

Panasonic

ideas for life

Panasonic recommends
Windows Vista® Business



TOUGHBOOK CF-52

Tough, high-performance mobile PC with
15.4" wide LCD that's even great for the office

OS	Genuine Windows® XP Professional Service Pack 2
CPU	Intel® Core™2 Duo Processor P8400 (2.26 GHz, 3 MB ¹ L2 cache, 1066MHz FSB)
Color TFT-LCD	15.4" WXGA
HDD	160 GB* ²
RAM	1 GB* ¹

Handle for increasing efficiency when operating in the field.



Easy hard disk removal and security functions for hard disk protection.



Passed a 76 cm free-fall test*³ and a 100-kgf pressurized vibration test*⁴.



Spill-resistant keyboard*⁵.



Built-in security chip (TPM)*⁶ for data protection.

ATI Mobility Radeon™ HD 3650 for high-quality graphics in a mobile computing environment

Bluetooth® (Ver.2.0+EDR/Class1) for easy communication and connectivity with peripherals.

*1 1 MB = 1,048,576 bytes/1 GB = 1,073,741,824 bytes. *2 The HDD is 1 GB (1,000,000,000 bytes) in capacity. The actual capacity may be less than displayed, depending on the OS and application software. *3 Carried out in Panasonic technical research lab. Test conducted in non-operating condition. *4 Carried out in a Panasonic laboratory in non-operation mode. Vibration with pressure of 980 N (100 kgf) is applied uniformly over the top and bottom faces. *5 Spill resistance applies to all of the keyboard. It does not apply to the side panel, battery section, speakers, and DVD drive when it is open. The Spill-resistant performance of the product does not guarantee that it will be free from damage or malfunction. If water is spilled onto it, be sure to have it repaired. (Note that a fee will be charged for this repair service.) *6 Installation of Infineon TPM Professional Package is required to use this feature. *The shock resistance, pressure resistance, and splash-proof functions are not a guarantee against damage or malfunction.

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CF-52	
CF-52 Series	
Model No.	
OS ^{*1}	Genuine Microsoft® Windows® XP Professional Service Pack 2 with Advanced Security Technologies (NTFS File System)
CPU/Secondary cache memory	Intel® Core™2 Duo Processor P8400 (2.26 GHz, 3 MB ^{*2} L2 cache, 1066 MHz FSB)
Chipset	Mobile Intel® GM45 Express Chipset
Main Memory ^{*3}	1 GB ^{*2} , DDR2 SDRAM (4 GB ^{*2} Max.)
Video Memory	UMA (512MB ^{*2} Max. / 1024MB ^{*2} Max. with expanded memory) ^{*4}
Hard Disk Drive ^{*5}	160GB (serial ATA)
CD/DVD drive	DVD Multi Drive built-in, Buffer underrun error prevention function: Supported
Display Method	15.4 WXGA type (TFT)
	Internal LCD 65,536/16,777,216 colors (800 x 600 dots / 1024 x 768 dots / 1280 x 768 dots / 1280 x 800 dots) ^{*6}
	External Display ^{*7} 65,536/16,777,216 colors (800 x 600 dots / 1024 x 768 dots / 1280 x 768 dots / 1600 x 1200 dots / 1920 x 1200 dots)
Wireless LAN ^{*8}	Intel® WiFi Link 5100 (IEEE802.11a,b,g compliant, IEEE 802.11n draft 2.0 compliant)
Bluetooth TM ^{*9}	Version 2.0 + EDR
LAN	IEEE 802.3 10Base-T / IEEE 802.3u 100BASE-TX / IEEE 802.3ab 1000BASE-T
Modem	Data: 56 kbps (V.92) FAX: 14.4 kbps
Sound	WAVE and MIDI playback, Stereo speaker, Intel® High Definition Audio subsystem support
Card Slots	PC Card Slot x 2, Type I or Type II, allowable current 3.3V: 400mA, 5V: 400mA SD Memory Card Slot ^{*10} x 1
RAM Module Slot	x 2, DDR2 SDRAM, 200-pin, 1.8V, SO-DIMM, PC2-6400 Compliant
Interface	USB Ports x 4 (4-pin, USB 2.0) ^{*11} / Serial Port (Dsub 9-pin male) / Modem Port (RJ-11) / LAN Port (RJ-45) / External Display Port (Mini Dsub 15-pin female) / IEEE1394a Interface Connector (4-pin) / Microphone Jack (Miniature jack, 3.5 DIA) / Headphone Jack (Miniature jack, 3.5 DIA, Impedance 32 Ω, Output Power 4 mW x 2, Stereo) / Expansion Bus Connector (Dedicated 100-pin female)
Keyboard / Pointing Device	87 keys / Touch Pad
Power Supply	AC adaptor or Battery pack
AC Adaptor ^{*12}	Input: 100 V - 240 V AC, 50 Hz/60 Hz, Output: 15.6 V DC, 8.0 A
Battery Pack	Li-Ion 11.1 V, 7.8 Ah
	Operating Time ^{*13} Approx. 7 hours
	Charging Time ^{*14} Approx. 4 hours
Power Consumption ^{*15}	Approx. 45 W ^{*16} / Approx. 100 W (maximum when recharging in the ON state)
Physical Dimensions (W x D x H) (including the carrying handle)	355.7 mm x 286.3 mm x 50.7 - 51.9 mm
Weight (including the carrying handle)	Approx. 3.4 kg
Operation Environment	Temperature: 5 °C to 35 °C Humidity: 30% to 80% RH (No condensation)
Storage Environment	Temperature: -20 °C to 60 °C Humidity: 30% to 90% RH (No condensation)
Pre-installed Software	Adobe Reader, MediaPlayer10, WinDVD™ 5 (OEM Version), PC Information Viewer, Loupe Utility, Icon Enlarger, B's Recorder GOLD9 BASIC ^{*17} , B's CLIP 7 ^{*17} , Intel® PROSet / Wireless Software ^{*9} , Bluetooth® Stack for Windows® by TOSHIBA ^{*9} , Wireless Switch Utility, Wireless Connection Disable Utility ^{*17} , Hotkey Settings, Battery Recalibration Utility, Setup Utility, Hard Disk Data Erase Utility ^{*18} , PC-Diagnostic Utility

^{*1} Operations of this computer are not guaranteed except for the pre-installed OS and the OS which is installed by using the Product Recovery DVD-ROM provided by Panasonic. ^{*2} 1 MB = 1,048,576 bytes/1GB = 1,073,741,824bytes. ^{*3} You can physically expand the memory up to 4GB, but the total amount of usable memory available will be less depending on the actual system configuration. ^{*4} A segment of the main memory is allotted automatically depending on the computer's operating status. The size of the Video Memory cannot be set by the user. The size of Video memory is allotted depending on the operating system. ^{*5} 1 GB = 1,000,000,000 bytes. Your operating system or some application software will report as fewer GB. ^{*6} A 16,777,216 color display is achieved by using the dithering function. ^{*7} Display may be impossible using some connected external displays. ^{*8} Only for model with wireless LAN. ^{*9} Only for model with Bluetooth. ^{*10} Operation has been tested and confirmed using Panasonic SD/SDHC Memory Cards with a capacity of up to 8 GB. Operation on other SD equipment is not guaranteed. ^{*11} Does not guarantee operation of all USB-compatible peripherals. ^{*12} The AC adaptor is compatible with power sources up to 240V AC adaptor. This computer is supplied with a 125V AC compatible AC cord. ^{*13} Measured at (LCD brightness : 60 cd/m²). Varies depending on the usage conditions, or when an optional device is attached. ^{*14} Varies depending on the usage conditions, CPU speed, etc. ^{*15} Approx. 0.9W when the battery pack is fully charged (or not being charged) and the computer is off. ^{*16} Rated power consumption. ^{*17} Must be installed before use. ^{*18} The Product Recovery DVD-ROM is required.

As an ENERGY STAR® Partner, Panasonic Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency. Active Matrix color display conforms to industry standards. Some displays may contain isolated illuminated or dark pixels as an artifact of the manufacturing process (effective pixels: minimum 99.998% , defect pixels : maximum 0.002%). Panasonic and TOUGHBOOK are brand names and registered trademarks of Panasonic Corporation. Acrobat® is a registered trademark of Adobe® Systems Incorporated. Intel, the Intel logo, Centrino, Centrino Inside, Intel Core, Core Inside, Intel vPro, and vPro Inside are trademarks of Intel Corporation in the United States and other countries. Microsoft®, Windows® and Windows Vista® are trademarks of Microsoft® Corporation of the United States and/or other countries. All other brand names shown are the registered trademarks of the relevant companies. All rights reserved. All working conditions, times and figures quoted are optimum or ideal levels and may differ as a result of individual and local circumstances.



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