Panasonic recommends Windows.

TOUGHBOOK 20

- 10.1" Fully Rugged PC For Use as a Laptop or Tablet

- Sunlight-viewable Display Works With or Without Gloves

- Optional Bridge Battery Enables Hot-swap Battery Replacement for Continuous Use

- Integrated 2nd Battery, SmartCard, Barcode, Magstripe, Fingerprint, Serial Options and More

- Built-in Handle Also Functions as a Kickstand

- Industry leading driver packages for ease of deployment and support

MIL-STD-810G

MIL-STD-461F

IP65

ANSI HAZ LOC

4-FOOT DROP RATING

THE WORLD'S FIRST FULLY RUGGED DETACHABLE LAPTOP.

The Toughbook 20 is the first fully rugged detachable PC with a removable keyboard that quickly transforms from a laptop into a fully functioning tablet with just one hand. At only 3.9 pounds, it's good on the go with a clever built in handle that also functions as a kickstand, an optional bridge battery allows hot swappable battery replacement while running without disruption and the broadest range of ports and integrated options in its class. The Toughbook 20 display can be used with or without gloves and its sunlight-viewable 800 nit IPS display with direct bonding enables wider viewing angles and richer colors.

1.800.662.3537
us.panasonic.com/toughbook/20

TOUGHPAD®

Panasonic recommends Windows.

SOFTWARE
- Windows® 10 Pro 64-bit (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 — (4' drop - 5' tablet only, shock, vibration, rain, dust, sand, altitude, freeze/thaw, high/low temperature, temperature shock, solar radiation, salt fog, humidity, explosive atmosphere)[1]
- MIL-STD-461F certified[1]
- IP65 certified sealed all-weather design[1]
- Optional hazardous location class I division 2, groups ABCD certified model
- Magnesium alloy chassis encased with ABS and elastomer edges
- Built-in dual purpose handle & kickstand
- Solid state drive heater
- Removable battery
- Optional rotating hand strap
- Reinforced locking port covers
- Raised bezel for LCD impact protection
- Preinstalled replaceable screen film for LCD protection

CPU
- Intel® Core™ m5-6Y57 vPro™ Processor
  - 1.1GHz with Turbo Boost up to 2.8GHz
  - 4MB Cache

STORAGE & MEMORY
- 8GB or 16GB SDRAM (DDR3L - 1600MHz)[2]
- 128GB SSD with heater[2]
- Optional 256/512GB SSD with heaters[2]
- Optional OPAL encrypted SSD with heater

DISPLAY
- 10.1" WUXGA 1920 x 1200
  - 10-point capacitive gloved multi touch
  - 10-point capacitive gloved multi touch + digitizer
- 2-800 nit
- IPS display with direct bonding
- Anti-reflective (AR) and anti-glare (AG) screen treatments
- Intel HD Graphics 515
- 4 monitor support
- Concealed mode (configurable)

AUDIO
- Integrated dual array microphone
- Intel® High Definition Audio compliant
- Integrated speaker
- On-screen and button volume and mute controls

CAMERAS
- 1080p webcam with dual array mic and camera on/off indicator
- Optional 8MP rear camera with autofocus and triple LED flash

KEYBOARD & INPUT
- Waterproof IP55 stylus pen with integrated stylus holder, tether and cleaning cloth
- Supports glove mode and rain mode
- 7 tablet buttons (2 user-definable A1/A2 buttons)
- On-screen QWERTY keyboard
- 82-key with dedicated Windows® key
- Emissive backlit keyboard
- Pressure-sensitive touchpad with multi touch

INTERFACE & EXPANSION
- On the tablet:
  - USB 3.0 x1 (optional 2nd USB[3,4])   Type A
    - USB 3.0 is high powered 1.5A USB (Always on USB, USB rapid charging)
  - MicroSDXC   UHS-I
  - HDMI   Type A
  - 10/100/1000 Ethernet   RJ-45
  - Optional Serial (True)[3,4]   D-sub 9-pin
  - Headphones/speaker   Mini-jack stereo
  - Micro-SIM   3FF

- On the keyboard dock:
  - USB 3.0 x2, USB 2.0 x1   Type A
  - SDXC   UHS-I
  - HDMI   Type A
  - VGA   D-sub 15-pin
  - 10/100/1000 Ethernet   RJ-45
  - Serial (USB)   D-sub 9-pin

WIRELESS
- Optional 4G LTE multi carrier mobile broadband with satellite GPS[5]
- Optional dedicated GPS (u-blox NEO M8N)[5]
- Dual high-gain antenna pass-through
- Optional contactless SmartCard/NFC reader
- Intel® Dual Band Wireless-AC 8260 Wi-Fi 802.11a/b/g/n/ac
- Bluetooth® v4.1 (Class 1) + EDR
- Security
  - Authentication: LEAP, WPA, 802.1x, EAP-TLS, EAP-FAST, PEAP
  - Encryption: CKIP, TKIP, 128-bit and 64-bit WEP, Hardware AES

POWER
- Li-Ion battery pack:
  - Standard in tablet; optional 2nd battery in keyboard dock
  - 11.4V, 2600mAh (each battery)
- Battery operation: 10 hours (20 hours with opt. 2nd battery)[6]
- Battery charging time: 3 hours (3.5 hours with opt. 2nd battery)[6]
- Optional bridge battery: 1 minute hot swap time
- 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 slots x2 (on tablet and keyboard dock)
- Trusted platform module (TPM) security chip v.1.2[7]
- Persistence® technology by Absolute embedded in BIOS[8]
- Optional fingerprint reader[9]
- Optional insertable SmartCard reader[9]
- Optional contactless SmartCard/NFC reader[9]
  - ISO 14443 A/B compliant

WARRANTY
- 3-year limited warranty, parts and labor

DIMENSIONS & WEIGHT
- 10.7" (L) x 9.2" (W) x 1.3" (H)[10]
- 3.9 lbs.[11]

HAZARDOUS LOCATION CERTIFICATIONS
- ANSI/ISA 2.12.01-2013
  - Optional class I division 2, groups ABCD certified model

INTEGRATED OPTIONS[12]
- Choice of dedicated GPS (u-blox NEO-M8N) or 4G LTE multi carrier mobile broadband with satellite GPS
- Choice on tablet of 1D/2D capable barcode reader (N6603), serial (true), or second USB 2.0 port[3]
- Choice on tablet of magstripe reader (future availability), insertable SmartCard reader, contactless SmartCard/NFC reader or fingerprint reader[4]
- 8MP rear camera
- Bridge battery
- 256/512GB SSD with heaters
- OPAL encrypted SSD with heater

ACCESSORIES[12]

AC Adapter 65W (3-prong)	CF-AA6413CM
Battery Pack	CF-VZSU0QW
4-Bay Battery Charger	CF-VCB201M
LIND Car Charger 120W	CF-LNDDC120
LIND Solar Charge System	PASC1580-4464
ToughMate ComUniversal Jr. Carrying Case	TBCCOMUJR-P
ToughMate Backpack	TBCBPK-P
ToughMate Mobility Bundle	TBC20MBBDL-P
Rotating Hand Strap	CF-VST2011U
Desktop Dock	CF-VEB201U
Vehicle Cradle (no electronics)	
– Panasonic Keyed Alike	CF-CDS20VM05
– Panasonic Keyed Differently	CF-CDS20VM06
Vehicle Docks (no pass-through)	
– Panasonic Keyed Alike	CF-CDS20VM02
– Panasonic Keyed Differently	CF-CDS20VM04
Vehicle Docks (dual pass-through)	
– Panasonic Keyed Alike	CF-CDS20VM01
– Panasonic Keyed Differently	CF-CDS20VM03
AntennaPlus Dual LTE & GPS Antenna Kit	
– Threaded Black Mount	AP-PAN-CCGPD-Q-BL
– Threaded White Mount	AP-PAN-CCGPD-Q-WH
Cradlepoint Router	
– Verizon	CP-IBR1100LPE-VZ
– AT&T	CP-IBR1100LPE-AT
Multi Touch IP55 Stylus	CF-VNP022U
Multi Touch + Digitizer IP55 Stylus	CF-VNP023U
Tether	CF-VNT002U
Spare Keyboard	CF-VEK201LMP
10.1" LCD Protector Film	CF-VPF31U

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] 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 the 16GB memory.

[3] Barcode, Serial (true) and 2nd USB 2.0 Port are mutually exclusive.

[4] Serial, 2nd USB and the Magstripe reader integrated options increase the overall height and prohibit use in convertible mode.

[5] Dedicated GPS and 4G LTE are mutually exclusive.

[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.

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

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

[9] Magstripe, Insertable SmartCard, Contactless SmartCard/NFC and Fingerprint Readers are mutually exclusive.

[10] Includes tablet and keyboard dock with handle. Tablet when detached is 10.7" (L) x 7.7" (W) x 0.6" (H). Serial, 2nd USB, Magstripe reader or Barcode+Insertable SmartCard integrated options increase overall height and prohibit use in convertible mode.

[11] Includes tablet and keyboard dock with handle. Tablet when detached is 2.1 lbs. Optional 2nd battery weighs 0.4 lbs.

[12] Accessories and Integrated Options may vary depending on your configuration. Visit the Panasonic website for more accessories and details.

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TOUGHBOOK®