unitech

RP902

Bluetooth UHF Pocket Reader

Quick Start Guide

V1.2

Package

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

The Package Contents

- RP902 Terminal
- Battery (P/N 1400-900066G)
- USB Type-C Cable (P/N 1550-905908G)

Optional Accessories

- RP902 One-Slot Charging Cradle
- Hand Strap (P/N 5500-900007G)
- Neck Strap (P/N 3210-900019G)
- Power Supply (P/N 1010-900067G)
- RFID tags/labels

Product View

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

LCD Display & Operation Mode

Left: The icon and the alphabet indicates the operation mode.
Middle: Time
Right: Battery State

Operation Mode	
Icon	**Operation Mode**
S	USB SPP
S	BT SPP
H	BT HID
B	Buffer
H	BLE HID

Note: Once you select a different operation mode, the terminal will automatically restart.

To enable USB SPP and BT SPP mode, Please click the URL Tag Access APK or scan the barcode to download.

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 Class 2, BLE 5.0 (HID / SPP)
Compatibility	**RP902 with Mfi Versinon**: BT: Android / Windows / iOS (MFi) USB: Windows **RP902 W/O Mfi Versinon** BT: Android / Windows / iOS (BLE) USB: Windows
Operating Temp	-10˚C to 50 ˚C

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 successfully read	RP902 turned on
Blue Flashing	——	Waiting for BT connection
Blue Solid	——	BT connection is successful

Note: During F/W Upgrade, Status LED shows red solid light & Communication LED shows green solid light.

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 two 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.

Install the Battery

5. Align two hooks at the bottom of the battery cover with the recesses on the batter 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.

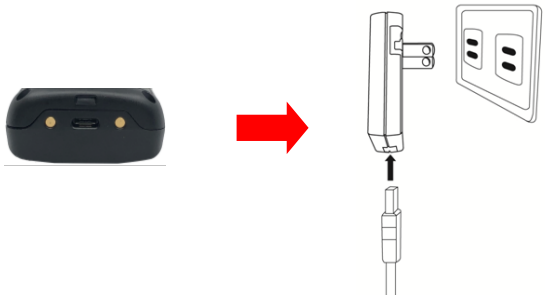
Note: Please ensure the battery strap is not revealed.

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:
   RP902 Charging Cradle: 2 hours.
   USB Type-C Cable: 3.5 hours.



Buttons Behavior

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 Reading: Short press Power / Trigger Key **Continuous Reading:** Keep pressing 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 secs	

Power Up / Shut Down

Power Up

- Short press the Power / Trigger Key to power up.
  You will hear short beeps
  (SPP mode: 1 beep/HID mode: 2 beeps/Buffer mode: 3 beeps)
  with green flash appears on the communication LED,
  then the LCD screen will appear.

Shut Down

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

Start-up Screen

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.

Setting Page

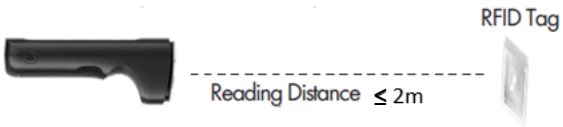
Operating Mode	**Buffer** mode
	USB **SPP** mode
	*BT **SPP** mode
	BT **HID** mode
	BLE **HID** mode
Read Mode	Multiple Read
	*Single Read
Power Setting	11-27 dBm (*22 dBm)
Beep Setting	High
	*Low
	Medium
	Mute
Vibrate Setting	*Enable/Disable
Auto-Power-off	Disable
	1-3/5/10 min (*2 min)
Factory Default	Enable/Disable

Note:

- The "*" indicates the default setting.
- The data will be temporarily saved in the reader under Buffer Mode.

Reading RFID Tags

It is recommended to read RFID tags by aiming the antenna area of RP902 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 setting is 27 dBm.

Getting Connected

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

2. After powering on RP902, the communication LED should show “flashing blue light”, it means RP902 is waiting for Bluetooth connection.

Note: RP902 Supports NFC quick pairing.

3. Enable the BT function of the host device and select "RP902_0ABB (RP902 terminal name)" to connect with RP902. After connection, the communication LED should be solid blue light.

Disconnect

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

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 two sides of battery cover, and lift upward to remove it.

3. Pull the battery strap upward to remove.

Firmware Update

Please click the URL FW Update Instructions or scan the barcode for more information .

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 of 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 staying inside of them such as dust, grease, mud, and water. The negligence may cause the unit with no communication, short circuited, Overheated and so on. If the connector is damaged, please ensure the connector is being fully repaired before using the unit to avoid causing short circuited.

http://www.ute.com/

Copyright 2022 Unitech Electronics Co., Ltd. All rights reserved.
Unitech is a registered trademark of Unitech Electronics Co., Ltd.

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:
. Reorient or relocate the receiving antenna.
. Increase the separation between the equipment and receiver.
. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
. Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

FCC Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 0.5 centimeters between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The antennas used for this transmitter must be installed to provide a separation distance of at least 0.5 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.