Panasonic

TOUGHBOOK 20
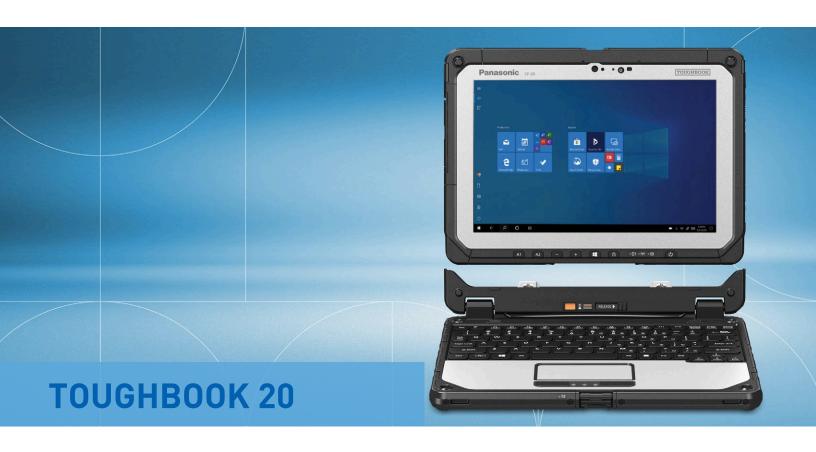
- 10.1" fully rugged PC for use as a laptop or tablet

- 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, fingerprint, magstripe, barcode options and more

- Optional FirstNet Ready™ EM7511 Band 14 mobile broadband

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 including optional FirstNet Ready™ CF-20 EM7511 Band 14 mobile broadband. 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.

MIL-STD-810G

MIL-STD-461F

IP65

C1D2 HAZ LOC

4-FOOT DROP RATING

TOUGHBOOK®

TOUGHBOOK 20

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

CERTIFICATIONS AND DURABILITY
- MIL-STD-810G
  – 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[1]
- IP65[1]
- Optional ANSI hazardous location C1D2 (class 1 div 2) groups ABCD
- Magnesium alloy chassis encased with ABS and elastomer edges
- Fanless sealed all-weather design
- Built-in dual purpose handle & kickstand
- Solid state drive heater
- Optional quick-release storage drive[4,8]
- Removable battery
- Optional rotating hand strap
- Reinforced locking port covers
- Raised bezel for LCD impact protection
- Replaceable screen protector

CPU
- Intel® Core™ i5-7Y57 vPro™ processor
  – 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]
- Optional OPAL encrypted SSD with heater

DISPLAY
- 10.1" WUXGA 1920 x 1200
  – 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
  – 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 including 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-A 3.0 x1 (1.5A) Optional 2nd USB-A 2.0[3,4]
- – MicroSDXC UHS-I
- – HDMI
- – 10/100/1000 Ethernet RJ-45
- – Optional Serial (True) D-sub 9-pin [3,4]
- – Audio In/Out 3.5mm Mini-jack stereo
- – SIM 4FF
- On the keyboard:
- – Docking Connector 24-pin
- – USB-A x3 (3.0 x2, 2.0 x1)
- – SDXC UHS-I
- – HDMI
- – VGA D-sub 15-pin
- – 10/100/1000 Ethernet RJ-45
- – Serial (USB) D-sub 9-pin

WIRELESS
- Optional (EM7455 or Band 14 EM7511) 4G LTE-A multi carrier w/satellite GPS[5] – AT&T, FirstNet™, Verizon
- Optional dedicated GPS (u-blox NEO M8N)[5]
- Dual antenna pass-through
- Intel® Dual Band Wireless-AC 8265 Wi-Fi 802.11a/b/g/n/ac
- Bluetooth® v4.1 (Class 1) + EDR

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)

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

DIMENSIONS & WEIGHT
- 10.7" (L) x 9.2" (W) x 1.3" (H)[4,9]
- 3.9 lbs.[10]

WARRANTY
- 3-year limited warranty, parts and labor

INTEGRATED OPTIONS
- Choice of 4G LTE multi carrier with satellite GPS (EM7455 or Band 14 EM7511) or dedicated GPS (u-blox NEO M8N)
- Choice of 1D/2D capable barcode reader (N6603), serial (true), or second USB-A 2.0 port
- Choice of magstripe, insertable SmartCard CAC, contactless SmartCard CAC or fingerprint reader or quick-release SSD (comes with insertable SmartCard CAC)[4]

Please consult your reseller or Panasonic representative to learn more about the TOUGHBOOK 20 and the wide variety of accessories and services offered.

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-A Port are mutually exclusive.

4 Magstripe, Serial, 2nd USB-A, 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). Optional Quick-release SSD (comes with Insertable Smartcard CAC reader) adds 0.5" (H).

10 Includes tablet and keyboard with handle. Tablet when detached is 2.1 lbs. Optional 2nd battery weighs 0.4 lbs. Optional Quick-release SSD (comes with Insertable Smartcard CAC reader) adds 0.5 lbs.

SPEC SHEET