



Bringing desktop power to tough mobile conditions.

TOUGHBOOK
When it's worth doing better.

CF-53

OS

• Windows 7 Professional

High performance

• Intel® Core™ i5-3320M processor
(3 MB Cache, up to 3.3GHz)
with Intel® Turbo Boost Technology

Long battery life

• Operating time : 11 hours*1

High reliability

• 76cm drop tested*2
• Spill-resistant keyboard*3
• Wide temperature range support {0 °C to 50 °C}

Super mobility



- Various wireless support
- High security

High performance



- Latest Intel Platform
- High speed interface

High usability in field



- Integrated handle
- Configurability
- High outdoor visibility



USB3.0



Built-in security chip (TPM)
for data protection



New wide touchpad
with multitouch function

*1 Measured at room temperature by using MobileMark 2007, 60 nits. The Economy Mode (ECO) was disabled during measurement. When Economy Mode (ECO) is enabled, the operating time becomes approximately 20% shorter than when it is disabled. The period of battery operation time varies according to the operating environment, LCD brightness, and system settings. *2 Spill resistance applies to all of the keyboard. It does not apply to the side panel, battery section, speakers. 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.) *3 Carried out in Panasonic technical research lab. Dropped on to bottom (in operation mode).



CF-53

Model	CF-53JSWHYDY
Operating System*1	Windows 7 Professional 32-bit or Windows 7 Professional 64-bit
CPU	Intel® Core™ i5-3320M processor (3 MB*2 Cache, up to 3.3GHz) with Intel® Turbo Boost Technology
Chip Set	Intel® 7 Series Express Chipsets QM77
Main Memory*3	4 GB*2 DDR3 SDRAM (max. 16 GB*2)
Graphic Chip	Intel® HD 4000 Graphics, UMA <32-bit> 1419 MB*2 Max., <64-bit> 1696 MB*2 Max.)*4
Storage	500 GB (SATA)*5 <Approx. 10 GB*5 is used as a partition with recovery tools. (Users cannot use this partition.)>
CD/DVD Drive	DVD MULTI Drive <Buffer underrun error prevention function: Supported, Zero Power ODD: Supported>
LCD	14" Active Matrix (TFT) colour LCD 1366 x 768 pixels (HD) with sunlight viewable Touchscreen (up to 1.000 cd/m ²)
	Internal LCD
	65,536/16,777,216 colors (800 x 600 dots / 1024 x 768 dots/1280 x 600 dots / 1280 x 720 dots / 1280 x 768 dots / 1360 x 768 dots / 1366 x 768 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 1080 dots / 1920 x 1200 dots)
Wireless LAN	Intel® Centrino® Advanced-N 6205 802.11 a/b/g/n compliant; slide on/off switch
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, Intel® High Definition Audio subsystem support
Security	TPM (TCG V1.2 compliant)*8
Card Slots	PC Card
	ExpressCard
	SD Memory Card*9
	x 1 (SDXC supported)
RAM Module	x 2, DDR3L SDRAM, 204-pin, 1.35V, SO-DIMM, PC3L-1600 Compliant
Interfaces	USB*10
	x 4 (USB 2.0 x 2 + USB 3.0 x 2)
	Serial
	Modem
	LAN
	RJ-11
	RJ-45
	External Display
	Mini Dsub 15-pin female VGA port
	HDMI*11
	Type A
	Microphone
	Miniature jack, 3.5 DIA
	Headphones
	Miniature jack, 3.5 DIA, stereo
	Expansion Bus
	Connector
	Dedicated 100-pin female
Input Devices	87 or 88 Keys / Touch Pad / Resistive Touchscreen
Power	AC Adaptor
	Input: 100 V - 240 V, 50 Hz / 60 Hz; Output: 15.6 V, 7.05 A
	Battery Pack
	Lithium-Ion (10.8 V, Typical 6750 mAh / Minimum 6300 mAh)
	Operating Time*12
	Approx. 11 hours (Mobile Mark™ 2007, 60 cd/m ²)
	Charging Time*13
	Approx. 2 hours
	Consumption*14
	Approx. 30 W*15 / Approx. 100 W (max. when recharging in the ON state)
Dimensions (WxDxH)	340 mm x 281 mm x 46 - 55mm (including carrying handle)
Weight	Approx. 2.95 kg (including carrying handle)
Operating Environment	Temperature
	0 °C to 50 °C (IEC60068-2-1, 2)*16
	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, PC Information Viewer, Intel® PROSet/Wireless Software, Bluetooth™ Stack for Windows® by TOSHIBA, Wireless Switch Utility, Wireless Connection Disable Utility*17, Hotkey Settings, Battery Recalibration Utility, Infineon TPM Professional Package*17, Aptio Setup Utility, PC-Diagnostic Utility, Roxio Creator LJB, CyberLink Power2Go 10, Display Selector, Concealed Mode Utility, Hard Disk Data Erase Utility*18, Recovery Disc Creation Utility, Dashboard for Panasonic PC, Quick Boot Manager, Power Plan Extension 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 / 1 GB = 1,073,741,824 bytes. *3 Memory size of the factory default depends on the model. You can physically expand the memory up to 8 GB, 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 MB = 1,000,000 bytes / 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 TPM. For information on TPM, refer to the Installation Manual of "TrustedPlatform Module (TPM)". *9 This slot is compatible with High-Speed Mode. Operation has been tested and confirmed using Panasonic SD/SDHC/SDXC Memory Cards with a capacity of up to 64 GB. Operation on other SD equipment is not guaranteed. *10 Does not guarantee operation of all USB-compatible peripherals. *11 Does not guarantee operation of all HDMI-compatible peripherals. *12 Varies depending on the usage conditions, or when an optional device is attached. *13 Varies depending on the usage conditions, CPU speed, etc. *14 Approx. 0.5 W when the battery pack is fully charged (or not being charged) and the computer is off. <When using with 115 V AC> Even when the AC adaptor is not connected to the computer, power is consumed (Max. 0.2 W) simply by having the AC adaptor plugged into an AC outlet. <When using with 240 V AC> Even when the AC adaptor is not connected to the computer, power is consumed (Max. 0.3 W) simply by having the AC adaptor plugged into an AC outlet. *15 Rated power consumption. *16 Do not expose the skin to this product when using the product in a hot or cold environment. Product functions and product life may vary in such condition, check the Operation Instructions for further details. *17 Must be installed before use. *18 Perform on the recovery partition. (If this software cannot be performed on the recovery partition, perform from the recovery disc).

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 and Windows 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. It does not guarantee operation of all USB-compatible peripherals.

