

### HF | NFC - Handheld Reader **CHAINWAY - MC51E NFC**

- Android 14, Qualcomm Octa-core 2.4 GHz
- 5G & Wi-Fi 6E connectivity
- 6-inch HD display, glove & wet-hand support
- NFC, GNSS & 16 MP camera integrated
- IP67, MIL-STD-810H, 1.5 m drop-proof



### HF | NFC - Handheld Reader Android 14 - Operating System

The Chainway MC51 is a powerful 5G mobile computer designed for frontline workers who demand high performance and reliable connectivity. Powered by a Qualcomm Octa-core processor running at 2.4 GHz, paired with up to 8 GB RAM and 256 GB storage, and running Android 14, the MC51 delivers a fast and smooth user experience for even the most demanding enterprise applications.

Connectivity is a core strength of the MC51, featuring 5G WWAN support across all major frequency bands for both European and American networks, combined with Wi-Fi 6E (802.11ax) and Bluetooth 5.2. This ensures seamless real-time data transfer in high-density environments such as warehouses, distribution centers and logistics hubs.

For RFID data collection, the MC51 offers an optional self-developed UHF module based on Impinj E Series chips with support for Impinj Gen2X, available in both built-in and pistol-grip configurations. Complementing this are integrated NFC (13.56 MHz), optional 1D/2D barcode scanning, a 16 MP autofocus rear camera, and multi-constellation GNSS positioning.

Built for demanding field conditions, the MC51 carries an IP67 rating and meets MIL-STD-810H standards, withstanding multiple 1.5 m drops to concrete. The 5000 mAh hot-swappable battery with QC3.0 fast charging ensures continuous all-day operation even in shift-critical environments.

### Common Applications

- Warehouse management
- Inventory control
- Retail stock management
- Asset tracking
- Logistics & shipping

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**MC51 Built-in RFID Reader**

### TECHNICAL SPECIFICATIONS

#### Data Collection 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

#### 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 (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

#### Performance Characteristics

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

#### Physical Characteristics

Dimension	161.0 x 77.8 x 15.5mm
Weight	297g
Keypad	1 Power key, 2 scan keys, volume (+/-) keys, multifunction
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

#### User Environment

Operating Temp.	-20 °C to +50 °C
Storage Temp.	-40 °C to +70 °C
Humidity	5% RH - 95% RH (non condensing)
Drop Specification	Multiple 1.5 m drops to concrete across the operating temperature range
	MIL-STD-810H (SGS Test): Multiple 1.5 m/4.92 ft. drops to concrete across the operating temperature range
Tumble Specification	1000 x 0.5m (falls at room temperature)
Sealing	IP67 per IEC sealing specifications
ESD	±15 KV air discharge, ±8 KV conductive discharge

#### Camera

Rear Camera	16MP Autofocus with flash
Front Camera	5MP

## TECHNICAL SPECIFICATIONS

### 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.

### Drivers & Support

Operating System	Android 14
SDK	Chainway Software Development Kit
Language	Java
Tool	Eclipse / Android Studio