

# IBM ThinkPad 310 (EMEA) - withdrawn

| IBM® ThinkPad®:                                                                            | 310                                                                                                                                                                                                          | 310                                              | 310D                                                                                                                    |
|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
|                                                                                            | 11.3" Dual Scan SVGA color                                                                                                                                                                                   | 11.3" TFT SVGA color                             | 11.3" Dual Scan SVGA color / 10 x CD-ROM                                                                                |
| Processor type                                                                             | Pentium® 133/66 MHz (P54CSLM) / 64 bit to transfers to L2 cache and memory                                                                                                                                   |                                                  |                                                                                                                         |
| Processor upgrade                                                                          | None                                                                                                                                                                                                         |                                                  |                                                                                                                         |
| L2 cache                                                                                   | 256 KB / write-back / direct mapped / 7 ns / synchronous pipelined burst                                                                                                                                     |                                                  |                                                                                                                         |
| External FDD port                                                                          | External FDD port (works with standard external diskette on CD-ROM-based model; or use if upgrade to CD-ROM)                                                                                                 |                                                  |                                                                                                                         |
| Diskette drive                                                                             | Internal 3.5" 1.44 MB (on left side)                                                                                                                                                                         |                                                  |                                                                                                                         |
| CD-ROM drive                                                                               | None (upgrade available)                                                                                                                                                                                     | None (upgrade available)                         | 10 x CD-ROM / bootable(left side) / CAV                                                                                 |
| Code name                                                                                  | LaCrosse                                                                                                                                                                                                     | LaCrosse                                         | LaCrosse                                                                                                                |
| Price                                                                                      |                                                                                                                                                                                                              |                                                  |                                                                                                                         |
| Type - model                                                                               | 2600-100                                                                                                                                                                                                     | 2600-300                                         | 2600-200                                                                                                                |
| Preload (see side)                                                                         | Windows 95 OSR2                                                                                                                                                                                              |                                                  |                                                                                                                         |
| Avail / withdrawn date                                                                     | June 1997 / January 1998                                                                                                                                                                                     |                                                  |                                                                                                                         |
| Disk - size / ms                                                                           | 1.08GB / 13ms read; 14ms write / PIO Mode 4                                                                                                                                                                  |                                                  |                                                                                                                         |
| Disk controller                                                                            | EIDE / busmaster / PCI 2.1 / supports one internal disk                                                                                                                                                      |                                                  |                                                                                                                         |
| Display - size and type                                                                    | 11.3" Dual Scan SVGA color                                                                                                                                                                                   | 11.3" TFT SVGA color                             | 11.3" Dual Scan SVGA color                                                                                              |
| Display - technology                                                                       | 11.3" SVGA color / 640x480 or 800x600<br>256 simultaneous colors / Dual Scan / 30 to 1 contrast ratio                                                                                                        |                                                  | 11.3" SVGA color / 640x480 or 800x600 / 65,536 sim colors<br>Black Matrix TFT - active matrix / 100 to 1 contrast ratio |
| Graphics - controller                                                                      | C&T™ 65550 HiQV32™ / 64 bit SVGA accelerator / 1 MB EDO DRAM / 70 ns                                                                                                                                         |                                                  |                                                                                                                         |
| Graph - arch/data path                                                                     | PCI 2.1 / interpolation / color space conversion                                                                                                                                                             |                                                  |                                                                                                                         |
| Graphics - features                                                                        | Simultaneous LCD and CRT / 180 degree tilt / Zoomed Video support                                                                                                                                            |                                                  |                                                                                                                         |
| Graphics - external                                                                        | External SVGA to 1024x768 with 256 colors                                                                                                                                                                    |                                                  |                                                                                                                         |
| Memory - std / max                                                                         | 16MB / 64MB / one 16MB SO-DIMM is installed in one of two sockets                                                                                                                                            |                                                  |                                                                                                                         |
| Memory - features                                                                          | 60 ns / non-parity / 3.3 volt / EDO / memory installed from bottom of system                                                                                                                                 |                                                  |                                                                                                                         |
| Memory - upgrade                                                                           | 1 socket available for two JEDEC 144 pin EDO SO-DIMM of 8, 16, or 32MB                                                                                                                                       |                                                  |                                                                                                                         |
| Keyboard / # of keys                                                                       | Full size alp/num / 85 keys (9 Fn key functions)                                                                                                                                                             |                                                  |                                                                                                                         |
| Keyboard slope                                                                             | Large palm rest / keyboard remains flat (no sloop) / no liftup keyboard                                                                                                                                      |                                                  |                                                                                                                         |
| Pointing device                                                                            | TrackPoint III™ / no drag lock keys                                                                                                                                                                          |                                                  |                                                                                                                         |
| Palm rest                                                                                  | Integrated palm rest / external keyboard support (no optional cable)                                                                                                                                         |                                                  |                                                                                                                         |
| Dimensions                                                                                 | 11.7 x 8.9 x 1.9" (198 cubic inches)                                                                                                                                                                         |                                                  |                                                                                                                         |
| Weight                                                                                     | 6.6 pounds (3.0 kg)                                                                                                                                                                                          | 6.6 pounds (3.0 kg)                              | 7.0 lbs (3.2 kg)                                                                                                        |
| Battery - type                                                                             | NiMH / non-intelligent / battery unique to 310 / insert from right side                                                                                                                                      |                                                  |                                                                                                                         |
| Battery - life                                                                             | 2.5 hours                                                                                                                                                                                                    |                                                  |                                                                                                                         |
| Charge time - on / off                                                                     | 3.5 to 10 hrs / 2.8 hrs / no non-disruptive battery exchange                                                                                                                                                 |                                                  |                                                                                                                         |
| Architecture                                                                               | ISA (audio, diskette, serial, parallel) / ALI® Aladdin III M1521/M1523 chipset<br>PCI 2.1 / 32-bit / 33MHz (EIDE, graphics, PCMCIA)<br>NS PC87336VJG (diskette, serial, parallel) / TI PCI1131 CardBus (PCI) |                                                  |                                                                                                                         |
| Docking Station                                                                            | None                                                                                                                                                                                                         |                                                  |                                                                                                                         |
| Port replicator                                                                            | None                                                                                                                                                                                                         |                                                  |                                                                                                                         |
| PCMCIA™ slots                                                                              | 2 Type I or 2 Type II or 1 Type III / PCMCIA 2.1 compatible / PC Card Standard 95<br>CardBus 32-bit PCI / Zoomed Video support in lower slot                                                                 |                                                  |                                                                                                                         |
| Serial / parallel ports                                                                    | One 9 pin; 16550A / one (IEEE P1284-A, EPP, ECP, bidirectional)                                                                                                                                              |                                                  |                                                                                                                         |
| Other features                                                                             | Universal AC Adapter 3 prong (45 watts) with barrel connector (slim) /<br>APM-aware BIOS / APM 1.2 / Selectable boot / Acer® BIOS                                                                            |                                                  |                                                                                                                         |
| Video in/out                                                                               | None                                                                                                                                                                                                         |                                                  |                                                                                                                         |
| MPEG decoder                                                                               | None                                                                                                                                                                                                         |                                                  |                                                                                                                         |
| Data/fax modem                                                                             | None                                                                                                                                                                                                         |                                                  |                                                                                                                         |
| Audio support                                                                              | 16-bit audio chip / 18 voice MIDI FM synthesis / Yamaha YMF715<br>Internal stereo speakers / .5 watt / Fn key volume control                                                                                 |                                                  |                                                                                                                         |
| Audio jacks                                                                                | Input jack (3.5 mm) / stereo output jack (3.5 mm) / stereo mic jack (3.5 mm)                                                                                                                                 |                                                  |                                                                                                                         |
| Telephone                                                                                  | None                                                                                                                                                                                                         |                                                  |                                                                                                                         |
| Infrared ports                                                                             | None                                                                                                                                                                                                         |                                                  |                                                                                                                         |
| Security                                                                                   | Power-on password / Setup password (for Notebook Manager and BIOS Utility)/<br>Diskette and disk write protect and disable /<br>Locking device keyhole on back (Kensington™ cable lock)                      |                                                  |                                                                                                                         |
| Preinstalled software                                                                      | Windows 95 with applications (listed on right)                                                                                                                                                               |                                                  |                                                                                                                         |
| Warranty                                                                                   | 1 year - carry-in                                                                                                                                                                                            |                                                  |                                                                                                                         |
| BIOS Utility is entered by holding F2 while the ThinkPad logo is displayed after power on. |                                                                                                                                                                                                              | Compatible in ThinkPad 310 family:               |                                                                                                                         |
| Fn + F1 = Hot key help                                                                     |                                                                                                                                                                                                              | - 2.1GB HDD 13/14 ms (user upgradeable) 11J8643  |                                                                                                                         |
| Fn + F2 = Brightness/contrast                                                              |                                                                                                                                                                                                              | - NiMH Battery 11J8639                           |                                                                                                                         |
| Fn + arrows = Adjust brightness/contrast                                                   |                                                                                                                                                                                                              | - AC Adapter, 3 prong w/o power cord 11J8699     |                                                                                                                         |
| Fn + F3 = LCD/CRT/Simultaneous                                                             |                                                                                                                                                                                                              | - AC Adapter, 3 prong with US power cord 11J8702 |                                                                                                                         |
| Fn + F4 = Fuel gauge                                                                       |                                                                                                                                                                                                              | - 8MB SO DIMM 3.3v NP EDO 64-bit, gold 11J8635   |                                                                                                                         |
| Fn + F5 = Audio volume                                                                     |                                                                                                                                                                                                              | - 16MB SO DIMM 3.3v NP EDO 64-bit, gold 11J8636  |                                                                                                                         |
| Fn + arrows = Adjust volume                                                                |                                                                                                                                                                                                              | - 32MB SO DIMM 3.3v NP EDO 64-bit, gold 11J8637  |                                                                                                                         |
| Fn + F6 = Power mgmt and system info                                                       |                                                                                                                                                                                                              | - 10 x CD-ROM w/ external FDD/cable 11J8676      |                                                                                                                         |
| Fn + F7 = Standby                                                                          |                                                                                                                                                                                                              | (dealer installable only)                        |                                                                                                                         |
| Fn + F8 = Hibernation                                                                      |                                                                                                                                                                                                              | - PCMCIA 28.8Kbps International 42H4319          |                                                                                                                         |
| Fn + Esc = Close Hot key icon                                                              |                                                                                                                                                                                                              |                                                  |                                                                                                                         |

## WINDOWS 95 PRELOAD

- Microsoft Windows 95 OSR2 (FAT16)
- Notebook Manager
- PhoenixCard Manager
- (no diskette factory)
- 1. IBM Anti-Virus
- 2. IntelliQuest Registration Mailer
- 3. ThinkPad Customization Icon
- Lotus SmartSuite CD-ROM
- Recovery CD-ROM with boot diskette
- Windows 95 CD-ROM (no installation)

Disk is not removable, but it can be upgraded via a dealer or service center (not customer installable).

System does not have non-disruptive battery exchange. Battery can be changed while system is off, in hibernation, or under AC power.

## FEATURES OF 310 MODELS

Plug and Play 1.0a  
Standby and hibernation modes  
Color LED indicator  
US EPA Energy Star compliant  
Personalized nameplate indentation  
**International Warranty Service**  
**24 hour / 7 day telephone, bulletin board, fax, electronic, and Internet**  
**(http://www.pc.ibm.com) support**  
**IBM and dealer warranty/service**

# IBM ThinkPad® 310E and 310ED (EMEA) - withdrawn

| IBM® ThinkPad®:                                                                                                                      | 310E                                                                                                                                                                                                             | 310E                                             | 310ED                                                                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                      | 12.1" Dual Scan SVGA color                                                                                                                                                                                       | 11.3" TFT SVGA color                             | 12.1" Dual Scan SVGA color / 10X CD-ROM                                                                                             |
| Processor type                                                                                                                       | <b>Pentium® MMX™ 133/66MHz<sup>1</sup></b>                                                                                                                                                                       |                                                  |                                                                                                                                     |
| Processor upgrade                                                                                                                    | <b>None</b>                                                                                                                                                                                                      |                                                  |                                                                                                                                     |
| Processor features                                                                                                                   | <b>MMX technology / P55CLM / 64-bit to transfers to L2 cache and memory</b>                                                                                                                                      |                                                  |                                                                                                                                     |
| L2 cache                                                                                                                             | <b>256KB / write-back / direct mapped / 7ns / synchronous pipelined burst</b>                                                                                                                                    |                                                  |                                                                                                                                     |
| External FDD port                                                                                                                    | <b>External FDD port (works with standard external diskette on CD-ROM-based model; or use if upgrade to CD-ROM)</b>                                                                                              |                                                  |                                                                                                                                     |
| Diskette drive                                                                                                                       | <b>Internal 3.5" 1.44MB (on left side)</b>                                                                                                                                                                       |                                                  |                                                                                                                                     |
| CD-ROM drive                                                                                                                         | <b>None (upgrade available)</b>                                                                                                                                                                                  |                                                  |                                                                                                                                     |
| Code name                                                                                                                            | <b>LaCrosse-2</b>                                                                                                                                                                                                |                                                  |                                                                                                                                     |
| Price                                                                                                                                |                                                                                                                                                                                                                  |                                                  |                                                                                                                                     |
| Type - model                                                                                                                         | <b>2600-400</b>                                                                                                                                                                                                  | <b>2600-600</b>                                  | <b>2600-500</b>                                                                                                                     |
| Preload (see side)                                                                                                                   | <b>Windows 95 OSR2</b>                                                                                                                                                                                           |                                                  |                                                                                                                                     |
| Avail / withdrawn date                                                                                                               | <b>November 1997 / July 1998</b>                                                                                                                                                                                 |                                                  |                                                                                                                                     |
| Disk - size / ms                                                                                                                     | <b>1.6GB<sup>4</sup> / 13ms read; 14ms write / PIO Mode 4 / SMART</b>                                                                                                                                            |                                                  |                                                                                                                                     |
| Disk controller                                                                                                                      | <b>EIDE / busmaster / PCI 2.1 / supports one internal disk</b>                                                                                                                                                   |                                                  |                                                                                                                                     |
| Display - size and type                                                                                                              | <b>12.1" Dual Scan SVGA color</b>                                                                                                                                                                                | <b>11.3" TFT SVGA color</b>                      | <b>12.1" Dual Scan SVGA color</b>                                                                                                   |
| Display - technology                                                                                                                 | <b>12.1" SVGA color / 640 x 480 or 800 x 600<br/>256 simultaneous colors / Dual Scan / 30 to 1 contrast ratio</b>                                                                                                |                                                  | <b>11.3" SVGA color / 640 x 480 or 800 x 600 / 65,536 sim colors<br/>Black Matrix TFT - active matrix / 100 to 1 contrast ratio</b> |
| Graphics - controller                                                                                                                | <b>C&amp;T™ 65550 HiQV32™ / 64-bit SVGA accelerator / 1MB EDO DRAM / 70ns</b>                                                                                                                                    |                                                  |                                                                                                                                     |
| Graph - arch/data path                                                                                                               | <b>PCI 2.1 / interpolation / color space conversion</b>                                                                                                                                                          |                                                  |                                                                                                                                     |
| Gaphics - features                                                                                                                   | <b>Simultaneous LCD and CRT / 180 degree tilt / Zoomed Video support</b>                                                                                                                                         |                                                  |                                                                                                                                     |
| Graphics - external                                                                                                                  | <b>External SVGA to 1024x768 with 256 colors</b>                                                                                                                                                                 |                                                  |                                                                                                                                     |
| Memory - std / max                                                                                                                   | <b>16MB / 64MB / one 16MB SO-DIMM is installed in one of two sockets</b>                                                                                                                                         |                                                  |                                                                                                                                     |
| Memory - features                                                                                                                    | <b>60ns / non-parity / 3.3 volt / EDO / memory installed from bottom of system</b>                                                                                                                               |                                                  |                                                                                                                                     |
| Memory - upgrade                                                                                                                     | <b>1 socket available for two JEDEC 144 pin EDO SO-DIMM of 8, 16, or 32MB</b>                                                                                                                                    |                                                  |                                                                                                                                     |
| Keyboard / # of keys                                                                                                                 | <b>Full size alp/num / 85 keys (9 Fn key functions)</b>                                                                                                                                                          |                                                  |                                                                                                                                     |
| Keyboard slope                                                                                                                       | <b>Large palm rest / keyboard remains flat (no sloop) / no liftup keyboard</b>                                                                                                                                   |                                                  |                                                                                                                                     |
| Pointing device                                                                                                                      | <b>TrackPoint® III / no drag lock keys</b>                                                                                                                                                                       |                                                  |                                                                                                                                     |
| Palm rest                                                                                                                            | <b>Integrated palm rest / external keyboard support (no optional cable)</b>                                                                                                                                      |                                                  |                                                                                                                                     |
| Dimensions                                                                                                                           | <b>11.7 x 8.9 x 2.0" (208 cubic inches) / 298 mm x 227 mm x 49 mm</b>                                                                                                                                            |                                                  |                                                                                                                                     |
| Weight <sup>2</sup>                                                                                                                  | <b>6.6 pounds (3.0 kg)</b>                                                                                                                                                                                       | <b>6.6 pounds (3.0 kg)</b>                       | <b>7.1 lbs (3.2 kg)</b>                                                                                                             |
| Battery - life                                                                                                                       | <b>3.0 hours</b>                                                                                                                                                                                                 | <b>3.5 hours</b>                                 | <b>3.0 hours</b>                                                                                                                    |
| Charge time - on / off                                                                                                               | <b>3.5 to 10 hrs / 2.0 hrs / no non-disruptive battery exchange</b>                                                                                                                                              |                                                  |                                                                                                                                     |
| Battery - type                                                                                                                       | <b>NiMH / non-intelligent / battery unique to 310 / insert from right side</b>                                                                                                                                   |                                                  |                                                                                                                                     |
| Architecture                                                                                                                         | <b>ISA (audio, diskette, serial, parallel) / ALI® Aladdin III M1521/M1523 chipset<br/>PCI2.1/32-bit/33MHz (EIDE, graphics, PCMCIA)<br/>NS PC87336VJG (diskette, serial, parallel) / TI PCI1131 CardBus (PCI)</b> |                                                  |                                                                                                                                     |
| Docking Station                                                                                                                      | <b>None</b>                                                                                                                                                                                                      |                                                  |                                                                                                                                     |
| Port replicator                                                                                                                      | <b>None</b>                                                                                                                                                                                                      |                                                  |                                                                                                                                     |
| PCMCIA™ slots                                                                                                                        | <b>2 Type I or 2 Type II or 1 Type III / PCMCIA 2.1 compatible / PC Card Standard 95<br/>CardBus 32-bit PCI / Zoomed Video support in lower slot</b>                                                             |                                                  |                                                                                                                                     |
| Serial / parallel ports                                                                                                              | <b>One 9 pin; 16550A / one (IEEE P1284-A, EPP, ECP, bidirectional)</b>                                                                                                                                           |                                                  |                                                                                                                                     |
| Other features                                                                                                                       | <b>Universal AC Adapter 3 prong (45 watts) with barrel connector (slim) / APM-aware BIOS / APM 1.2 / Selectable boot / Acer® BIOS</b>                                                                            |                                                  |                                                                                                                                     |
| Video in/out                                                                                                                         | <b>None</b>                                                                                                                                                                                                      |                                                  |                                                                                                                                     |
| MPEG decoder                                                                                                                         | <b>None</b>                                                                                                                                                                                                      |                                                  |                                                                                                                                     |
| Data/fax modem                                                                                                                       | <b>None</b>                                                                                                                                                                                                      |                                                  |                                                                                                                                     |
| Audio support                                                                                                                        | <b>16-bit audio chip / 18 voice MIDI FM synthesis / Yamaha YMF715</b>                                                                                                                                            |                                                  |                                                                                                                                     |
|                                                                                                                                      | <b>Internal stereo speakers / .5 watt / Fn key volume control</b>                                                                                                                                                |                                                  |                                                                                                                                     |
| Audio jacks                                                                                                                          | <b>Input jack (3.5 mm) / stereo output jack (3.5 mm) / stereo mic jack (3.5 mm)</b>                                                                                                                              |                                                  |                                                                                                                                     |
| Telephone                                                                                                                            | <b>None</b>                                                                                                                                                                                                      |                                                  |                                                                                                                                     |
| Infrared ports                                                                                                                       | <b>None</b>                                                                                                                                                                                                      |                                                  |                                                                                                                                     |
| Security                                                                                                                             | <b>Power-on password / Setup password (for Notebook Manager and BIOS Utility)/ diskette and disk write protect and disable / security keyhole / electronic personalization</b>                                   |                                                  |                                                                                                                                     |
| Preinstalled software                                                                                                                | <b>Microsoft® Windows® 95 with applications (listed on right)</b>                                                                                                                                                |                                                  |                                                                                                                                     |
| Limited warranty <sup>11</sup>                                                                                                       | <b>1 year - carry-in</b>                                                                                                                                                                                         |                                                  |                                                                                                                                     |
| BIOS Utility is entered by holding F2 while the ThinkPad logo is displayed after power on.                                           |                                                                                                                                                                                                                  | <b>OPTIONS</b>                                   |                                                                                                                                     |
| Fn + F1 = Hot key help                                                                                                               |                                                                                                                                                                                                                  | - 2.1GB disk, 13/14ms (user upgradeable) 11J8643 |                                                                                                                                     |
| Fn + F2 = Brightness/contrast                                                                                                        |                                                                                                                                                                                                                  | - 3.2GB disk, 13/14ms (user upgradeable) 05K8864 |                                                                                                                                     |
| Fn + arrows = Adjust brightness/contrast                                                                                             |                                                                                                                                                                                                                  | - NiMH Battery 11J8639                           |                                                                                                                                     |
| Fn + F3 = LCD/CRT/Simultaneous                                                                                                       |                                                                                                                                                                                                                  | - AC Adapter, 3 prong without power cord 11J8699 |                                                                                                                                     |
| Fn + F4 = Fuel gauge                                                                                                                 |                                                                                                                                                                                                                  | - 16MB SO DIMM 3.3v NP EDO 64-bit, gold 11J8636  |                                                                                                                                     |
| Fn + F5 = Audio volume                                                                                                               |                                                                                                                                                                                                                  | - 32MB SO DIMM 3.3v NP EDO 64-bit, gold 11J8637  |                                                                                                                                     |
| Fn + arrows = Adjust volume                                                                                                          |                                                                                                                                                                                                                  | - 10X CD-ROM w/ external FDD/cable 11J8676       |                                                                                                                                     |
| Fn + F6 = Power mgmt and system info                                                                                                 |                                                                                                                                                                                                                  | (dealer installable only)                        |                                                                                                                                     |
| Fn + F7 = Standby                                                                                                                    |                                                                                                                                                                                                                  | - 20X-8X Portable CD-ROM 1969010                 |                                                                                                                                     |
| Fn + F8 = Hibernation                                                                                                                |                                                                                                                                                                                                                  | - 20X-8X Portable Stereo CD-ROM 1969011          |                                                                                                                                     |
| Fn + Esc = Close Hot key icon                                                                                                        |                                                                                                                                                                                                                  | - PCMCIA 33.6Kbps International Data/Fax 42H4319 |                                                                                                                                     |
|                                                                                                                                      |                                                                                                                                                                                                                  | - PCMCIA 33.6Kbps Modem w/ XJACK 55H6759         |                                                                                                                                     |
| System does not have non-disruptive battery exchange. Battery can be changed while system is off, in hibernation, or under AC power. |                                                                                                                                                                                                                  |                                                  |                                                                                                                                     |
| No suspend mode; has standby and hibernation mode                                                                                    |                                                                                                                                                                                                                  |                                                  |                                                                                                                                     |
| <b>FEATURES</b>                                                                                                                      |                                                                                                                                                                                                                  |                                                  |                                                                                                                                     |
| Plug and Play 1.0a                                                                                                                   |                                                                                                                                                                                                                  |                                                  |                                                                                                                                     |
| Standby and hibernation modes                                                                                                        |                                                                                                                                                                                                                  |                                                  |                                                                                                                                     |
| Color LED indicator                                                                                                                  |                                                                                                                                                                                                                  |                                                  |                                                                                                                                     |
| ENERGY STAR compliant                                                                                                                |                                                                                                                                                                                                                  |                                                  |                                                                                                                                     |
| Personalized nameplate indentation                                                                                                   |                                                                                                                                                                                                                  |                                                  |                                                                                                                                     |
| <b>International Warranty Service<sup>14</sup></b>                                                                                   |                                                                                                                                                                                                                  |                                                  |                                                                                                                                     |
| <b>IBM SystemXtra™</b>                                                                                                               |                                                                                                                                                                                                                  |                                                  |                                                                                                                                     |
| <b>24 hour / 7 day telephone, bulletin board, fax, electronic, and Internet (www.ibm.com/pc/us) support</b>                          |                                                                                                                                                                                                                  |                                                  |                                                                                                                                     |
| <b>IBM and dealer warranty/service</b>                                                                                               |                                                                                                                                                                                                                  |                                                  |                                                                                                                                     |

# IBM ThinkPad® 310E and 310ED (EMEA) - Spring 1998 - withdrawn

| IBM® ThinkPad®:                                                                                                                                                                                                                                                                                                                               | 310E                                                                                                                                                                                                          | 310E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 310ED                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                               | 12.1" Dual Scan SVGA color                                                                                                                                                                                    | 12.1" TFT SVGA color                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 12.1" Dual Scan SVGA color / CD-ROM                                                                                         |
| Processor type                                                                                                                                                                                                                                                                                                                                | <b>Pentium® MMX™ 166/66MHz<sup>1</sup></b>                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Processor upgrade                                                                                                                                                                                                                                                                                                                             | None                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Processor features                                                                                                                                                                                                                                                                                                                            | MMX technology / P55CLM / 64-bit to transfers to L2 cache and memory                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| L2 cache                                                                                                                                                                                                                                                                                                                                      | <b>256KB</b> / write-back / direct mapped / 7ns / synchronous pipelined burst                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| External FDD port                                                                                                                                                                                                                                                                                                                             | External FDD port (works with standard external diskette on CD-ROM-based model; or use if upgrade to CD-ROM)                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Diskette drive                                                                                                                                                                                                                                                                                                                                | Internal 3.5" 1.44MB (on left side)                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| CD-ROM drive                                                                                                                                                                                                                                                                                                                                  | <b>None</b> (dealer upgrade available)                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Price                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Type - model                                                                                                                                                                                                                                                                                                                                  | <b>2600-A00</b>                                                                                                                                                                                               | <b>2600-C00</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>2600-B00</b>                                                                                                             |
| Preload (see side)                                                                                                                                                                                                                                                                                                                            | <b>Windows 95 OSR2</b>                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Avail / withdrawn date                                                                                                                                                                                                                                                                                                                        | March 1998 / September 1998                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Disk - size / ms                                                                                                                                                                                                                                                                                                                              | <b>2.1GB<sup>4</sup></b> / 13ms read; 14ms write / PIO Mode 4 / SMART                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Disk controller                                                                                                                                                                                                                                                                                                                               | EIDE / busmaster / PCI 2.1 / supports one internal disk                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Display - size and type                                                                                                                                                                                                                                                                                                                       | <b>12.1" Dual Scan SVGA color</b>                                                                                                                                                                             | <b>12.1" TFT SVGA color</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>12.1" Dual Scan SVGA color</b>                                                                                           |
| Display - technology                                                                                                                                                                                                                                                                                                                          | 12.1" SVGA color / 640 x 480 or 800 x 600<br>256 simultaneous colors / Dual Scan / 30 to 1 contrast ratio                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 12.1" SVGA color / 640 x 480 or 800 x 600 / 65,536 sim colors<br>Black Matrix TFT - active matrix / 100 to 1 contrast ratio |
| Graphics - controller                                                                                                                                                                                                                                                                                                                         | C&T™ 65550 HiQV32™ / 64-bit SVGA accelerator                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Graphics - memory                                                                                                                                                                                                                                                                                                                             | 1MB EDO DRAM / 70ns                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Graph - arch/data path                                                                                                                                                                                                                                                                                                                        | PCI 2.1 / interpolation / color space conversion                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Graphics - features                                                                                                                                                                                                                                                                                                                           | Simultaneous LCD and CRT / 180 degree tilt / Zoomed Video support                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Graphics - external                                                                                                                                                                                                                                                                                                                           | External SVGA to 1024 x 768 with 256 colors                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Memory - std / max                                                                                                                                                                                                                                                                                                                            | <b>16MB</b> / 64MB                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>32MB</b> / 64MB                                                                                                          |
| Memory - implement                                                                                                                                                                                                                                                                                                                            | One 16MB SO-DIMM is installed in one of two sockets                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Memory - features                                                                                                                                                                                                                                                                                                                             | 60ns / non-parity / 3.3 volt / EDO / memory installed from bottom of system                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Memory - upgrade                                                                                                                                                                                                                                                                                                                              | 1 socket available for two JEDEC 144 pin EDO SO-DIMM of 16 or 32MB                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Keyboard / # of keys                                                                                                                                                                                                                                                                                                                          | Full size alp/num / 85 keys (9 Fn key functions)                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Keyboard slope                                                                                                                                                                                                                                                                                                                                | Large palm rest / keyboard remains flat (no sloop) / no liftup keyboard                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Pointing device                                                                                                                                                                                                                                                                                                                               | TrackPoint® III / no drag lock keys                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Palm rest                                                                                                                                                                                                                                                                                                                                     | Integrated palm rest / external keyboard support (no optional cable)                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Dimensions                                                                                                                                                                                                                                                                                                                                    | 11.7 x 8.9 x 2.0" (208 cubic inches) / 298 mm x 227 mm x 50 mm                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Weight <sup>2</sup>                                                                                                                                                                                                                                                                                                                           | 6.6 pounds (3.0 kg)                                                                                                                                                                                           | 6.6 pounds (3.0 kg)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 6.9 lbs (3.1 kg)                                                                                                            |
| Battery - life                                                                                                                                                                                                                                                                                                                                | 3.0 hours                                                                                                                                                                                                     | 2.8 hours                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 3.0 hours                                                                                                                   |
| Charge time - on / off                                                                                                                                                                                                                                                                                                                        | 3.5 to 10 hrs / 2.0 hrs / no non-disruptive battery exchange                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Battery - type                                                                                                                                                                                                                                                                                                                                | NiMH / non-intelligent / battery unique to 310 / insert from right side                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Architecture                                                                                                                                                                                                                                                                                                                                  | ISA (audio, diskette, serial, parallel) / ALI® Aladdin III M1521/M1523 chipset<br>PCI 2.1 / 32-bit / 33 Mhz (EIDE, graphics, PCMCIA)<br>NS PC87336VJG (diskette, serial, parallel) / TI PCI1131 CardBus (PCI) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Docking Station                                                                                                                                                                                                                                                                                                                               | None                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Port replicator                                                                                                                                                                                                                                                                                                                               | None                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| PCMCIA™ slots                                                                                                                                                                                                                                                                                                                                 | 2 Type I or 2 Type II or 1 Type III / PCMCIA 2.1 compatible / PC Card Standard 95<br><b>CardBus 32-bit PCI / Zoomed Video support in lower slot</b>                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Serial / parallel ports                                                                                                                                                                                                                                                                                                                       | One 9 pin; 16550A / one (IEEE P1284-A, EPP, ECP, bidirectional)                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Other features                                                                                                                                                                                                                                                                                                                                | Universal AC Adapter 3 prong (45 watts) with barrel connector (slim) /<br>APM-aware BIOS / APM 1.2 / Selectable boot / Acer® BIOS                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Video in/out                                                                                                                                                                                                                                                                                                                                  | None                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| MPEG decoder                                                                                                                                                                                                                                                                                                                                  | None                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Data/fax modem                                                                                                                                                                                                                                                                                                                                | None                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Audio support                                                                                                                                                                                                                                                                                                                                 | <b>16-bit audio chip / 18 voice MIDI FM synthesis / Yamaha YMF715</b><br>Internal stereo speakers / .5 watt / Fn key volume control                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Audio jacks                                                                                                                                                                                                                                                                                                                                   | Input jack (3.5 mm) / stereo output jack (3.5 mm) / stereo mic jack (3.5 mm)                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Telephone                                                                                                                                                                                                                                                                                                                                     | None                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Infrared ports                                                                                                                                                                                                                                                                                                                                | None                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Security                                                                                                                                                                                                                                                                                                                                      | Power-on password / Setup password (for Notebook Manager and BIOS Utility)/<br>diskette and disk write protect and disable / security keyhole /<br>electronic personalization                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Preinstalled software                                                                                                                                                                                                                                                                                                                         | Microsoft® Windows® 95 with applications (listed on right)                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| Limited warranty <sup>11</sup>                                                                                                                                                                                                                                                                                                                | <b>1 year</b> - carry-in                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
| BIOS Utility is entered by holding F2 while the ThinkPad logo is displayed after power on.                                                                                                                                                                                                                                                    |                                                                                                                                                                                                               | <b>OPTIONS</b> <ul style="list-style-type: none"> <li>- 2.1GB disk 13/14ms (user upgradeable) 11J8643</li> <li>- 3.2GB disk 13/14ms (user upgradeable) 05K8864</li> <li>- NiMH Battery 11J8639</li> <li>- AC Adapter, 3 prong without power cord 11J8699</li> <li>- 16MB SO DIMM 3.3v NP EDO 64-bit, gold 11J8636</li> <li>- 32MB SO DIMM 3.3v NP EDO 64-bit, gold 11J8637</li> <li>- 10X CD-ROM w/ external FDD/cable 11J8676</li> <li>(dealer installable only)</li> <li>- 20X-8X CD-ROM w/ external FDD/cable 05K8867</li> <li>(dealer installable only)</li> <li>- 20X-8X Portable CD-ROM 1969010</li> <li>- 20X-8X Portable Stereo CD-ROM 1969011</li> <li>- PCMCIA 33.6Kbps International Data/Fax 42H4319</li> <li>- PCMCIA 33.6Kbps Modem w/ XJACK 55H6759</li> </ul> |                                                                                                                             |
| Fn + F1 = Hot key help<br>Fn + F2 = Brightness/contrast<br>Fn + arrows = Adjust brightness/contrast<br>Fn + F3 = LCD/CRT/Simultaneous<br>Fn + F4 = Fuel gauge<br>Fn + F5 = Audio volume<br>Fn + arrows = Adjust volume<br>Fn + F6 = Power mgmt and system info<br>Fn + F7 = Standby<br>Fn + F8 = Hibernation<br>Fn + Esc = Close Hot key icon |                                                                                                                                                                                                               | System does not have non-disruptive battery exchange. Battery can be changed while system is off, in hibernation, or under AC power.<br><br>No suspend mode; has standby and hibernation mode<br><br><b>FEATURES</b><br>Plug and Play 1.0a<br>Standby and hibernation modes<br>Color LED indicator<br>ENERGY STAR compliant<br>Personalized nameplate indentation<br><b>International Warranty Service<sup>14</sup></b><br><b>IBM SystemXtra™</b><br><b>24 hour / 7 day telephone, bulletin board, fax, electronic, and Internet (www.ibm.com/pc/us) support</b><br><b>IBM and dealer warranty/service</b>                                                                                                                                                                    |                                                                                                                             |

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No warranties are expressed or implied in this summary  
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# IBM ThinkPad® 310ED (Retail models) - withdrawn

| IBM® ThinkPad®:                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                              | 310ED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 310ED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Processor type                                                                                                                                                                                                                                                                                                                                | Pentium® MMX™ 133/66MHz¹                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Pentium MMX 166/66MHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Processor upgrade                                                                                                                                                                                                                                                                                                                             | None                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Processor features                                                                                                                                                                                                                                                                                                                            | MMX technology / P55CLM / 64-bit to transfers to L2 cache and memory                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| L2 cache                                                                                                                                                                                                                                                                                                                                      | 256KB / write-back / direct mapped / 7ns / synchronous pipelined burst                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| External FDD port                                                                                                                                                                                                                                                                                                                             | External FDD port (works with standard external diskette on CD-ROM-based model; or use if upgrade to CD-ROM)                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Diskette drive                                                                                                                                                                                                                                                                                                                                | External 3.5" 1.44MB (connect to rear)                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| CD-ROM drive                                                                                                                                                                                                                                                                                                                                  | 10x⁵ CD-ROM / bootable (left side) / CAV                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 20X-8X⁵ CD-ROM / bootable (left side) / CAV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Price                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Type - model                                                                                                                                                                                                                                                                                                                                  | 2600-50U                                                                                                                                                                                                     | 2600-B0U                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| UPC code                                                                                                                                                                                                                                                                                                                                      | 087944375975                                                                                                                                                                                                 | 087944395997                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Preload (see side)                                                                                                                                                                                                                                                                                                                            | Windows 95 OSR2                                                                                                                                                                                              | Windows 95 OSR2.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Avail / withdrawn date                                                                                                                                                                                                                                                                                                                        | November 1997 / May 1998                                                                                                                                                                                     | March 1998 / September 1998                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Disk - size / ms                                                                                                                                                                                                                                                                                                                              | 1.6GB⁴ / 13ms/14ms / PIO 4 / SMART                                                                                                                                                                           | 2.1GB / 13ms read; 14ms write / PIO Mode 4 / SMART                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Disk controller                                                                                                                                                                                                                                                                                                                               | EIDE / busmaster / PCI 2.1 / supports one internal disk                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Display - size and type                                                                                                                                                                                                                                                                                                                       | 12.1" Dual Scan SVGA color                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Display - technology                                                                                                                                                                                                                                                                                                                          | 12.1" SVGA color / 640 x 480 or 800 x 600<br>256 simultaneous colors / Dual Scan / 30 to 1 contrast ratio                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Graphics - controller                                                                                                                                                                                                                                                                                                                         | C&T™ 65550 HiQV32™ / 64-bit SVGA accelerator / 1MB EDO DRAM / 70ns                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Graph - arch/data path                                                                                                                                                                                                                                                                                                                        | PCI 2.1 / interpolation / color space conversion                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Gapics - features                                                                                                                                                                                                                                                                                                                             | Simultaneous LCD and CRT / 180 degree tilt / Zoomed Video support                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Graphics - external                                                                                                                                                                                                                                                                                                                           | External SVGA to 1024 x 768 with 256 colors                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Memory - std / max                                                                                                                                                                                                                                                                                                                            | 16MB / 64MB / one SO-DIMM used                                                                                                                                                                               | 32MB / 64MB / one SO-DIMM used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>WINDOWS 95 PRELOAD¹⁶</b><br><br>- Microsoft Windows 95 OSR2 (FAT16)<br>- Internet Explorer 4.0<br>- AOL, AT&T WorldNet, CompuServ<br>- Media Player<br>- ActiveMovie (MPEG-1, AVI)<br>- Video for Windows<br>- CD Audio Player<br>- MIDI Sequencer<br>1. Lotus® SmartSuite 97<br>- WordPro Work Processor<br>- 1-2-3 Spreadsheet<br>- Freelance Graphics<br>- Approach Database<br>- Organizer Scheduler<br>- ScreenCam<br>2. IBM Anti-Virus<br>3. PointCast (with ThinkPad Channel)<br>4. ThinkPad Customization Icon<br>5. Notebook Manager<br>6. Ergonomics<br>7. IntelliQuest Registration Mailer<br>8. Passport Protected Marketing Demo<br>9. PhoenixCard Manager<br>- (no diskette factory)<br>CD-ROMs included in shipping carton:<br>- Application CD-ROM (includes Lotus SmartSuite 97, W95/W31/DOS device drivers, preloaded applications)<br>- Windows 95 CD-ROM (no installation; includes Setup Boot Diskette) |
| Memory - features                                                                                                                                                                                                                                                                                                                             | 60ns / non-parity / 3.3 volt / EDO / memory installed from bottom of system                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Memory - upgrade                                                                                                                                                                                                                                                                                                                              | 1 socket available for JEDEC 144 pin EDO SO-DIMM of 8, 16, or 32MB                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Keyboard / # of keys                                                                                                                                                                                                                                                                                                                          | Full size alp/num / 85 keys (9 Fn key functions)                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Keyboard slope                                                                                                                                                                                                                                                                                                                                | Large palm rest / keyboard remains flat (no sloop) / no liftup keyboard                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Pointing device                                                                                                                                                                                                                                                                                                                               | TrackPoint® III / no drag lock keys                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Palm rest                                                                                                                                                                                                                                                                                                                                     | Integrated palm rest / external keyboard support (no optional cable)                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Dimensions                                                                                                                                                                                                                                                                                                                                    | 11.7 x 8.9 x 2.0" (208 cubic inches) / 298 mm x 227 mm x 50 mm                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Weight²                                                                                                                                                                                                                                                                                                                                       | 7.1 lbs (3.2 kg)   6.9 lbs (3.1 kg)                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Battery - life                                                                                                                                                                                                                                                                                                                                | 3.0 hours                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Charge time - on / off                                                                                                                                                                                                                                                                                                                        | 3.5 to 10 hrs / 2.0 hrs / no non-disruptive battery exchange                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Battery - type                                                                                                                                                                                                                                                                                                                                | NiMH / non-intelligent / battery unique to 310 / insert from right side                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Architecture                                                                                                                                                                                                                                                                                                                                  | ISA (audio, diskette, serial, parallel) / ALI® Aladdin III M1521/M1523 chipset<br>PCI 2.1 / 32-bit / 33MHz (EIDE, graphics, PCMCIA)<br>NS PC87336VJG (diskette, serial, parallel) / TI PCI1131 CardBus (PCI) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Docking Station                                                                                                                                                                                                                                                                                                                               | None                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Port replicator                                                                                                                                                                                                                                                                                                                               | None                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| PCMCIA™ slots                                                                                                                                                                                                                                                                                                                                 | 2 Type I or 2 Type II or 1 Type III / PCMCIA 2.1 compatible / PC Card Standard 95<br><b>CardBus 32-bit PCI / Zoomed Video support in lower slot</b>                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Serial / parallel ports                                                                                                                                                                                                                                                                                                                       | One 9 pin; 16550A / one (IEEE P1284-A, EPP, ECP, bidirectional)                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Other features                                                                                                                                                                                                                                                                                                                                | Universal AC Adapter 3 prong (45 watts) with barrel connector (slim) / APM-aware BIOS / APM 1.2 / Selectable boot / Acer® BIOS                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Video in/out                                                                                                                                                                                                                                                                                                                                  | None                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Data/fax modem                                                                                                                                                                                                                                                                                                                                | None                                                                                                                                                                                                         | 56Kbps PC Card modem<br>ActionTec® DataLink / K56flex™                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Audio support                                                                                                                                                                                                                                                                                                                                 | 16-bit audio chip / 18 voice MIDI FM synthesis / Yamaha YMF715<br>Internal stereo speakers / .5 watt / Fn key volume control                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Audio jacks                                                                                                                                                                                                                                                                                                                                   | Input jack (3.5 mm) / stereo output jack (3.5 mm) / stereo mic jack (3.5 mm)                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Telephone                                                                                                                                                                                                                                                                                                                                     | None                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Infrared ports                                                                                                                                                                                                                                                                                                                                | None                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Security                                                                                                                                                                                                                                                                                                                                      | Power-on password / Setup password (for Notebook Manager and BIOS Utility) / diskette and disk write protect and disable / security keyhole / electronic personalization                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Preinstalled software                                                                                                                                                                                                                                                                                                                         | Microsoft® Windows® 95 with applications (listed on right)                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Limited warranty¹¹                                                                                                                                                                                                                                                                                                                            | 1 year - carry-in                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| BIOS Utility is entered by holding F2 while the ThinkPad logo is displayed after power on.                                                                                                                                                                                                                                                    |                                                                                                                                                                                                              | <b>OPTIONS</b><br><br>- 2.1GB disk 13/14ms (user upgradeable) 11J8643<br>- 3.2GB disk 12ms (user upgradeable) 05K8864<br>- NiMH Battery 11J8639<br>- AC Adapter, 3 prong, US pwr cord, 45 wa 11J8702<br>- 16MB SO DIMM 3.3v NP EDO 64-bit, gold 11J8636<br>- 32MB SO DIMM 3.3v NP EDO 64-bit, gold 11J8637<br>- PCMCIA 33.6Kbps International Data/Fax 42H4319<br>- PCMCIA 33.6Kbps Modem w/ XJACK 55H6759<br>- 56K PC Card Modem Kit 04K0052                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Fn + F1 = Hot key help<br>Fn + F2 = Brightness/contrast<br>Fn + arrows = Adjust brightness/contrast<br>Fn + F3 = LCD/CRT/Simultaneous<br>Fn + F4 = Fuel gauge<br>Fn + F5 = Audio volume<br>Fn + arrows = Adjust volume<br>Fn + F6 = Power mgmt and system info<br>Fn + F7 = Standby<br>Fn + F8 = Hibernation<br>Fn + Esc = Close Hot key icon |                                                                                                                                                                                                              | System does not have non-disruptive battery exchange. Battery can be changed while system is off, in hibernation, or under AC power.<br><br>No suspend mode; has standby and hibernation mode<br><br><b>FEATURES</b><br><br>Plug and Play 1.0a<br>Standby and hibernation modes<br>Color LED indicator<br>ENERGY STAR compliant<br>Personalized nameplate indentation<br>Year 2000 ready<br><b>International Warranty Service¹⁴</b><br><b>24 hour / 7 day telephone, bulletin board, fax, electronic, and Internet (www.ibm.com/pc/us) support</b><br><b>IBM and dealer warranty/service</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

↗ = Withdrawn from marketing

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