



Latest Platform Offers even Higher Performance and Amazing Protection against Shock, Dust, and Water.

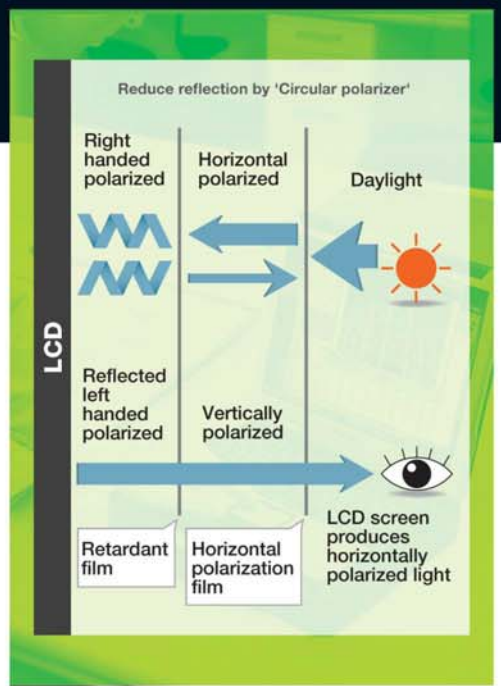
TOUGHBOOK **CF-31**
When it's worth doing better.

- OS** • Genuine Windows® 7 Professional

- High performance with rugged cooling Fan** • Standard model : 2nd generation Intel® Core™i5-2520M(2.5GHz)standard voltage processor with Intel® HD 3000 graphics
 • Performance model : 2nd generation Intel® Core™i5-2540M(2.6GHz)standard voltage processor with AMD Radeon™HD6750M

- 13.1"Outdoor viewable screen** • 1,200cd/m² high brightness LCD with circular polarizer and LED backlight

- Fully Rugged** • 120cm{48 in} drop shock resistance
 • IP65 dust & water resistance



Long battery life:
 Std 13.5H*2 +2nd 20H*2
 Std model:13.5H*(Std battery)
 20H*(Std battery + 2nd battery*)
 Performance model:12.5H*(Std battery)

x1 RS232C x1 / USB2.0*3 x4

Touch Screen even operated with glove

*1 Available only for Std model. *2 Measured by Mobile Mark 2007 and tested with LCD Brightness: 60 cd/m² *3 Does not guarantee operation of all USB-compatible peripherals.



CF-31

■ Main Specifications

Model No.	CF-31Q Series (Value Model) / CF-31J Series (Standard or Performance Model)		
OS	Genuine Windows® 7 Professional		
CPU/Secondary cache memory	Intel® Core i3-2310M (Value Model) / Intel® Core i5-2520M (Standard Model) / Intel® Core i5-2540M (Performance Model)		
Chipset	Mobile Intel® HM65 Express (Value Model) / Mobile Intel® QM67 Express		
Main Memory	2GB DDR3 SDRAM (Max up to 8GB) / 4GB DDR SD RAM (Max up to 8 GB)		
Video Memory	<Windows 7> UMA (<32-bit> 1428 MB Max, <64-bit> 1696MB Max.), <Windows XP> UMA (1024MB Max)		
Hard Disk Drive / Display Method	320GB / 13.1" XGA Type (TFT) (1024 x 768 dots)		
	Internal LCD	External LCD	
External Display	65,536/16,777,216 colors (800 x 600 dots/1024 x 768 dots/1280 x 768 dots/1280 x 1024 dots)		
Wireless LAN	Intel® Centrino® Advanced - N 6205 (a/b/g/n) (Standard and Performance Model) / Atheros AR9285 (Value Model)		
Bluetooth®	version 2.1 +EDR		
LAN	1000BASE-T		
Modem	Data: 56 kbps (V.92)		
Sound	WAVE and MIDI playback, Intel® High Definition Audio subsystem support		
Security Chip	TPM (TCG V1.2 compliant)		
Card Slot	PC Card	≈ 1, Type I or Type II.	
	Express Card	≈ 1, ExpressCard/54	
	SD Memory Card	≈ 1, SDXC	
	Smart Card	-	
RAM Module Slot	≈ 1, DDR3 SDRAM, SO-DIMM, PC3-1060		
Interface	USB Ports = 4 / Serial Port (Dsub 9-pin male) / Modem Port (RJ-11)*11 / LAN Port (RJ-45) / External Display Port (VGA) (Mini Dsub 15-pin female) / HDMI Port (Type A) / IEEE1394a Interface Connector (4-pin) / Microphone Jack (Miniature jack, 3.5 DIA) / Headphone Jack (Miniature jack, 3.5 DIA, Impedance 32 W, Output Power 4 mW × 2, Stereo) / Expansion Bus Connector (Dedicated 100-pin female)		
Keyboard / Pointing Device	87 keys / Touch Pad / Touchscreen		
Power Supply	Input: 100 V to 240 V AC, 50 Hz/60 Hz, Output: 15.6 V DC, 7.05 A		
Battery Pack	Operating Time	Main Battery: Approx. 11 hours / Up to 17.5 hours with extended battery (Only available for Value and Standard Model for extended battery)	
	Charging Time	Power on Power off	
Power Consumption	Operating	Main Battery: Approx. 4.5 hours / Main Battery + Second Battery: Approx. 8.0 hours (Only available for Value and Standard Model)	
	Power off	Main Battery: Approx. 3.5 hours / Main Battery + Second Battery: Approx. 7.0 hours (Only available for Value and Standard Model)	
Physical Dimensions(W x H x D) (excluding the hand strap/shoulder strap)	Approx. 55 W / Approx. 100 W (maximum when recharging in the ON state)		
Weight	Approx. 3.72 kg		
Environment	Operating	Temperature	-10 °C to 50 °C
		humidity	30 % to 80 %
	Storage	Temperature	-20 °C to 60 °C
		humidity	30 % to 90 %
Pre-installed Software	Adobe Reader, PC Information Viewer, Logue Utility, Display Selector, Bluetooth® Stack for Windows® by TOUGHBOOK, Wireless Switch Utility, Intel® PROSet / Wireless Software, Wireless Connection Disable Utility, Hotkey Settings, Battery Recalibration Utility, Infineon TPM Professional Package, Protector Suite Q, Auto Setup Utility, Hard Disk Data Erase Utility, PC-Diagnostic Utility, Concealed mode Utility, Wireless Manager Mobile Edition 5.5f, Quick Boot Manager, Fan Monitoring Utility		

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.

