

Panasonic

ideas for life

Windows®. Life without Walls™.
Panasonic recommends Windows 7.



TOUGHBOOK CF-19

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

OS	Genuine Windows 7 Professional
CPU	Intel® Core™ i5-540 (1.20 GHz, 3MB ¹ , Intel® Smart Cache)
Colour 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 Polarising 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° Ruggedised, 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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Fully-rugged

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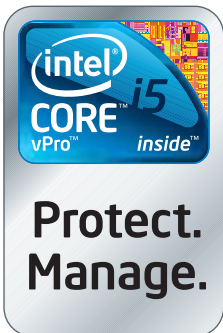


CF-19

Model No.	CF-19R Series	
OS ¹	Genuine Windows® 7 Professional	
CPU/Secondary cache memory	Intel® Core™ i5-540UM VPro™ Processor (1.20 GHz, 3MB Intel® Smart Cache)	
Chipset	Intel® Mobile QM57 Express Chipset	
Memory ^{3,4}	2 GB DDR3 SDRAM (4 GB Max.)	
Video Memory ^{3,5}	UMA 768 MB Max. (When Memory is 2 GB) / UMA 1435 MB Max. (When Memory is 4 GB)	
Hard Disk Drive ⁶	160 GB Approx. 300 MB is used as a partition with boot files. (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® Centrino® Advanced-N 6200 AGN WLAN (IEEE802.11 a/b/g/n compliant with On/Off slide switch)	
Bluetooth ^{9,11}	Version 2.1 + 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)
	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	204-pin, 1.5 V, SO-DIMM, DDR3 SDRAM, PC3-6400 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 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 / Touchscreen (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 11.1 V, 5.6 Ah (typ), 5.3Ah (min)	
	Operating Time ¹⁷	Approx. 9 hours ¹⁸
	Charging Time ¹⁷	Approx. 3.5 hours
	Power on	Approx. 3.5 hours
	Power off	Approx. 3.5 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.
³ 1 MB = 1,048,576 bytes/1GB = 1,073,741,824bytes. 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 (or 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 colour display conforms to industry standards. Some displays may contain isolated illuminated or dark pixels as an artefact of the manufacturing process (effective pixels: minimum 99.998%).
RAM capacity calculated as follows:
1MB = 1,048,576 bytes. HDD capacity calculated as follows: 1GB = 1,000,000,000 bytes.
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