



## Lenovo ThinkPad

### Product Details

ThinkPad R400  
Model NN9C1xx



#### At a glance...

<b>Processor</b> <sup>2</sup>	Intel® Core 2 Duo processor T5870 2GHz	<b>Audio</b>	
<b>Memory (std/max)</b>	2x1 GB / 4 GB	<b>Fax/modem speeds</b>	56Kbps data/14.4Kbps fax
<b>Disk capacity</b> <sup>1</sup>	250GB	<b>Network Interface</b>	Gigabit Ethernet-Integrated
<b>Display</b>	14,1" 1280x800 -- WXGA TFT	<b>Installed OS</b>	Genuine Windows Vista Business
<b>PCMCIA Card Bus Slots</b>	1 Type I/II (ExpressCard or SmartCard or 7-in-1 MediaCard Reader)		
<b>Media Device</b> <sup>8</sup>	DVD Recordable:24X Max		
<b>Unique System Features</b>	Rescue and Recovery; Access Connections; Bluetooth; Fingerprint Reader; IEEE 1394		

New ThinkPad R400 14" widescreen notebook computer offer a cost-effective solution for mainstream productivity. The R Series systems are a combination of latest mainstream technology focused on security and performance.

#### Features & Benefits

Lenovo ThinkPad R400 notebook models deliver outstanding technology and features:

- Intel® Core™ 2 Duo Processor technology for the enhanced performance
- Discrete Switchable Graphics up to 256 MB optimizes graphic performance and improved battery life when customers are running non-graphic intensive applications
- Portable design with 14.1 "WXGA and WXGA+ widescreen display
- ThinkVantage manageability tools that are built-in standard. Power Manager and Access Connections have been improved to enhance the user experience.
- Integrated camera, Blu-ray, next generation Intel Turbo Memory, and additional features

#### General Information

##### Price

Note<sup>7</sup>

#### Administrative Information

Part number	Description
<b>NN9C1xx</b>	<b>R Series 1.80G 2 2/250 14.1</b>
Product category:	<b>Mobile</b>
Product family:	<b>Lenovo ThinkPad</b>
Product series:	<b>ThinkPad R Series</b>
UPC Code:	
Model name:	<b>ThinkPad R400</b>
Worldwide part number:	<b>7443C1G</b>
Retail SKU #:	
Global model:	<b>No</b>
Workhorse model:	<b>No</b>
Type / Model:	<b>7443-C1G</b>
Standard pack quantity:	
Announce status:	<b>Announced</b>
Availability status:	<b>TopSeller</b>
Announce date:	<b>30 Sep 08</b>
General availability date:	<b>6 Oct 08</b>
IBM announcement number:	<b>ZL08-0077</b>
Announcement of withdrawal date:	
Withdrawal date:	
Withdrawal announcement number:	
Final returns date:	
Final returns request date:	
Returns announcement number:	
Alternative models:	
Most recent change date:	
Reason for change:	
Countries of origin:	
Ship group:	<b>System unit with country -specific keyboard Worldwide AC adapter Country-specific line cord Rechargeable battery pack TrackPoint cap Publications Group - ThinkPad R400 Notebook Setup Guide - ThinkPad R400 Notebook Troubleshooting Guide TopSeller</b>
Special model designation:	

## Warranty

Limited Warranty period and type<sup>3</sup>: **One year parts and labor (system battery: one year) Customer Carry-in Repair**

## Technical Information

### Architecture

Form factor:	<b>Notebook</b>
Bus type/architecture:	<b>PCI/PCI Express</b>
Expansion bus type:	<b>PCI/PCI Express</b>
PCMCIA Card Bus Slots:	<b>1 Type I/II (ExpressCard or SmartCard or 7-in-1 MediaCard Reader)</b>
Bay Type:	<b>Ultrabay Enhanced</b>
Indicator light:	
Cover material:	<b>Business black</b>

### Display

Screen type description:	<b>WXGA TFT</b>
Viewable image size (diagonal):	<b>14,1inches</b>
Screen illumination:	<b>CCFL Backlight</b>
Max resolution on built-in screen:	<b>1280x800</b>
Max colors or grey shades:	<b>16777216</b>
External display supported:	
Max resolution on external display:	

Simultaneous external display:

## Processor

Processor (CPU) <sup>2</sup> :	Intel® Core 2 Duo processor T 5870
Processor internal clock speed <sup>2</sup> :	2GHz
Front side bus:	800MHz
Processor manufacturer:	Intel
L2 external CPU cache std/max:	– /
Upgradable processor:	
BIOS type:	Flash ROM

## Memory

Memory (RAM) std/max:	2x1GB / 4GB
RAM speed:	1066MHz
Optional RAM configuration:	512:1024:2048MB SODIMM
RAM type:	PC3-8500 DDR3 SDRAM
RAM slots total (available):	2 SODIMM (0 SODIMM)

## Hard disk

Hard disk controller:	Serial ATA
Hard disk size <sup>1</sup> :	250GB
Hard disk type:	SSD SATA
Average seek time:	12,5ms
Average latency:	–
Number of platters:	
Platter RPM:	–
Burst transfer rate:	
Sustained data trans rate (low; high):	–

## Graphics subsystem

Graphics chipset:	Intel Graphics Media Accelerator 4500MHD
Graphics type:	–
Video RAM std/max:	– / –
Video RAM type:	DVMT
Max resolution (with max video RAM) NI:	2048x1536 16777216 colors
Max colors (with max video RAM):	16777216
Graphics bus interface:	PCI Express
Graphics features:	

## Multimedia

Media speed <sup>8</sup> :	24X Max
Media interface type:	EIDE
Media data transfer rate:	15,7KBps
Media average access time:	150ms
Media transport type:	Front tray loading
Recordable:	Yes
Removable:	Yes
Audio features:	Mute Button; Speakers (integrated)
Multimedia features:	7 in1 Multicard Reader

## Audio

Audio chipset make & model:

Audio data width: --  
Number of integrated speakers: 2  
Speaker power rating: 2Watts

## Communications

Fax/modem: V.90&K56Flexvoice&Ethernetcard,V.90 & K56 w Ethernet  
Fax/modem speeds: 56Kbps data/14.4Kbps fax  
Infrared Port: No  
Wireless Type: PAN  
Wireless Standard: Intel WiFi Link 5100AGN  
Wireless Max. Speed: Bluetooth: 1Mbps  
Description: Bluetooth Version 2.1 + EDR  
Frequency: Bluetooth:2.4GHz

Network card: Integrated Intel 82567LM Gigabit Network Adapter  
Network interface: Gigabit Ethernet- Integrated  
Network speed: 1000Mbps,100Mbps,10Mbps  
Network features:

## Accessories

A/C adapter:  
Worldwide A/C compatibility: Yes  
Port replicator:  
Dock:

## Standard features

Pointing device type: UltraNav (TrackPoint and TouchPad)  
Standard diskette size: --  
Optional diskette size: --  
Diskette drive configuration:  
Keyboard type standard: Full size  
Keyboard light: Yes  
Product approvals/certifications<sup>4</sup>:

## Power management

### Note<sup>5</sup>

Battery life - min/max: 5.6 Hrs  
Battery type(s): 6 Cell Lithium-Ion  
Charge time - on/off: 6.0Hrs / 3.5Hrs  
Heat emissions: 65W  
Sound emissions: 40dB  
Power management features<sup>4</sup>: Suspend mode  
Standby mode  
Power management mode  
Presentation Director  
Battery Power Status Display  
EasyEject Utility  
Hibernation mode

## Expansion options

Plug and play support:  
Standard Interfaces:  
Ports (type):

Expansion ports: Expansion Bus port (for Dock II/Mini Dock or Port Replicator II ), External Display (VGA), External Microphone/Line-In, Headphone / Line out, IEEE 1394, RJ-11, RJ-45, 3 USB 2.0

## Weight & dimensions

Note<sup>6</sup>  
 Weight: 2,4Kg  
 Travel weight: 2,32Kgs  
 Height: 34,9mm  
 Width: 335,5mm  
 Depth: 238mm  
 Operating Temperature (C) (low; high): 10; 31  
 Relative Humidity (%) (low; high): 8; 80

## Software

Tested operating systems:  
 Operating system provided: **Genuine Windows Vista Business**  
 Communication/networking applications:<sup>9</sup>  
 Device drivers/utilities:<sup>9</sup>  
 Multimedia applications:<sup>9</sup>  
 Productivity applications:<sup>9</sup>  
 Other applications provided:<sup>9</sup>  
 Preloaded applications:

## Security

Universal management features: **Client Security Solution  
 ThinkVantage Access Connections  
 ThinkVantage Active Protection System  
 ThinkVantage Rescue and Recovery**  
 Security features: **Client Security Solution  
 Hard disk drive password  
 Integrated fingerprint reader  
 Power-on password  
 Security lock slot  
 Supervisor password**  
 VPD support:  
 Security Chip: **Intel iTPM**  
 Integrated Fingerprint Reader: **Yes**

## Selected Accessories and Upgrades

\*Please see footnotes under Product Specific Notices for further information

Description	Part Number
<b>Accessories and Upgrades (A Lenovo Product)</b> <i>See footnotes for limitations</i>	
<b>Monitors &amp; Monitor Accessories</b>	
<b>Flat Panel Monitors</b>	
17"	
Lenovo ThinkVision L 1700P LCD Monitor	R27HExx
Lenovo ThinkVision L 1700P LCD Monitor	T27HExx
19"	
Lenovo ThinkVision L 1900 LCD Monitor	R35AExx

Lenovo ThinkVision L 1900P LCD Monitor	R43HExx
Lenovo ThinkVision L 1940 19.0in (19.0in/481mm VIS) Wide LCD Business Black Monitor	R44ABxx
Lenovo ThinkVision L 1940P 19.0in (19.0in/432mm VIS) Wide LCD Business Black Monitor	R44HBxx
Lenovo ThinkVision L 1900 LCD Monitor	T35AExx
L1900P 19in/19.0in VIS BLK MON	T43HExx
Lenovo ThinkVision L 1940 19.0in (19.0in/481mm VIS) Wide LCD Business Black Monitor	T44ABxx
Lenovo ThinkVision L 1940P 19.0in (19.0in/481mm VIS) Wide LCD Business Black Monitor	T44HBxx
Lenovo ThinkVision L 2440P Wide LCD Monitor	R40HBxx
Lenovo ThinkVision L 2440x 24.0in (24.0in/ 610mm VIS) CTO-03 Business Black Monitor	R41HBxx
Lenovo ThinkVision L 2240p 22.0in (22.0in/559mm VIS) Wide LCD Business Black Monitor	R42HBxx
Lenovo ThinkVision L 2440P Wide LCD Monitor	T40HBxx
Lenovo ThinkVision L 2440x 24.0in (24.0in/ 610mm VIS) CTO-03 Business Black Monitor	T41HBxx
Lenovo ThinkVision L 2240p 22.0in (22.0in/559mm VIS) Wide LCD Business Black Monitor	T42HBxx
<b>Batteries &amp; Power</b> <i>See footnotes for limitations</i>	
<b>Accessories for Slim AC/DC Adapter</b>	
Lenovo L8a Tip for Blackberry and Select Motorola Phones (10-pack) <sup>10</sup>	41R4464
<b>Batteries</b>	
Lenovo 3000 & ThinkPad R60/T60/Z60 Series	
ThinkPad T61/R61 Series 14" W 4 Cell Standard Battery	41U3196
ThinkPad T61/R61 Series 14" W 6 Cell Enhanced Battery	41U3198
ThinkPad T61/R61 14W 9 Cell High Capacity	43R2499
<b>Docks &amp; Port Replicators</b> <i>See footnotes for limitations</i>	
<b>T60/R60/Z60 Series Docks and Port Replicators</b>	
ThinkPad Essential Port Replicator <sup>11</sup>	250510W
ThinkPad Advanced Dock - Europe <sup>12</sup>	39T4569
ThinkPad Advanced Dock <sup>12</sup>	39T45xx
ThinkPad Advanced Mini Dock <sup>12</sup>	39T45yy
<b>Keyboards &amp; Mice</b> <i>See footnotes for limitations</i>	
<b>Keyboard &amp; Mouse Combo</b>	
USB Travel Keyboard with UltraNav	31P9XXX
<b>Keyboards</b>	
Business Black Preferred Pro Full -size PS/2 Keyboard	31P74xx
USB Enhanced Performance Keyboard (Black) - French	73P2629
Business Black Enhanced Performance USB Keyboard	73P26xx
ThinkPlus Preferred Pro USB Keyboard (Business Black) - Chinese/US	73P5225
Business Black Preferred Pro USB Keyboard	73P52XX
<b>Memory</b> <i>See footnotes for limitations</i>	
<b>Notebook Memory</b>	
ThinkPad & Lenovo 3000	
Lenovo 1GB PC3-8500 1066MHz DDR3 SODIMM Memory	43R1987
Lenovo 2GB PC3-8500 1066MHz DDR3 SODIMM Memory	43R1988
<b>Security Solutions</b> <i>See footnotes for limitations</i>	
<b>Physical Security</b>	
Kensington Twin Head Cable Lock from Lenovo	45K1620
Kensington MicroSaver 64068E Security Cable Lock from Lenovo	73P2582
<b>Privacy Filters</b>	
	43R2472

ThinkPad T400 / R400 14W Privacy Filter	
Smart Card Security	
Gemplus GemPC Smart Card Reader from Lenovo	41N3004
<b>Storage</b> <i>See footnotes for limitations</i>	
<b>Memory Keys &amp; Microdrives</b>	
Lenovo USB Essential Memory Key - 4GB	45J7904
<b>Optical Drives</b>	
<b>External</b>	
ThinkPlus USB 2.0 CD-RW/DVD-ROM Combo II Drive	40Y86XX
<b>Notebooks</b>	
ThinkPad DVD-ROM Ultrabay Enhanced Drive (Serial ATA)	43R9147
ThinkPad CD-RW/DVD-ROM Ultrabay Enhanced Drive (Serial ATA)	43R9148
ThinkPad DVD Burner Ultrabay Enhanced Drive (Serial ATA)	43R9149
ThinkPad Blu-ray Burner Ultrabay Enhanced Drive (Serial ATA)	43R9150
<b>Removable Disk Drives</b>	
USB Portable Diskette Drive	05K9276
<b>Storage Adapters</b>	
ThinkPad Serial ATA Hard Drive Bay Adapter II	43R1980

## Product Specific and Legal Notices

### Product Specific Notices

#### Numbered Footnotes

- Hard Drive:** GB=billion bytes. Accessible capacity is less; up to 4 GB is service partition.
- Mobile Processors:** Power management reduces processor speed when in battery mode.
- Warranty Information:** For terms and conditions or copies of Lenovo's limited warranty, call 08705 500900 in the U.K. Limited warranty includes International Warranty Service in those countries where this statement of product is sold by Lenovo or Lenovo Business Partners (registration required).
- Energy Star:** As an Energy Star Partner, Lenovo has determined that this product meets the Energy Star guidelines for energy efficiency.
- Battery:** These model numbers achieved the Ziff Davis Media, Inc.'s Business Winstone® 2002 BatteryMark Version 1.0, Battery Rundown Time of at least the time shown. This test was performed without independent verification by the VeriTest testing division of Lionbridge Technologies, Inc. ("VeriTest") or Ziff Davis Media, Inc.; neither Ziff Davis Media, Inc. nor VeriTest makes any representations or warranties as to these test results. Winstone is a registered trademark and BatteryMark is a trademark of Ziff Davis Publishing Holdings, Inc. in the U.S. and other countries. Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning and other customer preferences.
- Thickness:** may vary at certain points on the system.
- Unless otherwise indicated, prices shown are estimated reseller prices to end users. Reseller prices may vary. Lenovo reserves the right to change prices and product specifications and to discontinue marketing products without notice.
- CD/DVD drive speeds:** list maximum rates; rates are variable and are often less than the maximum.  
  
(Tape Drives) Data compression may be software dependent.
- Actual applications included dependent upon country.

#### Generic Footnotes

##### ADSL Modems:

**Actual modem speeds:** depend on many factors, including the plan you sign up for with your ADSL provider, and are often less than the maximum possible.

##### New 56K v.92 Modem Standard:

**Modem speeds:** Public network download speeds are limited to 53 Kbps. Upload speeds are limited to 48 Kbps for v.92 modems. Actual speeds depend on many factors and are often less than the maximum possible. V.92 functions and speeds require compatible phone line and server equipment. Requires download of v.92 microcode, when available, and country approval. Check with your telephone and ISP service providers for availability.

**Included Software:** may differ from its retail version (if available) and may not include user manuals or all program functionality. License agreements may apply. Operating systems that are not preloaded on the system may not provide full-feature functionality. Please refer to [lenovo.com/think/pc/support](http://lenovo.com/think/pc/support), select notebook brand, click on "Product Information", choose your machine type, then click on "Product Limitations"

**Titanium composite:** As tested using the high-flex modulus test. **Travel Weight:** includes battery and optional travel bezel instead of standard optical drive in Ultrabay bay, if applicable; weight may vary due to vendor components, manufacturing process and options.

**Maximum memory and internal hard disk capacities:** may require the replacement of standard component with largest supported component available. Norton AntiVirus comes with 90 days of virus definition updates.

10. To be used with the ThinkPad and IdeaPad 90W Slim AC/DC Combo adapter. For more information, visit: [www.lenovo.com/support/slimadaptertips](http://www.lenovo.com/support/slimadaptertips)

11. Uses the system 90W AC adapter, which can be purchased separately

12. Support for DVI-D (Digital Video Interface - Digital) function is determined by graphic subsystem on notebook.

## Legal Notices

© Lenovo 2006. All Rights Reserved.

Lenovo Technology (United Kingdom) Limited  
PO Box 32  
Normandy House  
Bunnian Place  
Basingstoke  
RG21 7EJ  
United Kingdom

## General Notes

All the part numbers referenced in this publication are product part numbers and not service part numbers.

LENOVO PROVIDES THIS PUBLICATION AS IS WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

The above paragraph does not apply to the extent that its provisions are inconsistent with local law.

This publication could contain technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of this publication.

LENOVO may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time. LENOVO reserves the right to alter pricing, specifications and other product information without notice. It is your responsibility to obtain the latest information.

LENOVO may not offer all or some of the products, services or features discussed in this document in all countries. Information is subject to change without notice. Consult your local LENOVO representative for information on offerings available in your area.

Other part numbers in addition to those listed in this document may be required to support a specific device or function.

The following terms are trademarks or registered trademarks of Lenovo Corporation in the United States or other countries or both: Lenovo, Lenovo care, ThinkCentre, ThinkPad, ThinkPlus Services, ThinkPlus Accessories, ThinkVantage Technologies, ThinkVision, 3000 Family Notebooks, 3000 Family Desktops, TrackPoint, Asset ID, and Ultrabay.

Microsoft, Windows, and Windows logos are registered trademarks of Microsoft Corporation. Intel, Pentium, OverDrive, MMX, Celeron, Pentium II Xeon, Pentium III Xeon are trademarks or registered trademarks of the Intel Corporation or its subsidiaries in the United States and other countries.

UNIX is a registered trademark in the United States and other countries licensed exclusively through X/Open Company Limited. C-bus is a trademark of Corollary, Inc. Trinitron is a trademark of the Sony Corporation. SuperDisk is a trademark of Imation Corporation. Zip is a registered trademark of Iomega Corporation. AMD and K6 are trademarks of Advanced Micro Devices. Other company, product, and service names may be trademarks or service marks of others.

Unless otherwise stated, LENOVO makes no representations or warranties with respect to non-LENOVO products. Support (if any) for the non-LENOVO products is provided by the third party, not LENOVO.

For non-Lenovo software, software may differ from its retail version (if available) and may not include user manuals or all program functionality; applicable third party software licenses may apply.

*On ThinkPad systems with an Intel 945GM, 945PM, GM965, or PM965 chipset, even though it is possible to physically install 4GB of*

*memory, the actual amount of memory addressable by an operating system will be limited to 3GB. This limitation does not exist with the Intel GM965 and PM965 with the 64-bit operating systems Windows XP Professional 64-bit and Windows Vista 64-bit Editions.*

Certain Microsoft® software product(s) included with this computer may use technological measures for copy protection. IN SUCH EVENT, YOU WILL NOT BE ABLE TO USE THE PRODUCT IF YOU DO NOT FULLY COMPLY WITH THE PRODUCT ACTIVATION PROCEDURES. Product activation procedures and Microsoft's privacy policy will be detailed during initial launch of the product, or upon certain reinstallations of the software product(s) or reconfigurations of the computer, and may be completed by Internet or telephone (toll charges may apply).

This LENOVO equipment is subject to applicable rules and regulations of the United States Federal Communication Commission (FCC). LENOVO reserves the right to change the price, product specification, and discontinue marketing the products listed, at any time, without notice.

The price displayed applies only to LENOVO Business Partners who are approved to acquire the product directly from LENOVO. LENOVO Business Partners that source from a LENOVO Distributor do so at prices and on terms that are established by the LENOVO Distributor, not by LENOVO.