3.5 word / hard d Security (mm) / he disk pass Subsyste	adpho word m 2.0	ne jack / super ³³ / hard	(3.5 mm) / no line in visor password / sec dware key storage / PN security ¹⁶ / TCG-	n jack curity keyl multi-fact	nole or	Serv	icePac	^{®, 22} 2 yr 3 yr IOF	8 9x5 N	30L9190 BD 30L9197				
Limited warranty ¹²	3 years/1 yr ba	ttery - Easy	Serv™,19	nsite	pickup a	and delivery / service	e upgrade	s ²² avail	Serv	icePac	4 yr IOF	? 9x5 N	BD 69P919				
128 MB PC2700 I 256 MB PC2700 I 512 MB PC2700 DI 1GB PC2700 DDI Second HDD Ada ThinkPad DVD-R CD-RW/DVD Cor	DDR-SDRAM C DDR-SDRAM C R-SDRAM CL2. pter for Ultraba OM Ultrabay SI	_2.5 SOD 3 _2.5 SOD 3 5 SOD 3 y Slim 6 m Drive 7	31P9830	T40/ Ultra Thin 30GI 40GI	R50 Hig bay Slii kPad M B Hard I B HS Ha	ries Li-Ion Battery 6 gh Capacity Li-Ion B m Li-Polymer Batter ultiple Battery Char, Disk 9.5mm (4200 rp ard Disk 9.5mm (540 ard Disk 9.5mm (540	att 9-cell (y 3-cell (ger II 2 om) (00 rpm) (08K8214 08K8197 08K8190 22P9040 09N4268 08K9816 09N4273	Serv	icePac	5 yr IOF 4 yr P& 5 yr P&I cePac op	L P/U [_ P/U D	BD 69P920 Depot 69P919 Pepot 69P920				
Multi-Burner Ultra Portable 40GB US IBM USB Portable IBM USB 2.0 Port ThinkPad 72W AO Other options at il	bay Enhanced I BB 2.0 with Rapi e Diskette Drive able Multi-Burn C/DC Combo Ac	Orive 7 d Restore 0 er Drive 2 lapter 2	'3P3282	Intel IBM IBM Thin Thin	PRO/W 11a/b/g 11a/b/g kPad P	/ireless 2200BG Min Wireless Mini PCI / Wireless CardBus / ort Replicator II ini Dock	ni PCI (Adapter (Adapter (73P2801 31P9701	ib wa Post- agre- ib	m.con amom warra ements	n/service ceu.pdf nty annu s at n/service	s/its/us	s/source/				

Type-model Process	Speed Graphics E sor GHz Memory Screen controller (Ethernet IEEE Battery Workhorse (W) on 1394Securitycells Global (G) Avail planar port chip Preload Entry (E) date
1836-2NU Pentium 1836-2PU Pentium 1836-2QU Pentium 1836-2RU Pentium 1836-2TU Pentium 1836-2TU Pentium 1836-3TU Pentium 1836-3NU Pentium 1836-3QU Pentium 1836-3QU Pentium 1836-3RU Pentium 1836-3SU Pentium 1836-3TU Pentium	1°M 1.4 256MB 14.1" XGA 7500 4 1M 1.4 256MB 14.1" XGA 7500 4 1M 1.4 256MB 14.1" XGA 7500 4 1M 1.4 256MB 14.1" XGA 7500 6 1M 1.5 256MB 14.1" XGA 7500 6 1M 1.4 256MB 15.0" XGA 7500 6 1M 1.5 256MB 15.0" XGA 7500 6 1M 1.6 256MB 15.0" XGA 7500 6 1M 1.6 256MB 15.0" SXGA+9000 6 1M 1.6 256MB 15.0" SXGA+9000 6 1M 1.6 256MB 15.0" SXGA+9000 6	OG DVD *Intel 11b Wi-Fi ³² Modem OG Combo Open; wireless upg ³⁶ Modem OG Combo *Intel 11b Wi-Fi OG Combo 11a/b/g Wi-Fi ³² Modem OG Combo Open; wireless upg OG Combo *Intel 11b Wi-Fi OG Combo *Intel 11b Wi-Fi OG DVD Open; wireless upg OG DVD *Intel 11b Wi-Fi OG DVD Open; wireless upg OG DVD *Intel 11b Wi-Fi OG DVD Open; wireless upg OG DVD *Intel 11b Wi-Fi OG Combo 11a/b/g Wi-Fi OG Combo Open; wireless upg OG Combo *Intel 11b Wi-Fi OG Combo *Intel 11b Wi-	10/100 Yes 6 XP Pro No Oct 2003 Gigabit 1394 Yes 6 XP Pro No Oct 2003 Gigabit 1394 Yes 6 XP Pro No Oct 2003 Gigabit 1394 Yes 9 XP Pro No Oct 2003 Gigabit 1394 Yes 6 XP Pro No Oct 2003 Gigabit 1394 Yes 6 XP Pro No Oct 2003 Gigabit 1394 Yes 6 XP Pro No Oct 2003 10/100 Yes 6 XP Pro No Oct 2003 Gigabit 1394 Yes 9 XP Pro No Oct 2003 Gigabit 1394 Yes 6 XP Pro No Oct 2003 Gigabit 1394 Yes 6 XP Pro No Oct 2003 Gigabit 1394 Yes 6 XP Pro No Oct 2003 Gigabit 1394 Yes 6 XP Pro No Oct 2003 Gigabit 1394 Yes 6 XP Pro No Oct 2003 Grogram SOFTWARE 14
L2 cache Memory Diskette drive DVD Combo Ultrabay Enhanced Disk	enhanced Intel SpeedStep™ technology technology and in the large speed) / Element Formula (at processor speed) / Element Formula (at p	ngy¹ and 400MHz system bus CC MHz DDR-SDRAM / non-parity / CL2.5 / nemory in one socket / one socket available sed diskette drive // bootable / removable from Ultrabay Enhar (//24X/8X²¹ speed / removable from Ultrabay devices / Ultrabay Slim-compatible / 12.7 mr), 9.5mm high / removable and upgradable / th optional 'Second HDD Adapter for Ultrabaer / IBM Active Protection System	(in hidden protected area) Preloaded • Access IBM • Access Connections • Adobe Acrobat Reader • IBM Rapid Restore™ Ultra • IBM RecordNOW and IBM Drive
Display Graphics controller	Some: 15.0" (381.0mm) XGA (1024) Some: 15.0" (381.0mm) SXGA+ (14	(768) TFT color / Active Matrix / 150 nits (768) TFT color / Active Matrix / 200 nits (768) TFT color / Active Matrix / 200 nits (7500 / AGP 4X / 32MB DDR-SDRAM)	
Keyboard TrackPoint® Touch pad ThinkLight™	87-key / Access IBM button / palm re TrackPoint® pointing device, "Press-tu UltraNav™ multi-pointing system / tou Illuminates the keyboard to improve v	B-15 connector / up to 1600x1200 at 85Hz / I st / pitch: 19mm; stroke: 2.7mm (std-size k b-Select," Internet Scroll Bar ¹³ , magnifying o ich pad below keyboard / Tap Zones isibility in low-light conditions	DDC2B Downloadable IBM Director Agent Software Delivery Assistant
Dimensions ³ Approximate weight ² Case material Battery - type Battery - life ¹⁰	15.0" models (WxDxH): 13.1" x 10.6": with optical drive and battery: 14.1" m Color: black; All: Acrylonitrile-Butad Lithium Ion 6- or 9-cell / intelligent / si	c 1.35-1.46"; 314mm x 260mm x 34-37mm c 1.47-1.58"; 332mm x 269mm x 37-40mm odels: 5.7 to 6.2 lb; 15.0" models: 6.6 to 6.8 iene-Styrene (ABS) plastic upports unique 2nd battery in Ultrabay Enhandels: 6.0 to 6.9 hr; optional 9-cell available for the second of the se	Ced Universal 72 watt AC adapter
Architecture PC Card Std slots Ports	Intel 855PM chipset / 82855PM Mem. 82801DBM ICH4-M I/O Controller Hul Low Pin Count [LPC] interface, USB, PCI4520A CardBus and 1394 controll (security chip; PC87392 Super I/O for One Type I, one Type II, or one Type	ory Controller Hub (MCH-M) / o (ATA-100 EIDE, PCI bus, ethernet MAC, Bluetooth]) / PCI bus 2.2 32-bit, 33MHz (TI® er, Mini PCI, external expansion) / LPC bus 3 diskette, parallel, infrared, [docking-based p III / CardBus 32-bit / PCMCIA 2.1 / integraternal monitor (DB-15) / infrared (4Mbps) / o keyboard or mouse or serial port	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 to protect software image and data International Warranty Service ¹⁷ 24 hour x 7 day¹8 toll-free warranty
IEEE 1394 Wireless antenna Mini PCI Wireless upg³6 11b Wi-Fi³2 11a/b/g Wi-Fi³2 CDC Modem Bluetooth Ethernet Audio support Security Security chip Limited warranty¹2	Some: IEEE 1394 (FireWire) port /4-UltraConnect™ Antenna built into the one Mini PCI type III slot (Communic Some: wireless upgradable with wirel Some: 11b Wi-Fi³²² wireless⁴, Mini PC Some: 11a/b/g Wi-Fi³²² wireless⁴, Mini One Communications Daughter Card 56K⁶ V.90 (V.92-designed²⁵) modem i Some: Bluetooth wireless technology Some: 10/100 ethernet on planar / Int Some: Gigabit Ethernet on planar / Int Some: Gigabit Ethernet on planar / Int series speakers / 1 watt / volume up, microphone input jack (3.5 mm) / hea Power-on password / hard disk passi IBM Embedded Security Subsystea authentication / local file encryption / 1 year - EasyServ™.19 onsite pickup a	pin connector / 1394a-2000 standard display cover for optimal wireless signal receations Bay) / customer upgradable ess Mini PCI options , Intel PRO/Wireless 2100, Intel 82531 chips PCI, Atheros™ AR5001X+ chipset (CDC) socket (used by modem) / not access of CDC / Agere® chipset / in CDC (with modem) el 82562EZ chipset (physical layer) / Wake of 82540EP chipset (MAC/PHY) / Wake on lectSound® support / AD1981B AC97 coded down, mute buttons / internal microphone / dphone jack (3.5 mm) / no line in jack word / supervisor password / security keyhom 2.0³3 / hardware key storage / multi-factorenhances VPN security¹6 / TCG-compliant and delivery / service upgrades²² available	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 30L9194 ServicePac 5 yr IOR 9x5 NBD 30L9194 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
256 MB PC2700 D 512 MB PC2700 D	DR-SDRAM CL2.5 SOD 31P9830 DR-SDRAM CL2.5 SOD 31P9832	T40/R50 High Capacity Li-Ion Batt 9-cell 08	K8214 Post-warranty annual maintenance K8197 agreements at ibm.com/services/its/us/source/

Гуре-model Process	Speed	Screen	Graphics controller memory		Optical	Mini PCI Comm Bay wireless	CDC modem		1394	Securit			(G) Ávail		
1832-22U Pentium 1832-23U Pentium	[®] M 1.7 512MB 1	15.0" UXG	A 128MB	60G	DVD-RW	11a/b/g Wi-Fi ³²	Mod/Blu	e Gigabit e Gigabit	No	Yes	XP Pro XP Pro	W I	Nov 2003		
Positioning Processor _2 cache	Mainstream perf Intel® Pentium® enhanced Intel S 1MB / on die (at	M Proces SpeedSte processo	ssor 1.7Gh p™ techno r speed) / B	Iz wit logy ¹ ECC	h and 400MF	Iz system bus			- Micr	osoft®	SOFTW/ Profess Windows	ional			
Memory	two 200-pin SO-	-DIMM so	ckets / std	mem	ory in one s	DR-SDRAM) / non socket / one socke			♦Disk		sk Recove				
Diskette drive DVD-RW Jltrabay Enhanced	reads CD-ROM, DVD-RW, DVD- Enhanced Drive	W Multi-B , CD-R, C :Video, D\ : Option / i	Burner / wri D-RW, CD VD-RAM / s removable	tes to -Audi same from	CD-R, CD- lo, DVD-RC as optional Ultrabay E	-RW, DVD-RAM, D DM, DVD-R, DVD+ ThinkPad Multi-B 	R, DVD+l urner Ultr	RW, abay	• Acce • Acce • Adol	aded ess IBI ess Co be Rea	nnections der	3			
Disk	60GB8 Ultra HS 9.5mm high bay	(7200 rpn / supports	n), 9.5mm s 2nd disk v	high/ vith o _l	removable otional 'Sec	and upgradable / ond HDD Adapter Protection Syste	for Ultraba		 IBM Lette 	Recor er Acc	Restore ^T dNOW a ess by So WinDVD	nd IBM	Drive		
Display	400:1 contrast ra	atio / 170-	dègree ho	rizont	al and verti	Active Matrix / 200 cal viewing angle / unlatch and open w	display u		NortPC-I	on Ant					
Graphics Graphics external						R1 / OpenGL® sup / up to 1600x1200		DDC2B	IBM	Updat	Jtilities e Connec	tor ^{TM,15}			
Keyboard FrackPoint® Fouch pad ThinkLight™	TrackPoint®poir	nting devi i-pointing	ce, "Press- system / to	to-Se ouch p	elect," Interi ad below k	n; stroke: 2.7mm (s net Scroll Bar¹³, ma eyboard / Tap Zon ght conditions	gnifying (DownIBMSoftSystClie	t					
Dimensions ³ Weight ² Case material Battery - type Battery - life ¹⁰	(WxDxH): 13.1": with optical drive Color: black; A Lithium Ion 9-ce 5.9 hr; with optic	e and batte M: Acrylor II / intellig	ery: 7.1 lb nitrile-Buta ent / suppo	(3.2kg diene orts ur	g) Styrene (<i>F</i> nique 2nd ba	ABS) plastic attery in Ultrabay Er	nhanced		security chip) License (CD not included) - Lotus® SmartSuite® Millenniu Lotus Notes® Stand-alone Cli						
	Low Pin Count [I PCI4520A Cardl (security chip; PC Two Type I, two	4-M I/O Co LPC] inter Bus and 1 C87392 S Type II, c	ontroller Hu face, USB, 394 contro super I/O fo or one Type	ub (A7 [Blue] Iler, M r diske Elll / (TA-100 EID etooth]) / PC fini PCI, ex ette, paralle CardBus 32	E, PCI bus, etherned bus 2.2 32-bit, 33 ternal expansion) / el, infrared, [docking 2-bit / PCMCIA 2.1	MHz (TI® LPC bus g-based p / integrat	orts])							
Ports	RJ-11 (modem)	/ RJ-45 (e	ethernet) /	no ke	yboard or r	DB-15) / infrared (4 nouse or serial por	·Mbps) / t								
Mini PCI 11b Wi-Fi ³²	One Mini PCI typ	Antenna b pe III slot	uilt into the Communi	displ	ay cover for ns Bay) / cu	d connector optimal wireless s stomer upgradable eless 2100, Intel 82	ě		Think\ desigr	√antag n; visit i	tebooks i je™ techr i bm.com	ologies /thinkv	s and antage		
11a/b/g Wi-Fi ³² CDC Modem Bluetooth Ethernet Audio support	One Communica 56K ⁶ V.90 (V.92- Bluetooth wireles Gigabit Ethernet Soft audio / ICH	ations Dau designed ss techno on plana AC97 co	ughter Card 1 ²⁹) modem logy / in CE r / Intel 825 ntroller / Di	d (CD in CE C (wi 40EP rectS	C) socket (1 0C / Agere® ith modem) chipset (M ound® supp	AR5001X+ chipset used by modem) / r chipset AC/PHY) / Wake o port / AD1981B AC ttons / internal mic	not access n LAN® 97 codec	sible	Universal 72 watt AC adapter Asset IDTM,34 (system-specific info i chip accessed over network) PC 2001 and PXE 2.0-compliant ACPI 1.0b and 2.0-compliant CIM and DMI 2.0-compliant ENERGY STAR® compliant IBM ImageUltra™ Services availabi						
Security Security chip	Power-on passy IBM Embedded authentication /	vord / har I Security local file e	d disk pass / Subsyste encryption	sword em 2. / enha	l / superviso 0 33 / hardwa ances VPN	.5 mm) / no line in j or password / secu are key storage / m security ¹⁶ / TCG-c	rity keyho ulti-factor ompliant	ole .	IBM R prot Interna	apid R ect sof ational	estore Ul ftware im Warrant lay ¹⁸ toll-	tra ava age an y Servio	ilable to d data ce ¹⁷		
_imited warranty ¹² Service options	Service upgrade	es ²² provid	de up to fiv	e yea	rs of onsite	I delivery courier se or depot repair se warranty period)	ervice rvice	_	800	-IBM-S	ring the v SERV (42 ^{, 22} 2 yr IC	6-7378)		
128 MB PC2700 E 256 MB PC2700 E 512 MB PC2700 E 1GB PC2700 DD Second HDD Ada ThinkPad DVD-R CD-RW/DVD Con Multi-Burner Plus IBM 4GB Microdri IBM USB Portable IBM USB Serial P IBM USB 2.0 Port IBM USB 2.0 Port IBM USB 2.0 Men IBM USB 2.0 Men IBM USB 2.0 Men IBM USB 2.0 Men IBM USB 2.0 Men	DDR-SDRAM CL: DDR-SDRAM CL: DDR-SDRAM CL: R-SDRAM CL2.5 pter for Ultrabay Slin bo Ultrabay Enhanc ve™ with PC Care Diskette Drive arallel Adapter able 40GB Hard nory Key 256MB nory Key 512MB	2.5 SOD 2.5 SOD 2.5 SOD 5 SOD Slim n Drive nanced ced Drive d	31P9828 31P9830 31P9832 31P9834 62P4554 73P3270 73P3275	T40 T40 Ultr Thii IBM 300 400 800 Inte IBM Thii Thii Thii	J/R50 Serie J/R50 High abay Slim I nkPad Mult I USB Trav BB Hard Dis BB HS Hard I PRO/Wire I 11a/b/g W nkPad 72W nkPad 72W	s Li-Ion Battery 6-c Capacity Li-Ion Ba i-Polymer Battery iple Battery Charge el Keyboard with U k 9.5mm (4200 rpr Disk 9.5mm (5400 Disk 9.5mm	tt 9-cell 08 3-cell 08 er II 22 ItraNav 3 n) 09 0 rpm) 08 0 rpm) 09 PCI 73 dapter 3 dapter 3 dapter 22	BK8214 BK8197 BK8190 2P9040 1P9490 9N4268 BK9816 9N4273 BP2801 BP4301 1P9101 2K6699 2P9010 4P6733 37810U	Service Service Service Service Other ibn war Post-v	ePac dePac d	3 yr IOR 9 4 yr IOR 9 5 yr IOR 9 4 yr P&L 5 yr P&L I ePac opti Services/eu.pdf ty annual	9x5 NB 9x5 NB 9x5 NB P/U De P/U De ons at fits/us/s	30L9190 D 30L9197 D 69P9198 D 69P9200 epot 69P9199 pot 69P9201		