Panasonic
ideas for life

intel inside™
CORE i5 vPro™
Protect.
Manage.

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 processor, 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 12 years of consistent docking compatibility, and you have a computer that will go the distance with you anytime, anywhere.
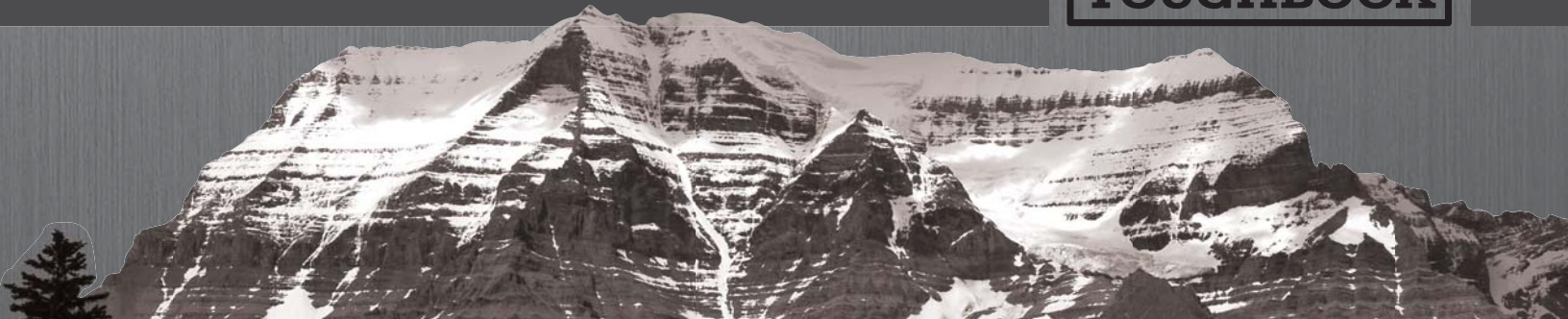
IP65

6-FOOT
DROP RATING

MIL-STD-810G

TOUGHBOOK

Intel inside™
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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)[1]
- MIL-STD-461F certified
- IP65 certified sealed all-weather design[1]
- UL1604 class I, division 2, groups ABCD certified model (special order)
- 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 or Genuine Windows® 7 Professional 64-bit*
- 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™ i5-2520M vPro™ Processor
  – 2.50GHz with Turbo Boost up to 3.2GHz
  – Intel Smart Cache 3MB

STORAGE & MEMORY
- 4GB SDRAM (DDR3-1333MHz) standard, expandable to 8GB[2,3] *
- 320GB shock-mounted flex-connect hard drive with quick-release[3]

DISPLAY
- 13.1" 1024 x 768 XGA sunlight-viewable LED (touchscreen model available)
  – Touchscreen with Panasonic CircuLumin™ technology:
    – 2-1200-nit
    – Anti-reflective and anti-glare screen treatments
    – Circular polarizer[4]
- External video support up to 1280 x 1024 at 16.7 million colours
- Intel QM67 video controller, max. 1428MB Shared VRAM for 32-bit[2]
- Concealed mode

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

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

MULTIMEDIA POCKET
- 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
• 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
• 56K modem	RJ-11

WIRELESS
- Optional integrated Gobi™ 2000 modem
- Intel® Centrino® Advanced-N 6205 802.11a/b/g/n
- Bluetooth® v2.1 + EDR (Class1)
- 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. 13.5 hours
  – Li-ion battery pack (10.65V, typical 8550mAh, minimum 8100mAh)
  – 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[1]*
- **■** *6-foot Drop Rating[1]*
- **■** *Sunlight-viewable Touchscreen with Panasonic CircuLumin™ Technology[4]*
- **■** *Full Magnesium Alloy Case with Handle*
- **■** *Desktop-class Performance*
- **■** *Embedded Wireless 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[4]
- Computrace® theft protection agent in BIOS[6]
- Optional fingerprint reader
- Optional SmartCard reader

WARRANTY
- 3-year limited warranty, parts and labour

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[7]
- Gobi™ 2000 modem
- Webcam[4]
- GPS receiver
- Backlit keyboard
- 2nd LAN (10/100)[4] or FireWire or Modem
- SmartCard reader
- Fingerprint reader
- HDD and battery lock

ACCESSORIES[7]
• AC Adapter (3-pin)	CF-AA5713AM
• Battery Charger	CF-VCBTB1W
• Li-ion Battery Pack	CF-VZSU46U
• 2nd Battery	CF-VZSU1431U
• LIND Car Adapter	PA15801745
• Touchscreen Large Stylus with Tether Hole	CF-VNP009U
• Carrying Case	CL55
• DVD Super MULTI Drive	CF-VDM311U
• Memory	
– 2GB DDR3	CF-BA106002G
– 4GB DDR3	CF-BA106004G
• Desktop Port Replicator	CF-VEB311
• 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 Sections13.4, 13.6.2, 14.2.5 and 14.3 for IP65.
[2] 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 763MB with 2GB of memory, or 1435MB with 4GB of memory.
[3] 1GB = 1,000,000,000 bytes.
[4] On i5 CPU models only.
[5] 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.
[6] Requires software and activation to enable theft protection.
[7] Accessories and Integrated Options may vary depending on your notebook configuration.

*Ships standard with Windows® 7 32-bit operating system. 64 bit operating system is required to access more than 3.2GB of RAM. Windows® 7 64 -bit OS is available by running a recovery on the unit.

TOUGHBOOK

CF31 MK2 09/11