Panasonic

Panasonic recommends Windows 8.

TOUGHBOOK 31

- Sunlight-viewable Touchscreen with Panasonic CircuLumin™ Technology[2]

- Full Magnesium Alloy Case with Handle

- Desktop-class Performance

- LTE Mobile Broadband and GPS-ready Design

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, packs a punch to deliver desktop-class performanceand improved video/3D graphics. An integrated webcam option, larger storage capacity and up to 21 hours of battery life (with optional media bay 2nd battery)[1] set the Toughbook 31 apart from the competition. Combine 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

MRUGGED Mobile Technology

Panasonic recommends Windows 8.

intel inside
CORE i5 vPro

DURABILITY
- 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 design[1]
- Hard drive 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

OPERATING SYSTEM
- Windows® 8 Pro
- Windows® 7 Professional 32-bit[1] or Windows® 7 Professional 64-bit[1]

SOFTWARE
- Panasonic Utilities (including Dashboard), Recovery Partition

CPU[5]
- Intel® Core™ i5-3340M vPro™ Processor
  – 2.7GHz with Turbo Boost up to 3.4GHz
  – Intel Smart Cache 3MB

STORAGE & MEMORY
- 4GB SDRAM (DDR3L-1333MHz), expandable to 8GB[3,4]
- Shock-mounted flex-connect hard drive with quick-release
  – 500GB 7200rpm
  – Optional 128GB and 256GB solid state drives (SSD)[8]

DISPLAY
- 13.1" XGA sunlight-viewable touchscreen LED 1024 x 768
  – Panasonic CircuLumin™ technology
  – 2-1200 nit
  – Circular polarizer
  – Anti-reflective and anti-glare screen treatments
- Intel QM77 video controller, max. 1785MB shared VRAM with 32-bit[3]
- External video support up to 1280 x 1024 at 16.7 million colors
- Concealed mode

AUDIO
- Intel® high-definition audio compliant
- Integrated front-facing speaker
- Keyboard volume and mute controls

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

MULTIMEDIA BAY
- 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 3), USB 3.0 (x1)[5]	4-pin
10/100/1000 Ethernet	RJ-45
56K Modem	RJ-11

WIRELESS
- Optional integrated LTE mobile broadband
- Intel® Centrino® Advanced-N 6235 802.11a/b/g/n
- Bluetooth® v4.0 + 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
- Slide on/off switch

POWER SUPPLY
- Battery operation: 14.5 hours
  – Long life Li-Ion battery pack (10.65V, typical 8550mAh, minimum 8100mAh)
  – Battery charge time: 3.5 hours off, 4.5 hours on[6]
- Optional media bay 2nd battery: 6.5 additional hours
- AC Adapter: AC 100V-240V 50/60Hz, auto sensing/switching worldwide power supply

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.1.2[8]
- Computrace® theft protection agent in BIOS[7]
- Intel® Anti-Theft Technology
- 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[8]
- LTE mobile broadband
- 720p Webcam
- GPS receiver
- Backlit keyboard
- SmartCard reader
- Fingerprint reader
- Media bay 2nd battery
- HDD and battery lock
- 128GB and 256GB solid state drives (SSD)

SELECT ACCESSORIES[8]
AC Adapter (3-prong)	CF-AA5713AM
Long Life Ion Battery Pack	CF-VZSU46AU
Media Bay 2nd Battery[1]	CF-VZSU1431U
Battery Charger	CF-VCBTB2W
LIND Car Adapter	PA15801745
Carrying Case	CL55
DVD Super MULTI Drive	CF-VDM312U
Memory Cards	
– 4GB DDR3L	CF-WMBA1104G
Desktop Dock	CF-VEB311U
Touchscreen Large Stylus with Tether Hole	CF-VNP009U
Tether	CF-VNT002U
13.1" LCD Protector Film	CF-VPF15U

Please consult your reseller or Panasonic representative before purchasing.
[1]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.
[2]A full set of Windows XP drivers are available at panasonic.ca
[3]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.
[4]1GB = 1,000,000,000 bytes.
[5]Replaces one USB 2.0 port.
[6]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.
[7]Requires software and activation to enable theft protection.
[8]Accessories and Integrated Options may vary depending on your notebook configuration. Visit Panasonic website for more accessories and details.

TOUGHBOOK

SOLUTIONS FOR BUSINESS