

## CF-30

Field Rugged Series



### Main Features

**Tested to MIL-STD-810F. IP54 Rated. Shock-resistant body survives a 90-cm free-fall test.\*1**

**Operates with the standard battery for up to 8 hours.\*2**

**All-In-One model featuring a variety of options.\*3**

GPS, WWAN, Optical Drives, Fingerprint Scanner, 2nd Battery Pack, Smart Card, Backlit Keyboard.

**High-brightness LCD with anti-reflection (AR) coating for easy viewing under direct sunlight.**

■ Integrated Bluetooth™ as standard.

■ The touch panel and touchpad can be operated even while wearing gloves.

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

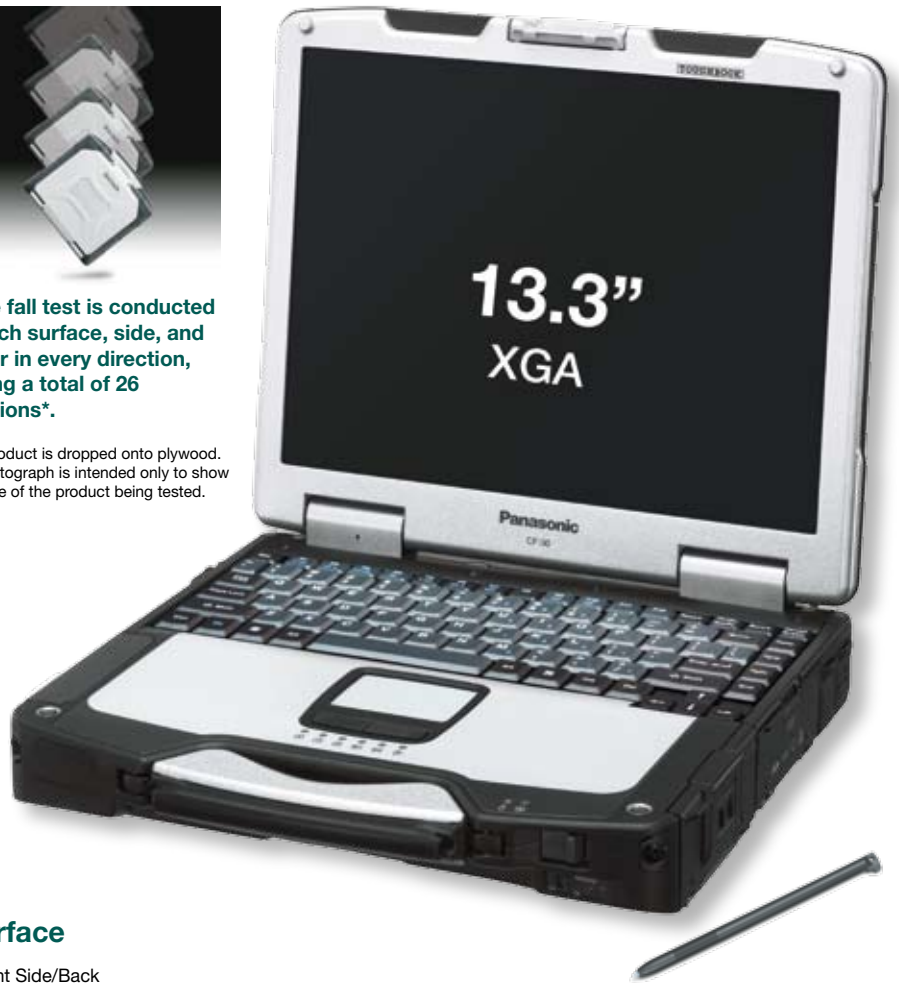
■ Serial and IEEE 1394a connectors as standard.

■ Integrated handle for increased efficiency when operating in the field.



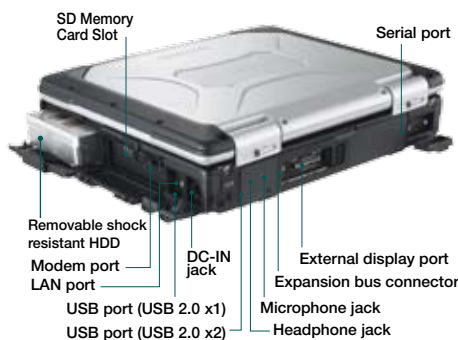
A free fall test is conducted on each surface, side, and corner in every direction, making a total of 26 directions\*.

\* The product is dropped onto plywood. The photograph is intended only to show an image of the product being tested.

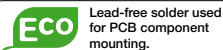


### Interface

- Right Side/Back



- Left Side/Front



- Genuine Microsoft® Windows® XP Professional
- Intel® Centrino® Duo Mobile Technology
- Intel® Core™ Duo Processor (Low voltage version L2400): 2-MB L2 cache, 1.66 GHz, 667-MHz FSB
- Built-in Intel® PRO/Wireless 3945ABG network connection 802.11a/b/g
- Security-Authentication: LEAP, WPA, 802.1X, EAP-TLS, EAP-FAST, PEAP
- Encryption: CKIP, TKIP, 128-bit and 64-bit WEP, Hardware AES
- Bluetooth™
- HDD: Approximately 80 GB\*4
- RAM: Standard 512 MB\*5 (4 GB max.\*6)\*7
- TFT color LCD: 13.3" supporting XGA resolution



\*1 Test conducted in non-operating condition. The shock resistance, vibration resistance, dust-proof, and splash-proof specifications do not guarantee that the product can be operated without damage or malfunction. \*2 The period of battery operation time varies according to the operating environment, LCD brightness, and system settings. Measured using BatteryMark™ Ver.4.0.1" (LCD brightness Minimum). \*3 For details, contact your Panasonic sales representative. \*4 The actual HDD capacity may be less than displayed, depending on the OS and application software. \*5 1 MB = 1,048,576 bytes. \*6 When the existing 512-MB DIMM is replaced with a 2-GB DIMM. \*7 1 GB = 1,000,000,000 bytes. Operating system or some application software will report as fewer GB.

# TOUGHBOOK

CF-30		CF-30CTQAZBM
<b>CPU</b>		Intel® Core Duo Processor L2400 (1.66 GHz, 2 MB <sup>1</sup> L2 cache, 667 MHz FSB)
<b>Chipset</b>		Intel® 945GM
<b>Memory<sup>1</sup></b>		512 MB (4096 MB Max.) DDR2 SDRAM
<b>Video Memory<sup>1,2</sup></b>		UMA (128 MB Max.)
<b>Hard Disk Drive<sup>3</sup></b>		80 GB
<b>Display Method</b>		13.3 XGA type (TFT) with Touchscreen 1000cd/m <sup>2</sup>
<b>Wireless LAN</b>		Intel PRO / Wireless 3945 ABG (802.11 a + b + g) PCI Ex. 1/4
<b>Bluetooth</b>		Version 2.0+EDR
<b>LAN</b>		IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX, IEEE 802.3ab 1000Base-T
<b>Modem</b>		Data: 56 kbps (V.92) FAX: 14.4 kbps
<b>Sound</b>		WAVE and MIDI playback, Monaural speaker, Intel® High Definition Audio subsystem support
<b>Security Chip</b>		TPM (TCG V1.2 compliant)
<b>Card Slot</b>	PC Card ExpressCard SD Memory Card <sup>8</sup> Smart Card <sup>10</sup>	Type I or Type II x 1 (3.3 V: 400 mA, 5 V: 400 mA) ExpressCard/34 or ExpressCard/54 x 1 x 1, Data transfer rate = 8 MB per second <sup>9</sup> x 1
<b>RAM Module Slot</b>		200-pin, 1.8 V, SO-DIMM, DDR2 SDRAM, PC2-4200 Compliant
<b>Interface</b>		USB port (4-pin, USB 2.0) x 3, 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 80-pin female), External Antenna Connector (Dedicated 50 Ω coaxial connector), IEEE 1394a Interface Connector (4-pin x 1), Microphone Jack (Miniature jack, 3.5 DIA, Monaural), Headphone Jack (Miniature jack, 3.5 DIA, Impedance 32 Ω, Output Power 4 mW x 2)
<b>Keyboard / Pointing Device</b>		87 keys / Touch Pad / Touchscreen (Anti-Reflection, Stylus (included) touch capable)
<b>Power Supply</b>		AC adaptor or Battery pack
<b>AC Adaptor</b>		Input: 100 V to 240 V AC, 50 Hz/60 Hz, Output: 15.6 V DC, 5.0 A
<b>Battery Pack</b>		Li-ion 10.65 V, 8.55 Ah
	Operating Time <sup>11</sup>	Approx. 4 hours at set to maxim brightness setting (typ: 1000nit) Approx. 5 hours (typ: 500nit) to Approx. 8 hours at BIOS default setting <sup>12</sup> Approx. 7 hours <sup>13</sup>
	Charging Time <sup>11</sup> (Power on)	Approx. 8.5 Hours
<b>Rated Power Consumption</b>		Approx. 45W
<b>Physical Dimensions (W x H x D) (including the carrying handle)</b>		302 mm x 67.5 - 69.5 mm x 285 mm
<b>Weight (including the carrying handle)</b>		Approx. 3.8 kg
<b>Operating Environment</b>		Temperature: 5 °C to 35 °C Humidity: 30% to 80% RH (No condensation)
<b>Storage Environment</b>		Temperature: -20 °C to 60 °C Humidity: 30% to 90% RH (No condensation)
<b>Operating System</b>		Microsoft® Windows® XP Professional Service Pack 2 with Advanced Security Technologies (NTFS File System)
<b>Utility Programs</b>		DMI Viewer, Microsoft® Windows® Media Player 10, Adobe Reader, PC Information Viewer, SD Utility, Icon Enlarger, Loupe Utility, Intel® Matrix Storage Manager, Intel® PROSet/Wireless Software, Bluetooth Stack for Windows® by TOSHIBA, Wireless Switch Utility, Hotkey Settings, Battery Recalibration Utility, Panasonic Hand Writing, Infineon TPM Professional Package <sup>14</sup> , Recover Pro™ <sup>6</sup> <sup>14</sup> Setup Utility, Hard Disk Data Erase Utility <sup>15</sup> , PC-Diagnostic Utility

\*1 1MB = 1,048,576 bytes

\*2 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.

\*3 1GB = 1,000,000,000 bytes. Your operating system or some application software will report as fewer GB.

\*4 A 16,777,216 color display is achieved by using the dithering function.

\*5 Maximum resolution depends on the specifications of the external display.

\*8 Operation has been tested and confirmed using Panasonic SD Memory Cards with a capacity of up to 2 GB.

The transfer rate using the SD Memory Card slot on this computer is 8 MB per second. (This is a theoretical value, and differs from actual speeds.)

The transfer rate is 8 MB per second even if you use an SD Memory Card that supports high-speed transfer rates.

Operation on other SD equipment is not guaranteed.

This computer is not compatible with MultiMediaCards or SDHC Memory Cards. Do not insert these kinds of cards.

\*9 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.

\*10 Only for model with Smart Card slot

\*11 Varies depending on the usage conditions.

\*12 Measured using BatteryMark. Version 4.0.1 (LCD brightness: Maximum - Minimum at BIOS default setting)

\*13 Measured using MobileMark. 2002 (LCD brightness: 60 cd/m<sup>2</sup>)

\*14 You need to install to use the feature.

\*15 The Product Recovery DVD-ROM is required.