



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
- Industry leading driver packages for ease of deployment and support
- Available TPM 2.0 Security<sup>1</sup>

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.

## TOUGHBOOK 31

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## SOFTWARE

- Windows® 10 Pro 64-bit
- 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]<sup>2</sup>
- MIL-STD-461F certified<sup>2</sup>
- IP65 certified sealed all-weather design<sup>2</sup>
- 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<sup>3</sup>

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

## STORAGE &amp; MEMORY

- Upgradeable Memory (RAM) - 2 slots
- 4GB expandable to 8GB or 16GB total of SDRAM (DDR3L-1600MT/s)<sup>4</sup>
- Shock-mounted storage drive with quick-release
- 500GB 7200rpm HDD with heater<sup>4</sup>
- Optional 256/512GB SSD with heaters<sup>4</sup>
- 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 &amp; 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 rubber backlit keyboard)
- Pressure-sensitive touchpad with vertical scrolling

## MULTIMEDIA BAY

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

## INTERFACE &amp; 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 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)<sup>5</sup>
- Battery charging time: 3.5 hours on/off (7 hours with opt. media bay 2nd battery)<sup>5</sup>
- AC Adapter: AC 100V-240V 50/60Hz, auto sensing/switching worldwide power supply

## SECURITY FEATURES

- TPM v1.2 (TPM v2.0 available)<sup>1</sup>
- NIST BIOS compliant
- Persistence® technology by Absolute embedded in BIOS<sup>4</sup>
- Kensington cable lock slot
- Optional fingerprint reader
- Optional insertable SmartCard CAC reader

## WARRANTY

- 3-year limited warranty, parts and labor

## DIMENSIONS &amp; 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<sup>7</sup>

- Dedicated GPS (u-blox NEO-M8N)
- 2nd LAN or FireWire
- Insertable SmartCard CAC reader
- Fingerprint reader
- Sealed rubber backlit keyboard
- DVD drive or Media bay 2nd battery

SELECT ACCESSORIES<sup>7</sup>

- 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-VDM312U
- LIND Solar Charge System CF-LNDDC120
- ToughMate ComUniversal PASC1580-4464
- Carrying Case (large capacity) TBCCOMUNV-P
- ToughMate Backpack TBCBPK-P
- ToughMate Sting 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
- Touchscreen Stylus CF-VNP009U
- Tether CF-VNT002U
- 13.1" LCD Protector Film CF-VPF15U

Please consult your reseller or Panasonic representative before purchasing.

<sup>1</sup>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](http://support.microsoft.com/en-us/help/2920188/update-to-add-support-for-tpm-2.0-in-windows-7-and-windows-server-2008-r2)

<sup>2</sup>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.

<sup>3</sup>An Intel Core i7 processor is also available.

<sup>4</sup>1GB = 1,000,000,000 bytes. Total usable memory will be less depending upon actual system configuration.

<sup>5</sup>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.

<sup>6</sup>Requires software and activation to enable theft protection.

<sup>7</sup>Accessories and Integrated Options may vary depending on your notebook configuration. Visit Panasonic website for more accessories and details.

