Panasonic

Panasonic recommends Windows.

TOUGHBOOK 20

- 10.1" fully rugged PC for use as a laptop or tablet
- Infrared webcam and Windows Hello enables biometric user authentication
- Optional quick-release SSD includes insertable SmartCard CAC reader
- Bridge battery enables hot-swap battery replacement for continuous use
- Integrated 2nd battery, CAC SmartCard, finger-print, magstripe, barcode options and more
- TPM 2.0 Security

MIL-STD-810G

MIL-STD-461F

IP65

ANSI HAZ LOC

4-FOOT DROP RATING

P.180

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, a bridge battery that 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
na.panasonic.com/us/toughbook20

TOUGHBOOK®

Mk2

TOUGHBOOK 20

Panasonic recommends Windows.

SOFTWARE
- Panasonic Utilities (including Dashboard), Recovery Partition
- Enterprise ready driver packages including CAB files and one-click driver bundles
- Windows® 10 Pro 64-bit

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 fanless 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
- Optional quick-release storage drive[4,8,13]
- 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™ i5-7Y57 vPro™ processor (7th Gen CPU) 1.2GHz with Turbo Boost up to 3.3GHz, 4MB cache

STORAGE & MEMORY
- Factory installed 8GB or 16GB SDRAM (LPDDR3-1866MT/s)[2]
- 256GB or 512GB SSD with heater[2]
- Optional quick-release SSD (comes with Insertable Smartcard CAC reader)[4,8,13]
- Optional OPAL encrypted SSD with heater

DISPLAY
- 10.1" WUXGA 1920 x 1200
  - 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 615
- 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
  - Infrared with Windows Hello support
- 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 (5 user-definable A1/A2 buttons)
- On-screen QWERTY keyboard
- 82-key with dedicated Windows® key
- Emissive white backlit keyboard with 4 adjustable levels
- Pressure-sensitive touchpad with multi touch

INTERFACE & EXPANSION
- On the tablet:
  - USB 3.0 x1 (optional 2nd USB 2.0[3,4]) — Type A (USB 3.0 is 1.5A)
  - MicroSDXC — UHS-I
  - HDMI — Type A
  - 10/100/1000 Ethernet — RJ-45
  - Optional Serial (True)[3,4] — D-sub 9-pin
  - Audio In/Out — 3.5mm Mini-jack stereo
  - SIM — 4FF
- On the keyboard:
  - Docking Connector — 24-pin
  - 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-A multi carrier mobile broadband w/satellite GPS[5]
  - Certified with Verizon, AT&T, Sprint and P.180[12]
- Optional dedicated GPS (u-blox NEO M8N)[5]
- Dual high-gain antenna pass-through
- Intel® Dual Band Wireless-AC 8265 Wi-Fi 802.11a/b/g/n/ac
- Bluetooth® v4.1 (Class 1) + EDR

POWER
- Li-Ion battery pack:
  - Standard in tablet; optional 2nd battery in keyboard
  - 11.4V, 2600mAh (each battery)
- Battery operation:
  - 8.5 hours (17 hours with opt. 2nd battery)[6]
- Battery charging time: 3 hours (3.5 hours with opt. 2nd battery)[6]
- Bridge battery: 1 minute hot swap time
- AC Adapter: AC 100V-240V 50/60Hz, auto sensing/switching worldwide power supply

SECURITY FEATURES
- TPM v2.0
- NIST BIOS compliant
- Persistence® technology by Absolute embedded in BIOS[7]
- Kensington cable lock slots x2 (on tablet and keyboard)
- Optional fingerprint reader[8]
- Optional insertable SmartCard CAC reader[8]
- Optional contactless SmartCard CAC reader[8]
  - 13.56MHz (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)[4,9]
- 3.9 lbs.[10]

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

INTEGRATED OPTIONS[11]
- Choice of dedicated 4G LTE multi carrier mobile broadband with satellite GPS or dedicated GPS (u-blox NEO M8N)
- Choice on tablet of 1D/2D capable barcode reader (N6603), serial (true), or second USB 2.0 port
- Choice on tablet of magstripe, insertable SmartCard CAC, contactless SmartCard CAC or fingerprint reader or quick-release SSD (comes with insertable SmartCard CAC)[4,8,13]

SELECT ACCESSORIES[11]

AC Adapter Standard 65W (3-prong)	CF-AA6413CM
AC Adapter MIL-STD-461F (3-prong)	CF-AA5713AM
Battery Pack	CF-VZSU0QW
4-Bay Battery Charger	CF-VCB201M
LIND Car Charger 120W	CF-LNDDC120
LIND Solar Charge System	PASC1580-4464
ToughMate Mobility Bundle (Carry Strap)	TBC20MBBDL-P
ToughMate Always-on Case	TBC20AOCS-P
ToughMate Rotating Hand & Shoulder Strap	TBC20HDSTP-P
Rotating Hand Strap[13]	CF-VST2011U
Rotating Hand Strap (Magstripe or Quick-release SSD only)	CF-VST2031U
Shoulder Strap, Screen Cover, and Rotating Hand Strap[13]	CF-VST2021U
Laptop Desktop Dock (requires keyboard)	CF-VEB201U
Tablet Desktop Cradle	CF-VEB202U
Laptop 2-in-1 Vehicle Docks (requires keyboard)	
– Gamber-Johnson (dual RF)	GJ-20-LVD2
– Havis (dual RF)	H-20-LVD2
Tablet Extended Vehicle Docks	
– Gamber-Johnson (dual RF)	GJ-A2-TVD2-X
AntennaPlus Dual LTE & GPS Antenna Kit	
– Threaded White Mount	AP-PAN-CCGPD-Q-WH
Multi Touch + Digitizer IP55 Stylus	CF-VNP023U
Tether	CF-VNT002U
Spare Keyboard	CF-VEK201LMP
10.1" LCD Protector Film	CF-VPF35U

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. 461F requires CF-AA5713AM.

[2] 1GB = 1,000,000,000 bytes. Total usable memory will be less depending upon actual system configuration.

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

[4] Magstripe, Serial, 2nd USB, Barcode+Insertable SmartCard, or Quick-release SSD integrated options increase 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 2014 at 150 nit and no cellular mobile broadband.

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

[8] Magstripe, Insertable SmartCard, Contactless SmartCard, Fingerprint Readers and optional Quick-release SSD (comes with Insertable SmartCard) are mutually exclusive.

[9] Includes tablet and keyboard with handle. Tablet when detached is 10.7" (L) x 7.7" (W) x 0.6" (H).

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

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

[12] For more information about P.180, please visit, PanasonicP180.com.

[13] CF-VST2011U and CF-VST2021U are not compatible with Magstripe or Quick-release SSD.

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