Panasonic recommends Windows.

TOUGHBOOK 31

- Sunlight-viewable touchscreen with Panasonic CircuLumin™ Technology

- Full magnesium alloy case with handle

- 18-hour battery life (27 hours with optional media bay 2nd battery)

- Standard backlit keyboard

- Optional 4G LTE multi carrier mobile broadband with satellite GPS

- Industry leading driver packages for ease of deployment and support

- Available TPM 2.0 Security[1]

MIL-STD-810G

MIL-STD-461F

IP65

ANSI HAZ LOC

6-FOOT DROP RATING

POWERFUL, RUGGED AND WIRELESS.

Panasonic presents the Toughbook® 31, the reliable laptop offering the world's most rugged design. With drop-shock protection and a MIL-STD-810G certification, it's the undisputed leader in the fully rugged category. Its Intel® Core™ i5 processor packs a punch and amazing battery life—18 hours, or 27 hours with optional media bay 2nd battery. Combine six generations of delivering rugged performance plus 16 years of consistent docking compatibility, and you have a computer that will go the distance with you anytime, anywhere.

1.800.662.3537
us.panasonic.com/toughbook/31

TOUGHBOOK®

Panasonic recommends Windows.

SOFTWARE
- Windows® 10 Pro (available Windows 7 Professional downgrade option)
- Panasonic Utilities (including Dashboard), Recovery Partition
- Enterprise ready driver packages including CAB files and one-click driver bundles

DURABILITY
- MIL-STD-810G certified (6' drop, shock, vibration, rain, dust, sand, altitude, freeze/thaw, high/low temperature, temperature shock, humidity, explosive atmosphere)[2]
- MIL-STD-461F certified[2]
- IP65 certified sealed all-weather design[2]
- Optional hazardous location class I division 2, groups ABCD certified model
- Full magnesium alloy case with handle
- Storage drive heater
- Shock-mounted caged storage drive
- Removable quick-release battery and storage drive
- Reinforced locking port covers
- Preinstalled replaceable screen film for LCD protection

CPU[3]
- Intel® Core™ i5-5300U vPro™ Processor
  – 2.3GHz with Turbo Boost up to 2.9GHz, 3MB cache

STORAGE & MEMORY
- Upgradeable Memory (RAM) - 2 slots
  – 4GB expandable to 8GB or 16GB total of SDRAM (DDR3L-1600MT/s)[4]
- Shock-mounted storage drive with quick-release
  – 500GB 7200rpm HDD with heater[4]
  – Optional 256/512GB SSD with heaters[4]
  – Optional OPAL encrypted SSD with heater

DISPLAY
- 13.1" XGA 1024 x 768
  – Resistive touchscreen
- 2-1200 nit
- Panasonic CircuLumin™ technology
- Anti-reflective (AR), anti-glare (AG), and circular polarizer
- HD Graphics 5500
- Triple monitor support
- Concealed mode (configurable)

AUDIO
- Intel® High Definition Audio compliant
- Integrated speaker
- Keyboard volume and mute controls

KEYBOARD & INPUT
- Stylus pen with integrated stylus holder, tether and cleaning cloth
- 87-key with dedicated Windows® key
- Emissive backlit keyboard with 4 adjustable levels (optional sealed rubber backlit keyboard)
- Pressure-sensitive touchpad with vertical scrolling

MULTIMEDIA BAY
- Optional DVD Super MULTI Drive or Media Bay 2nd battery

INTERFACE & EXPANSION

Docking connector	80-pin
USB 3.0 (x 1), USB 2.0 (x 3)	Type A
SD card (SDXC)	UHS-I
Optional IEEE 1394a (FireWire)	4-pin
HDMI	Type A
VGA	D-sub 15-pin
10/100/1000 Ethernet	RJ-45
Optional 10/100/1000 2nd LAN (Ethernet)	RJ-45
Audio In	3.5mm Mini-jack stereo
Audio Out	3.5mm Mini-jack stereo
Serial	D-sub 9-pin
Mini-SIM	2FF

WIRELESS
- Optional 4G LTE multi carrier mobile broadband with satellite GPS
- Optional dedicated GPS (u-blox NEO-M8N)
- User-selectable antenna pass-through (dual standard, single optional)
- Intel® Dual Band Wireless-AC 7265 Wi-Fi 802.11a/b/g/n/ac
- Bluetooth® v4.0 + EDR (Class 1)
- Slide on/off switch

POWER
- Standard long life Li-Ion battery pack (10.65V, typical 8550mAh, min. 8100mAh)
- Battery operation: 18 hours (27 hours with opt. media bay 2nd battery)[5]
- Battery charging time: 3.5 hours on/off (7 hours with opt. media bay 2nd battery)[5]
- AC Adapter: AC 100V–240V 50/60Hz, auto sensing/switching worldwide power supply

SECURITY FEATURES
- TPM v1.2 (TPM v2.0 available)[1]
- NIST BIOS compliant
- Persistence® technology by Absolute embedded in BIOS[6]
- Kensington cable lock slot
- Optional fingerprint reader
- Optional insertable SmartCard CAC reader

WARRANTY
- 3-year limited warranty, parts and labor

DIMENSIONS & WEIGHT
- 11.5"(L) x 11.9"(W) x 2.9"(H)
- 7.9 lbs. (8.2 lbs. with optional media bay 2nd battery)

HAZARDOUS LOCATION CERTIFICATIONS
- ANSI/ISA 2.12.01-2013
  – Optional class I division 2, groups ABCD certified model

INTEGRATED OPTIONS[7]
- 4G LTE multi carrier mobile broadband with satellite GPS
- Dedicated GPS (u-blox NEO-M8N)
- 2nd LAN or FireWire
- Insertable SmartCard CAC reader
- Fingerprint reader
- Sealed rubber backlit keyboard (emissive backlit standard)
- DVD drive or Media bay 2nd battery

SELECT ACCESSORIES[7]

AC Adapter 100W (3-prong)	CF-AA5713AM
Standard Long Life Battery Pack	CF-VZSU46AU
Media Bay 2nd Battery	CF-VZSU1431U
Battery Charger	CF-VCBTB2W
LIND 3-Bay Battery Charger	PACH329-1857-P
LIND Car Charger 120W	CF-LNDDC120
LIND Solar Charge System	PASC1580-4464
ToughMate ComUniversal Carrying Case (large capacity)	TBCCOMUNV-P
ToughMate Backpack	TBCBPK-P
ToughMate Sling 31 Case	TBC31CASE-P
ToughMate Shoulder Strap	TBCDLXSSKIT-P
DVD Super MULTI Drive	CF-VDM312U
Memory Card 4GB	CF-BAZ1504
Memory Card 8GB	CF-BAZ1608
Desktop Dock	CF-VEB311U
Vehicle Docks (no pass-through)	
– Gamber-Johnson with LIND power supply	7160-0318-04-P
– Havis with LIND power supply	CF-H-PAN-112-P
Vehicle Docks (single pass-through)	
– Gamber-Johnson with LIND power supply	7160-0318-05-P
– Havis with LIND power supply	CF-H-PAN-112-1-P
Vehicle Docks (dual pass-through)	
– Gamber-Johnson with LIND power supply	7160-0318-06-P
– Havis with LIND power supply	CF-H-PAN-112-2-P
Cradlepoint Router	
– Verizon LTE	CP-IBR1100LPE-VZ
– Multi Carrier LTE-Advanced	CP-IBR1100LP6-NA
– Multi Carrier LTE-Advanced (compact size)	CP-IBR900LP6-NA
Touchscreen Stylus	CF-VNP009U
Tether	CF-VNT002U
13.1" LCD Protector Film	CF-VPF15U

Please consult your reseller or Panasonic representative before purchasing.

[1]TPM 1.2 ships by default, but can run TPM2.0 – see below Microsoft link for details:
support.microsoft.com/en-us/help/2920188/update-to-add-support-for-tpm-2.0-in-windows-7-and-windows-server-2008-r2.
[2]Tested by national independent third party lab following MIL-STD-810G Method 516.6 Procedure IV for transit drop test and IEC 60529 Sections 13.4, 13.6.2, 14.2.5 and 14.3 for IP65.
[3]An Intel Core i7 processor is also available.
[4]1GB = 1,000,000,000 bytes. Total usable memory will be less depending upon actual system configuration.
[5]Battery performance features such as charge time and life span can vary according to the conditions under which the computer and battery are used. Battery operation and recharge times will vary based on many factors, including screen brightness, applications, features, power management, battery conditioning and other customer preferences. Battery testing results from MobileMark 2007 at 60 nit.
[6]Requires software and activation to enable theft protection.
[7]Accessories and Integrated Options may vary depending on your notebook configuration. Visit Panasonic website for more accessories and details.

intel inside™ CORE™ i5 vPro™

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