

Windows®. Life without Walls™. Panasonic recommends Windows 7.

THE TOUGHBOOK 31

Powerful, rugged and wireless.

Panasonic presents the Toughbook® 31, the reliable laptop offering the highest performance in its class along with the world's most rugged design. With drop-shock protection and an MIL-STD-810G certification, it's the undisputed leader in the fully-rugged category. Its new Intel® Core™ i5 and i3 processors, along with available discrete graphics, pack a punch to deliver desktop-class performance and improved video/3D graphics. An integrated webcam option and larger storage capacity set the Toughbook 31 apart from the competition. Six generations of delivering rugged performance plus 11 years of consistent docking compatibility, and you have a computer that will go the distance with you anytime, anywhere.

IP65

**6-FOOT
DROP RATING**

**MIL-STD-
810G**



TOUGHBOOK

THE PANASONIC TOUGHBOOK 31.



DURABILITY FEATURES

- MIL-STD-810G certified (6' drop, shock, vibration, rain, dust, sand, altitude, freeze/thaw, high/low temperature, temperature shock, humidity, explosive atmosphere)¹
- MIL-STD-461F certified
- IP65 certified sealed all-weather design¹
- UL1604 class I, division 2, groups ABCD certified model
- HDD heater
- Full magnesium alloy case with handle
- Shock-mounted flex-connect hard drive with quick-release
- Reinforced locking port covers
- Pre-installed replaceable screen film for touchscreen protection

SOFTWARE

- Genuine Windows® 7 Professional²
- Setup, Diagnostics, PC Information Viewer, Online Reference Manual, Adobe® Reader, Battery Recalibration Utility, Zoom Utility, Concealed Mode Utility, Hard Disk Data Erase Utility, Recovery DVD

CPU

- Intel® Core™ i5-540M vPro™ Processor
 - 2.53GHz with Turbo Boost up to 3.07GHz
 - Intel Smart Cache 3MB
- Intel® Core™ i5-520M vPro™ Processor
 - 2.40GHz with Turbo Boost up to 2.93GHz
 - Intel Smart Cache 3MB
- Intel® Core™ i3-350M Processor
 - 2.26GHz
 - Intel Smart Cache 3MB

STORAGE & MEMORY

- 2GB SDRAM (DDR3-1066MHz) standard, expandable to 8GB^{3,4}
- Shock-mounted flex-connect hard drive with quick-release⁴
 - 250GB (540M CPU) or 160GB (520M and 350M CPU)
 - Optional 256GB solid state drive (SSD)

DISPLAY

- 13.1" 1024 x 768 XGA sunlight-viewable touchscreen LCD
 - Panasonic CircuLumin™ technology:
 - 2-1100 nit
 - Anti-reflective and anti-glare screen treatments
 - Circular polarizer⁵
- External video support up to 1280 x 1024 at 16.7 million colors
- 540M CPU with switchable graphics in BIOS:
 - ATI Radeon™ HD5650, 512MB dedicated VRAM
 - Intel QM57 video controller, max. 1024MB UMA VRAM on XP³
- 520M CPU:
 - Intel QM57 video controller, max. 1024MB UMA VRAM on XP³
- 350M CPU:
 - Intel HM55 video controller, max. 1024MB UMA VRAM on XP³
- Concealed mode
- LED backlighting

AUDIO

- Intel® high-definition audio compliant
- Integrated front-facing speaker
- Convenient keyboard volume and mute controls

KEYBOARD & INPUT

- Touchscreen LCD
- Integrated stylus holder
- 87-key with dedicated Windows® key
- Pressure-sensitive touchpad with vertical scrolling support

MULTIMEDIA POCKET EXPANSION SLOTS

- Will accept optional DVD Super MULTI Drive
- PC card type II x 1
- SD card (SDHC)
- ExpressCard/54 x 1

INTERFACE

- Docking connector 80-pin
- HDMI Type A
- VGA D-sub 15-pin
- Headphones/speaker Mini-jack stereo
- Microphone/line in Mini-jack stereo
- Serial D-sub 9-pin
- Ext. antenna conn. 50 ohm coaxial
- USB 2.0 (x 4) 4-pin
- Optional IEEE 1394a (FireWire) 4-pin
- 10/100/1000 Ethernet RJ-45
- Optional 10/100 2nd LAN (Ethernet) RJ-45
- Optional 56K Modem RJ-11

WIRELESS

- Optional integrated Gobi™2000 mobile broadband
- Intel® Centrino® Advanced-N 6200 802.11a/b/g/n (i5 CPU models)
- Atheros AR9285 802.11b/g/n (i3 CPU model)
- Bluetooth® v2.1 + EDR
- Security
 - Authentication: LEAP, WPA, 802.1x, EAP-TLS, EAP-FAST, PEAP
 - Encryption: CKIP, TKIP, 128-bit and 64-bit WEP, Hardware AES
- High-gain antenna pass-through (single standard, dual optional)
- Slide on/off switch

POWER SUPPLY

- i5 CPU:
 - Battery operation: Approx. 11 hours (520M CPU or 540M CPU running Intel graphics), Approx. 5 hours (540M CPU running ATI graphics)⁶
 - Long life Li-Ion battery pack (10.65V, typical 8550mAh, minimum 8100mAh)
 - Battery charge time: 3.5 hours off, 4.5 hours on⁷
- i3 CPU:
 - Battery operation: Approx. 7 hours (with lightweight battery)⁶
 - Lightweight Li-Ion battery pack (11.1V, typical 5200mAh, minimum 5000mAh)
 - Battery charge time: 3 hours off, 3.5 hours on⁷
- AC Adapter: AC 100V-240V 50/60Hz, auto sensing/switching worldwide power supply
- Pop-up, on-screen battery status reporting

- MIL-STD-810G and IP65 Certified¹
- 6-foot Drop Rating¹
- Sunlight-viewable Touchscreen with Panasonic CircuLumin™ Technology⁵
- Full Magnesium Alloy Case with Handle
- Desktop-class Performance
- 3G Mobile Broadband and GPS-ready Design

POWER MANAGEMENT

- Suspend/Resume Function, Hibernation, Standby, ACPI BIOS

SECURITY FEATURES

- Password Security: Supervisor, User, Hard Disk Lock
- Kensington cable lock slot
- Trusted platform module (TPM) security chip v.1.2⁵
- Computrace® theft protection agent in BIOS⁷
- Intel® Anti-Theft Technology (i5 CPU models)
- Optional fingerprint reader
- Optional SmartCard reader

WARRANTY

- 3-year limited warranty, parts and labor

DIMENSIONS & WEIGHT

- 11.5"(L) x 11.9"(W) x 2.9"(H)
- 7.9 or 8.2 lbs. (varies by battery type)

INTEGRATED OPTIONS⁸

- Gobi™2000 mobile broadband (EV-DO Rev. A, HSPA)
- Webcam⁹
- GPS receiver
- Backlit keyboard – sealed rubber or plastic emissive
- 2nd LAN (10/100)³ or FireWire or Modem
- SmartCard reader
- Fingerprint reader
- HDD and battery lock

ACCESSORIES⁸

- AC Adapter (3-pin) CF-AA5713AM
- Battery Charger CF-VCBTB1W
- Lightweight Battery Pack CF-VZSU65U
- Long Life Ion Battery Pack CF-VZSU46AU
- LIND Car Adapter 120W CF-LNDDC120
- LIND Car Adapter 120W Mounting Bracket CF-LNDBRK120
- LIND Shutdown Timer CF-LNLDLPT
- Touchscreen Large Stylus with Tether Hole CF-VNP009U
- InfoCase ComUniversal Carrying Case (large capacity) TBCCOMUNV-P
- InfoCase Backpack TBCBPK-P
- InfoCase Sling 31 Case TBC31CASE-P
- DVD Super MULTI Drive CF-VDM311U
- Memory Cards
 - 2GB DDR3 CF-WMBA902GF
 - 4GB DDR3 CF-WMBA904G
- Desktop Port Replicator CF-VEB311U
- Vehicle Port Replicator
 - no pass-through See Dealer
 - single pass-through See Dealer
 - dual pass-through See Dealer
- 13.1" LCD Protector Film CF-VPF15U

Please consult your reseller or Panasonic representative before purchasing.

¹Tested 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.

²A full set of Windows XP drivers are available at panasonic.com/toughbook/support.
³The size of the VRAM cannot be set by the user and varies by operating system as well as size of RAM. Windows 7 max. VRAM is 763MB with 2GB of memory, or 1435MB with 4GB of memory.

⁴1GB = 1,000,000,000 bytes.

⁵On i5 CPU models only.

⁶Battery 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.

⁷Requires software and activation to enable theft protection.

⁸Accessories and Integrated Options may vary depending on your notebook configuration.

1.800.662.3537 / panasonic.com/toughbook/31

Financing options now available from Panasonic Finance Solutions; please call number above for more details.

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