

# PANASONIC TOUGHBOOK® FAMILY QUICK REFERENCE GUIDE Panasonic recommends Windows.



	TOUGHBOOK 54	TOUGHBOOK 31	TOUGHBOOK 20	TOUGHBOOK 33	TOUGHPAD FZ-G1	TOUGHPAD FZ-M1	TOUGHBOOK L1	TOUGHBOOK T1	TOUGHBOOK N1	TOUGHPAD FZ-X1
<b>FORM FACTOR</b>	Laptop	Laptop	2-in-1	2-in-1	Tablet	Tablet	Tablet	Handheld	Handheld	Handheld
Operating System	Windows 10 Pro	Windows 10 Pro	Windows 10 Pro	Windows 10 Pro	Windows 10 Pro	Windows 10 Pro	Android 8.1	Android 8.1	Android 8.1	Android 5.1.1
Screen Size and Resolution	14" HD/FHD (varies by model)	13.1" XGA	10.1" WUXGA	12.0" QHD	10.1" WUXGA	7" WXGA	7" HD	5" HD	4.7" HD	5" HD
Brightness (nit)	1000 (touch model)	1200	800	1200	800	700	350	420	500	500
Touch Display	Optional Gloved Multi Touch	Gloved Touch	Gloved Multi Touch + Digitizer	Gloved Multi Touch + Digitizer	Gloved Multi Touch + Digitizer	Gloved Multi Touch	Gloved Multi Touch	Gloved Multi Touch	Gloved Multi Touch	Gloved Multi Touch
Cameras	Webcam		Rear Cam & IR Webcam	Rear Cam & IR Webcam	Rear Cam & IR Webcam <sup>4</sup>	Rear Cam & Webcam	Rear Cam	Rear Cam	Rear Cam & Webcam	Rear Cam & Webcam
DVD Drive	Optional	Optional								
CPU	Intel® Core™ i5-7300U (i7 optional)	Intel® Core™ i5-5300U (i7 optional)	Intel® Core™ i5-7Y57	Intel® Core™ i5-7300U (i7 optional)	Intel® Core™ i5-7300U (i7 optional)	Intel® Core™ i5-7Y57	Qualcomm® MSM8909	Qualcomm® MSM8909	Qualcomm® SDM660-2	Qualcomm® APQ8064T
Dedicated Graphics	• (Performance model)									
Base Drive	256 GB SSD (500 GB HDD Lite model)	500 GB HDD (7200rpm)	256 GB SSD	256 GB SSD	256 GB SSD	256 GB SSD	16 GB Flash	16 GB Flash	32 GB Flash	32 GB Flash
Memory	8-32 GB <sup>1</sup> (16-32 GB Performance model)	4-16 GB	8-16 GB	8-16 GB	8 GB	8 GB	2 GB	2 GB	3 GB	2 GB
Weight (lbs.)	4.2-4.6	7.9	3.9	6.1 (with Premium Keyboard)	2.4	1.2	0.9	0.5	0.6	0.9
Battery Life (hours) <sup>1</sup>	Up to 12 (up to 20 with optional 2nd battery)	18 (27 with optional 2nd battery)	8.5 (17 with optional 2nd battery)	10 (20 with optional battery)	11 (22 with optional battery)	8 (18 with optional battery)	12	12	8 of continuous use (16 with optional battery)	14 (continuous use)
Hot-swappable Battery	Optional		•	•	Optional	•				•
<b>RUGGEDNESS</b>	<b>Semi-Rugged</b>	<b>Fully Rugged</b>	<b>Fully Rugged</b>	<b>Fully Rugged</b>	<b>Fully Rugged</b>	<b>Fully Rugged</b>	<b>Fully Rugged</b>	<b>Fully Rugged</b>	<b>Fully Rugged</b>	<b>Ultra-Rugged</b>
Backlit Keyboard	Red	White	White	Red	N/A	N/A	N/A	N/A	N/A	N/A
Fanless			•				•	•	•	•
Covered Ports	•	•	•	•	•	•	•	•	•	•
Storage Drive Heater	•	•	•	•	•	•	•	•	•	•
User-removable Battery	•	•	•	•	•	•	•	•	•	•
Hand Strap/Handle	•	•	•	Optional	Optional	•	Optional	Optional	Optional	Optional
Magnesium Alloy Casing or Chassis	•	•	•	•	•	•	•	•	•	•
Spill-resistant Keyboard	•	•	•	•	N/A	N/A	N/A	N/A	N/A	N/A
IP Certified <sup>3</sup>	IP51	IP65	IP65	IP65	IP65	IP65	IP65/IP67	IP66/IP68	IP66/IP68	IP65/IP68
MIL-STD-810G Certified <sup>3</sup>	3 ft	5 ft	4 ft (5 ft Tablet only)	4 ft (5 ft Tablet only)	4 ft	5 ft	5 ft	5 ft	7 ft	10 ft
<b>WIRELESS</b>										
Antenna Pass Through	Optional <sup>2</sup>	•	•	•	•	Optional				
Dedicated GPS	Optional <sup>2</sup>	Optional	Optional	Optional	Optional	Optional		•		
Mobile Broadband	Optional 4G LTE-A Multi Carrier (with satellite GPS)	Optional 4G LTE Multi Carrier (with satellite GPS)	Optional 4G LTE-A Multi Carrier (with satellite GPS)	Optional 4G LTE-A Multi Carrier (with satellite GPS)	Optional 4G LTE-A Multi Carrier (with satellite GPS)	Optional 4G LTE-A Multi Carrier (with satellite GPS)	Optional 4G LTE AT&T/Verizon	Optional 4G LTE AT&T/Verizon (& optional voice)	Optional 4G LTE AT&T/Verizon (& optional voice)	Optional 4G LTE AT&T/Verizon (& optional voice)
Wi-Fi	•	•	•	•	•	•	•	•	•	•
Bluetooth®	•	•	•	•	•	•	•	•	•	•

<sup>1</sup> Battery life, unless otherwise stated, is based on MobileMark 2007. Toughbook 20, 33 and 54 are based on MobileMark 2014.

<sup>2</sup> Not available on Lite model.

<sup>3</sup> Tested by a national, independent, third-party lab following MIL-STD-810G Method 516.6 Procedure IV for transit drop and IEC 60529 Sections 13.4, 13.6.2, 14.2.5 and 14.3 for IP65.

<sup>4</sup> Not available for models with d-GPS or 2nd USB.

