



# MC51

## Mobile Computer



5G



Android 14



Wi-Fi 6E



Bluetooth 5.2



UHF



1D Barcode



2D Barcode



NFC



Camera



GNSS

The Chainway MC51 is our latest 5G high-performance mobile computer, designed with cutting-edge technology. Powered by a robust processing chip, a 6-inch HD display, and exceptional 5G and Wi-Fi 6E connectivity, it provides an enhanced mobile office solution for your frontline workers. Featuring dual UHF configuration options—either built-in or pistol-grip—the device incorporates our self-developed UHF module based on Impinj chips, supporting Impinj Gen2X and ensuring superior RFID performance. With versatile data collection capabilities, including barcode scanning, RFID reading, and NFC, the MC51 is ideal for a wide range of applications, from retail stores and warehouse sorting to power inspections, asset management, and more.



# Specification

| Physical Characteristics |                                                                                                                   |
|--------------------------|-------------------------------------------------------------------------------------------------------------------|
| Dimensions               | 161.0 x 77.8 x 15.5mm / 6.34 x 3.06 x 0.61 in.                                                                    |
| Weight                   | 297g / 10.48oz. (device with battery)                                                                             |
| Keypad                   | Power key, 2 scan keys, volume (+/-) keys, 1 multifunctional key                                                  |
| Battery                  | 5000mAh removable main battery, support QC3.0 and RTC; Support Battery Management System; Hot swap battery backup |
| Display                  | 6-inch high definition display (18:9), 1440 x 720                                                                 |
| Touch Panel              | Corning Gorilla Glass, multi-touch panel, gloves and wet hands supported                                          |
| Sensor                   | G_sensor, proximity sensor, light sensor, geomagnetic sensor, gyroscope                                           |
| Notification             | Sound, LED indicator, vibrator                                                                                    |
| Audio                    | 2 microphones, 1 for noise cancellation; 1 speaker; 1 receiver                                                    |
| Card slot                | 1 for SIM card, 1 for SIM or TF card, Supports eSIM (optional)                                                    |
| Interfaces               | USB Type-C, USB 3.1, OTG                                                                                          |

| Performance |                                                                                            |
|-------------|--------------------------------------------------------------------------------------------|
| CPU         | Qualcomm Octa-core, 2.4GHz                                                                 |
| RAM+ROM     | UFS: 4GB + 64GB / 6GB + 128GB (optional) / 8GB + 128GB (optional) / 8GB + 256GB (optional) |
| Expansion   | Supports up to 256GB TF card (Supports Extreme Micro SD Card 512GB)                        |

| Developing Environment |                                   |
|------------------------|-----------------------------------|
| Operating System       | Android 14                        |
| 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 1.5m / 4.92ft. drops to the concrete across the operating temperature range |
| Tumble Specification | 1000 x 0.5m / 1.64ft. falls at room temperature                                      |
| Sealing              | IP67 per IEC sealing specifications                                                  |
| ESD                  | ±15 KV air discharge, ±8 KV conductive discharge                                     |

| Communication       |                                                                                                                                                                                                         |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WLAN                | Support 802.11 a/b/g/n/ac/ax-6E, 2.4G/5G dual-band, IPV4, IPV6; 2*2 MIMO antennas                                                                                                                       |
|                     | Fast roaming: PMKID caching, 802.11r, OKC                                                                                                                                                               |
|                     | Operating Channels: 2.4G (channel 1~13), 5G (channel 36, 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, WPA3-Enterprise, WPA3-Enhanced Open, WPA3 Easy Connect, WPA3-Personal, etc.     |
| WWAN (America)      | 2G: GSM/EDGE/GPRS(850/1900)                                                                                                                                                                             |
|                     | 3G: WCDMA(B2/B4/B5)                                                                                                                                                                                     |
|                     | 4G: FDD-LTE B2/B4/B5/B7/B12/B13/B25/B26/B28; TDD-LTE B38/B41;                                                                                                                                           |
|                     | 5G: N2/N3/N5/N7/N12/N13/N25/N26/N28/N38/N41/N77/N78                                                                                                                                                     |
| WWAN (Europe, Asia) | 2G: GSM / EDGE / GPRS (850/900/1800)                                                                                                                                                                    |
|                     | 3G: WCDMA (B1/B5/B8)                                                                                                                                                                                    |
|                     | 4G: FDD-LTE (B1/B3/B5/B7/B8/B20/B28A/B28B) TDD-LTE (B34/B38/B39/B40/B41)                                                                                                                                |
|                     | 5G: N1/N3/N5/N7/N8/N20/N28/N38/N40/N41/N77/N78/N79                                                                                                                                                      |
| Vo-LTE              | Support Vo-LTE HD video voice call                                                                                                                                                                      |
| Bluetooth           | Bluetooth 5.2                                                                                                                                                                                           |
| GNSS                | GPS/AGPS, GLONASS, BeiDou, Galileo, internal antenna                                                                                                                                                    |

| Data Collection |                                               |
|-----------------|-----------------------------------------------|
| Camera          |                                               |
| Rear Camera     | 16MP Autofocus with flash                     |
| Front Camera    | 5MP                                           |
| NFC             |                                               |
| Frequency       | 13.56 MHz                                     |
| Protocol        | ISO14443A/B, ISO15693, NFC-IP1, NFC-IP2, etc. |
| Chips           | M1 card (S50, S70), CPU card, NFC tags, etc.  |
| Range           | 2-4 cm                                        |

| UHF RFID (Optional)                                          |                                                                                                                                                                                                            |
|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| *For detailed specification, please check MC51 UHF datasheet |                                                                                                                                                                                                            |
| Barcode Scanning (Optional)                                  |                                                                                                                                                                                                            |
| 2D Scanner                                                   | Zebra: SE4710; SE5500; CM60                                                                                                                                                                                |
| 1D Symbologies                                               | UPC/EAN, Code128, Code39, Code93, Code11, Interleaved 2 of 5, Discrete 2 of 5, Chinese 2 of 5, Codabar, MSI, RSS, etc.                                                                                     |
| 2D Symbologies                                               | PDF417, MicroPDF417, Composite, RSS, TLC-39, Datamatrix, QR code, Micro QR code, Aztec, MaxiCode; Postal Codes: US PostNet, US Planet, UK Postal, Australian Postal, Japan Postal, Dutch Postal (KIX),etc. |

| Optional Accessories                                          |  |
|---------------------------------------------------------------|--|
| USB Cable, Adapter, Charging Cradle, Rugged Rubber Boot, etc. |  |
| *See details in accessory guide                               |  |

Notice: Product specifications are subject to change without prior notice. / Model: MC51 / Update Date: 2025-03-26

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