



# C66

## Mobile Computer



Chainway C66 is a highly expandable large-screen rugged handheld computer. Equipped with Qualcomm octa-core processor and Android 11 / 13, C66 comes with a 5.5-inch HD display, barcode scanning, and NFC functions. The device supports quick charge and UHF sled for high extensibility. The premium Android 11 / 13 version offer optional fingerprint recognition, volume measurement, built-in UHF functions and with Wi-Fi 6-ready platform for higher data throughput and security that fully satisfy the needs in logistics, warehouse, manufacturing, retail, etc. applications.



UHF



UHF Sled Reader



Pistol Grip

# Specification

| Physical Characteristics |                                                                                                                                                                                                              |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions               | 160.0 x 76.0 x 15.5 / 17.0mm / 6.3 x 2.99 x 0.61 / 0.67in.                                                                                                                                                   |
| Weight                   | 287g / 10.12oz.(device with battery)<br>297g / 10.47oz.(device with battery, Fingerprint / Volume Measurement / Built-in UHF)                                                                                |
| Keypad                   | 1 power key, 2 scan keys, 2 volume keys                                                                                                                                                                      |
| Battery                  | Removable main battery (normal version:4420 mAh ; Android 11 with fingerprint / built-in UHF / volume measurement version: 5200mAh )                                                                         |
|                          | 5200mAh optional pistol battery, support QC3.0 and RTC                                                                                                                                                       |
|                          | Standby: up to 490 hours (only main battery ; WiFi: up to 470h; 4G: up to 440h)                                                                                                                              |
|                          | Continuous use: over 12 hours (depending on user environment)<br>Charging time: 2.5 hours (charge device by standard adaptor and USB cable)                                                                  |
| Display                  | 5.5-inch high definition full display (18:9), IPS 1440 x 720                                                                                                                                                 |
| Touch Panel              | Multi-touch panel, gloves and wet hands supported                                                                                                                                                            |
| Sensor                   | Accelerometer sensor, light sensor, proximity sensor, gravity sensor gyroscope sensor (optional).                                                                                                            |
| Performance              |                                                                                                                                                                                                              |
| CPU                      | Qualcomm Snapdragon™ 662 Octa-core, 2.0 GHz                                                                                                                                                                  |
| RAM+ROM                  | 3GB + 32GB / 4GB + 64GB                                                                                                                                                                                      |
| Expansion                | Supports up to 128GB Micro SD card                                                                                                                                                                           |
| Developing Environment   |                                                                                                                                                                                                              |
| Operating System         | Android 11/13; GMS, 90-day security updates, Android Enterprise Recommended, Zero-Touch, FOTA, Soti MobiControl, SafeUEM supported. Committed support for a future upgrade to Android 16 pending feasibility |
| SDK                      | Chainway Software Development Kit                                                                                                                                                                            |
| Language                 | Java                                                                                                                                                                                                         |
| Tool                     | Eclipse / Android Studio                                                                                                                                                                                     |
| User Environment         |                                                                                                                                                                                                              |
| Operating Temp.          | -4°F to 122°F / -20 °C to +50 °C                                                                                                                                                                             |
| Storage Temp.            | -40°F to 158°F / -40 °C to +70 °C                                                                                                                                                                            |
| Humidity                 | 5% RH - 95% RH non condensing                                                                                                                                                                                |
| Drop Specification       | Multiple 1.8m / 5.91ft. drops (at least 20 times) to the concrete across the operating temperature range                                                                                                     |
|                          | Multiple 2.4m / 7.87ft. drops (at least 20 times) to the concrete after installed rubber boots                                                                                                               |
|                          | MIL-STD-810H(SGS Test): Multiple 1.22 M drops (at least 20 times) to the plate across the operating temperature range                                                                                        |
| Tumble Specification     | 1000 x 0.5m / 1.64ft. falls at room temperature                                                                                                                                                              |
| Sealing                  | IP65 per IEC sealing specifications, IP67 optional                                                                                                                                                           |
| ESD                      | ± 15KV air discharge, ± 8KV conductive discharge                                                                                                                                                             |
| Communication            |                                                                                                                                                                                                              |
| Vo-LTE                   | Support Vo-LTE HD video voice call                                                                                                                                                                           |
| Bluetooth                | Bluetooth 5.1                                                                                                                                                                                                |
| GNSS                     | GPS/AGPS, GLONASS, BeiDou, Galileo, internal antenna                                                                                                                                                         |
| WLAN                     | Support 802.11 a/b/g/n/ac/ax-ready/d/e/h/i/k/r/v, 2.4G/5G dual-band, IPV4, IPV6, 5G PA;                                                                                                                      |
|                          | Fast roaming: PMKID caching, 802.11r, OKC                                                                                                                                                                    |
|                          | Operating Channels: 2.4G(channel 1~13), 5G(channel36,40,44,48,52,56,60,64,100,104,108,112,116,120,124,128,132, 136,140,144,149,153,157,161,165). Depends on local regulations                                |
|                          | Security and Encryption: WEP, WPA/WPA2-PSK(TKIP and AES), WAPI-PSK—EAP-TTLS, EAP-TLS, PEAP-MSCHAPV2, PEAP-LTS,PEAP-GTC,etc.                                                                                  |

|                        |                                              |
|------------------------|----------------------------------------------|
| WWAN<br>(Europe, Asia) | 2G: 850/900/1800/1900 MHz                    |
|                        | 3G: CDMA EVDO: BC0                           |
|                        | WCDMA: 850/900/1900/2100MHz                  |
|                        | TD-SCDMA: A/F(B34/B39)                       |
| WWAN(America)          | 4G: B1/B3/B5/B7/B8/B20/B38/B39/B40/B41       |
|                        | 2G: 850/900/1800/1900MHz                     |
|                        | 3G: 850/900/1900/2100MHz                     |
|                        | 4G: B2/B4/B5/B7/B8/B12/B13/B17/B28A/B28B/B38 |

| Data Collection |                                               |
|-----------------|-----------------------------------------------|
| Camera          |                                               |
| Rear Camera     | Rear 13MP Autofocus with flash                |
| NFC             |                                               |
| Frequency       | 13.56MHz                                      |
| Protocol        | ISO14443A/B, ISO15693, NFC-IP1, NFC-IP2, etc. |
| Chips           | M1 card (S50, S70), CPU card, NFC tags, etc.  |
| Range           | 2-4cm                                         |

| UHF |
|-----|
|-----|

\*For detailed specification, please check C66 UHF part

| Fingerprint           |                                                           |
|-----------------------|-----------------------------------------------------------|
| Optional 1            |                                                           |
| Sensor                | TCS1                                                      |
| Sensing Area (mm)     | 12.8 × 18.0                                               |
| Resolution (dpi)      | 508 dpi, 8-bit greylevel                                  |
| Certifications        | FIPS 201, STQC                                            |
| Format Extraction     | ISO 19794, WSQ, ANSI 378, JPEG2000                        |
| Fake Finger Detection | Support by SDK                                            |
| Security              | AES, DES key encryption of the host communication channel |

| Optional 2            |                                                           |
|-----------------------|-----------------------------------------------------------|
| Sensor                | TLK1NC02                                                  |
| Sensing Area (mm)     | 14.0 X 22.0                                               |
| Resolution (dpi)      | 508dpi, 256 greylevel                                     |
| Certifications        | FIPS 201, FBI                                             |
| Format Extraction     | ISO19794, WSQ, ANSI 378, JPEG2000                         |
| Fake Finger Detection | Support by SDK                                            |
| Security              | AES, DES key encryption of the host communication channel |

| Volume Measurement (Optional, only Android 11 ) |                |
|-------------------------------------------------|----------------|
| Sensor                                          | IRS1645C       |
| Measurement Error                               | < 5%           |
| Module                                          | MD101D         |
| Field of view Angle                             | D71°/H60°/V45° |
| Measurement speed                               | 2s / piece     |
| Measured distance                               | 40cm-4m        |

\* Volume Measurement version does not support pistol

| Optional accessories(See details in Accessory Guide)                                       |  |
|--------------------------------------------------------------------------------------------|--|
| Separate handle with one button ; Handle + battery (handle battery 5200mAh, one button) ;  |  |
| UHF back clip + handle (5200mAh, one button) ; Wrist Strap; Rubber Bumper; Charging Cradle |  |

# Specification

## UHF1

UHF Back Clip



## UHF2

C66 + R6 UHF Sled



## UHF3

C66 UHF (Built-in)



### UHF1 (Optional, C66 UHF Back Clip)

|                    |                                                                                                                                                                                                                                                                                                                   |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Engine             | CM710-1 module based on Impinj E710<br>CM2000-1 module based on Impinj Indy R2000                                                                                                                                                                                                                                 |
| Frequency          | 865-868MHz / 920-925MHz / 902-928MHz                                                                                                                                                                                                                                                                              |
| Protocol           | EPC C1 GEN2 / ISO18000-6C                                                                                                                                                                                                                                                                                         |
| Antenna            | Circular Polarized Antenna (4dBi)                                                                                                                                                                                                                                                                                 |
| Power              | 1W (30dBm, +5dBm to +30dBm adjustable)<br>2W Optional (33dBm, for Latin America, etc.)                                                                                                                                                                                                                            |
| Max Read Range     | Impinj E710 chip:<br>28m (Impinj MR6 tag, size 70 x 15mm)<br>28m (Impinj M750 tag, size 70 x 15mm)<br>32m (Alien H3 Anti-Metal tag, size 130 x 42mm)<br><br>Impinj R2000 chip:<br>22m (Impinj MR6 tag, size 70 x 15mm)<br>24m (Impinj M750 tag, size 70 x 15mm)<br>30m (Alien H3 Anti-Metal tag, size 130 x 42mm) |
| Fastest Read Rate  | 1300+ tags/sec                                                                                                                                                                                                                                                                                                    |
| Communication Mode | Pin Connector                                                                                                                                                                                                                                                                                                     |

### UHF2 (Optional, C66 + R6 UHF Sled)

|                    |                                                                                                                                                                                                                                                                                                                   |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Engine             | CM710-1 module based on Impinj E710 CM2000-1 module based on Impinj Indy R2000                                                                                                                                                                                                                                    |
| Frequency          | 865-868MHz / 920-925MHz / 902-928MHz                                                                                                                                                                                                                                                                              |
| Protocol           | EPC C1 GEN2 / ISO18000-6C                                                                                                                                                                                                                                                                                         |
| Antenna            | Circular Polarized Antenna (3dBi)                                                                                                                                                                                                                                                                                 |
| Power              | 1W (30dBm, support +5~+30dBm adjustable)<br>2W Optional (33dBm, for Latin America, etc.)                                                                                                                                                                                                                          |
| Max Read Range     | Impinj E710 chip:<br>30m (Impinj MR6 tag, size 70 x 15mm)<br>28m (Impinj M750 tag, size 70 x 15mm)<br>31m (Alien H3 Anti-Metal tag, size 130 x 42mm)<br><br>Impinj R2000 chip:<br>25m (Impinj MR6 tag, size 70 x 15mm)<br>26m (Impinj M750 tag, size 70 x 15mm)<br>25m (Alien H3 Anti-Metal tag, size 130 x 42mm) |
| Fastest Read Rate  | 1300+ tags/sec                                                                                                                                                                                                                                                                                                    |
| Communication Mode | Pin Connector / Bluetooth                                                                                                                                                                                                                                                                                         |

### UHF3 (Optional, C66 UHF Built-in)

|                |                                                                                                                                    |
|----------------|------------------------------------------------------------------------------------------------------------------------------------|
| Engine         | CM-5N module based on Impinj E510                                                                                                  |
| Frequency      | 865-868 MHz / 920-925 MHz / 902-928 MHz                                                                                            |
| Protocol       | EPC C1 GEN2 / ISO18000-6C                                                                                                          |
| Antenna        | Linear Polarized Antenna (-5 dBi)                                                                                                  |
| Power          | 1 W (+5dBm to +30dBm adjustable)                                                                                                   |
| Max Read Range | 2.4m (Impinj MR6 tag, size 70 x 15mm)<br>2.6m (Impinj M750 tag, size 70 x 15mm)<br>2.7m (Alien H3 Anti-Metal tag, size 130 x 42mm) |

\* Ranges are measured in the open outdoors and low interference environment, and rate is measured in a laboratory low interference environment, they are affected by tags and environment.

\* built-in UHF version does not support pistol