# Panasonic



Panasonic recommends Windows.

## TOUGHBOOK 54

- 14'' HD (768p) and FHD (1080p) Displays

- Available Daylight-readable 1000 Nit Gloved Multi Touch Display

- Desktop Class Performance with Available Discrete Graphics and Dual Fans

- MIL-STD-810G and IP51 Certified Magnesium Alloy Design with Built-in Handle

- Available 2nd Drive, Hot-swappable 2nd Battery, 2nd LAN, Serial, DVD, Antenna Pass-through, SmartCard Readers and More

- Industry leading driver packages for ease of deployment and support

MIL-STD-810G

IP51

3-FOOT DROP RATING

## THE WORLD'S LIGHTEST AND THINNEST SEMI-RUGGED LAPTOP IN ITS CLASS.

The new Toughbook® 54 laptop from Panasonic uses the latest advances to create a laptop up to 2 lbs. lighter and 0.5" thinner than the competition. It features a spill-resistant, full magnesium alloy design, hard drive heater, backlit keyboard, and is available in four different models to suit every need. The Toughbook 54 has a wide range of integrated options, such as dedicated GPS, 4G LTE mobile broadband with satellite GPS, antenna pass- through, and insertable and contactless SmartCard readers. It is the only laptop in its class to offer a rugged Fischer USB port, another feature that makes the Toughbook 54 one of the most versatile and advanced semi-rugged notebooks on the market.

**1.800.662.3537**
**us.panasonic.com/toughbook/54**

PSC-M16446SS

## TOUGHBOOK®

## Panasonic recommends Windows.

**SOFTWARE**
- Windows 10 Pro (available Windows 7 Professional downgrade option)
- Panasonic Utilities (including Dashboard), Recovery Partition
- Enterprise ready driver packages including CAB files and one-click driver bundles

**DURABILITY**
- MIL-STD-810G certified (3' drop, shock, vibration, sand, dust, altitude, high/low temperature, high temperature tactical, temperature shock, humidity)[1]
- IP51 certified[1]
- Spill-resistant keyboard
- Magnesium alloy case with handle
- Storage drive heater
- Removable quick-release battery and storage drive
- Field upgradeable 4G LTE
- Shock-mounted caged storage drive
- Dual fans (Performance model)
- Pre-installed replaceable screen film for LCD protection (Gloved Multi Touch model)

**CPU**
- Intel® Core™ i5-6300U vPro™ Processor[2]
  – 2.4GHz with Turbo Boost up to 3.0GHz
  – 3MB cache

**STORAGE & MEMORY**
- Memory (RAM)
  – Performance model: 8GB or 16GB SDRAM (DDR3L-1600MHz)
  – Other models: 4GB, 8GB or 16GB[3] SDRAM (DDR3L-1600MHz)
- Primary Storage Drive (quick-release)
  – 500GB HDD (5400rpm Lite model; 7200rpm other models)[4]
  – Optional 256GB/512GB/1TB SSD, 1TB 7200rpm HDD[4]
  – Optional OPAL encrypted SSD
  – Storage drive heater
  – Shock-mounted
- Optional Second Storage Drive (onboard)[3]
  – 256GB/512GB/1TB SSD[4]
  – Storage drive heater
  – Trained technician removable

**DISPLAY**
- Display Size and Resolution
  – Gloved Multi Touch model: 14.0" FHD 1920 x 1080 (1000 nit)
  – Performance model: 14.0" FHD 1920 x 1080
  – Prime and Lite models: 14.0" HD 1366 x 768
- IPS with direct bonding on FHD displays
- Anti-reflective (AR)[3] and anti-glare (AG) screen treatments
- Graphics
  – Intel® HD Graphics 520 (all models)
  – AMD FirePro™ M5100 (Performance model)
- Triple monitor support through HDMI and optional VGA
- Concealed mode (configurable)

**AUDIO**
- Intel® High Definition Audio compliant
- Integrated speakers
- Keyboard volume and mute controls

**CAMERAS**
- Optional 1080p webcam with mic and camera on/off indicator[3]

**KEYBOARD & INPUT**
- Gloved Multi Touch model: Stylus pen with optional integrated stylus holder[5]
- 2 user-definable keys (A1/A2)
- 87-key with dedicated Windows® key
- Emissive backlit keyboard[3]
- Electrostatic touchpad with multi touch

**DVD DRIVE**
- Optional DVD Super MULTI Drive[5]

**INTERFACE & EXPANSION**

| | |
|---|---|
| Docking Connector | 24-pin |
| USB 3.0 (x 3) | Type A |
| – Includes 1 high powered 1.5A USB | Always on USB, USB rapid charging |
| Optional USB 2.0 (x 1) | Type A[3,6] |
| Rugged Fischer® USB (Core Series) | 5-pin[3,6] |
| SD card (SDXC) | UHS-II |
| HDMI | Type A |
| Optional VGA | D-sub 15-pin |
| 10/100/1000 Ethernet | RJ-45 |
| 10/100/1000 2nd LAN (Ethernet) | RJ-45[3,6] |
| Headphones/Mic | Mini-jack stereo |
| Optional Serial (True) | D-sub 9-pin[3] |
| Optional PC card  Type II[3,5] | |

**WIRELESS**
- Optional 4G LTE multi carrier mobile broadband with satellite GPS
- Optional dedicated GPS (u-blox NEO-M8N)[3,6]
- Optional dual high-gain antenna pass-through[3]
- Optional contactless SmartCard/NFC reader[3,7]
- Intel® Dual Band Wireless-AC 8260 802.11a/b/g/n/ac
- Bluetooth® v4.1 + EDR (Class 1)[12]
- Security
  – Authentication: LEAP, WPA, 802.1x, EAP-TLS, EAP-FAST, PEAP
  – Encryption: CKIP, TKIP, 128-bit and 64-bit WEP, Hardware AES
- Slide on/off switch

**POWER**
- Li-Ion battery pack:
  – Lite model (lightweight battery): 10.8V, typical 3220mAh, min. 3050mAh
  – Other models (long life battery): 11.1V, typical 4200mAh, min. 4080mAh
  – Media bay 2nd battery[5]: 11.1V, typical 2960mAh, min. 2860mAh
- Battery operation[8]:
  – Lite model: 9 hours (16 hours with opt. 2nd battery)
  – Other models: 11 hours (18 hours with opt. 2nd battery)
- Hot swap with optional media bay 2nd battery
- Battery charging time[8]: 2 hours (each battery)
  – Quick charge: 80% charge in approx 1 hour
- AC Adapter: AC 100V-240V 50/60Hz, auto sensing/switching worldwide power supply

**POWER MANAGEMENT**
- Suspend/Resume Function, Hibernation, Standby

**SECURITY FEATURES**
- Password Security: Supervisor, User, Hard Disk Lock
- Kensington cable lock slot
- Trusted platform module (TPM) security chip v.1.2[9]
- Persistence® technology by Absolute embedded in BIOS[10]
- Optional fingerprint reader[3,7]
- Optional insertable SmartCard reader (bottom)
- Optional contactless SmartCard/NFC reader[3,7]
  – ISO 14443 A/B compliant

**WARRANTY**
- 3-year limited warranty, parts and labor

**DIMENSIONS & WEIGHT**
- 10.7"(L) x 13.6"(W) x 1.2"(H)[11]
- 4.2 lbs. (Lite model), 4.4 lbs. (Prime model)
- 4.6 lbs. (Performance and Gloved Multi Touch models)

**INTEGRATED OPTIONS[12]**
- 4G LTE multi carrier mobile broadband with satellite GPS
- 1080p webcam and mic[3]
- Dual antenna pass-through[3]
- Dedicated GPS (u-blox) or 2nd LAN or 4th USB (2.0) or rugged Fischer USB[3]
- PC Card[3] or DVD drive or insertable SmartCard (media bay) or media bay 2nd battery or stylus pen holder
- Contactless SmartCard/NFC or fingerprint readers[3]
- Insertable SmartCard reader (bottom)
- Serial[3]
- VGA
- Primary hard drive (quick-release)[4]:
  – 256GB/512GB/1TB SSD and 1TB 7200rpm HDD with heaters
- 2nd hard drive (onboard)[3,4]:
  – 256GB/512GB/1TB SSD with heaters

**SELECT ACCESSORIES[12]**

| | |
|---|---|
| AC Adapter 100W (3-prong) | CF-AA5713AM |
| Long Life Battery Pack | CF-VZSU0PW |
| Lightweight Battery Pack | CF-VZSU0LW |
| Media Bay 2nd Battery Pack[5] | CF-VZSU0KW |
| Battery Charger | CF-VCBTB3W |
| LIND Car Charger 120W | CF-LNDDC120 |
| LIND Solar Charge System | PASC1580-4464 |
| ToughMate Always-on 54 Case | TBC54AOCS-P |
| ToughMate ComUniversal Carrying Case | TBCCOMUNV-P |
| ToughMate Backpack | TBCBPK-P |
| Memory Card 4GB | CF-WMBA1304G |
| Memory Card 8GB | CF-WMBA1308G |
| Desktop Dock | CF-VEB541AU |
| Vehicle Cradle (no electronics) | |
| – Gamber-Johnson | 7160-0578-00 |
| – Havis | CF-H-PAN-423 |
| Vehicle Docks (no pass-through) | |
| – Gamber-Johnson with LIND power supply | 7170-0250-P |
| – Havis with LIND power supply | CF-H-PAN-422-P |
| Vehicle Docks (dual pass-through) | |
| – Gamber-Johnson with LIND power supply | 7170-0251-P |
| – Havis with LIND power supply | CF-H-PAN-422-2-P |
| Cradlepoint Router | |
| – Verizon | CP-IBR1100LPE-VZ |
| – AT&T | CP-IBR1100LPE-AT |
| Gloved Multi Touch Stylus | FZ-VNPM11U |
| 14.0" Gloved Multi Touch LCD Protective Film | CF-VPF29U |

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 IP51.

[2] An Intel® Core™ i7 processor is also available on Prime, Performance and Gloved Multi Touch models.

[3] Not available on Lite model.

[4] 1GB = 1,000,000,000 bytes. Total usable memory will be less depending upon actual system configuration. Please contact your reseller or Panasonic representative if  you are interested in either the  512GB SSD or 1TB SSD.

[5] DVD, PC Card insertable SmartCard (media bay), Media Bay 2nd Battery and stylus pen holder are mutually exclusive. As an alternative, units can be configured with insertable SmartCard reader (bottom). NOTE: DVD drive is serviceable by trained and authorized professionals only – please contact a Panasonic representative for program details.

[6] Dedicated GPS (u-blox), 4th USB (2.0), rugged Fischer USB and 2nd LAN are mutually exclusive.

[7] Contactless SmartCard/NFC and fingerprint readers are mutually exclusive.

[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.

[9] TPM 2.0 available upon request – please contact your reseller or Panasonic representative.

[10] Requires software and activation to enable theft protection.

[11] 1.5" height on Performance model and all models with the following integrated options: insertable SmartCard (bottom), 2nd LAN, 4th USB (2.0), rugged Fischer USB, VGA and Serial.

[12] Accessories and Integrated Options may vary depending on your notebook configuration. Not all items are currently available. Visit Panasonic website for more accessories and details.

[13] For Windows 10.  Version 4.0 for Windows 7 Professional.

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