

M3 MOBILE

M3 WR15

User Manual

Version 1

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Terms of Use

Thank you for purchasing M3 SM30. 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 SM30 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

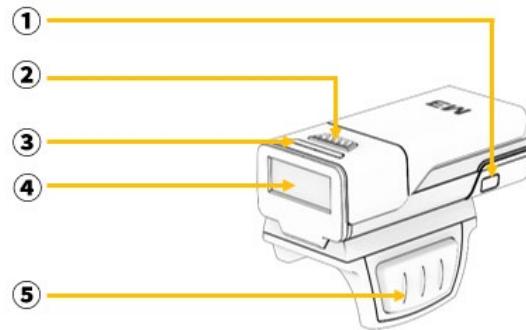
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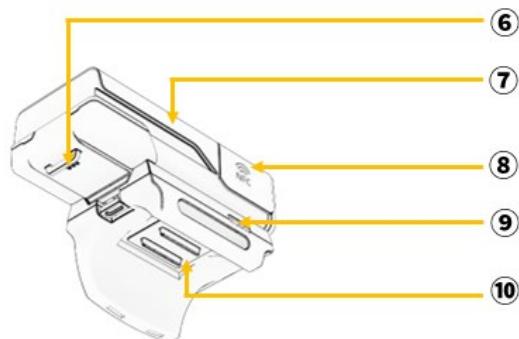
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1 Getting Started

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 Components

The standard components of the M3 WR15 are as follows.



WR15



Battery



Quick Manual

The standard package contents of the M3 WR15 are as follows:

* NOTE

All accessories are sold separately.

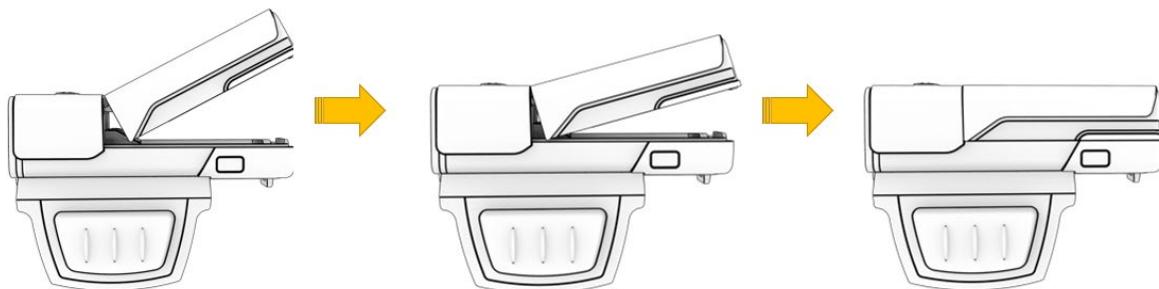
Using or modifying the device for purposes other than its intended use may result in exposure to electromagnetic radiation.

1.3 Battery

1.3.1. Battery Usage Instructions

Inserting the Battery

- Slide the top of the battery into place first.
- Press the bottom of the battery until the left and right release buttons are securely locked.



The M3 WR15 uses a 1,000 mAh lithium-ion battery.

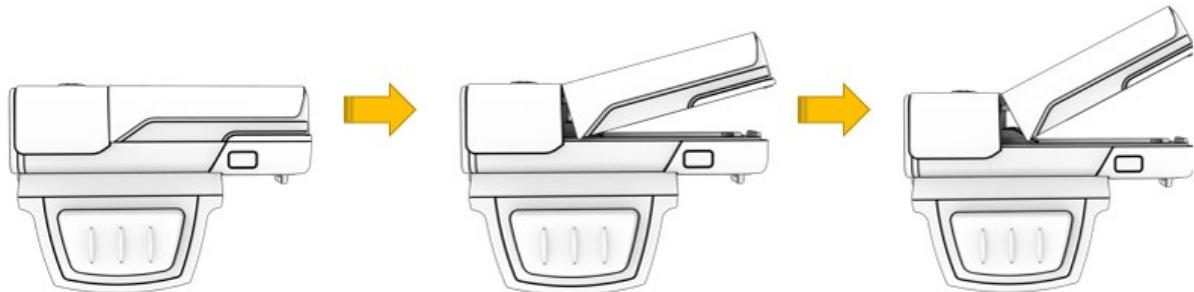
Once the battery is inserted, the device powers on immediately with zero-second boot.



- Using an unauthorized battery may cause an explosion.
- When disposing of the battery, please follow proper disposal procedures.
- Make sure the battery is inserted in the correct orientation.

Battery Removal

- Remove the battery as shown below.



If the battery is not removed properly, it may become bent or damaged.

Before removing the battery, make sure to close all running programs. Otherwise, program errors may occur.

1.3 Charging the Battery

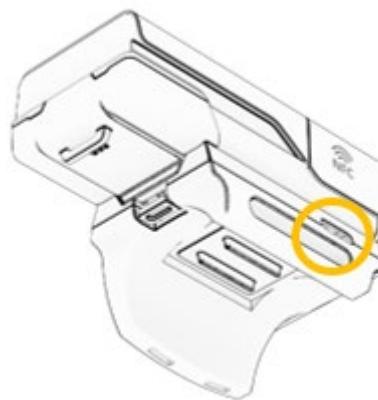
Please charge the battery when a low battery warning message appears.

If you continue to use the ring scanner without charging the battery, the device may power off.

After removing the battery from the ring scanner, you can charge it using a battery charger (3-slot, 8-slot, 16-slot, or 32-slot), or charge it via the USB Type-C port on the ring trigger.

Charging the Battery via USB

- Connect the USB Type-C cable to the USB port on the ring trigger.
- Check the LED indicator to confirm the connection status:
(Red – Charging / Green – Charging complete)



The ring trigger supports USB 2.0 charging.

Manufacturer: Sunshine Tech. Model: XSC-0502000SEUU



PD adapters are not supported and cannot be used for charging.



The M3 WR15 operates normally while the battery is being charged via USB Type-C.

Charging the Battery with an 8-Slot Battery Charger

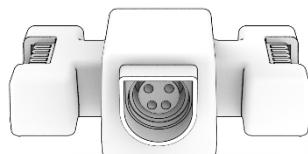
- To charge the battery, insert it into the optional 8-slot battery charger (sold separately).
- As shown in the figure below, charging will begin once up to eight batteries are placed into the battery charger.



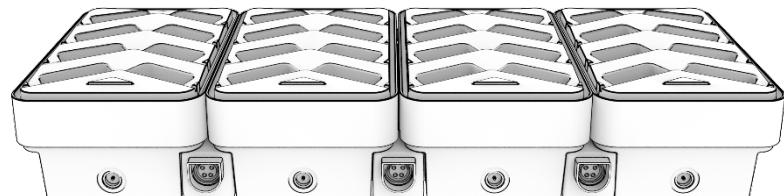
The AC adapter is designed for use with an input of 100–240V and an output of 12V $\frac{---}{---}$, 3A. Using voltages outside this specified range may cause serious damage.

Charging the Battery Using a 32-Slot Battery Charger

- Insert the battery into the cradle, which can be purchased separately, to charge the battery.
- As shown in the illustration below, you can connect the 8-slot battery chargers using a bridge to configure them as a 32-slot battery charger



Bridge



32-Slot Battery Charger



The AC adapter is designed for use with an input voltage of 100–240V and an output of 12V $\frac{---}{---}$ / 7A. Using a voltage outside of the specified range may cause serious damage to the device.

LED Color	Description
Red	The battery is charging.
Green	The battery is fully charged.
Red flashing / Green flashing	A battery that requires replacement is currently charging/ A battery that requires replacement is fully charged.
Red and green alternating flashing	Charging error



Battery Replacement Notification Function:

When the battery charger's LED indicator flashes red or green, it indicates that battery replacement is recommended. (This applies to the 3-slot, 8-slot, and 32-slot battery chargers.)



If the battery is used in environments outside the temperature range of 0°C to 50°C, the device may malfunction or be damaged.



- It is recommended to replace the battery every two years.
- Continuously charging and using the battery may shorten its lifespan.

1.4 Powering On the Device

The ring scanner (WR15) powers on immediately when the battery is inserted.

Bluetooth pairing mode is activated automatically at the same time the ring scanner is powered on.

The WR15 supports two operating modes:

- Active Mode: The WR15 scans data or transmits data via Bluetooth.
- Off Mode: The WR15 is not connected to a power source.

2 Using the Device

2.1 How to Connect to Bluetooth

2.1.1 Pairing

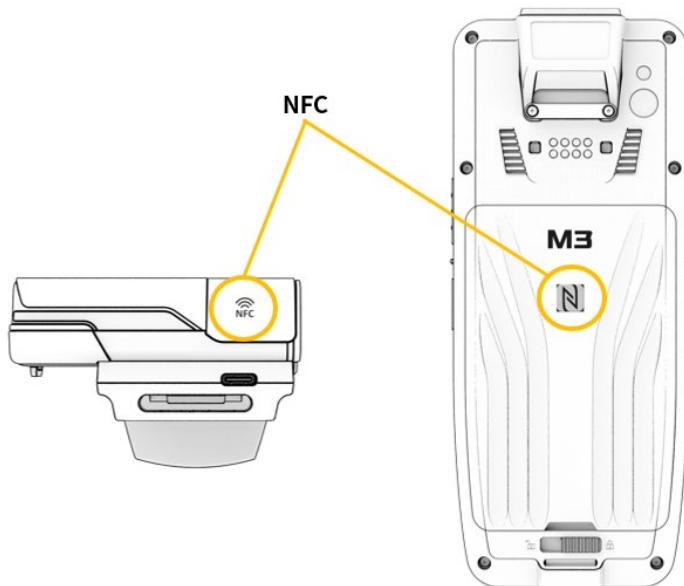
Press and hold the pairing button for 3 seconds. (Deletes existing pairing data)

2.1.2 Tap to Pair

After installing the M3 WR15 application, bring the ring scanner close to the rear side of the device.

An NFC pairing notification will appear on the device screen.

Follow the on-screen instructions to confirm pairing with the device.



Connecting the Ring Scanner to an Android Device via HID Bluetooth

- Enable Bluetooth on the Android device.
(Settings → Connected devices → Connection preferences → Bluetooth → Turn on Bluetooth)
- Select **WR15** from the "Available devices" list in the Bluetooth settings.

Connecting the Ring Scanner to a Windows Device via HID Bluetooth

- Right-click the Bluetooth icon on the Windows device screen and select **Add a device**.

2.2 Disconnecting Bluetooth

Turn off the Bluetooth function on the host device, then remove the battery from the ring scanner.

2.3 Disconnecting Bluetooth

- Make sure the battery is inserted and the device is powered on.
- Press and hold the pairing button until the system LED turns white (about 5 seconds).
- When the white LED turns on, release the pairing button, then press the pairing button again.
- When the reset is complete, a beep sounds for 1 second.
- Once the reset is completed, all settings of previously paired devices will be deleted



2.4 Scanner

2.4.1 Operating Mode

- The ring scanner operates in SPP mode by default.

Human Interface Device (HID) Mode



Serial Port Profile (SPP) Mode



2.4.2 Power Saving Mode

- If pairing mode remains active for approximately 4 minutes, the device will switch to sleep mode.
- To exit sleep mode, long press(> 3 second) top scan button or connect to Bluetooth.

2.4.3 Power Off

- Detach the battery from the device.

2.4.4 End Character Settings

Set the end character to **None**



Set the end character to **Enter**



Set the end character to **Tab**



2.4.5 Sound Settings

Mute Sound Setting



Enable Sound Setting

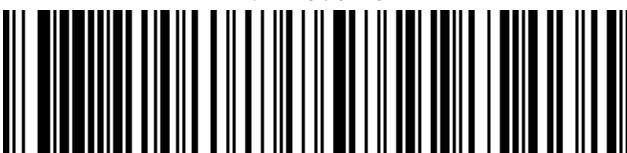


2.4.6 Illumination Settings

Illumination Off



Illumination On



2.4.7 Aim Settings

Aim Off



Aim On



2.4.8 Default Scanner Settings



2.4.9 Vibration Settings

Vibration Off Setting



Vibration On Setting



2.4.10 LED Settings

LED Off



LED On



2.4.11 Disconnection (Unpairing) Settings



2.4.12 Reading Mode

The ring scanner operates in **ASYNC mode** by default.

Set to ASYNC Mode



Set to Continuous Mode



2.5 스캐너 상태 표시

Description	LED Indicator	Beep Indicator	Vibration Indicator
Normal Operation			
Power	Red -> Green -> Blue	On melody	1sec
Battery Status			
Charging	Red	N/A	N/A
Charging Complete	Green	N/A	N/A
Low Battery (20%)	Red blinking	N/A	N/A
스캐닝 표시			
Barcode Successfully Decoded	Green single flash	1x High	N/A
Transmission Error	Red	4x Low	N/A
Radio Status			
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
Maintenance Indication			
Firmware installation	Skyblue	N/A	N/A
Programing completed successfully	Pink	N/A	N/A

3 Scanner Configuration Using QR Codes

All settings can be applied to the WR15 scanner by importing them via an M3 Configuration QR Code. To generate an M3 Configuration QR Code, please use the M3 Ring Scanner Configuration App (TBD).

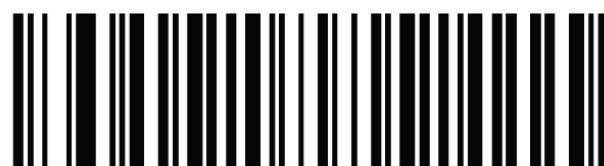
4 Appendix

If the ring scanner fails to recognize barcodes in environments that are too bright or too dark, you can adjust the illumination brightness by scanning the barcode below.

Display Mode Setting: ON

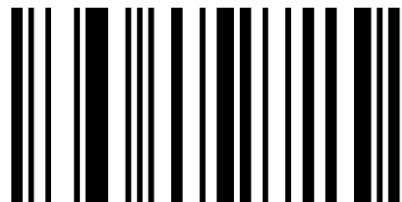
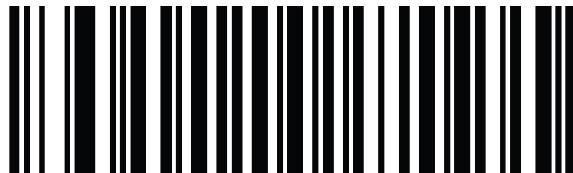


Display Mode Setting: OFF



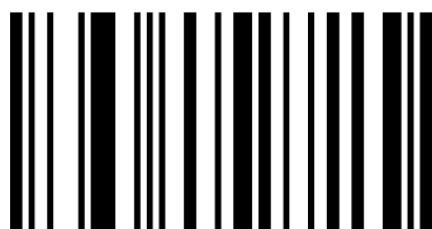
Adjust the illumination brightness to 30%

(The three barcodes below must be scanned consecutively.)



Adjust Illumination Brightness to 100%

(Scan the three barcodes below consecutively.)



5 Others

5.1 WR15 Specifications

Physical Characteristics	
Dimensions	70.7 x 33.0 x 22.1 mm
Weight	Scanner only: 29g Scanner+Battery: 55g Scanner+Battery+Trigger+HandStrap: 70g
Network Connections	WPAN(BLE)
Notification	3 RGB LEDs located, Beeper, Vibrator
Buttons	Pairing Reset, Scanner Button
Pairing	NFC: Tap to pair, Scan to Pair
Scan Triggering	Manual ambidextrous trigger
Performance Characteristics	
Power	1,000mAh
Data Capture	
Scanning	2D Imager (SE4107, E4770) Smart Focus (SE5500)
Optical Resolution	SE4107: 1280 x 960 pixels / E4770: 1280 x 800 / SE5500: 2688 x 1520 pixels
Skew, Pitch, Roll	SE4107/ SE5500: Skew tolerance: 60 / Pitch tolerance: 60 / Roll tolerance: 360 E4770: Skew tolerance: 55 / Pitch tolerance: 55 / Roll tolerance: 360
Aiming Element	SE4107: 610nm LED / SE5500: 515nm Laser / E4770: 650nm Laser diode
FOV	SE4107 - Horizontal: 44.5, Vertical: 33.5 E4770 – Diagonal: 48, Level: 42, Vertical: 30 SE5500 – Horizontal: 37, Vertical: 21.4
NFC	NFC(13.56MHz)
Wireless PAN	

Bluetooth	Bluetooth V5.3 BLE Support Classic Version
	Bluetooth classic (BDR/EDR) & Bluetooth low energy (BLE)
Regulatory	
EMI/EMC	EN 301-489-1; EN301-489-17; EN 61000-3-2; EN 61000-3-3
Electrical Safety	EN 62368-1
RF Exposure	EN 62479
Cyber Security	EN18031-1, EN18031-2
User Environment	
Operating Temperature	-20°C to 50°C (-4°F to 122°F)
Storage Temperature	-40°C to 70°C (-40°F to 158°F)
Humidity	5% to 90% RH (Non-condensing)
Tumble Test	0.5m/1000Cycle (2,000 times)
Drop Test	1.8m
Sealing	IP65
Vibration	Sine 5-2000Hz, 4g peak, 1 hour per axis; Random 20-2000Hz, 6g RMS or 0.04g2/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 WR15series are warranted against defects in workmanship and materials for a period of 1 (one) year from the date of shipment. For complete warranty statement.

5.2 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.

5.3 Contacts

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