

# M3 WR10 Series

## User Manual

Version 1.1 © 2024

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# Revision

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Release date of version 1.0: Jan. 2024

- Initial distribution

Release date of version 1.1: Apr. 2024

- Feature modification

## Terms of Use

Thank you for purchasing M3 WR10. This device provides high performance data collection and mobile communications that meet industrial standards.

This user manual enables users to know the characteristics of M3 WR10 series and how to use it.

- Please carefully read this manual before using the device to ensure safe and proper use, as well as to prevent accidents that may occur when the device is used.
- This manual is created based on current status. The details on this manual may be changed without prior notice.
- The descriptions of this manual are based on the device's default settings.
- Images and screenshots are described with the latest software version.
- This manual is created under the assumption that the device has all options. For detailed information on available options, contact the local distributor or refer to our Web site (<http://www.m3mobile.net>).
- M3 Mobile does not have any legal responsibility for any performance problem that may occur when a user uses an application that is supplied by a third party.
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- M3 Mobile does not have any legal responsibility for copyright or patent breach by the user.
- M3 Mobile can request all or part of the applications developed by a user or a third party. The request is for the improvement of user environment or device performance.
- Higher OS version may be released after you purchase the device with the existing OS. If you want to receive information on the latest OS, please contact your local distributor.
- This device can be operated in at least one Member State without infringing applicable requirements on the use of radio spectrum.
- This manual may include technical or editing errors.

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## Safety Rules

- Do not use the device while driving.
  - ✓ Traffic accidents may occur.
  - ✓ Observe the rules on device use while driving.
- Do not touch the power plug with wet hands.
  - ✓ You may be electrocuted.
- Be careful when using the battery.
  - ✓ Avoid causing a strong impact on the battery or breaking a hole through it with a sharp thing.
  - ✓ Do not put water on the battery or submerge it in water.
  - ✓ Do not let the charging terminal of the battery come into contact with a metal material.
- Keep the device, battery, or charger away from direct heat sources.
  - ✓ Heat may cause the device to become deformed, or an explosion or fire may occur.
  - ✓ If the device is placed inside a vehicle, the battery may explode due to increase in temperature.
- Do not use the device when there is thunder or lightning.
  - ✓ Lightning or fire may cause the device to break down or you may be electrocuted.
- Turn off power of the device when device use is prohibited.
  - ✓ Hazardous or wave-related problem may occur.
  - ✓ Turn off power of the device when you board a plane. The electromagnetic waves generated from the device may affect the plane's electronic equipment.
  - ✓ Turn off power of the device when you are in a hospital. Observe the device rules while in a hospital. The electromagnetic waves generated from the device may affect the medical equipment in the hospital.
- Turn off power of the device in hazardous areas where explosions may occur.
  - ✓ Observe the regulations, instructions, or signs of a hazardous area where explosions may occur.
  - ✓ Turn off power of the device while refueling.

- Be careful when a headset is used.
  - ✓ Avoid long-term exposure to loud sounds to prevent damage to your hearing.
  - ✓ Loud sounds while walking or driving distract your attention and may cause traffic accidents.

## Instructional Icons

Before using this manual, please carefully read and understand the following icons:



Warning – Situations that may cause injury to yourself or others



Caution – Situations that may cause damage to your device or other equipment



Note – Notes, usage tips, or additional information

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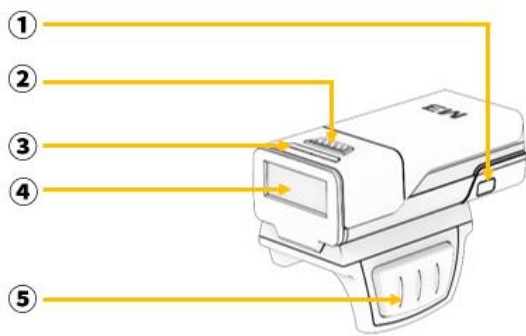
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## Contents

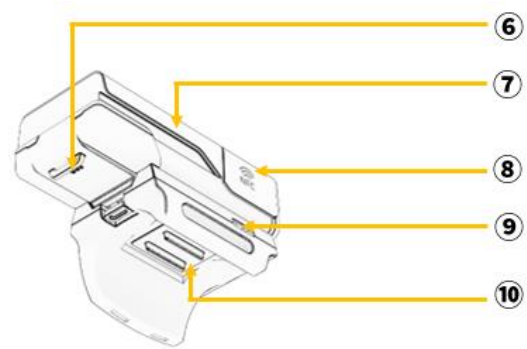
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## 1 Getting Started

### 1.1 Features



- ① Pairing Button
- ② Top Scan Trigger
- ③ System LED
- ④ Scan Window
- ⑤ Scan Trigger

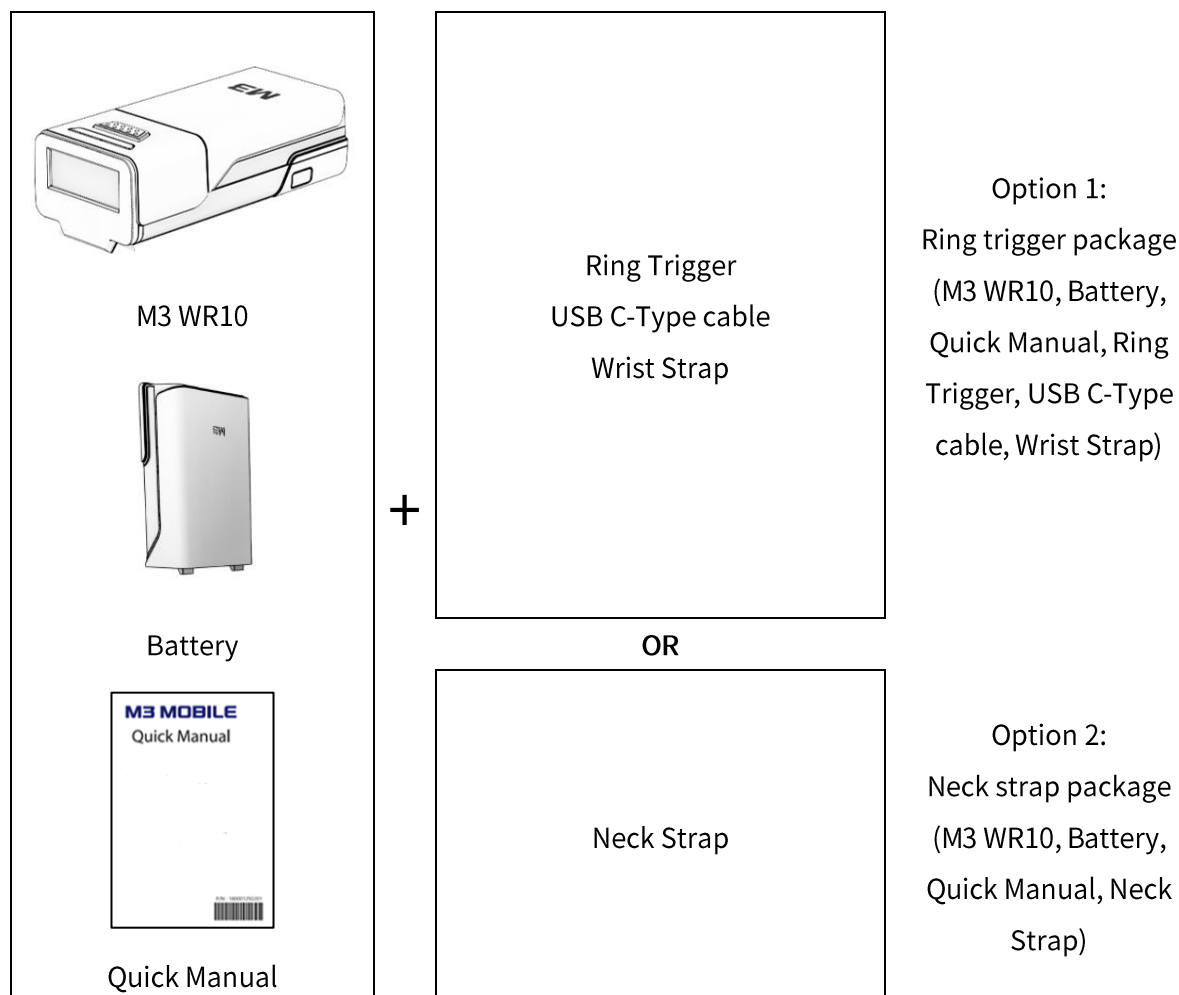


- ⑥ Lanyard (for Neck Strap)
- ⑦ Battery
- ⑧ NFC Logo
- ⑨ USB Type-C socket
- ⑩ Comfort PAD (non-slip pad)

## 1.2 Package

The **M3 WR10** package includes the following items:

You can use it after purchasing it as a Ring trigger package or a Neck strap package.



If one or more items above are damaged or are not included in the package, contact the store where you purchased the device.

Components are subject to change depending on the product SKU.

※ NOTE

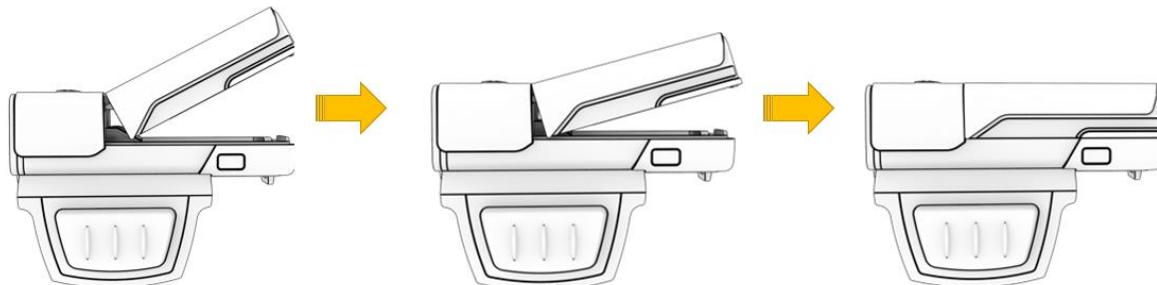
The cradle and all accessories are sold separately. If the device is used for purposes other than the original device use or if it is remodeled, you may be exposed to electromagnetic waves.



### 1.3 Battery

#### Inserting the Battery

- Insert the battery in the right direction.



M3 WR10 uses 1,000mAh Li-ion Battery.

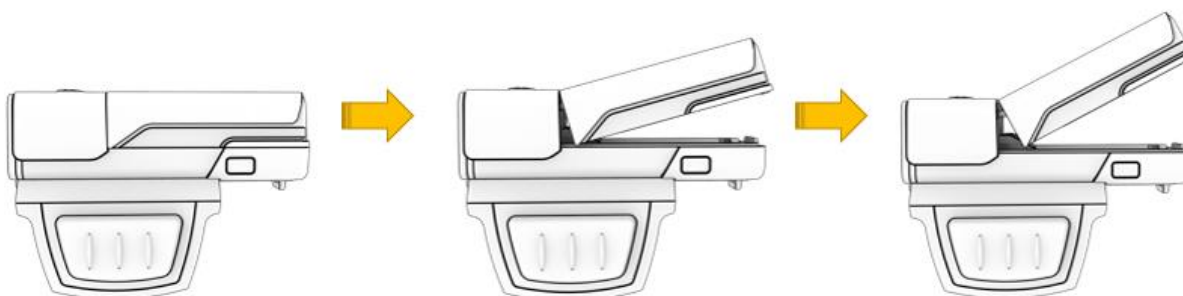
The power turns on instantly with zero-second booting as soon as the battery is inserted.



- If an unapproved battery is used, it may explode.
- When a battery is discarded, follow proper disposal procedure.
- Check if the battery is inserted in right direction.

#### Removing the Battery

- Disconnect the battery as shown below.



If the battery is not properly removed, the battery terminal may become bent or damaged. Before the battery is removed, close any running program. If it is not closed, an error may occur in the program.

### 1.4 Charging the Battery

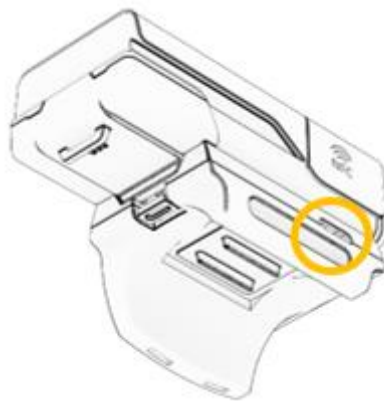
If a low battery warning message is displayed, charge the battery.

If you continue to use the ring scanner without charging the battery, the ring scanner may be powered off.

The battery can be removed from the ring scanner and charged using the battery charger.

#### Charge the battery with USB Type-C (Only for Ring trigger package)

- Connect the USB Type-C cable to the USB socket.
- Make sure the USB is connected through the LED indicator (Red – Charging / Green – Charging complete)



Supports USB 2.0 charging.

Manufacturer: Sunshine Tech. Model: XSC-0502000SEUU



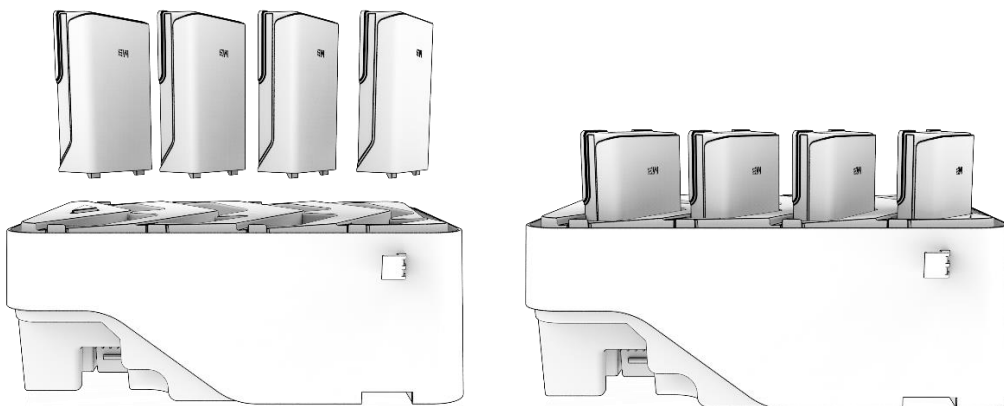
PD adapters are not compatible, so charging is not possible with it.



M3 WR10 operates normally even while charging the battery via USB Type-C.

#### Charge the battery with 8-slot battery charger

- Insert the battery in 8-slot battery charger that can be purchased separately.
- Charge begins when you insert 8 batteries on the as shown in the figure below.

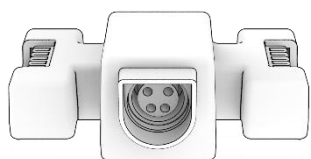




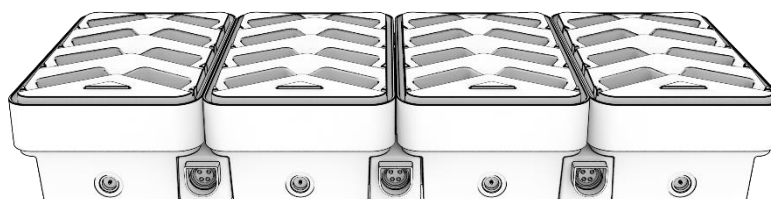
AC adaptor is made to be used in 100–240V input, 12V  $\overline{\text{---}}$  3A output. If a voltage beyond the range is supplied, the device may be seriously damaged.

### Charge the battery with 32-slot battery charger

- Insert the battery in 32-slot battery charger that can be purchased separately.
- It can be used as a 32-slot battery charger by connecting the 8-slot battery charger and the bridge as shown below.



Bridge



32-slot battery charger



AC adaptor is made to be used in 100–240V input, 12V  $\overline{\text{---}}$  7A output. If a voltage beyond the range is supplied, the device may be seriously damaged.

LED Color	Description
Red	Battery is being charged.
Green	Battery is fully charged.
Red blinking / Green blinking	The battery due for replacement is currently charging. / The battery due for replacement has been fully charged.
Red & Green cross blinking	Abnormal charging



The alarm function for battery replacement timing: When the battery charger flashes red or green while charging, it indicates a recommendation for battery replacement. (Applicable to models 3-slot battery charger, 8-slot battery charger, 32-slot battery charger)



If the battery is used at the temperature other than 0°C to 50°C, the device may malfunction or break down.



- It is recommended to replace a battery every two year.
- If a battery is charged and used continuously, its lifespan will decrease.

## 1.5 Turning the Device On

The ring scanner (WR10) is powered on at the same time as the battery is inserted.

Bluetooth pairing mode is activated at the same time that the Ring scanner is powered on. If a device has information that it has previously connected to the ring scanner, it will automatically connect. (If it fails to reconnect for one minute, it will change to pairing mode.)

If pairing mode lasts for 4 minutes without connecting to any device, the ring scanner changes to sleep mode.

The WR10 is capable of three modes of activity:

- Run Mode: The WR10 is scanning or transferring data using Bluetooth.
- OFF Mode: The WR10 is not connected to a power source.

## 2 Basic Use

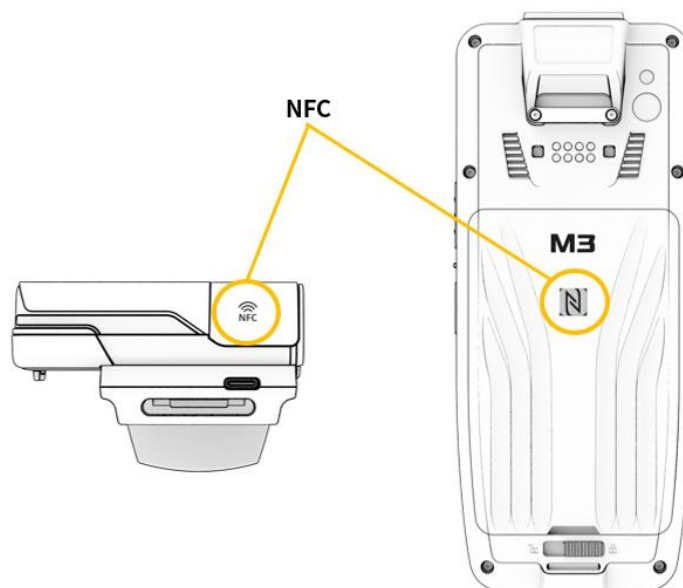
### 2.1 How to connect to Bluetooth

#### 2.1.1 Pairing

- Press the pairing button for 3 seconds (Delete connection data.)

#### 2.1.2 Tap-to-Pair

After installing the M3 WR SCAN EMUL app, bring the ring scanner to the back of the device and an NFC pairing notification will be displayed on the device screen. Follow the on-screen phrases to decide whether to pair with the device.



### Connecting to Android Devices with Ring Scanner HID Bluetooth

- Enable Bluetooth functionality on the Android device screen. (Setting -> Connected devices -> Connection preferences -> Bluetooth -> Use Bluetooth)
- Select WR10 from "Searched Devices List" in Bluetooth settings.  
Ring scanner is denoted WR10-xxxxxx, where xxxxxx is the serial number.

### **Connecting to Windows Devices with Ring Scanner HID Bluetooth**

- On the Windows Device screen, right-click the Bluetooth icon and select Add Device.

## **2.2 Disconnecting Bluetooth**

Turn off the Bluetooth function on the host device and remove the ring scanner battery.

## **2.3 Reset**

### **2.3.1 Factory Reset**

- Make sure the battery is inserted and the power is turned on.
- Press and hold the pairing button and the scan button on the Ring Scanner at the same time until the system LED turns white (About 5 seconds).
- When the white LED turns on, release the pairing button, and then press the pairing button again.
- When the reset is complete, a beep (1 second) sound.
- When the reset is complete, all settings of previously paired devices are deleted.

## 2.4 Scanner

### 2.4.1 Operating mode

- The ring scanner operates in Default SPP mode.

### 2.4.2 Sleep mode

- If pairing mode persists for about 4 minutes, it will transition to sleep mode.
- To exit sleep mode, press the scan button or pairing button.

### 2.4.3 Power off

- Remove the battery

## 2.5 Scanner status Indications

Description	LED Indication	Beep Indication	Vibration Indication
<b>Standard Use</b>			
Power On	Red -> Green -> Blue	On melody	1sec
<b>Battery Indications</b>			
Charging	Red	N/A	N/A
Charging complete	Green	N/A	N/A
Low Battery(20%)	Red blinking	N/A	N/A
<b>Scanning Indications</b>			
A barcode has been decoded	Green single flash	1x High	N/A
Transmission error.	Red	4x Low	N/A
<b>Radio Indication</b>			
Device in paring state.	Blue blinking	N/A	N/A
Bluetooth connection established	N/A	2x High	N/A
Bluetooth communication is disconnected.	Blue blinking	N/A	N/A
<b>Maintenance Indication</b>			
Firmware installation	Skyblue	N/A	N/A
Programing completed successfully	Pink	N/A	N/A

## 3 Others

### 3.1 WR10 specifications

Physical Characteristics	
Dimensions	70.7 mm L x 33.0 mm W x 22.1 mm D
Weight	Scanner only: 29g, Scanner+Battery: 55g, Scanner+Battery+Trigger+HandStrap: 73g
Network Connections	WPAN(BLE)
Notification	3 RGB LEDs located, Beeper, Vibrator
Buttons	Pairing, Scanner Button
Pairing	NFC; Tap to pair
Scan Triggering	Manual ambidextrous trigger
Performance Characteristics	
Power	1,000mAh
Data Capture	
Scanning	2D Imager (SE4107, SE5500)
Optical Resolution	SE4107: 1280 x 960 pixels / SE5500: 2688 x 1520 pixels
Skew, Pitch, Roll	Skew tolerance: 60 / Pitch tolerance: 60 / Roll tolerance: 360
Aiming Element	SE4107: 610nm LED / SE5500: 515nm Laser
FOV	SE4107 - Horizontal: 44.5, Vertical: 33.5 SE5500 - Horizontal: 37, Vertical: 21.4
NFC	HF (13.56MHz)
Wireless PAN	
Bluetooth	Bluetooth 5.2 BLE
Regulatory	
KC, CE, EAC	
User Environment	
Temperature	Operating Temperature: -20° C to 50° C Storage Temperature: -40°C to 70°C
Humidity	5% to 90% RH (Non-condensing)
Tumble Test	0.5m/1000Cycle
Drop Test	1.8m
Sealing	IP65
Vibration	Sine 5-2000Hz, 4g peak, 1 hour per axis; Random 20-2000Hz, 6g RMS or 0.04g <sup>2</sup> /Hz, 1 hour per axis
ESD	+/- 15kV air, +/-8kV contact discharge, +/-8kV indirect contact discharge
Warranty	
Subject to the terms of M3 Mobile's hardware warranty statement, the WR10 series are warranted against defects in workmanship and materials for a period of 1 (one) year from the date of shipment. For complete warranty statement.	

## 3.2 Service

If you have any questions or complaints with using our product, please contact M3 Service Center or visit our Web site (<http://itc.m3mobile.net>). We do our best to immediately respond to your inquiry.

The M3 FAQ document may help resolve general problems.

For any questions on work programs, please contact the program supplier for faster service.

### 4.2.1 Contacts

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