

# 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. Five 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 NEW 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)<sup>1</sup>
- MIL-STD-461F certified
- IP65 certified sealed all-weather design<sup>1</sup>
- 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 Professional (with XP downgrade option)
- 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<sup>2,3</sup>
- Shock-mounted flex-connect hard drive with quick-release<sup>3</sup>
  - 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 polarizer<sup>4</sup>
- 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 XP<sup>2</sup>
- 520M CPU:
  - Intel QM57 video controller, max. 1024MB UMA VRAM on XP<sup>2</sup>
- 350M CPU:
  - Intel HM55 video controller, max. 1024MB UMA VRAM on XP<sup>2</sup>
- 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

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

## POWER MANAGEMENT

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



- MIL-STD-810G and IP65 Certified<sup>1</sup>
- 6-foot Drop Rating<sup>1</sup>
- Sunlight-viewable Touchscreen with Panasonic CircuLumin™ Technology<sup>4</sup>
- Full Magnesium Alloy Case with Handle
- Desktop-class Performance
- 3G Mobile Broadband and GPS-ready Design

## SECURITY FEATURES

- Password Security: Supervisor, User, Hard Disk Lock
- Kensington cable lock slot
- Trusted platform module (TPM) security chip v.1.2<sup>4</sup>
- Computrace® theft protection agent in BIOS<sup>5</sup>
- 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 OPTIONS<sup>7</sup>

- Gobi™2000 mobile broadband (EV-DO Rev. A, HSPA)
- Webcam<sup>4</sup>
- GPS receiver
- Backlit keyboard – sealed rubber or plastic emissive
- 2nd LAN (10/100)<sup>4</sup> or FireWire or Modem
- SmartCard reader
- Fingerprint reader
- HDD and battery lock

## ACCESSORIES<sup>7</sup>

- 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 CF-LNDDC120
- LIND Car Adapter Mounting Bracket CF-LNDBRK120
- LIND Low Profile Shutdown Timer CF-LNDLPT
- Touchscreen Large Stylus with Tether Hole CF-VNP009U
- InfoCase ComUniversal Carrying Case (large capacity) 7540-P
- InfoCase Backpack TM-UNIVBPK-P
- InfoCase Sling 31 Case TBC31CASE-P
- DVD Super MULTI Drive CF-VDM311U
- Memory Cards
  - 2GB DDR3 CF-WMBA902G
  - 4GB DDR3 CF-WMBA904G
- Desktop Port Replicator CF-VEB311
- Vehicle Port Replicator
  - no pass-through TBD
  - single pass-through TBD
  - dual pass-through TBD
- 13.1" LCD Protector Film CF-VPF15U

Please consult your reseller or Panasonic representative before purchasing.

<sup>1</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>2</sup> The 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 768MB with 2GB of memory, or 1435MB with 4GB of memory.

<sup>3</sup> 1GB = 1,000,000,000 bytes.

<sup>4</sup> On i5 CPU models only.

<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.

<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.

1.800.662.3537 / [panasonic.com/toughbook/31](http://panasonic.com/toughbook/31)

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

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