

Panasonic recommends Windows® 7.

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## TOUGHBOOK CF-31 STANDARD MODEL.

THE FULLY RUGGED, FULL-SIZE NOTEBOOK THAT  
DELIVERS DESKTOP PERFORMANCE.

Specifically designed for field-based professionals working in challenging environments, the new fully rugged Toughbook CF-31 Standard Model offers the ideal balance between the latest technology and supreme ruggedness. Whether working in adverse weather, wet conditions, underground or where space restrictions would usually hamper productivity, the CF-31 ensures that mobile workers perform to their optimum, at all times.

- Intel® Core™ i5-2520M (2.5GHz) vPro processor
- Genuine Windows® 7 Professional
- Intel HD 3000 graphics
- 13.1" high brightness outdoor display with circular polarizer
- Certified by MIL-STD 810G\* and IP65\*
- Backwards compatible with CF-30 docking stations and carmounters\*\*
- High flexibility and connectivity through new configurations such as second LAN, camera, 3G or GPS

\* Tested by an independent third-party lab following IEC 60529, sections 13.4, 13.6.2, 14.2.5, 14.3

\*\* Limited functionality



**TOUGHBOOK** When it's worth doing better.

[www.toughbook.eu](http://www.toughbook.eu)



# MOBILE BUSINESS EXCELLENCE

## FOR FIELD PROFESSIONALS WHO FACE THE TOUGHEST CHALLENGES

The CF-31's high performance is provided by the 2nd generation latest Intel® Core™ i5 processor architecture, allowing users to exploit job-specific, cutting-edge software. A 1.200cd/m<sup>2</sup>, 13.1" LED backlight display (4:3) with circular polarizer also means the CF-31 can be viewed in direct sunlight.



Mobile Computing Platform	Intel® Core™ i5-2520M vPro™ processor (2.5GHz, 3MB Intel® Smart Cache, Intel® 6 series Express chipset QM67)	
Operating System	Genuine Windows® 7 Professional	
RAM	4GB DDR3 SDRAM (max. 8GB)	
Graphic Chip	Intel® HD Graphics 3000, UMA (Windows® 7 64bit max 1696MB, 32bit max 1428MB)	
Storage	320GB HDD (SATA)	
LCD	13.1" sunlight-viewable XGA Active Matrix (TFT) colour LCD (up to 1.200cd/m <sup>2</sup> ) with circular polarizer; concealed mode	
Cabinet	Full magnesium alloy with integrated carrying handle	
Bluetooth™	Version 2.1 + EDR Class 1	
WLAN	Intel® Centrino® Advanced-N 6205 AGN WLAN IEEE 802.11 a/b/g/n compliant; slide on/off switch	
LAN	IEEE 802.3 10 Base-T, IEEE 802.3u 100 Base-TX, IEEE 802.3ab 1000 Base-T (2nd LAN Project Based)	
Modem (optional)	Data: 56 kbps (V.92) FAX: 14.4 kbps	
Audio	WAVE and MIDI playback, Intel® High Definition Audio subsystem support	
Input Devices	Resistive Touchscreen, Touchpad and Keyboard with 88 keys	
Interfaces	Serial (16550A compatible)	D-sub, 9-pin
	External display (VGA port)	Mini D-sub, 15-pin
	HDMI	x1
	Headphone	Mini-jack, 3.5 DIA
	Microphone	Mini-jack, 3.5 DIA, stereo
	DC-In	Jack
	USB 2.0	x4, 4-pin
	Modem (optional, project based)	RJ-11
	LAN (2nd LAN optional, project based)	RJ-45
	Firewire (IEEE1394a, optional, project based)	x1, 4-pin
	External Antenna	x1, Dedicated 50 ohms coaxial connector
	Port Replicator	80-pin
Expansion Slots	PC Card	x1, Type I or Type II, Allowable current 3.3V, 400mA, 5V: 400mA
	Express Card	x1, Express Card/34 or Express Card/54
	SD/SDXC Memory Card	x1
	Optional RAM Module	x1 DDR3 SDRAM, 204 Pins SO-DIMM, 1.5V, SO-DIMM, PC3-10600 Compliant
Power	AC Adapter	Input: 100 - 240V AC, 50Hz/60Hz; Output: 15.6V DC, 7.05.0A
	Battery	Li-ion (10.65V, Typical 8550 mAh / Minimum 8100mAh)
	Battery Life	Approx. 13.5h (Windows® 7, Mobile Mark™ 2007, LCD brightness: 60cd/m <sup>2</sup> )
Power Management	Standby function, Hibernation function, ACPI BIOS	
Security Features	TPM (Trusted Platform Module, TCG V1.2 compliant), Integrated hardware security lock slot, Password security (supervisor password, user password, HDD lock)	
Dimensions (WxHxD)	302mm x 73.5mm x 292mm, 11.9" x 2.9" x 11.5" (excluding protrusions)	
Weight	Approx. 3.72kg (Approx. 8.2lb.)	
Integrated Options	GPS, Fingerprint Reader, Smart Card Reader, 3G Mobile Broadband (HSPA+, up to 21Mbps)	
Testing Standards	Water resistance test	IEC529 (JIS C0920) IP-X5*, MIL-STD 810G 506.5- I & III*
	Dust resistance test	IEC529 (JIS C0920) IP-6X*, MIL-STD 810G 510.5- I & II*
	Gravity drop resistance test	MIL-STD 810G 516.6 IV* (180cm drop)
	Vibration resistance test	MIL-STD 810G 514.6- I & II*
Accessories	Desktop Port Replicator	CF-VEB311
	Car Mounter Kit	CF-WEB301
	AC Adapter	CF-AA5713A
	Battery	CF-VZSU46AU
	DVD Multi Drive (Multimedia Bay)	CF-VDM311U
	Stylus Pen	CF-VNP009U
	Display Protection Film	CF-VPF15U

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. Toughbook is a brand name and registered trademark of Panasonic Corporation. Acrobat® is a registered trademark of Adobe® Systems Incorporated. Intel, the Intel logo, Intel Core, Intel vPro, Core Inside and vPro Inside are trademarks of Intel Corporation in the U.S. and other countries. Microsoft® and Windows® are registered 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. \* Tested by an independent third-party lab following IEC 60529, sections 13.4, 13.6.2, 14.2.5, 14.3 Panasonic Marketing Europe GmbH, Panasonic Computer Products Europe Headquarters, Hagenauer Straße 43, 65203 Wiesbaden (Germany).

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