

## COMPUTER PRODUCTS BY PANASONIC

Transforming the way businesses work



# TABLETS



## CF-D1

### 13.3" FULLY RUGGED WINDOWS TABLET



## FZ-G1

### 10.1" FULLY RUGGED WINDOWS TABLET

|                                 |                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                             |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mobile Computing Platform / CPU | Intel® Core™ i5-6300U vPro™ processor<br>{2.4GHz up to 3.0GHz (with Turbo Boost), 3 MB Intel® Smart Cache}                                                                                                                                                                                                                                                        | Intel® Core™ i5-7300U vPro™ processor<br>{2.6GHz up to 3.5GHz (with Turbo Boost), 3 MB Intel® Smart Cache}                                                                                                                                                                                                  |
| Operating System                | Windows 10 Pro                                                                                                                                                                                                                                                                                                                                                    | Windows 10 Pro                                                                                                                                                                                                                                                                                              |
| Memory & Storage                | 4GB RAM (max. 16GB)<br>500GB HDD                                                                                                                                                                                                                                                                                                                                  | 8GB RAM<br>256GB SSD                                                                                                                                                                                                                                                                                        |
| Display                         | 13.3" Active Matrix (TFT) colour LCD 1366 × 768 pixels [HD]<br>with resistive touchscreen (up to 400cd/m²)                                                                                                                                                                                                                                                        | 10.1" Active Matrix (TFT) IPS pro next colour LCD, 1920 × 1200 pixels,<br>WUXGA (up to 800cd/m²) with circular polariser<br>10 finger capacitive touchscreen and digitiser<br>Intel® HD Graphics 60                                                                                                         |
| Camera                          | Rear: 5MP optional                                                                                                                                                                                                                                                                                                                                                | Front: 2MP<br>Rear: 8MP with LED light                                                                                                                                                                                                                                                                      |
| Expansion Slots                 | PC Card: ×1, Type I or II, Allowable current 3.3V: 400mA, 5V: 400mA<br>ExpressCard: ×1, ExpressCard /34 or /54<br>SD/SDXC Memory Card: ×1<br>RAM Module: ×1 DDR3 200-pin SO-DIMM                                                                                                                                                                                  | MicroSD/SDXC Memory Card: ×1 optional (configuration port)                                                                                                                                                                                                                                                  |
| Interfaces                      | Serial: ×1<br>VGA: ×1 optional <sup>5</sup> (eliminates serial)<br>Headphone: ×1<br>Microphone: ×1<br>DC Input: ×1<br>USB 2.0: ×2<br>USB 3.0: ×1<br>4th USB: ×1 optional <sup>5</sup> (Modular Bay Port)<br>Rugged USB: 2.0 ×1 or ×2 optional <sup>5</sup> (Modular Bay Port)<br>LAN: ×1, 2nd LAN optional <sup>5</sup> (Modular Bay Port)<br>Industry Cradle: ×1 | Headset: ×1<br>HDMI: ×1<br>DC Input: ×1<br>USB 3.0: ×1<br>LAN: ×1 standard (configuration port)<br>USB 2.0: ×1 optional (configuration port)<br>Serial: ×1 optional (configuration port)<br>Port Replicator: ×1<br>External Antenna Connector: ×1<br>FLIR Thermal Imaging: ×1 optional (configuration port) |
| Connectivity                    | Bluetooth®: Version 4.1 + EDR Class 1<br>Wireless LAN: Intel® Dual Band Wireless-AC 8260<br>LAN: IEEE 802.3 10Base-T / IEEE 802.3u 100Base-TX / IEEE 802.3ab 1000Base-T<br>(2nd LAN 100MBit optional <sup>5</sup> )                                                                                                                                               | Bluetooth®: Version 4.1 + EDR Class 1<br>Wireless LAN: Intel® Dual Band Wireless-AC 8265<br>LAN: IEEE 802.3 10 Base-T / IEEE 802.3u 100Base-TX,<br>IEEE 802.3ab 1000Base-T optional                                                                                                                         |
| Power                           | AC Adaptor: Input: 100-240V AC, 50Hz/60Hz; Output: 15.6V DC, 7.05A<br>Battery: Li-Ion (10.8V, 6.2Ah)<br>Battery Life: Approx. 10 hours (Mobile Mark™ 2014)                                                                                                                                                                                                        | AC Adaptor: Input: 100-240V AC, 50Hz/60Hz; Output: 16V DC, 4.06A<br>Battery: Li-Ion (11.1V, 4200mAh), user replaceable<br>Battery Life: Approx. 11 hours (Mobile Mark™ 2014)<br>Hot Swap Battery: Optiona                                                                                                   |
| Security Features               | TPM (Trusted Platform Module), TCG V2.0<br>Integrated hardware security lock slot<br>Smartcard Reader optional                                                                                                                                                                                                                                                    | TPM (Trusted Platform Module), TCG V2.0<br>Integrated hardware security lock slot                                                                                                                                                                                                                           |
| Dimensions (W × H × D) & Weight | 349mm × 46mm × 244mm {13.7" × 1.8" × 9.6"}<br>2.25kg {4.96lb}                                                                                                                                                                                                                                                                                                     | 270mm × 19mm × 188mm {10.6" × 0.75" × 7.4"}<br>1.1kg {2.43lb}                                                                                                                                                                                                                                               |
| Options for Integration         | 4G LTE, GPS                                                                                                                                                                                                                                                                                                                                                       | 4G LTE, GPS, Smart Card Reader                                                                                                                                                                                                                                                                              |
| Ruggedisation                   | MIL-STD 810G certified <sup>4</sup><br>Water resistance test: IEC529 (JIS C0920) IPX5 <sup>4</sup><br>Dust resistance test: IEC529 (JIS C0920) IP6X <sup>4</sup><br>Gravity drop resistance test: 90cm drop <sup>4</sup><br>Operating temperature: -10°C to 50°C <sup>4</sup>                                                                                     | MIL-STD 810G certified <sup>4</sup><br>Water resistance test: IEC529 (JIS C0920) IPX5 <sup>4</sup><br>Dust resistance test: IEC529 (JIS C0920) IP6X <sup>4</sup><br>Gravity drop resistance test: 180cm drop <sup>4</sup><br>Operating temperature: -29°C to 60°C <sup>4</sup>                              |

# TABLETS



## FZ-A2

### 10.1" FULLY RUGGED ANDROID TABLET



## FZ-B2

### 7" FULLY RUGGED ANDROID TABLET

|                                 |                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                   |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mobile Computing Platform / CPU | Intel® Atom™ x5-Z8550 processor (1.44GHz to 2.4GHz, 2MB Cache)                                                                                                                                                                                                                                                      | Intel® Atom™ x5-Z8550 processor (1.44GHz to 2.4GHz, 2MB Cache)                                                                                                                                                                                                                    |
| Operating System                | Android™ 6.0                                                                                                                                                                                                                                                                                                        | Android™ 6.0                                                                                                                                                                                                                                                                      |
| Memory & Storage                | 4GB RAM<br>32GB eMMC                                                                                                                                                                                                                                                                                                | 2GB RAM<br>32GB eMMC                                                                                                                                                                                                                                                              |
| Display                         | 10.1 Active Matrix (TFT) IPS colour LCD, 1920 × 1200 pixels, WUXGA (up to 800cd/m²) Anti Glare, Anti Reflection<br>10 finger capacitive touchscreen                                                                                                                                                                 | 7" Active Matrix (TFT) colour LCD<br>1280 × 800 pixels, WXGA (up to 500cd/m²)<br>10 finger capacitive touchscreen                                                                                                                                                                 |
| Camera                          | Front: 2MP<br>Rear: 8MP with LED light                                                                                                                                                                                                                                                                              | Front: 2MP<br>Rear: 8MP with LED light                                                                                                                                                                                                                                            |
| Expansion Slots                 | MicroSDHC Memory Card: ×1 (max. 32GB)                                                                                                                                                                                                                                                                               | MicroSDHC Memory Card: ×1 (max. 32GB)                                                                                                                                                                                                                                             |
| Interfaces                      | Headset: ×1<br>DC Input: ×1<br>USB 3.0: ×1<br>USB 3.1 type C OTG: ×1<br>HDMI: ×1<br>USB 2.0: ×1 optional (configuration port)<br>2D Barcode Reader: ×1 optional (configuration port)<br>Smartcard Reader: ×1 optional (business expansion module)<br>Port Replicator: ×1<br>External Antenna Connector: ×1 optional | Headset: ×1<br>DC Input: ×1<br>USB 3.0: ×1<br>USB 3.1 type C OTG: ×1<br>Port Replicator: ×1<br>2D Barcode Reader: ×1 optional (configuration port)<br>Smartcard Reader: ×1 optional (business expansion module)<br>Port Replicator: ×1<br>External Antenna Connector: ×1 optional |
| Connectivity                    | Bluetooth®: Version 4.2 + EDR Class 1<br>Wireless LAN: Intel® Dual Band Wireless-AC 8260<br>Dedicated GPS                                                                                                                                                                                                           | Bluetooth®: Version 4.2 + EDR Class 1<br>Wireless LAN: Intel® Dual Band Wireless-AC 8260<br>Dedicated GPS                                                                                                                                                                         |
| Power                           | AC Adaptor: Input: 100V-240V AC, 50Hz/60Hz, Output: 16V DC, 4.06A<br>Battery: Li-Ion (11.4V, 2600mAh), user replaceable<br>Battery Life: Approx. 9 hours<br>Hot Swap Battery: Optional                                                                                                                              | AC Adaptor: Input: 100V-240V AC, 50Hz/60Hz; Output: 16V DC, 3.75A<br>Battery: Li-Ion (7.2V, 3220mAh), user replaceable<br>Battery Life: Approx. 8 hours<br>Hot Swap Battery: Optional via business expansion module                                                               |
| Security Features               | Optional Smartcard Reader                                                                                                                                                                                                                                                                                           | Integrated hardware security lock slot<br>Optional Smartcard Reader                                                                                                                                                                                                               |
| Dimensions (W × H × D) & Weight | 272mm × 16.4mm × 196mm {10.71" × 0.65" × 7.72"}<br>880g {1.94lb}                                                                                                                                                                                                                                                    | 203mm × 18mm × 132mm {7.98" × 5.20" × 0.71"}<br>540g {1.2lb}                                                                                                                                                                                                                      |
| Options for Integration         | 4G LTE                                                                                                                                                                                                                                                                                                              | 4G LTE                                                                                                                                                                                                                                                                            |
| Ruggedisation                   | MIL-STD 810G certified⁴<br>Water resistance test: IEC529 (JIS C0920) IPX5⁴<br>Dust resistance test: IEC529 (JIS C0920) IP6X⁴<br>Gravity drop resistance test: 150cm drop¹<br>Operating temperature: -29 °C to 60 °C⁴                                                                                                | MIL-STD 810G certified⁴<br>Water resistance test: IEC529 (JIS C0920) IPX5⁴<br>Dust resistance test: IEC529 (JIS C0920) IP6X⁴<br>Gravity drop resistance test: 150cm drop¹<br>Operating temperature: -29 °C to 60 °C⁴                                                              |

# TABLETS



## FZ-M1

### 7" FULLY RUGGED WINDOWS TABLET



## FZ-L1

### 7" FULLY RUGGED ANDROID TABLET

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                    |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mobile Computing Platform / CPU | Intel® Core™ i5-7Y57 vPro™ processor (1.2GHz to 3.3GHz (with Turbo Boost), 4MB Intel® Smart Cache) (Standard Model) or Intel® Celeron™ N4100 processor (1.1GHz to 2.4GHz (with Turbo Boost), 4MB Cache) (Value Model)                                                                                                                                                                                                                                                                           | Qualcomm® MSM8909 1.1GHz Quad Core                                                                                                                                                                                                                                                                 |
| Operating System                | Windows 10 Pro                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Android™ 8.1                                                                                                                                                                                                                                                                                       |
| Memory & Storage                | 4GB RAM (max. 8GB), 128GB SSD (Standard Model) or 4GB RAM (max. 4GB), 128GB SSD (Value Model)                                                                                                                                                                                                                                                                                                                                                                                                   | 2GB RAM<br>16GB eMMC                                                                                                                                                                                                                                                                               |
| Display                         | 7" Active Matrix (TFT) colour LCD<br>1280 × 800 pixels, WXGA (up to 700cd/m²)<br>10 finger capacitive touchscreen                                                                                                                                                                                                                                                                                                                                                                               | 7" HD (1280 × 720 pixels) sunlight-readable display<br>with Glove & Rain mode (up to 350cd/m²)<br>10 finger capacitive touchscreen                                                                                                                                                                 |
| Camera                          | Front: 2MP<br>Rear: 8MP with LED light                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Rear: 8MP with LED light                                                                                                                                                                                                                                                                           |
| Expansion Slots                 | MicroSD/SDXC Memory Card: ×1                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | MicroSD/SDXC Memory Card: ×1                                                                                                                                                                                                                                                                       |
| Interfaces                      | Headset: ×1<br>DC Input: ×1<br>USB 3.0: ×1<br>Serial: ×1 (configuration port)<br>LAN: ×1 optional (configuration port)<br>2D Barcode Reader: ×1 optional (configuration port)<br>Smartcard Reader: ×1 optional (business expansion module)<br>UHF RFID: ×1 optional (business expansion module)<br>Port Replicator: ×1<br>External Antenna Connector: ×1 optional<br>FLIR Thermal Imaging: ×1 optional (business expansion module)<br>Intel® RealSense: ×1 optional (business expansion module) | Headset: ×1<br>Micro USB 2.0: ×1<br>Docking connector: ×1<br>2D Barcode Reader: ×1 landscape optional                                                                                                                                                                                              |
| Connectivity                    | Bluetooth®: Version 4.1 + EDR Class 1<br>Wireless LAN: Intel® Dual Band Wireless-AC 8265<br>LAN: IEEE 802.3 10Base-T / IEEE 802.3u 100Base-TX / IEEE 802.3ab 1000Base-T optional                                                                                                                                                                                                                                                                                                                | Bluetooth®: Version 4.2 Class 1<br>Wireless LAN: IEEE802.11 a/b/g/n/d/h/i/r<br>Data (optional): 4G LTE, HSPA+, UMTS, EDGE, GPRS, GSM<br>Dual micro SIM (Single standby)<br>GPS: 2m CEP50 (±2 to 4m), GLONASS<br>NFC: Built-in (Type A, B, Felica, ISO 15693)                                       |
| Power                           | AC Adaptor: Input: 100V-240V AC, 50Hz/60Hz; Output: 16V DC, 4.06A<br>Battery: Li-Ion (7.2V, 3220mAh), user replaceable<br>Battery Life: Approx. 8 hours (Mobile Mark™ 2014)<br>Hot Swap Battery: Optional via business expansion module                                                                                                                                                                                                                                                         | AC Adaptor: Input: 100V-240V AC, 50Hz/60Hz;<br>Output: 5V DC, 1.8A USB<br>Standard battery: Li-Ion 3.8V, 3200mAh (Warm swappable)<br>Battery Life: up to 12 hours continuous data access<br>Battery Charging Time: Full charge in approx. 2.5 hours with Cradle /<br>Approx. 4 hours via USB cable |
| Security Features               | TPM (Trusted Platform Module), TCG V2.0<br>Integrated hardware security lock slot                                                                                                                                                                                                                                                                                                                                                                                                               | Built-in ARM® TrustZone®                                                                                                                                                                                                                                                                           |
| Dimensions (W × H × D) & Weight | 203mm × 18mm × 132mm {7.98" × 5.20" × 0.71"}<br>540g {1.2lb}                                                                                                                                                                                                                                                                                                                                                                                                                                    | 193mm × 131mm × 13/30mm<br>(barcode reader option) {7.6" × 5.2" × 0.5"}<br>480g {1.06lb}                                                                                                                                                                                                           |
| Options for Integration         | 4G LTE, GPS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 4G LTE                                                                                                                                                                                                                                                                                             |
| Ruggedisation                   | MIL-STD 810G certified⁴<br>Water resistance test: IEC529 (JIS C0920) IPX5⁴<br>Dust resistance test: IEC529 (JIS C0920) IP6X⁴<br>Gravity drop resistance test: 180cm drop⁴<br>Operating temperature: -29°C to 60°C⁴                                                                                                                                                                                                                                                                              | MIL-STD 810G<br>Water resistance test: IEC529 (JIS C0920) IPX7¹<br>Dust resistance test: IEC529 (JIS C0920) IP6X¹<br>Gravity drop resistance test: 150cm drop¹<br>Operating temperature: -10°C to 50°C¹                                                                                            |

# HANDHELDS



## FZ-T1

### 5" FULLY RUGGED ANDROID HANDHELD



## FZ-N1

### 4.7" FULLY RUGGED ANDROID HANDHELD

|                                       |                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mobile Computing Platform / CPU       | Qualcomm® MSM8909 1.1GHz Quad Core                                                                                                                                                                                                                                                              | Qualcomm® SDM660-2 64bit 2.2GHz x4 +1.8GHz x4 Octa Core                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Operating System                      | Android™ 8.1                                                                                                                                                                                                                                                                                    | Android™ 8.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Memory & Storage                      | 2GB RAM<br>16GB eMMC                                                                                                                                                                                                                                                                            | 3GB RAM<br>32GB eMMC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Display                               | 5" HD (1280x720 pixels) sunlight-readable display with<br>Glove & Rain mode (up to 420cd/m²)<br>10 finger capacitive touchscreen                                                                                                                                                                | 4.7" HD (1280 × 720 pixels) sunlight-readable display with<br>Glove & Rain mode (minimum 500cd/m²)<br>10 finger capacitive touchscreen<br>As default supports optional Passive and optional Active pen<br>(For Bio-metric signatures)                                                                                                                                                                                                                                                                                        |
| Camera                                | Rear: 8MP with LED light                                                                                                                                                                                                                                                                        | Front: 5MP<br>Rear: 8MP with LED Flash                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Expansion Slots                       | MicroSD/SDXC Memory Card: ×1                                                                                                                                                                                                                                                                    | MicroSDXC Memory Card: ×1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Interfaces                            | Headset: ×1<br>Micro USB 2.0: ×1<br>Docking connector: ×1                                                                                                                                                                                                                                       | Headset: ×1<br>Micro USB 2.0: ×1<br>Docking connector: ×1                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Connectivity                          | Bluetooth®: Version 4.2 Class 1<br>Wireless LAN: IEEE802.11 a/b/g/n/d/h/i/r<br>Data + Voice (optional): 4G LTE, HSPA+, UMTS, EDGE, GPRS, GSM<br>Dual micro SIM (Single standby)<br>GPS: 2 m CEP50 (±2 to 4 m), GLONASS<br>NFC: Built-in (Type A, B, Felica, ISO 15693)                          | Bluetooth®: Version 5 Class 1<br>Wireless LAN: IEEE802.11 a/b/g/n/ac/d/h/i/k/r/v/w<br>Voice & Data (optional): 4G LTE, HSPA+, UMTS, EDGE, GPRS, GSM<br>Dual micro SIM (Single standby)<br>GPS: 2m CEP50 (±2 to 4 m), GLONASS<br>NFC: Built-in (Type A, B, Felica, ISO 15693)                                                                                                                                                                                                                                                 |
| Power                                 | AC Adaptor: Input: 100V-240V AC, 50Hz/60Hz; Output: 5V DC, 1.8A USB<br>Standard battery: Li-Ion 3.8V, 3200mAh (Warm swappable)<br>Battery Life: up to 12 hours continuous data access<br>Battery Charging Time: Full charge in approx. 2.5 hours with<br>Cradle / Approx. 4 hours via USB cable | AC Adaptor: Input: 100V-240V AC, 50Hz/60Hz; Output: 16V DC, 3.75A<br>Standard battery: Li-Ion 3.8V, 3200mAh (Warm swappable)<br>Optional extended battery: Li-Ion 3.8V, 6400 mAh (Warm swappable)<br>Battery Life (Standard/Extended battery):<br>up to 12 hours / 19 hours of continuous data access<br>up to 27 hours / 44 hours talk time<br>up to 700 hours / 1400 hours standby time<br>Battery Charging Time: Full charge in approx. 2 hours with Standard battery /<br>Approx. 4 hours with optional extended battery |
| Security Features                     | Built-in ARM® TrustZone®                                                                                                                                                                                                                                                                        | FIPS140-2 level-1 compliant & Built-in ARM® TrustZone®                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Dimensions<br>(W × H × D)<br>& Weight | 75mm × 154mm × 13.1/17.5mm (barcode reader section)<br>{3.0" × 6.1" × 0.5"/0.7" (barcode reader section)}<br>230g {0.51lb}                                                                                                                                                                      | 74mm × 156mm × 16.3mm/31mm (barcode reader section)<br>{2.9" × 6.1" × 0.6"/1.2"} (barcode reader section)<br>274g {0.60lb}                                                                                                                                                                                                                                                                                                                                                                                                   |
| Options for<br>Integration            | 4G LTE                                                                                                                                                                                                                                                                                          | 4G LTE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Ruggedisation                         | MIL-STD 810G<br>Water resistance test: IEC529 (JIS C0920) IPX8¹<br>Dust resistance test: IEC529 (JIS C0920) IP6X¹<br>Gravity drop resistance test: 150cm drop¹<br>Operating temperature: -10°C to 50°C¹<br>1,000 drops (500 tumbles), 1.0m                                                      | MIL-STD 810G certified⁴<br>Water resistance test: IEC529 (JIS C0920) IPX8⁴<br>Dust resistance test: IEC529 (JIS C0920) IP6X⁴<br>Gravity drop resistance test: 210cm drop⁴<br>Operating temperature: -20°C to 50°C⁴<br>2,000 drops (1,000 tumbles), 1.0m<br>Raised bezel for display protection                                                                                                                                                                                                                               |

# NOTEBOOKS



## CF-31

### 13.1" FULLY RUGGED CLAMSHELL NOTEBOOK



## CF-54

### 14" SEMI RUGGED CLAMSHELL NOTEBOOK



|                                 |                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mobile Computing Platform / CPU | Intel® Core™ i5-5300U vPro™ processor (2.3 GHz up to 2.9 GHz (with Turbo Boost), 3 MB Intel® Smart Cache)                                                                                                                                                                  | Intel® Core™ i5-7300U vPro™ processor (2.6GHz up to 3.5GHz (with Turbo Boost), 3 MB Intel® Smart Cache)                                                                                                                                                                                                                                                                                                               |
| Operating System                | Windows 10 Pro                                                                                                                                                                                                                                                             | Windows 10 Pro                                                                                                                                                                                                                                                                                                                                                                                                        |
| Memory & Storage                | 4GB RAM (max. 16GB)<br>500GB HDD (SATA)                                                                                                                                                                                                                                    | Entry model: 4GB RAM (max. 16GB), 500GB HDD<br>Mid model: 4GB RAM (max. 16GB), 256GB SSD<br>Premium model: 8GB RAM (max. 16GB), 256GB SSD                                                                                                                                                                                                                                                                             |
| Display                         | 13.1" LCD sunlight-viewable XGA Active Matrix (TFT) colour LCD (up to 1,200cd/m <sup>2</sup> ) with circular polariser; concealed mode                                                                                                                                     | 14" Active Matrix (TFT) display<br>Entry model: HD (1366 x 768)<br>Mid model: Full HD IPS (1920 x 1080)<br>Premium model: Full HD IPS (1920 x 1080) with 10 finger capacitive touchscreen (up to 1,000cd/m <sup>2</sup> )                                                                                                                                                                                             |
| Camera                          |                                                                                                                                                                                                                                                                            | Front: 2MP optional                                                                                                                                                                                                                                                                                                                                                                                                   |
| Expansion Slots                 | SD/SDXC Memory Card: x1<br>RAM module: x1 DDR3L 200-pin SO-DIMM                                                                                                                                                                                                            | SD/SDXC Memory Card: x1<br>RAM Module: x2, DDR3L 200-pin SO-DIMM, one slot occupied<br>Config Area: DVD Multi Drive (as standard) or PC Card (Type I or Type II) or 2nd battery (6 cell) or Smart card reader                                                                                                                                                                                                         |
| Optical drive                   | DVD Multi Drive (optional, Multimedia pocket)                                                                                                                                                                                                                              | DVD Multi Drive (as standard, in the Config area)                                                                                                                                                                                                                                                                                                                                                                     |
| Interfaces                      | Serial: x1<br>HDMI: x1<br>VGA: x1<br>Headphone: x1<br>Microphone: x1<br>DC input: x1 jack<br>USB 2.0: x3<br>USB 3.0: x1<br>LAN: x1 (2nd LAN optional, project based)<br>Firewire: optional x1 (project based)<br>Port Replicator: x1<br>External Antenna Connector: x1     | USB 3.0: x3<br>HDMI: x1<br>Serial: x1<br>VGA: x1<br>LAN: x1 standard, x1 optional (exclusive option at configuration port)<br>Headset: x1<br>DC Input: x1 jack<br>Port Replicator: x1<br>USB 2.0: x1 (exclusive option at configuration port)<br>Dedicated GPS: x1 (exclusive option at configuration port)<br>Rugged USB 2.0: x1 (exclusive option at configuration port)<br>External Antenna Connector: x1 optional |
| Connectivity                    | Bluetooth®: Version 4.0 + EDR Class 1<br>Wireless LAN: Intel® Dual Band Wireless-AC 7265<br>LAN: IEEE 802.3 10Base-T / IEEE 802.3u 100Base-TX / IEEE 802.3ab 1000Base-T (2nd Gigabit LAN project based)                                                                    | Bluetooth®: Version 4.1 + EDR Class 1<br>Wireless LAN: Intel® Dual Band Wireless-AC 8265<br>LAN: IEEE 802.3 10Base-T / IEEE 802.3u 100Base-TX / IEEE 802.3ab 1000Base-T                                                                                                                                                                                                                                               |
| Power                           | AC Adaptor: Input: 100V-240V AC, 50Hz/60Hz;<br>Output: 15.6V DC, 7.05A<br>Battery: Li-Ion (10.65V, typical 8550mAh / minimum 8100mAh)<br>Battery life: Approx. 18 hours (Mobile Mark™ 2007)                                                                                | AC Adaptor: Input: 100V-240V AC, 50Hz/60Hz, Output: 15.6V DC, 7.05 A<br>Battery: Li-Ion 6 cell<br>Battery Life: Approx. 10 hours (Mobile Mark™ 2014)<br>Approx. 17 hours (with optional 2nd battery)<br>Hot Swap Battery: optional                                                                                                                                                                                    |
| Security Features               | TPM (Trusted Platform Module), TCG V1.2<br>Integrated hardware security lock slot                                                                                                                                                                                          | TPM (Trusted Platform Module), TCG V2.0<br>Integrated hardware security lock slot                                                                                                                                                                                                                                                                                                                                     |
| Dimensions (W x H x D) & Weight | 302mm x 73.5mm x 292mm {11.9" x 2.9" x 11.5"}<br>3.72kg {8.2lb}                                                                                                                                                                                                            | 345mm x 272mm x 39.0mm {13.6" x 10.7" x 1.54"}, with extended cover<br>HD model: 1.99kg {4.39lb}<br>FullHD model w/o touchscreen: 1.9kg {4.19lb}<br>FullHD model with touchscreen: 2.1kg {4.63lb}                                                                                                                                                                                                                     |
| Options for Integration         | 4G LTE, GPS, fingerprint reader, smart card reader                                                                                                                                                                                                                         | 4G LTE, GPS, HF RFID, fingerprint reader, smart card reader, bridge battery, dual pass through antenna                                                                                                                                                                                                                                                                                                                |
| Ruggedisation                   | MIL-STD 810G certified <sup>4</sup><br>Water resistance test: IEC529 (JIS C0920) IPX5 <sup>4</sup><br>Dust resistance test: IEC529 (JIS C0920) IP6X <sup>4</sup><br>Gravity drop resistance test: 180cm <sup>4</sup><br>Operating temperature: -29°C to +60°C <sup>4</sup> | MIL-STD 810G certified <sup>1</sup><br>Water resistance test: IEC529 (JIS C0920) IPX1 <sup>4</sup><br>Dust resistance test: IEC529 (JIS C0920) IP5X <sup>4</sup><br>Gravity drop resistance test: 76cm <sup>1</sup><br>Operating temperature: -10°C to 50°C <sup>1</sup>                                                                                                                                              |



## CF-33

### 12" FULLY RUGGED 2-IN-1 DETACHABLE NOTEBOOK



## CF-20

### 10.1" FULLY RUGGED 2-IN-1 DETACHABLE NOTEBOOK

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mobile Computing Platform / CPU | Intel® Core™ i5-7300U vPro™ processor (2.6GHz up to 3.5GHz (with Turbo Boost), 3 MB Intel® Smart Cache)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Intel® Core™ i5-7Y57 vPro™ processor (1.2GHz to 3.3GHz (with Turbo Boost), 4MB Intel® Smart Cache)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Operating System                | Windows 10 Pro                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Windows 10 Pro                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Memory & Storage                | 8GB RAM (4GB or 16GB project based)<br>256GB SSD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 8GB RAM (4GB or 16GB project based)<br>256 GB SSD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Display                         | 12.0" Active Matrix (TFT) colour LCD, QHD (2160 × 1440 pixels), up to 1200cd/m² brightness, Aspect ratio 3:2, Anti Reflection with glove and rain modes<br>Dual Touch as standard (10 finger capacitive touchscreen and Digitiser)                                                                                                                                                                                                                                                                                                                                                                                                            | 10.1 Active Matrix (TFT) IPS colour LCD, 1920 × 1200 pixels, WUXGA (up to 800cd/m²) Anti Glare, Anti Reflection<br>10 finger capacitive touchscreen<br>Dual Touch model with Digitiser optional                                                                                                                                                                                                                                                                                                                                                                                                         |
| Camera                          | Front: 2MP with IR for Windows Hello<br>Rear: 8MP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Front: 2MP<br>Rear: 8MP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Expansion Slots                 | SD/SDXC Memory Card: ×1 SDXC (Keyboard), ×1 Micro-SDXC (Tablet)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | SD/SDXC Memory Card: ×1 SDXC (Keyboard Base), ×1 Micro-SDXC (Main Unit)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Interfaces                      | Serial: ×1 (Keyboard Base), ×1 optional (Main Unit)<br>HDMI: ×2 (Keyboard Base & Main Unit)<br>VGA: ×1 (Keyboard Base)<br>USB 3.0: ×2 (Keyboard Base), ×1 (Main Unit)<br>USB 2.0: ×1 (Keyboard Base), ×1 optional (Main Unit)<br>Rugged USB: ×1 optional (Main Unit)<br>LAN: ×2 (Keyboard Base & Main Unit)<br>2D Barcode Reader: ×1 optional (Main Unit)<br>Smartcard Reader: ×1 optional (Main Unit)<br>HF RFID: ×1 optional (Main Unit)<br>Fingerprint Reader: ×1 optional (Main Unit)<br>Port Replicator: ×1 (Keyboard Base)<br>External Antenna Connector: ×1 (Keyboard Base)<br>Headset: ×1<br>DC Input: ×2 (Keyboard Base & Main Unit) | Serial: ×1 (Keyboard Base), ×1 optional (Main Unit)<br>HDMI: ×2 (Keyboard Base & Main Unit)<br>VGA: ×1 (Keyboard Base)<br>Headset: ×1<br>DC Input: ×2 Jack (Keyboard Base & Main Unit)<br>USB 2.0: ×1 (Keyboard Base), optional ×1 (Main Unit)<br>USB 3.0: ×2 (Keyboard Base), ×1 (Main Unit)<br>LAN: ×2 (Keyboard Base & Main Unit)<br>2D Barcode Reader: optional ×1 (Main Unit)<br>Smartcard Reader: optional ×1 (Main Unit)<br>HF RFID: optional ×1 (Main Unit)<br>Fingerprint Reader: ×1 optional (Main Unit)<br>Port Replicator: ×1<br>External Antenna Connector: ×2 (Keyboard Base & Main Unit) |
| Connectivity                    | Bluetooth®: Version 4.1 Class 1<br>WLAN: Intel® Dual Band Wireless-AC 8265<br>LAN (Tablet and Keyboard): IEEE 802.3 10Base-T / IEEE 802.3u 100Base-TX / IEEE 802.3ab 1000Base-T                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Bluetooth®: Version 4.1 Class 1<br>Wireless LAN Intel® Dual Band Wireless-AC 8265<br>LAN IEEE 802.3 10Base-T / IEEE 802.3u 100Base-TX / IEEE 802.3ab 1000Base-T                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Power                           | AC Adaptor: Input: 100V-240V AC, 50Hz/ 60Hz, Output: 15.6V DC, 7.05 A<br>Standard Battery: Li-Ion 11.1V, 1990mAh × 2, user replaceable, hot swappable<br>Extended Battery (Factory option): Li-ion 10.8V, 4120mAh × 2, user replaceable, hot swappable<br>Battery Life (2-in-1 Detachable): Approx. 10 hours; Approx. 20 hours with optional extended battery (Mobile Mark™ 2014)<br>Battery Life (Tablet only): Approx. 11 hours; Approx. 22 hours with optional extended battery (Mobile Mark™ 2014)                                                                                                                                        | AC Adaptor: Input: 100V-240V AC, 50Hz/ 60Hz, Output: 16V DC, 4.06A<br>Battery: Li-Ion (11.4V, 2600mAh), user replaceable<br>Battery Life: Tablet approx. 8.5 hours (Mobile Mark™ 2014);<br>Approx. 17 hours with 2nd battery in Keyboard Base (Mobile Mark™ 2014)<br>Hot Swap Battery: Standard                                                                                                                                                                                                                                                                                                         |
| Security Features               | TPM (Trusted Platform Module), TCG V2.0<br>Integrated hardware security lock slot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | TPM (Trusted Platform Module), TCG V2.0<br>Integrated hardware security lock slot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Dimensions (W × H × D) & Weight | 2-in-1 Detachable: 313.0 × 288.4 × 46.1mm {12.3" × 11.4" × 1.8"}, 2.761 kg {6.1 lb.}<br>Tablet only version: 308.0 × 243.6 × 21.6mm {12.1" × 9.6" × 0.9"}, 1.527 kg {3.4 lb.}                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 272mm × 233mm × 33.5mm {10.7" × 9.17" × 1.32"} (Main Unit + Keyboard Base)<br>272mm × 196mm × 16.4mm {10.7" × 7.7" × 0.65"} (Main Unit)<br>1.89kg {4.2lb} (Main Unit + Keyboard Base) 950g {2.1lb} (Main Unit)                                                                                                                                                                                                                                                                                                                                                                                          |
| Options for Integration         | 4G LTE, GPS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 4G LTE, GPS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Ruggedisation                   | MIL-STD 810G certified⁴<br>Water resistance test: IEC529 (JIS C0920) IPX5⁴<br>Dust resistance test: IEC529 (JIS C0920) IP6X⁴<br>Gravity drop resistance test: 150cm drop⁴<br>Operating temperature: -29°C to +60°C⁴                                                                                                                                                                                                                                                                                                                                                                                                                           | MIL-STD 810G certified⁴<br>Water resistance test: IEC529 (JIS C0920) IPX5⁴<br>Dust resistance test: IEC529 (JIS C0920) IP6X⁴<br>Gravity drop resistance test: 120cm drop⁴<br>Operating temperature: -29°C to +60°C⁴                                                                                                                                                                                                                                                                                                                                                                                     |



## FZ-Q2

**12.5" SEMI RUGGED 2-IN-1  
DETACHABLE NOTEBOOK**



## CF-XZ6

**12" BUSINESS RUGGED  
2-IN-1 DETACHABLE NOTEBOOK**

|                                 |                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mobile Computing Platform / CPU | Intel® Core™ m5-6Y57 vPro™ processor (1.1GHz to 2.8GHz (with Turbo Boost), 4MB Intel® Smart Cache)                                                                                                                 | Intel® Core™ i5-7300U vPro™ processor (2.6GHz up to 3.5GHz (with Turbo Boost), 3 MB Intel® Smart Cache)                                                                                                                                                                                                                                                                        |
| Operating System                | Windows 10 Pro                                                                                                                                                                                                     | Windows 10 Pro                                                                                                                                                                                                                                                                                                                                                                 |
| Memory & Storage                | 4GB RAM (max. 8GB project based)<br>128 GB SSD                                                                                                                                                                     | 8GB RAM (4GB or 16GB project based)<br>256GB SSD                                                                                                                                                                                                                                                                                                                               |
| Display                         | 12.5 Active Matrix (TFT) IPS colour LCD, 1920 × 1080 pixels, FHD, Anti Glare, Anti Reflection<br>10 finger capacitive touchscreen                                                                                  | 12.0" Active Matrix (TFT) colour LCD, QHD (2160 × 1440 pixels) and Anti Reflection screen<br>10 finger capacitive multi-touch with optional Active pen                                                                                                                                                                                                                         |
| Camera                          | Front: 1080p<br>Rear: 8MP                                                                                                                                                                                          | Front: 2MP with IR for Windows Hello<br>Rear: 8MP with LED light                                                                                                                                                                                                                                                                                                               |
| Expansion Slots                 | SD/SDXC Memory Card: x1 Micro-SDXC (Main Unit)                                                                                                                                                                     | SDXC Card (UHS-I / UHS-II): x1 (Keyboard Base)                                                                                                                                                                                                                                                                                                                                 |
| Interfaces                      | Headset: x1<br>USB 3.0: x1<br>Serial: x1<br>HDMI: x1<br>LAN: x1<br>DC Input: x1                                                                                                                                    | USB 3.0: x3 (Keyboard Base)<br>LAN: x1 (Keyboard Base)<br>VGA: x1 (Keyboard Base)<br>HDMI: x1 (Keyboard Base)<br>Headphone: x1 (Main Unit)<br>USB 3.1 (Gen1) Type-CTM: x1 (Main Unit)                                                                                                                                                                                          |
| Connectivity                    | Bluetooth®: Version 4.1 Class 1<br>Wireless LAN: Intel® Dual Band Wireless-AC 8260<br>LAN: IEEE 802.3 10Base-T / IEEE 802.3u 100Base-TX / IEEE 802.3ab 1000Base-T                                                  | Bluetooth®: Version 4.1 Class 1<br>Wireless LAN: Intel® Dual Band Wireless-AC 8265<br>LAN (Keyboard Base): 1000Base-T/100Base-TX/10Base-T                                                                                                                                                                                                                                      |
| Power                           | AC Adaptor: Input: 100V-240V AC, 50Hz/ 60Hz, Output: 16V DC, 3.75A<br>Battery: Li-Ion (7.6V, 4860mAh)<br>Battery Life: Approx. 9 hours (Mobile Mark™ 2014)                                                         | AC Adaptor: Input:100V-240V AC, 50Hz/60Hz, Output:16V DC, 4.06A<br>Main unit battery (Built-in): 4-cell battery, Li-Ion 7.6V, 3540mAh<br>Keyboard Base Battery (End-user removable, Hot swap): 4-cell battery, Li-Ion 7.6V, 5200mAh<br>2-in-1 Detachable Battery Life: Approx. 14 hours (Mobile Mark™ 2014)<br>Tablet only Battery Life: Approx. 6.5 hours (Mobile Mark™ 2014) |
| Security Features               | TPM (Trusted Platform Module), TCG V2.0<br>Integrated hardware security lock slot                                                                                                                                  | TPM (Trusted Platform Module), TCG V2.0<br>Integrated hardware security lock slot                                                                                                                                                                                                                                                                                              |
| Dimensions (W × H × D) & Weight | 340mm × 220mm × 43mm {13.4" × 8.66" × 1.69"}<br>(Main Unit + Keyboard Base) 340mm × 220mm × 22mm {13.4" × 8.66" × 0.87"}<br>(Main Unit) 1.93kg {4.25lb}<br>(Main Unit + Keyboard Base) 1.09kg {2.40lb} (Main Unit) | 2-in-1 Detachable: 288.5mm × 223.7mm × 22mm {11.36" × 8.80" × 0.87"}, Approx. 1.18kg {2.60lb}<br>Tablet only: 286.5mm × 206.2mm × 9.5mm {11.28" × 8.12" × 0.37"}, Approx. 640g {1.41lb}                                                                                                                                                                                        |
| Options for Integration         | 4G LTE, -10°C SSD heater (project based)                                                                                                                                                                           | 4G LTE                                                                                                                                                                                                                                                                                                                                                                         |
| Ruggedisation                   | Passed a 76cm free-fall test <sup>3</sup><br>100kgf pressurised vibration test <sup>3</sup>                                                                                                                        | Passes a 76cm free-fall test <sup>3</sup><br>100kgf pressurised vibration test <sup>3</sup>                                                                                                                                                                                                                                                                                    |

Active Matrix colour display conforms to industry standards. Some displays may contain isolated illuminated or dark pixels as an artefact of the manufacturing process (effective pixels: minimum 99.998%). RAM capacity calculated as follows: 1MB = 1,048,576 bytes. HDD capacity calculated as follows: 1GB = 1,000,000,000 bytes. TOUGHBOOK is brand names and registered trademark of Panasonic Corporation. Google, the Google logo, YouTube and Android are trademarks of Google Inc. Intel, the Intel logo, Intel Core, Intel vPro, Core Inside and vPro Inside are trademarks of Intel Corporation in the U.S. and other countries. Microsoft® and Windows® are registered trademarks of Microsoft® Corporation of the United States and/or other countries. All other brand names shown are the registered trademarks of the relevant companies. All rights reserved. All working conditions, times and figures quoted are optimum or ideal levels and may differ as a result of individual and local circumstances. Technical specifications are subject to change without notice.

<sup>1</sup>Tested in Panasonic Factory. <sup>2</sup>Config. A: 1x PC Card Type I or II + 1x ExpressCard; Config. B: 2x PC Card Type I or II, no ExpressCard. <sup>3</sup>The shock resistance, pressure resistance, and splashproof functions are not a guarantee against damage or malfunction. <sup>4</sup>Tested by an independent third party lab following MIL-STD-810G and IEC 60529. <sup>5</sup>Project based. Only one interface can be selected.

<sup>6</sup>Safety Certifications list available at [www.toughbook.eu](http://www.toughbook.eu).

Computer Product Solutions (CPS) BU, Panasonic System Communications Company Europe (PSCEU), Panasonic Marketing Europe GmbH, Hagenauer Straße 43, 65203 Wiesbaden (Germany).