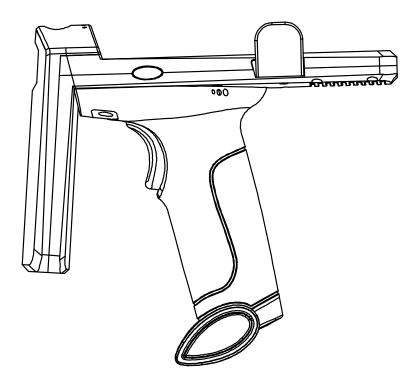
# Bluetooth/2.4G UHF handheld User manual



MM32\_2.4GBT+UHF\_V1.2-200914

### 1. 2. Introduction and Features ......1 3. Product parameters ......2 Connection method ......4 4. 5. Indicator light description ......4 6. 7. 8. Frequently Asked Questions ......14 9.

# list

# **User notice**

1. Please read this user manual carefully before using this device

2. The charging voltage of the handheld is 5V, please charge with a suitable power supply

3. The company reserves the right to make changes to any product to improve its reliability, improve its function or design, for the application or use of any product, circuit, or related to or related to other applications described herein. The company is not responsible for any product liability arising therefrom.

4. Handheld accessories

The standard configuration of the handheld: a handheld, a receiver, a USB cable, a manual, a product certificate.

5. The contents of this manual are subject to change without notice.

# Introduction

UHF handheld is a special card reader and barcode scanner that supports one-dimensional code/two-dimensional code/915Mhz UHF tags based on barcode recognition, RFID radio frequency identification technology and Bluetooth communication. Not only the power consumption is low, the standby time can be as long as 1 year, which changes the traditional data line transmission method, and there is no need to load additional power (the handset comes with a lithium battery). Only the receiving end Bluetooth and the handset Bluetooth pairing are successful Upload the epc number of the UHF tag directly to the receiving end of the device via Bluetooth.

# Characteristic

1. No password authentication is required for pairing, and it can be paired directly.

2. Sensitive scanning code recognition rate is high

3. 3500mA/h large-capacity battery ultra-long standby (normal charging 8 hours, standby time up to 1 year)

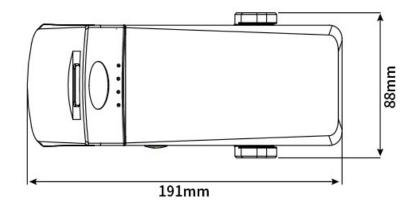
4. The handheld has a long communication distance, and the Bluetooth stable communication distance is up to 10 meters. The wireless 2.4g outdoor communication distance is up to 150 meters.

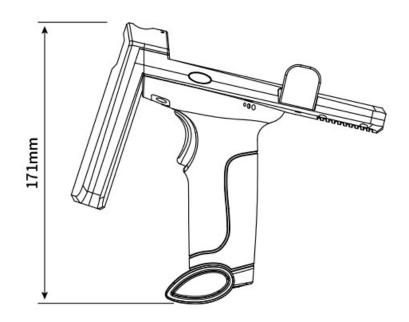
5. Equipped with a mobile phone holder, which can combine the mobile phone with the handheld, which is more convenient to use

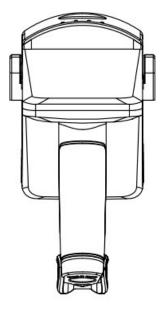
- 6. Fast transmission speed, no need to load program.
- 7. It can be charged directly with the mobile phone charger plug.
- 8. The data output defaults to the carriage return function, without manual selection.
- 9. It is widely used in Windows, IOS, Android and other devices with Bluetooth communication.

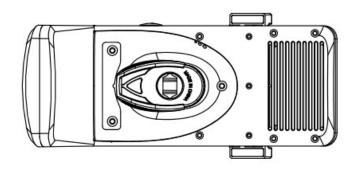
# **Product parameter**

project	parameter
model	R12
Working frequency	915Mhz
Card reader type	ISO 18000-6C
Barcode type	One-dimensional code, two-dimensional code, screen code
communication method	USB/Bluetooth/2.4G wireless
Reading distance	Om-3m (the specific effective reading distance is related to the tag type)
Card reading rate	106K/Bit
Card reading speed	0.15
Reading distance	0.5S
Card reading time	<100mS
Operating temperature	-20°C—70°C
Working current	100mA
Charging voltage	5V
battery capacity	3500MA/H
Size	171mm×191mm×88mm (product)/225mm×205mm×95mm (including packaging)
Weight	400G (net weight)/600G (including packaging)
operating system	Operating systems such as IOS\WINXP\Win 7\Win 10\Android\LINUX
Other	Status indicator: 4-color LED
	"Red" charging indicator light; "green" reading indicator light
	"Orange Red" working indicator light; "Blue" connection indicator light
	Built-in buzzer sound









- 3 -

# **Connection method**

This product has three connection methods, USB cable direct connection, wireless 2.4g and Bluetooth

The USB wired connection method is as follows:

1. Short press the handset trigger button to turn on

- 2. Connect the handheld and the device with the supporting USB cable.
- 3. Open the corresponding software on the device to scan and enter.

The wireless 2.4g connection method is as follows:

1. Short press the handset trigger button to turn on

2. Connect the wireless receiver to the USB port of the device.

3. Open the corresponding software on the device to scan and enter.

The Bluetooth connection method is as follows:

- 1. Short press the handset trigger button to turn on
- 2. Turn on the Bluetooth function of the mobile phone or other device and search for Bluetooth devices.
- 3. Find the device named "FSC-BT957" and click Connect.
- 4. With a beep when the pairing is successful, the blue indicator light is always on.

# **Indicator light description**

- 1. "Red" charging indicator light: always on when charging
- 2. "Green" reading indicator: flashes once after successful card reading/scanning
- 3. "Orange red" work indicator: always on after power on
- 4. "Blue" connection indicator light: flashes when connected, and always on after a successful connection

# **Operation instructions for card reading function**

Press the side function key, when the buzzer sounds once, it will enter the card reading mode, support the label of ISO18000-6C protocol, and the recognition distance can be up to 3m (the distance may vary according to the type of label)

After connecting the device, open the software (such as a form or text file) that needs to record the card number, and place the cursor at the position that needs to be entered to operate the card reading. The format and function operations are as follows:

#### 1. Connecting devices and software

Connect the card reader with the computer, double-click to open the application program

The current format of the card reader will be displayed in the status box on the right side of the software.

**X** System Stype About USB reader intelligent set... Prefix suffix Data Input Receive... AA000A000001000000010181000ABB Read data success 11:27:59 AM -output format setting -The Output format : 8 no. in HEX (7 🔲 10 no. in D reverse 10 no.in D(four byte) bvte) The Output format : do not add semicolon The Output format : do not add , 🔲 8 no. in HEX 🔲 8 no. in HEX reverse The Output format : do not add ? The Output format : add enter 🔲 00+8 no. in D (last 3 bytes) 🔲 8 no. in D (last 3bytes) no add customize data... 🔲 5 no. in D 🔲 8 no. in D (last 4 bytes) The current format is displayed in 🔲 13 no. in D 🔲 18 no. in D the status box 🔲 GS1 no (sgtin-96) 🔲 10 no. in HEX -All EPC Card Numberscard number 12-7-4 reverse epc card number 12-7-4 BYT 🔲 2H4D 🔲 8 no. in D (last 4 bytes) 🔲 add , in middle 🗌 add ? 🔲 add ; add "Enter" Click the botton Factory default Fatory default Read Close voice Reader type Format setting Active reading Passtive reading Reading versio Version number Set 2020.07.10 11:28:33 AM RFID Format output card number



software.... , and click the read button.

# Bluetooth/2.4G UHF handheld

Format output card number			<b>X</b>
<u>S</u> ystem S <u>t</u> ype <u>A</u> bout			
USB reader intelligent set Prefix suffi	ix Data Input	data error, please check Device	
_output format setting		Connection	
<ul> <li>10 no.in D(four byte)</li> </ul>	🔲 10 no. in D reverse	Data error, no data recevice PM	05:34:32
🔲 8 no. in HEX	8 no. in HEX reverse		
🔲 8 no. in D (last 3bytes)	🔲 00+8 no. in D (last 3 bytes)		

#### 2、Reader status output format

## 2.1 Output format setting

💀 Format output card number		
<u>S</u> ystem S <u>t</u> ype <u>A</u> bout		
USB reader intelligent set Prefix suffix Data	Input	Receive AA0002008082BB
-output format setting		Set Up Success 11:30:40 AM
<ul> <li>10 no.in D(four byte)</li> </ul>	🔲 10 no. in D reverse	After setting, the status box
🔲 8 no. in HEX	🔲 8 no. in HEX reverse	After setting, the status box shows that the setting was successful
🔲 8 no. in D (last 3bytes)	00+8 no. in D (last 3 bytes)	
🔲 8 no. in D (last 4 bytes)	🔲 5 no. in D	
🔲 18 no. in D	🗆 13 no. in D 🛛 🕘 Choose the forma	at you want
🔲 10 no. in HEX	🔲 GS1 no (sgtin-96)	
All EPC Card Numberscard number 12-	7-4 reverse epc card number 12-7-4 BYT	
🔲 2H4D 🔲 8 no. in D (l	last 4 bytes) 🔲 add , in middle	
🔲 add ; 👘 a	dd ? 🔄 add "Enter"	
Format setting		
RFID Format	output card number	2020.07.10 11:32:40 AM

## 2.2 Reader type settings

🚱 Format output card number		
<u>S</u> ystem S <u>t</u> ype <u>A</u> bout		
USB reader intelligent set Prefix suffix	Data Input	ReceiveAA0002008082BB
output format setting		Send buzzer shutdown instructions
10 no.in D(four byte)	🔲 10 no. in D reverse	ReceiveAA0002008082BB Set Active reading success 11:35:32 AM
		ReceiveAA0002008082BB
🔲 8 no. in HEX	8 no. in HEX reverse	Set Passtive reading success 11:35:32 AM
🔲 8 no. in D (last 3bytes)	00+8 no. in D (last 3 bytes)	
8 no. in D (last 4 bytes)	2 5 no. in D	When the Settings are complete, the
o no. In D (iast 4 bytes)		status box displays the Settings
🔲 🔲 18 no. in D	🗍 13 no. in D	
	_	
🔲 🔲 10 no. in HEX	🔲 GS1 no (sgtin-96)	
All EPC Card Numberscard numbe	er 12-7-4 reverse epc card number 12-7-4 BYT	
2H4D 🔲 8 no. ii	in D (last 4 bytes) 🔲 add , in middle	
🗌 🗖 add ; 👥 🚺 🚹	Set the card reader work type according to t	the requirements
Read Reader	r type Close voice Factory default Fatory default	
Format setting		
Set	reading Passtive reading Reading versio Version number	
RFID For	mat output card number	2020.07.10 11:35:34 AM

2.3 Restore factory settings and version number query

💀 Format output card number		
<u>S</u> ystem S <u>t</u> ype <u>A</u> bout		
USB reader intelligent set Prefix suffix Data	Input	ReceiveAA0002008082BB
_output format setting		Restore factory settings Success
10 no.in D(four byte)	🔲 10 no. in D reverse	11:37:44 AM
🔲 8 no. in HEX	🔲 8 no. in HEX reverse	ReceiveAA001B004D4D33325F52463931355F5 2575F56312E34612D3230303632335DBB read version number success 11:37:46
🔲 8 no. in D (last 3bytes)	00+8 no. in D (last 3 bytes)	AM
🔲 8 no. in D (last 4 bytes)	🗇 5 no. in D	the version number is: 4D4D33325F52463931355F52575F56312E34612D3 23030363233
🔲 18 no. in D	🔲 13 no. in D	
🔲 10 no. in HEX	2 GS1 no (sgtin-96)	The Settings are displayed in the status box
All EPC Card Numberscard number 12-	7-4 reverse epc card number 12-7-4 BYT	
🖸 2H4D 🔲 8 no. in D (l	ast 4 bytes) 🔲 add , in middle	
add;	dd? Click the botton	
Read Reader type Format setting Active rea		
Set Active rea	ding Passtive reading Reading versio Version number	
RFID Format	output card number	2020.07.10 11:37:48 AM

#### 3、 Prefix and suffix data entry

#### 3.1 Prefix and suffix settings

Fill in the prefix and suffix that need to be added here, up to four bytes. After completing, click the setting button behind, the status

window on the right side will display the successful setting, as shown in the figure:

🚯 Format output card number	
System Stype About Select "Prefix suffix data inp	out" button
USB reader intelligent set Prefix suffix Data Input	Receive AA0002008082BB
Prenx surnx setting	Set prefix Success 11:39:18 AM
Prefix: 30 31 32 33 Prefix seting	
First byte Second byte the third byte The fourth byte	ReceiveAA0002008082BB Suffix setting Success 11:39:21 AM
Suffix: 31 32 33 34	
Suffix setting	It is tatus box displays the
First byte Second byte the third byte The fourth byte	results
searcicard interval: 10 range : 00~255, Unit:10ms Setting	
card filter number: 10 range 00~255 ,00 output allthe time Setting	
outp 2 to Input the prefix and suffix to be set and click the botton t	to confirm
wiegand open     wiegand close	
💽 USB open 🔲 USB close	
Setting baud rate : 9600 baud rate Settting	
Serial port end symbol: 02 00 none, 01 means 0D, 02 means 0D0A Setting	
Set RF power 02 00~11, means 12.5db~30db Setting	
Wiegand output format: 00 00WG26 01WG34 02WG66 03WG98 Setting	
Wiegand value position: 09 12 bytes card number + place of value Setting	
DA         DA         Setting           wiegand Low level pulse width (0x01^0xFF) UNIT 10US         Setting         Wiegand Idle level(0x01^0xFF) Unit 100US	
RFID Format output card number	2020.07.10 11:39:23 AM

#### 3.2 915M machine information

Card search interval value refers to the time interval between two card readings. The larger the value, the longer the interval time; Card filtering times refer to the number of repeated card readings. The larger the value, the longer the interval between repeated readings;

Output interface setting, open or close the corresponding interface according to requirements, click the setting button to complete the setting;

The default baud rate is 9600, select the required value and click the right setting button to complete the setting;

Add a serial port input terminator, enter the character to be set in the input window, and click the set button to complete the setting;

RF power setting, the greater the value, the higher the power, the farther the sensing distance, enter the required value, click the

setting button to complete the setting;

Wiegand output format, enter the corresponding value, representing the corresponding format, click the setting button to complete

the setting;

Wiegand value location, 12-byte card number, fill in the required location, click the set button to complete the setting;

Wiegand low-level pulse width range and Wiegand idle-level pulse width range, fill in the value to be set (0x01~0xFF), click the setting

button to complete the setting, as shown below:

🕅 Format output card number 🛛 🛛 🗷		
<u>S</u> ystem S <u>t</u> ype <u>A</u> bout		
USB reader intelligent set., Prefix suffix Data Input	ReceiveAA0002008082BB	
Prefix suffix setting According to the requirements to set the Prefix: <sup>30</sup> corresponding parameters or options, Prefix seting	search card interval success 11:42:24 AM	
First by click the right button to confirm The fourth byte	ReceiveAA0002008082BB Set card filter number Success	
Suffix:     31     32     33     34       First byte     Second byte     the third byte     The fourth byte	11:42:25 AM	
-915M device information search card interval: 10 range : 00~255, Unit:10ms Setting	ReceiveAA0002008082BB putput interface setting Success 11:42:25 AM	
card filter number: 10 range 00~255 ,00 output allthe time Setting	Receive AA0002008082BB	
output interface setting:	Setting baud rate Success 11:42:26 AM	
wiegand open     wiegand close     USB open     USB close	Serial port end symbol Success 11:42:26 AM	
Setting baud rate : 9600 baud rate Settting	ReceiveAA0002008082BB Set RF power Success 11:42:27 AM	
Serial port end symbol: 02 00 none, 01 means 0D, 02 means 0D0A Setting	Receive AA0002008082BB	
Set RF power 02 00~11, means 12.5db~30db Setting	Viegand output format success 11:42:27 AM	
Wiegand output format: 00 00WG26 01WG34 02WG66 03WG98 Setting	ReceiveAA0002008082BB Set Wiegand value position success	
Wiegand value position: 09 12 bytes card number, place of value Setting	11:42:28 AM	
0A         Setting           wiegand Low level pulse width (0x01~0xFF) UNIT 10US         Wiegand Idle level(0x01~0xFF) Unit 100US	2 The status box displays the results	
RFID Format output card number	2020.07.10 11:42:28 AM	

# Scan code function operation instructions

Press the side function key, when the buzzer beeps twice, it will enter the scan code mode, aim at the barcode

scan to upload the barcode data to the device. Scan the corresponding setting code below to adjust the function

of the handheld. Some scan feedback information needs to be displayed on the document.

#### **Basic system settings**

1. Restore the initial state by scanning the "Restore Factory Settings" barcode



(%%Restore)

2. Turn off the device by scanning the "shutdown command" barcode



(%%Power Off)

3. There is no response when the wireless receiver is plugged in. It is paired by scanning the "One Piece Pairing" barcode. Scan

first, and then plug the receiver into the computer to complete the pairing after hearing a continuous beep.



(%%EZPair)

4. Check the remaining battery power of the device by scanning the "Display battery power" barcode, and the scanning result

will appear in the cursor input area



(%%Batt)

5. Scan the "software version information" barcode to view the device version number, the scan result will appear in the cursor

input area



(%%Version)

#### **Buzzer settings**

1. Turn on the buzzer of the device by scanning the barcode of "Enable Scanning Prompt Tone"



(%%BZOpen1)

2. Turn off the buzzer of the device by scanning the barcode of "Turn off the scanning prompt tone"



(%%BZClose1)

End character setting

1. Add a carriage return to the output suffix by scanning the "Add carriage return" barcode



(End CR)

2. Add the TAB character to the output suffix by scanning the "Add TAB" barcode



(%%EndTab)

3. Add a carriage return and a newline character to the output suffix by scanning the "Add carriage return + line feed" barcode



(%%EndCRLF)

4. Set the output result without suffix by scanning the bar code "EndNone"



(%%EndNone)

#### Sleep time setting

Scan the "sleep time SET" barcode to enter the setting mode, and then scan the sleep time you want to set



sleep time SET(%%ALLTIMSET)



30 Sec(%%ALLTIM01)



60 Sec (%%ALLTIM02)



5 Min (%%ALLTIM04)



10 Min (%%ALLTIM05)



No sleep (%%ALL\*TIDIS)

#### Mode setting

The scanner has three operating modes: normal mode, inventory mode and non-loss mode. The operating mode can be switched through different setting codes

• In normal mode, the scanned data is directly transmitted to the computer or mobile phone via wireless or Bluetooth, and the scanner will emit a low-frequency short tone after the transmission is successful. If the transmission fails, 3 short low-frequency tones will be issued to warn. In normal mode, if the transmission fails, the scanned barcode will be lost.



(%%ALLPT-SET)

• If the scanner works beyond the wireless or Bluetooth transmission range, it is recommended to use the inventory mode. In inventory mode, the scanned data is stored in the internal storage of the scanner. When a barcode is scanned, the scanner will emit a short tone, and the scanned barcode will be automatically stored in the scanner. If the internal storage is full, the scanner will emit 3 low-frequency short tones as a warning, read the scanner's The setting code will be introduced later.



(%%ALLMEM-SET)

• In the non-lost mode, the barcode scanned by the scanner will be directly transmitted to the computer or mobile phone if it

is successful, and will be automatically stored in the scanner's internal storage when it fails to solve the problem of data loss



(%%ALLAEM-SET)

#### Data management

Scan the "Total Data" barcode to view the number of barcodes stored in the scanner, and the result is displayed in the cursor

input area



Total Data (%%ALLMEM-ZS)

Upload the stored data by scanning the "Data Upload" barcode. The barcode stored in the scanner will not be deleted

automatically after the data is uploaded, and the user can upload the stored data multiple times by scanning "Data Upload".



Data Upload (%%ALLMEM-SC)

Scan the "Clear Data" barcode to clear the stored barcode data. After the barcode is cleared, upload can no longer be performed.

Please confirm whether the data has been uploaded before clearing.



clear data (%%ALLMEM-QC)

# common problem

- Why can't the barcode be uploaded to the computer or mobile phone after pairing?
- 1. Confirm whether the pairing is successful, the first blue LED indicator on the right side of the pairing is always on
- Whether the inventory function is enabled (bar codes will not be automatically uploaded in inventory mode, you need to manually scan the corresponding setting code to upload)
- 3. Change to normal mode and upload while scanning
- What should I do if the device fails to connect after the wireless receiver is plugged in?

Unplug the receiver, and then scan the one-key pairing setting code for pairing. After scanning, it will emit a

continuous low beep tone. At this time, plug the receiver into the computer. When the tone stops, it indicates that

the pairing with the receiver is successful. used

• Why there is no response when scanning the setting code?

Scan the setting code that shows the version number to check the version number and make sure it is the

software version that matches the current manual

• How to change more scan settings

Please contact the manufacturer

# Precautions

- The card reader only reads radio frequency cards and barcodes, including ISO18000-6C tags, one-dimensional codes and two-dimensional codes, and does not support reading Bluetooth card data (Bluetooth card frequency band is 2.4G);
- When scanning codes or reading card data, please switch the input method of the mobile phone or other platforms to English for more complete data output;
- The way of reading the card, it is recommended to use the card directly facing the card reader and approach it naturally. The card reading method that uses the card to quickly swipe from the side is not advisable and

does not guarantee the success of the card.

- The configured data cable does not have communication function and is only used to charge the card reader.
   The card reader cannot upload data to the operating platform with this data cable.
- There are many factors that affect the card reading distance. Different protocols, different antenna designs, surrounding environments (mainly metal objects), and different cards will all affect the actual card reading distance;
- The handheld has its own sleep system. When the card reader is not in use, it will automatically sleep after 60s. If you need to restart it, press the button again, and the card reader can enter the working state again.
- If the data cable is directly inserted into the charging plug, the card reading will be unsuccessful.
- If the reading distance of the card reader is too long, it will cause the card reading to be unstable or fail.
   Avoid reading the card in a critical state (the distance just to be able to read the card). At the same time, two readers that are too close will interfere with each other.
- When swiping the card, it is recommended not to operate the mouse to avoid data transmission errors.
- The length of the communication cable between the card reader and the computer should be less than 15 meters.
- No response when swiping the card:
- 1. Check if the interface is plugged in;
- 2. 360 antivirus software block, close antivirus software or add whitelist;
- The driver cannot be recognized repeatedly, right-click on the calculator, select Device Manager, ergonomic input device, then right-click the mouse, select the driver delete, click the operation in the menu bar, select the scan detection hardware;
- 4. Whether the radio frequency card is the corresponding RFID card type;
- 5. Whether the radio frequency card is broken;
- 6. Whether another radio frequency card is within the reading range.
- Data transfer error: whether the mouse is operated when swiping the card; whether the card is read in an environment with strong electromagnetic field interference; whether the communication cable between the card reader and the computer is too long; whether the card is read in a critical state.
- After reading the card, the buzzer will beep 3 times, and you should check if the connection is successful