



## TOUGHBOOK CF-31

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™ i5-3320M vPro Processor
- Genuine Windows® 7 Professional
- Intel HD 4000 graphics
- Vibration and shock resistant (MIL-STD 810G)\*
- Water and dust resistant (IP65, MIL-STD 810G)\*
- 13.1" high brightness outdoor display (up to 1.200cd/m<sup>2</sup>) with circular polarizer
- USB 3.0 SuperSpeed port
- Up to 14.5 hours battery life
- 3G mobile broadband optional (HSPA+, up to 21Mbps)
- Concealed Mode to switch PC into "silent mode"
- Backwards compatible with CF-30 docking stations and Car Mounter Kit\*\*
- High flexibility and connectivity through new configurations such as second LAN, camera or GPS

\* Tested by an independent third party lab following MIL-STD-810G and IEC 60529, Sections 13.4, 13.6.2, 14.2.5 and 14.3

\*\* Limited functionality

Panasonic recommends Windows 8 Pro.



# MOBILE BUSINESS EXCELLENCE

## FOR FIELD PROFESSIONALS WHO FACE THE TOUGHEST CHALLENGES

The CF-31's desktop level performance is provided by the 3rd generation Intel® Core™ i Processor architecture, allowing users to exploit job-specific, cutting-edge software.



Mobile Computing Platform	Intel® Core™ i5-3320M vPro™ processor (2.6GHz, 3MB Intel® Smart Cache, Intel® 7 series Express chipset QM77)	
Operating System	Genuine Windows® 7 Professional	
RAM	4GB DDR3 SDRAM (max. 8GB)	
Storage	500GB 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 4.0 + EDR Class 1	
WLAN	Intel® Centrino® Advanced-N 6235 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 Input:	Jack
	USB 2.0:	x3, 4-pin
	USB 3.0:	x1, 9-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
	Desktop Port Replicator:	80-pin
	PC Card:	x1, Type I or Type II, Allowable current 3.3V, 400mA, 5V: 400mA
Expansion Slots	Express Card:	x1, Express Card/34 or Express Card/54
	SD/SDXC Memory Card:	x1
	RAM Module (optional):	x1 DDR3L SDRAM
	Power	
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. 14.5h (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 / 8.2lb (including battery)	
Integrated Options	GPS, Fingerprint Reader, Smart Card Reader, 3G Mobile Broadband (HSPA+, up to 21Mbps)	
Accessories	AC Adapter:	CF-AA5713A
	Battery Charger:	CF-VCB182W
	Battery Pack:	CF-VZSU46AU
	Battery Pack (Multimedia Bay):	CF-VZSU1431U
	Car Charger:	CF-LND1224A (120W, 24V)
	Car Mounter Kit:	CF-WEB301
	Desktop Port Replicator:	CF-VEB311
	DVD Multi Drive (Multimedia Bay):	CF-VDM312U
	Stylus Pen:	CF-VNP009U
	Display Protection Film:	CF-VPF15U
	Carrying and CDS Docking Solutions:	Please visit <a href="http://www.toughbook.eu">www.toughbook.eu</a>
	Water resistance test:	IEC529 (JIS C0920) IP-X5*, MIL-STD 810G 506.5, III*
	Dust resistance test:	IEC529 (JIS C0920) IP-6X*, MIL-STD 810G 510.5, Level*
	Gravity drop resistance test:	MIL-STD 810G 514.6 (180cm drop)*
	Vibration resistance test:	MIL-STD 810G 514.6, category 20 & 24*
Testing Standards		

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.

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Computer Product Solutions (CPS) BU, Panasonic System Communications Company Europe (PSCU), Panasonic Marketing Europe GmbH, Hagenukstraße 43, 65203 Wiesbaden (Germany).

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