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 a 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, larger storage capacity and up to 20 hours of battery life (with optional media bay 2nd battery)[1], set the Toughbook 31 apart from the competition. Six generations of delivering rugged performance plus 12 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

Panasonic
ideas for life

THE PANASONIC TOUGHBOOK 31.

Protect. Manage.

DURABILITY FEATURES
- 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
- IP65 certified sealed all-weather design[2]
- 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 32-bit[3] or Genuine Windows® 7 Professional 64-bit[3]
- Panasonic Utilities, Recovery Partition

CPU
- Intel® Core™ i5-2540M vPro™ Processor
  – 2.6GHz with Turbo Boost up to 3.3GHz
  – Intel Smart Cache 3MB
- Intel® Core™ i5-2520M vPro™ Processor
  – 2.5GHz with Turbo Boost up to 3.2GHz
  – Intel Smart Cache 3MB
- Intel® Core™ i3-2310M Processor
  – 2.1GHz
  – Intel Smart Cache 3MB

STORAGE & MEMORY
- i5 models: 4GB SDRAM (DDR3-1333MHz), expandable to 8GB[4,5]
- i3 model: 2GB SDRAM (DDR3-1333MHz), expandable to 8GB[4,5]
- Shock-mounted flex-connect hard drive with quick-release
  – 320GB 7200rpm (i5 models), 320GB 5400rpm (i3 model)[5]
  – Optional 128GB and 256GB solid state drives (SSD)[5]

DISPLAY
- 13.1" XGA sunlight-viewable touchscreen LED 1024 x 768
  – Panasonic CircuLumin™ technology:
     – 2-1200 nit
     – Anti-reflective and anti-glare screen treatments
     – Circular polarizer[6]
- External video support up to 1280 x 1024 at 16.7 million colors
- 2540M CPU with switchable graphics in BIOS:
  – ATI Radeon™ HD6750, 512MB dedicated VRAM
  – Intel QM67 video controller, max. 1428MB shared VRAM for 32-bit[4]
- 2520M CPU:
  – Intel QM67 video controller, max. 1428MB shared VRAM for 32-bit[4]
- 2310M CPU:
  – Intel HM65 video controller, max. 1428MB shared VRAM for 32-bit[4]
- Concealed mode

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 BAY
- Will accept optional DVD Super MULTI Drive or 2nd battery

EXPANSION SLOTS
- PC card type II x 1
- SD card (SDXC)
- 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)—optional USB 3.0 (x1)[7]	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 LTE 4G mobile broadband (available Fall 2011)
- Optional integrated Gobi™2000 3G mobile broadband
- Intel® Centrino® Advanced-N 6205 802.11a/b/g/n (i5 CPU models)
- Atheros 802.11b/g/n (i3 CPU model)
- Bluetooth® v2.1 + EDR (Class 1)
- Security
  – Authentication: LEAP, WPA, 802.1x, EAP-TLS, EAP-FAST, PEAP
  – Encryption: CKIP, TKIP, 128-bit and 64-bit WEP, Hardware AES
- User-selectable antenna pass-through (single standard, dual optional)
- Slide on/off switch

POWER SUPPLY
- i5 CPU:
  – Battery operation: 13.5 hours (2520M), 12.5 hours (2540M running Intel graphics), 7.5 hours (2540M CPU running ATI graphics)[8]
  – Long life Li-Ion battery pack (10.65V, typical 8550mAh, minimum 8100mAh)
  – Battery charge time: 3.5 hours off, 4.5 hours on[8]
- i3 CPU:
  – Battery operation: Approx. 8 hours (with lightweight battery)[8]
  – Lightweight Li-Ion battery pack (11.1V, typical 5200mAh, minimum 5000mAh)
  – Battery charge time: 3 hours off, 3.5 hours on[8]
- Optional media bay 2nd battery: 6.5 additional hours (2520M and 2310M models)[1]
- 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[2]
- 6-foot Drop Rating[2]
- Sunlight-viewable Touchscreen with Panasonic CircuLumin™ Technology[6]
- 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[6]
- Computrace® theft protection agent in BIOS[9]
- 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 OPTIONS[10]
- LTE 4G mobile broadband (available Fall 2011)
- Gobi™2000 3G mobile broadband (EV-DO Rev. A, HSPA)
- Webcam[6]
- GPS receiver
- Backlit keyboard – sealed rubber or plastic emissive
- 2nd LAN (10/100)[6] or FireWire or Modem
- USB 3.0 port (x1)[7]
- SmartCard reader
- Fingerprint reader
- Media bay 2nd battery[1]
- HDD and battery lock
- 128GB and 256GB solid state drives (SSD)

ACCESSORIES[10]
• AC Adapter (3-prong)	CF-AA5713AM
• Battery Charger	CF-VCBTB1W
• Lightweight Battery Pack	CF-VZSU65U
• Long Life Ion Battery Pack	CF-VZSU46AU
• Media bay 2nd Battery[1]	CF-VZSU1431U
• LIND Car Adapter 120W	CF-LNDDC120
• LIND Car Adapter 120W Mounting Bracket	CF-LNDBRK120
• LIND Shutdown Timer	CF-LNDLPT
• 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-WMBA1002G
– 4GB DDR3	CF-WMBA1004G
• 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.
[1]Not available on 2540M.
[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]A full set of Windows XP drivers are available at panasonic.com/toughbook/support.
[4]The size of the VRAM cannot be set by the user and varies by operating system as well as size of RAM. Windows 7 64-bit max. VRAM is 1696MB with 4GB of memory.
[5]1GB = 1,000,000,000 bytes.
[6]On i5 CPU models only.
[7]Replaces one USB 2.0 port.
[8]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 running Windows 7 Professional.
[9]Requires software and activation to enable theft protection.
[10]Accessories 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.

TOUGHBOOK