

## TOUGHBOOK 20 AND TOUGHBOOK 19 SIDE BY SIDE MODEL COMPARISON

FEATURES	TOUGHBOOK 19	TOUGHBOOK 20
Processor	Intel Core i5-3610ME 2.7GHz vPro (Turbo Boost up to 3.3GHz)	Intel Core m5-6Y57 1.1GHz vPro (Turbo Boost up to 2.8GHz)
Processor Class & Generation	Standard Voltage - 3rd Gen	Low Voltage - 6th Gen
Cache	3MB	4MB
Memory (RAM)	4-16GB	8GB
Video Adapter	Intel QM77	Intel HD515
Display	Touchscreen or Multi Touch+Digitizer	Multi Touch or Multi Touch+Digitizer
Resolution	10.1" XGA 1024 x 768 (123 PPI)	10.1" WUXGA 1920 x 1200 (224 PPI)
Touch Technology	Resistive	Capacitive
Glove Operation	Yes	Yes
LCD Brightness	1000 nit (up to 6000 in direct sunlight)	800 nit
Screen	AG, AR, CP, TP+ (TransflectivePlus)	AG, AR, IPS, Direct Bonding
Concealed Mode	Yes	Yes
Dual Pass Through Antenna	Yes	Yes
Wi-Fi	802.11 a/b/g/n	802.11 a/b/g/n/ac
Wi-Fi Processor	Intel Centrino Advanced-N 6235	Intel Centrino Advanced-AC 8260
Mobile Broadband	4G LTE Multi Carrier	4G LTE Multi Carrier
Bluetooth	4.0 + EDR (class 1)	4.1 + EDR (class 1)
Standard Storage	500GB 7200rpm - field upgradeable (quick-release)	128GB SSD
Optional SSD	Yes (128 or 256GB)	Yes (256 or 512GB)
Video Outputs	x1 (VGA)	x3 (one HDMI on tablet, one HDMI & VGA on keyboard dock)
SD Card Slot	x1 (SDXC)	x2 (one microSDXC on tablet, SDXC on keyboard dock)
PC Card Slot (Type II)	Yes	No
ExpressCard (/54)	Yes	No
Serial Port	x1	x1 (keyboard dock; optional 2nd serial on tablet)
USB Ports	x2 (USB 3.0 x 1, USB 2.0 x 1)	x4 (one on tablet with 2nd optional; 3 on keyboard dock)
Audio 3.5mm Port	x2	x1 (tablet)
Webcam & Mic	No	1080p & Dual Array Mic (tablet)
Ethernet	10/100/1000 x1	10/100/1000 x2 (one on tablet and keyboard dock)
FireWire Port	Yes	No
Dimensions	8.5" x 10.7" x 1.9"	9.2" x 10.7" x 1.3" including handle (7.7" x 10.7" x 0.6" tablet)
Weight	5.1 lbs	3.9 lbs (2.1 lbs tablet)
Battery Life	10 hours (touchscreen), 9.5 hours (multi touch + digitizer)	Full shift with optional 2nd battery
Hot Swap	No	With optional bridge battery
Operating Systems	Win 7 Professional, Windows 8.1 Pro	Win 7 Professional, Windows 8.1 Pro, Win 10 Pro
Security	Kensington Cable Lock Slot (x1), Password Security, TPM 1.2 Computrace Theft Protection Agent, Optional Fingerprint Reader, Optional Insertable SmartCard	Kensington Cable Lock Slot (x2), Password Security, TPM 1.2 Computrace Theft Protection Agent, Optional Fingerprint Reader, Optional Insertable SmartCard, Optional Contactless SmartCard/NFC
Full Magnesium Alloy Case/Chassis	Yes	Yes
Shock-mounted HD	Yes	Yes
Drop-resistant	6 feet (MIL-STD-810G)	TBD (MIL-STD-810G)
Sealed All-weather Design	Yes (IP65)	Yes (IP65)
Sealed Ports	Yes	Yes
Storage Drive Heater	Yes	Yes
Handle/Strap	Yes	Yes
Backlit Keyboard	Optional	Yes
Integrated Options	4G LTE Multi Carrier, 128GB or 256 SSD, GPS (u-blox NEO-M8N), Fingerprint Reader, Insertable SmartCard Reader, Emissive Backlit Keyboard, Rubber Backlit Keyboard, ANSI 12.12.01 Haz Loc sku, 5MP Rear Camera, HDD & Battery Lock	4G LTE Multi Carrier, 256GB or 512 SSD, GPS (u-blox NEO-M8N), Fingerprint Reader, Insertable SmartCard Reader, Contactless SmartCard/NFC Reader, Magstripe Reader, 1D/2D Capable Barcode Reader, ANSI 12.12.01 Haz Loc sku, 8MP Rear Camera

■ Shaded cells indicate change.

[www.diagnosticinnovations.com/panasonic20.shtml](http://www.diagnosticinnovations.com/panasonic20.shtml)

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**TOUGHBOOK®**