

Panasonic

ideas for life

Panasonic recommends
Windows Vista® Business



TOUGHBOOK CF-19

Rugged, Convertible mobile PC
that withstands shocks, spills, and dust

OS	Genuine Windows Vista® Business Service Pack 1
CPU	Intel® Core™2 Duo Processor SU9300 (1.20 GHz, 3 MB*1 L2 cache, 800MHz FSB)
Color TFT-LCD	10.4" XGA
HDD	160 GB*2
RAM	2 GB*1

Functions as a usual mobile PC in the office.



Functions as a tablet PC with the monitor screen flipped over.

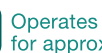


By pressing the screen rotation button, the screen display is turned 4 ways.



 High-brightness LCD (1,000 cd/m²)^{*3} with Circular Polarizing Touch Screen and Anti-Reflection (AR) coating for easy viewing under direct sunlight.



 Operates with the standard battery for approx. 9 hours.^{*5}



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



Full magnesium alloy case with Hand Strap ensured by a 90-cm (36 in) free-fall test.^{*4}



The screen turns 180° Ruggedized, 2D hinge used.

Various options can be built-in^{*7}
— GPS, WWAN, Fingerprint reader, Camera.

*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 Average luminance in the middle of the screen at the time of shipping. This may change depending on the environment and length of use. *4 Test conducted in non-operating condition. The shock resistance, vibration resistance, dust-proof, and splash-proof functions are not a guarantee against damage or malfunction. *5 The period of battery operation time varies according to the operating environment, LCD brightness, and system settings. Windows Vista Business, measured using MobileMark® 2007 at LCD brightness: 60 cd/m². Varies depending on the usage conditions, or when an external device is attached. *6 Available for some countries' model. Need to set-up TPM Professional Package. Refer to the Installation Manual of "TrustedPlatform Module (TPM)". *7 For details, contact your Panasonic sales representative.
* The shock resistance, vibration resistance, dust-proof, and splash-proof functions are not a guarantee against damage or malfunction.

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CF-19

Model No.	CF-19KD Series	
OS ^{*1}	Base OS	Genuine Windows Vista® Business Service Pack 1
	Optional OS ^{*2}	Genuine Microsoft® Windows® XP Tablet PC Edition 2005 (NTFS File System)
CPU/Secondary cache memory	Intel® Core™ 2 Duo Processor SU9300 (1.20 GHz, 3 MB ^{*3} L2 cache, 800 MHz FSB)	
Chipset	Mobile Intel® GS45 Express Chipset	
Memory ^{*3,4}	2 GB (4 GB Max.)	
Video Memory ^{*3,5}	Vista: UMA 797 MB Max. (When Memory is 2 GB) UMA 1551 MB Max. (When Memory is 4 GB) XP: 1024 MB	
Hard Disk Drive ^{*6}	160 GB Vista: Approx. 2 GB is used as a partition with recovery tools. (User cannot use this partition.)	
Display Method	10.4 XGA type (TFT)	
	Internal LCD ^{*7}	65,536 / 16,777,216 colors (800 x 600 dots / 1024 x 768 dots)
	External Display ^{*8}	65,536 / 16,777,216 colors (800 x 600 dots / 1024 x 768 dots / 1280 x 768 dots / 1280 x 1024 dots)
Wireless LAN ^{*9}	Intel® WiFi Link 5100 (IEEE802.11a/b/g compliant, IEEE802.11n Draft 2.0 compliant) ^{*10}	
Bluetooth ^{*9,11}	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, Intel® High Definition Audio subsystem support, Monaural speaker	
Security Chip	TPM (TCG V1.2 compliant) ^{*12}	
Card Slot	PC Card	Type I or Type II x 1 (3.3 V: 400 mA, 5 V: 400 mA)
	ExpressCard	ExpressCard/34 or ExpressCard/54 x 1
	SD Memory Card ^{*13}	x 1, Data transfer rate = 8 MB per second ^{*14}
	Smart Card ^{*15}	ISO7816 x 1
RAM Module Slot	200-pin, 1.8 V, SO-DIMM, DDR2 SDRAM, PC2-5300 Compliant	
Interface	USB port (4-pin, USB 2.0) x 2, Serial Port (Dsub 9-pin male), Modem port (RJ-11), LAN port (RJ-45), External display port (Mini Dsub 15-pin female), Expansion Bus Connector (Dedicated 100-pin female), External Antenna Connector (Dedicated 50 Ω coaxial connector) x 2, IEEE1394a Interface Connector (4-pin x 1), Microphone Jack (Miniature jack, 3.5 DIA, Stereo), Headphone Jack (Miniature jack, 3.5 DIA, Impedance 32 Ω, Output Power 4 mW x 2)	
Keyboard / Pointing Device	82 keys / Touch Pad / Dual Touch (Anti-Reflection, Stylus (included) touch capable)	
Power Supply	AC adaptor or Battery pack	
AC Adaptor ^{*16}	Input: 100 V to 240 V AC, 50 Hz/60 Hz, Output: 16.0 V DC, 3.75 A	
Battery Pack	Li-ion 10,65 V, 5.7 Ah	
	Operating Time ^{*17}	Vista: Approx. 9 hours ^{*18} XP: Approx. 10 hours ^{*19}
	Charging Time ^{*17}	Power on
		Power off
	Approx. 6.5 hours	
	Approx. 4.5 hours	
Clock Battery	Coin type Lithium battery 3.0 V	
Power Consumption ^{*20}	Approx. 30 W ^{*21} / Approx. 60 W (Maximum when recharging in the ON state)	
Physical Dimensions (W x H x D) (excluding the hand strap/shoulder strap)	271 mm x 49 mm x 216 mm (10.7" x 1.93" x 8.5")	
Weight	Approx. 2.30 kg (Approx. 5.06 lb)	
Operation Environment	Temperature: 5 °C to 35 °C (41 °F to 95 °F) Humidity: 30% to 80% RH (No condensation)	
Storage Environment	Temperature: -20 °C to 60 °C (-4 °F to 140 °F) Humidity: 30% to 90% RH (No condensation)	
Pre-installed Software ^{*1}	Adobe Reader, PC Information Viewer, Loupe Utility, Intel® PROSet/Wireless Software ^{*9} , Bluetooth™ Stack for Windows® by TOSHIBA ^{*11} , Wireless Switch Utility, Hotkey Settings, Battery Recalibration Utility, Panasonic Hand Writing, Display Rotation Tool, Infineon TPM Professional Package ^{*22} , Power Saving Utility, Wireless Connection Disable Utility ^{*22} , Concealed Mode Utility ^{*23} Setup Utility, Hard Disk Data Erase Utility ^{*24} , PC-Diagnostic Utility ^{*25}	

^{*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} When 25 or more units will be purchased in one year, this is a model pre-installed with Windows XP Professional and prepared on behalf of customers who purchased a Windows Vista Business model and wish to exercise their right to downgrade the OS. ^{*3} 1 MB = 1,048,576 bytes; 1 GB = 1,073,741,824 bytes. ^{*4} You can physically expand the memory up to 4096 MB, but the total amount of usable memory available will be less depending on the actual system configuration. ^{*5} 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. ^{*6} 1 GB = 1,000,000,000 bytes. Your operating system or some application software will report as fewer GB. ^{*7} A 16,777,216 color display is achieved by using the dithering function. ^{*8} Maximum resolution depends on the specifications of the external display. Display may be impossible using some connected external displays. ^{*9} Only for model with wireless LAN. ^{*10} It does not correspond to IEEE802.11a+b+g+n standards. Actual speeds may differ. ^{*11} Only for model with Bluetooth. ^{*12} Available for some countries' model. Need to set-up TPM Professional Package. Refer to the Installation Manual of "TrustedPlatform Module (TPM)". ^{*13} SD Memory Cards that support high-speed transfer rates can be used. Windows ReadyBoost function is also supported. Operation has been tested and confirmed using Panasonic SD Memory Cards and SDHC Memory Cards with a capacity of up to 8 GB. Operation on other SD equipment is not guaranteed. This computer is not compatible with MultiMediaCards. Do not insert this type of cards. ^{*14} Theoretical value and not the actual speed. The transfer rate does not become higher even if you use a card that supports the higher transfer rate. ^{*15} Only for model with Smart Card slot excluding Express Card slot. ^{*16} <Only for North America>: The AC adaptor is compatible with power sources up to 240 V AC adaptor. The computer is supplied with a 125 V AC compatible AC cord. ^{*17} Varies depending on the usage conditions. ^{*18} Measured using MobileMark® 2007 at LCD brightness: 60 cd/m². Varies depending on the usage conditions, or when an external device is attached. ^{*19} Measured using MobileMark® 2005 (LCD brightness: 60 cd/m²). ^{*20} Approx. 0.9 W when the battery pack is fully charged (not being charged) and the computer is OFF. ^{*21} Rated power consumption. ^{*22} You need to install to use the feature. ^{*23} Concealed Mode may not work properly during battery recalibration. ^{*24} The Product Recovery DVD-ROM is required. ^{*25} For startup methods, refer to "Hardware Diagnostics".

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 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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