



unitech RP902 MFi Bluetooth UHF Pocket Reader User Guide

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**RP902 MFi
Bluetooth UHF Pocket Reader
V1.2
Quick Start Guide**



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Differentiate RP902/RP902 MFi

There are five ways to differentiate between RP902 Standard Version and RP902 MFi Version:

Gift Box Outlook

RP902 MFi version will have the MFi mark on the gift box (please refer to the picture below).



P/N on the Product Label (in the battery compartment)

RP902 Standard	RP902 MFi
• RP902-33E8S0G	• RP902-33EMS0G
• RP902-43A8S0G	• RP902-43AMS0G
• RP902-43F8S0G	• RP902-43FMS0G

Product Label Color

RP902 Standard

RP902 MFi

- White



- Yellow



Operating Mode in the Setting Page

RP902 Standard

- Supports “USB SPP, BT SPP, BT HID, Buffer & BLE HID

RP902 MFi

- Only supports “USB SPP, BT SPP & Buffer”

Bluetooth Name Format on the Host Device (During Bluetooth Pairing)

RP902 Standard

- RP902_XXXX

RP902 MFi

- RP902_i_XXXX

Package

Please make sure the following contents are in the RP902 MFi gift box. If something is missing or damaged, please contact your Unitech representative.

The Package Contents

- RP902 MFi Terminal
- Battery (PN#1400-900066G)
- USB Type-C Cable (PN#1550-905908G)

Optional Accessories

- One-Slot Charging Cradle (PN#5000-900096G)
- Neck Lanyard (PN#3210-900019G)
- Power Supply (PN#1010-900067G)
- RFID tags/labels

Product View



1. Status LED	7. Antenna Area
2. Communication LED	8. Battery Lock
3. 0.96" LCD	9. Battery Cover
4. Power/Trigger Key	10. USB Type-C Port
5. Select Down/Power Off	11. POGO Pin
6. Function/Select Up Key	12. NFC Tag

Install the Battery

1. Turn the terminal to its rear side, and push the battery lock to the right to unlock the battery.



2. Grab two protrusions on both sides of the battery cover, and lift upward to remove it.



3. Insert the battery into the battery compartment from the top side and press down, make sure to leave half of the battery strap outside.



4. Press down the battery.



5. Align two hooks at the bottom of the battery cover with the recesses on the battery compartment and insert, please make sure to completely cover the battery strap.



6. Press down the battery cover, and push the battery lock to the left to secure the battery.



Note: Please ensure the battery strap is not revealed.

Specifications

Frequency	865 – 928 MHz (US/EU/JP/TW/CN)
Standard	EPC global Class1 Gen2, ISO/IEC 18000-6C
Read Range	1M: When Power is 22dBm 2M: When Power is 27dBm (Depends on the type and quantity of RFID tag and environment)
Weight	106g
Operating Time	> 12 hours with 75,000 tag readings
Charge Time	2 hours (via RP902 charging cradle) 3.5 hours (via USB type-C cable)
Bluetooth	Bluetooth® 5.0 (SPP(iAP2))
Compatibility	RP902 with MFi Version: BT: iOS (MFi) USB: Windows RP902 Without MFi Version BT: Android / Windows / iOS (BLE) USB: Windows
Operating Temp	-10°C to 50 °C

Getting Start

Turning on RP902 MFi for the first time

1. Short press the power/trigger key to power on RP902 MFi.

Note:

Power on RP902 MFi for the first time, the communication LED will show green flash first then “flashing blue light” to indicate that RP902 MFi is waiting for Bluetooth connection.

2. Enable the BT function of the host device and select “RP902_i_XXXX (RP902 MFi terminal name)” to connect with RP902. After connection, the communication LED shows solid blue light.

Note: RP902 MFi supports NFC quick pairing.

Button & LED Overview



LCD Display



Left: The icon and the alphabet indicates the operation mode.

(e.g., in the picture, it indicates Bluetooth SPP mode.)

Middle: Time

Right: Battery State

Default Settings

Operating Mode	BT SPP Mode
Read Mode	Single Read
Power Setting	22 dBm
Beep Setting	Low
Vibrate Setting	Enable
Auto Power-off	2 min

LED Indication

LED LED Status	Status LED	Communication LED
Off	Power off/ Fully charged	——
Red Solid	Battery charging	Connected with USB cable
Green Flash	RFID tag being read successfully	RP902 Mfi turned on
Blue Flashing	——	Waiting for BT connection
Blue Solid	——	BT connection success

Note:

During F/W Upgrade, Status LED will show solid red light.

Power Up/ Shut Down

Power Up

- Short press the Power / Trigger Key to power up, and you will hear short beeps (SPP mode: 1 beep/Buffer mode: 3 beeps) with green flash appears on the communication LED, then the LCD screen will appear.



Start-up Screen

Shut Down

- Long press the Select Down / Power Off button for about 3 seconds to shut down the terminal.

Power On / Off	
Power On	Short press Power / Trigger Key
Power Off	Long press Select Down / Power Off Key about 3 secs

Setting Page	
Enter the Setting Page	Short press Function / Select Up Key
Enter	Short press Power / Trigger Key
Up	Short press Function / Select Up Key
Down	Short press Select Down / Power Off Key
Read Mode	
Single read: Short press Power / Trigger Key Multiple read: Keep pressing Power / Trigger Key Counter read: Press and hold the Power / Trigger key Rapid read: Short press Power / Trigger Key Note: Please select the multiple reading mode to enable Continuous Reading.	
Return to Scan Page	
Long press Function / Select Up Key about 3 seconds	

Setting Page

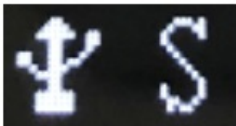


Operating Mode	USB SPP mode
	*BT SPP mode
	Buffer mode
Note: <ul style="list-style-type: none"> • The “*” indicates the default setting. • The data will be temporarily saved in the reader under Buffer Mode 	
Read Mode	*Single read
	Multiple read
	Counter read
	Rapid read
Power Setting	11-27 dBm (*22 dBm)
Beep Setting	High
	Medium*
	Low
	Mute
Vibrate Setting	*Enable
	Disable
Auto Power-off	Disable
	1-3/5/10 min (*2 min)
Factory Default	Enable/Disable

Note: For more details, please refer to RP902 MFi

User's Manual which can be download through <https://www.ute.com/en/products/detail/RP902MFi>

Data	Format	*Hex
		ACII
	Tag-Info	*EPC
		USER (0~5)
		TID
	Tag-Unique	*by EPC
		by Tag-Info
	Terminator	None/Null
		CR/LF
		Tab
	HID Char-Delay	1ms
		5ms
		*10ms
		20ms
		50ms
		100ms
Information	FW Version	
	Serial Number	
	MAC Address	
	SKU ID	
	Temperature	
Note: SKU ID: 1 = EU, 2 = US, 3 = JP		

Operating Mode

Operating Mode	
Icon	Operating Mode
	USB SPP
	BT SPP
	Buffer

Note:

Once you select a different operating mode, the terminal will automatically restart.

To enable USB SPP and BT SPP mode, please refer to Tag Access APK through the link:

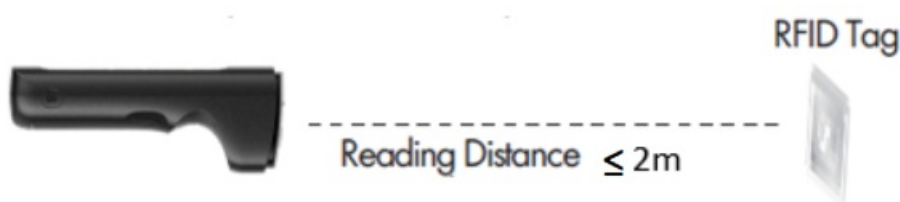
<https://www.ute.com/en/products/detail/RP902>

(Download Section) or scan the barcode on the left.



Reading RFID Tags

It is recommended to read RFID tags by aiming the antenna area of RP902 MFi at the RFID tag horizontally (as shown in the picture below.)

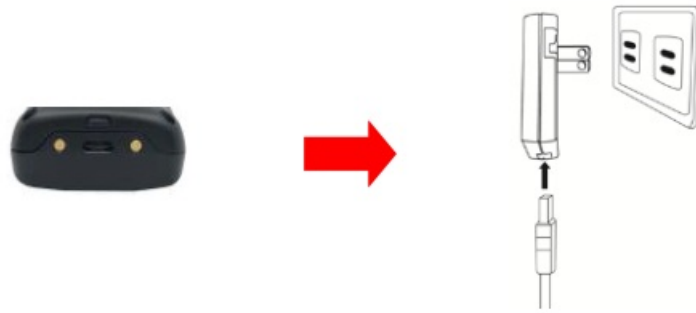


Reading distance may be impacted by the type of tag and environmental conditions.

Reading range is 1m when power is 22dBm, and the maximum reading range is 2m when power is 27 dBm.

Charging the Battery

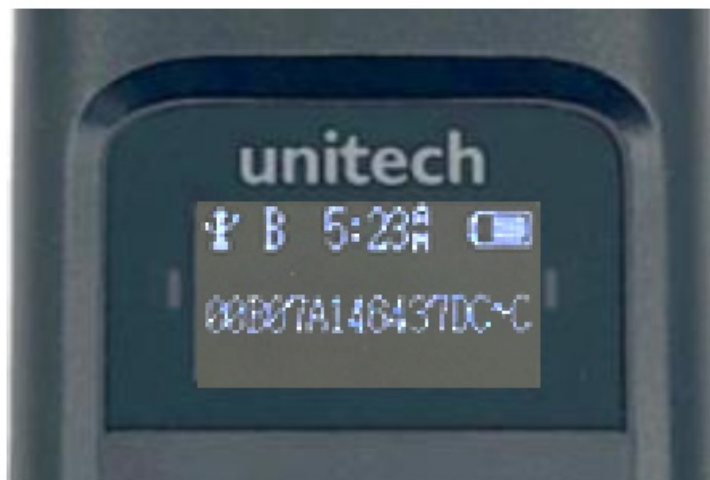
1. Plug the one end of the USB Type-C cable into the port on the reader and another end into a USB port on the host PC or power adapter.
2. Please fully charge the reader (or until the Status LED turns off) before use. Required Time for full charge:
One-Slot Charging Cradle: 2 hours USB Type-C Cable: 3.5 hours



Read Mode

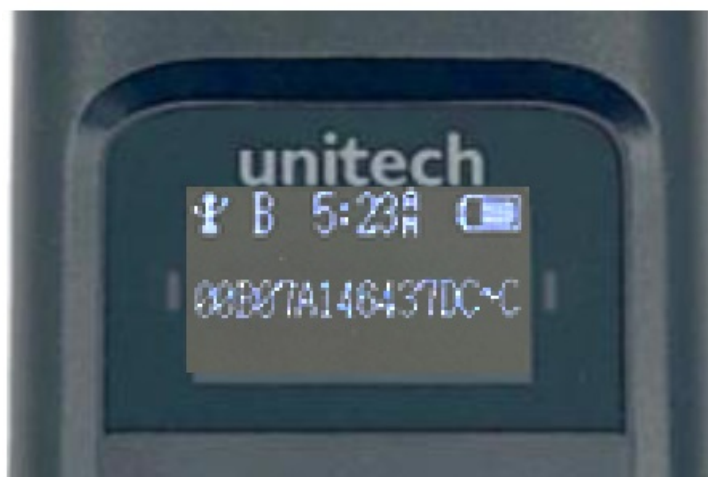
Single read: The terminal only reads one tag upon each press.

Please release the Power / Trigger Key and press again to read another tag. The LCD screen will show the EPC code of the RFID tag being read (shown as picture below).



Multiple read: The terminal can read multiple tags that are under RF coverage upon each press.

Keep pressing the Power / Trigger Key to read the tags that have not been read. The tags that had been read will not be read again, unless you release the button and press again.



When there is only one tag: Shows the EPC Code of the tag being read.



Multiple tags being read: Shows the amount of tags being read.

***Note:** Please note that RP902 MFi does not support continuous reading by single press the trigger key for more than 15 seconds. Users need to release the trigger key and press again to start a new round of reading.

Disconnect

Long press (about 3 – 5 secs.) the two buttons at the bottom of RP902 MFi at the same time to release the BT connection between the host device and RP902 MFi.



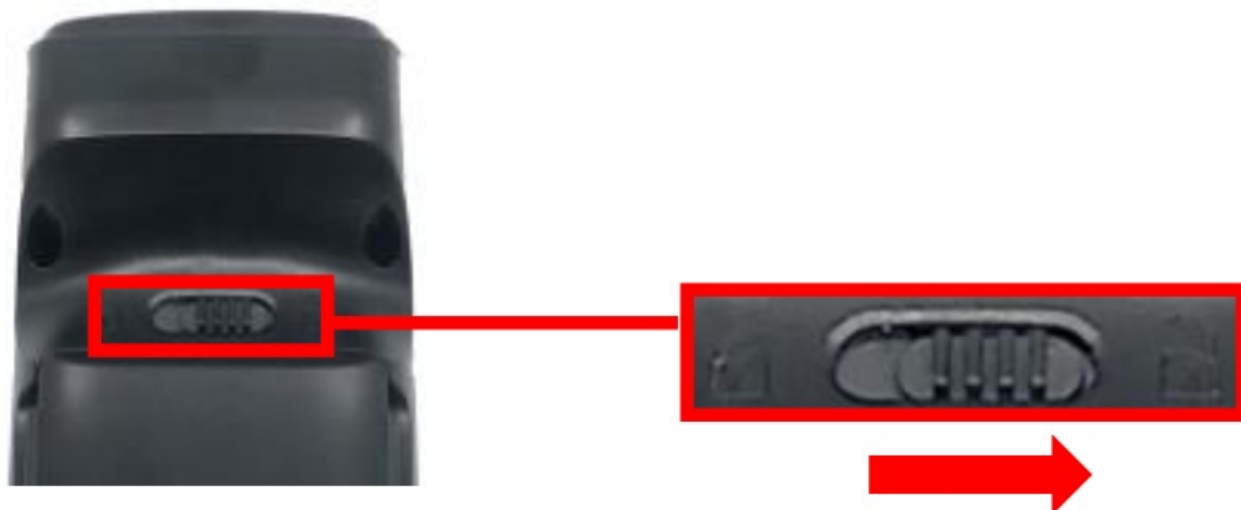
Firmware Update

Note: For more details, please refer to RP902 MFi F/W Update Instruction which can be download through <https://www.ute.com/en/products/detail/RP902MFi> (FAQ Section), or by scanning the barcode below.



Remove the Battery

1. Turn the terminal to its rear side, and push the battery lock to the right to unlock the battery.



2. Grab two protrusions on both sides of battery cover, and lift upward to remove it.
3. Pull the battery strap upward to remove.



WARNING!

There is a risk of fire and burns if the battery is handled improperly.

DO NOT disassemble, crush, puncture, short external contacts, or dispose the battery pack in fire or water.

DO NOT attempt to open or service the battery.

Dispose used batteries according to local recycling guidelines in your area.

CAUTION!

To ensure the unit working properly, please keep all connectors away from the contaminants such as dust, grease, mud, and water.

Negligence may cause the unit to lose communication, short circuit, or overheated. If the connector is damaged, please ensure the connector is fully repaired before using the unit to avoid short circuiting.




<http://www.ute.com/>

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Documents / Resources

	<p>unitech RP902 MFi Bluetooth UHF Pocket Reader [pdf] User Guide RP902, RP902 MFi, RP902 MFi Bluetooth UHF Pocket Reader, Bluetooth UHF Pocket Reader, UHF Pocket Reader, Pocket Reader, Reader</p>
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References

- [unitech Unitech Global | Your Brilliant AIDC Solution Provider](#)
- [unitech RP902 Bluetooth UHF RFID Pocket Reader â”, Unitech](#)
- [unitech RP902 MFi Bluetooth UHF RFID Pocket Reader â”, Unitech](#)

Manuals+.