

WE-T206-Z Social Distance Tag User Manual

Hainan Shidai Technology Co., LTD. 2020/6

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Environmental Protection

This product complies with the design requirements of environmental protection, and the storage, use and disposal of the product shall comply with the relevant national laws and regulations.

Preface

The 2m-Ranger is a UWB-based distance measurement system developed by World Electric Technology, featuring high precision, low latency, strong anti-interference capability, and low power consumption. The wearable tag continuously monitors distances to surrounding tags. When the distance falls below the safety threshold, it immediately triggers an alert to prevent people from approaching others and reduce the risk of virus transmission.

Users can choose to record or not record contact events based on their data needs. When contact events are recorded, the social distancing gateway can retrieve the event data stored in the terminal, providing data support for analyzing and tracing close-contact incidents.



Application Diagram

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1 WE-T206-Z Social Distance Tag Introduction

1.1 Brief Introduction

The WE-T206-Z is a terminal device for social sequencing systems, supporting various wearables including wristbands, armbands, and helmets. It features vibration alerts, high precision, large storage capacity, strong multi-path resistance, and low power consumption.

1.2 Surface

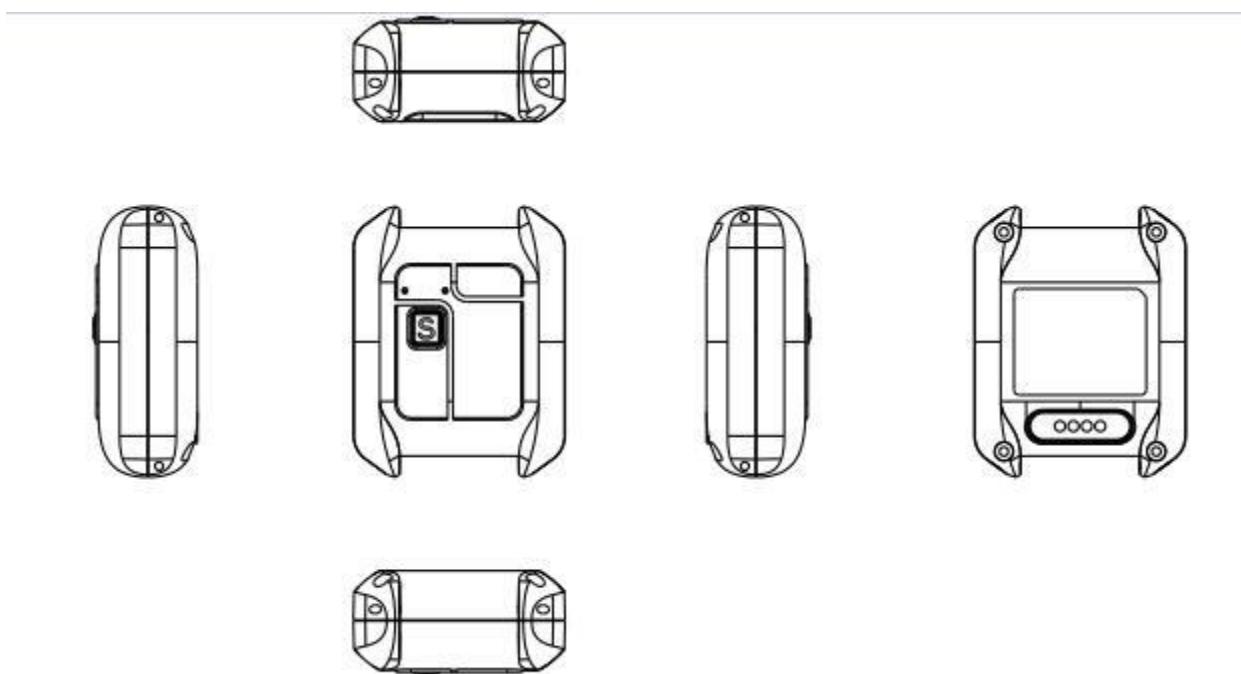


Figure 1: Six Views of the Product

1.3 Product List

See the example in the figure.

Figure 2 Product List

The product list in Figure 2 shows, from left to right, the label, charging cable, wristband, buckle (optional), and TTL to USB adapter cable (included with the first purchase).

1.4 Size of Product

Size of product	
Label Model	WE-T206-Z
Alarm type:	Shake
Battery	Rechargeable polymer lithium battery 600mAh

Ranging accuracy	$\leq 10\text{cm}$
Size (mm)	51×40×19.6
Weight (g)	26
Working frequency band	3.25GHz ~6.75GHz(Channel 1/2/3/5)
Duration of flight	10~15h
RF specifications	IEEE802.15.4a
Working temperature	-20~65℃
Working humidity	0%~90% no condensation
Levels of protection	IP67

2 Product Instructions

2.1 Product Formation

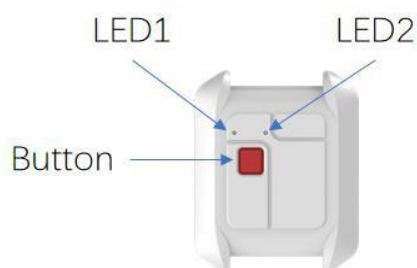


Figure 3 Product Composition

2.2 Wear

Spire lamella	Armlet	Wear a helmet
		

Figure 4 Wearing Diagram

2.3 Indicator Description

Factory Mode	Distance measurement & alarm mode	Low power status <30%	Charged state	Fully charged
				
Not bright	LED2 Green Blink	LED1 Red blink	LED1 Blue	LED1 Green

Figure 6 Indicator Light Description

2.4 Charging Instructions



Graph 7 Charging Instructions

2.5 User's Manual

2.5.1 Operation Declaration

Distance measurement & alarm mode



LED2 Green Blink

The wristband enters factory mode upon arrival or after charging, then switches to distance measurement alert mode to begin operation.

To operate: Press and hold the button for over three seconds until the green LED2 light turns on, indicating successful operation. This will activate the distance measurement and notification function.

Alarm mode.

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Indicator status: LED2 is flashing green.

Non-measuring mode (for administrators)



LED2 Green Blink



Not bright

Enabling the no-distance-measurement mode prevents alarm vibrations and extends standby time. In this mode, the wristband only transmits data without measuring distance or vibrating. To set it: Press the BUTTON button once, wait 1 second, then press again and hold for 3 seconds until LED2 flashes slowly green, indicating successful configuration.

Indicator status: Before data transfer is complete, LED2 flashes slowly in green.

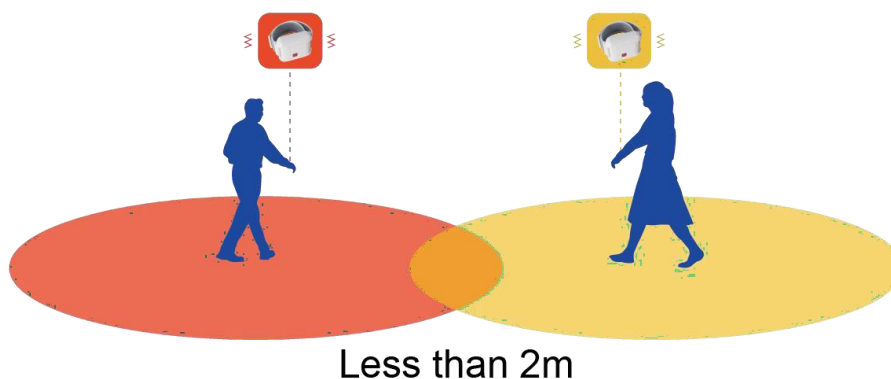
After the data transfer is complete, LED2 will turn off.

white list

The wristbands with the corresponding white list will not trigger mutual alerts for one hour. After one hour, they will return to distance measurement and alert mode. Operation method: When two or more wristbands are pressed for over 3 seconds within the alarm range, the corresponding settings will be configured.

white list 。

2.5.2 Alert Description



When a tag enters the alarm range, the corresponding tag with a distance within the alarm range will vibrate. If the corresponding tag remains within the alarm range, it will only vibrate for up to 20 seconds. The vibration stops when it leaves the alarm range.

When leaving the alarm range, a record is generated and stored in the tag. When the tag approaches the gateway, the data is uploaded.

3 Configure Tools

As shown in the figure below, the image is to be arranged.

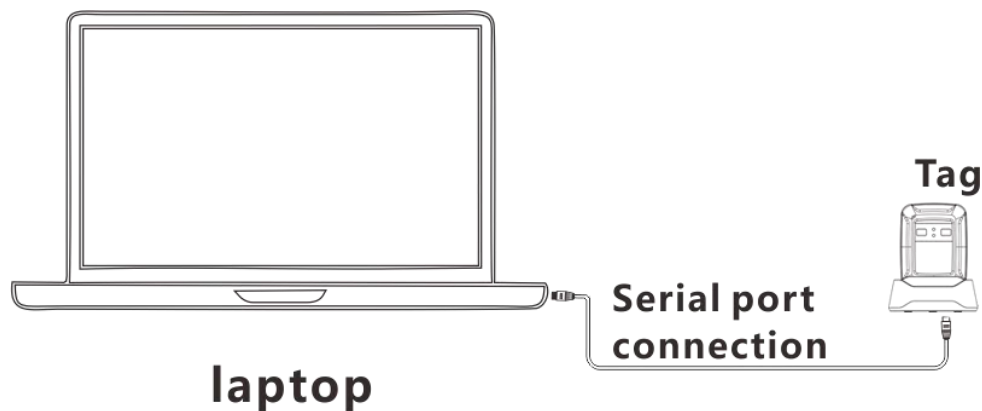


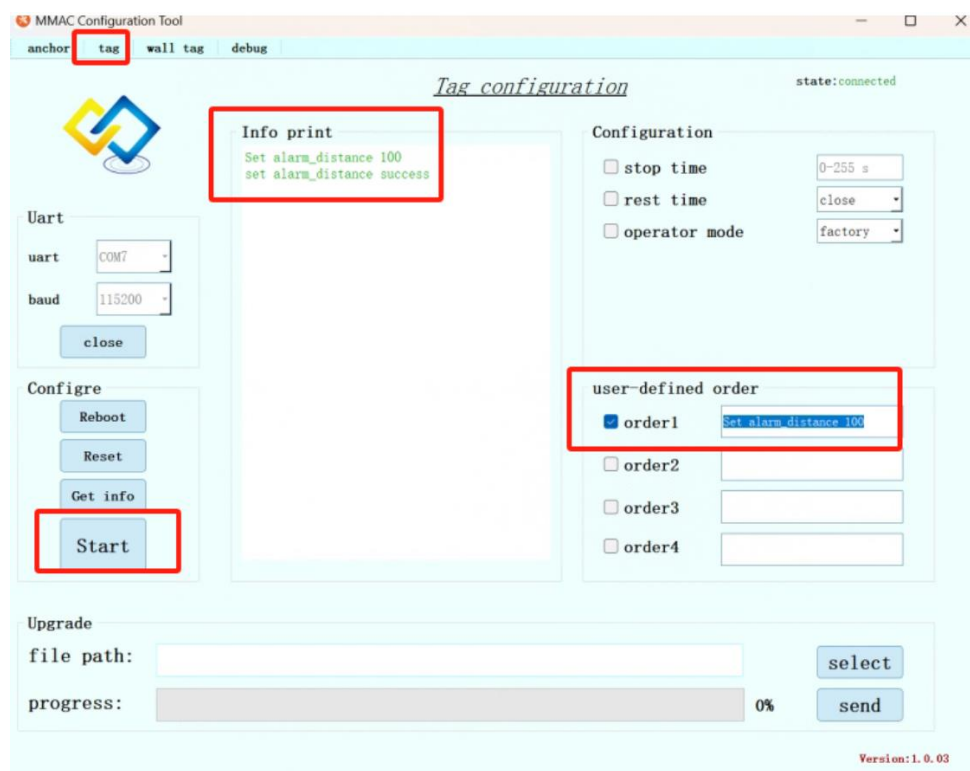
Figure 8 Connection Diagram

3.1 About the Tool

- 1 Open the configuration host file [mmac_tool_alpha\(English\)](#) .
2. Connect the configuration cable to the computer and launch the serial port configuration tool from Shidian Technology.

✖ MMAC_TOOL

, as shown in the figure below:



3 Select the TAG option. The software automatically detects the connected serial port with a default baud rate of 115200. Click OPEN to open the serial port.

In the User-defined order option, select order1 to enter the corresponding command, then click the Start button.

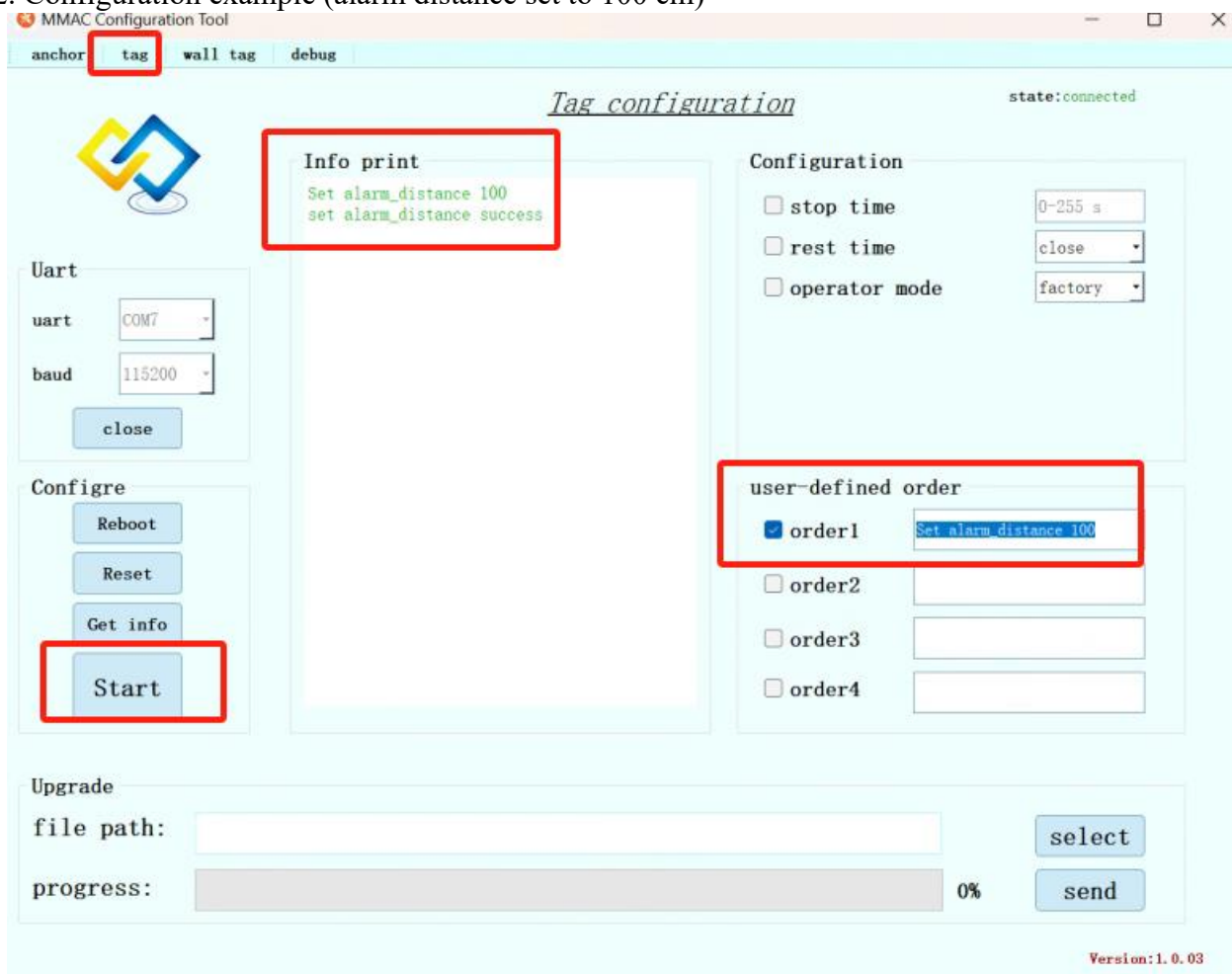
3.2 Direction for Use

1. Configure the

Reset command	Factory data reset
Reboot	Restart
Get mac	View tag ID
Set work_mode 1	Set the working mode (0 is factory mode)
Set alarm_distance 300	Set the alarm distance to 300cm (value 100-500 cm)
Get alarm_distance	View label settings for alarm distance

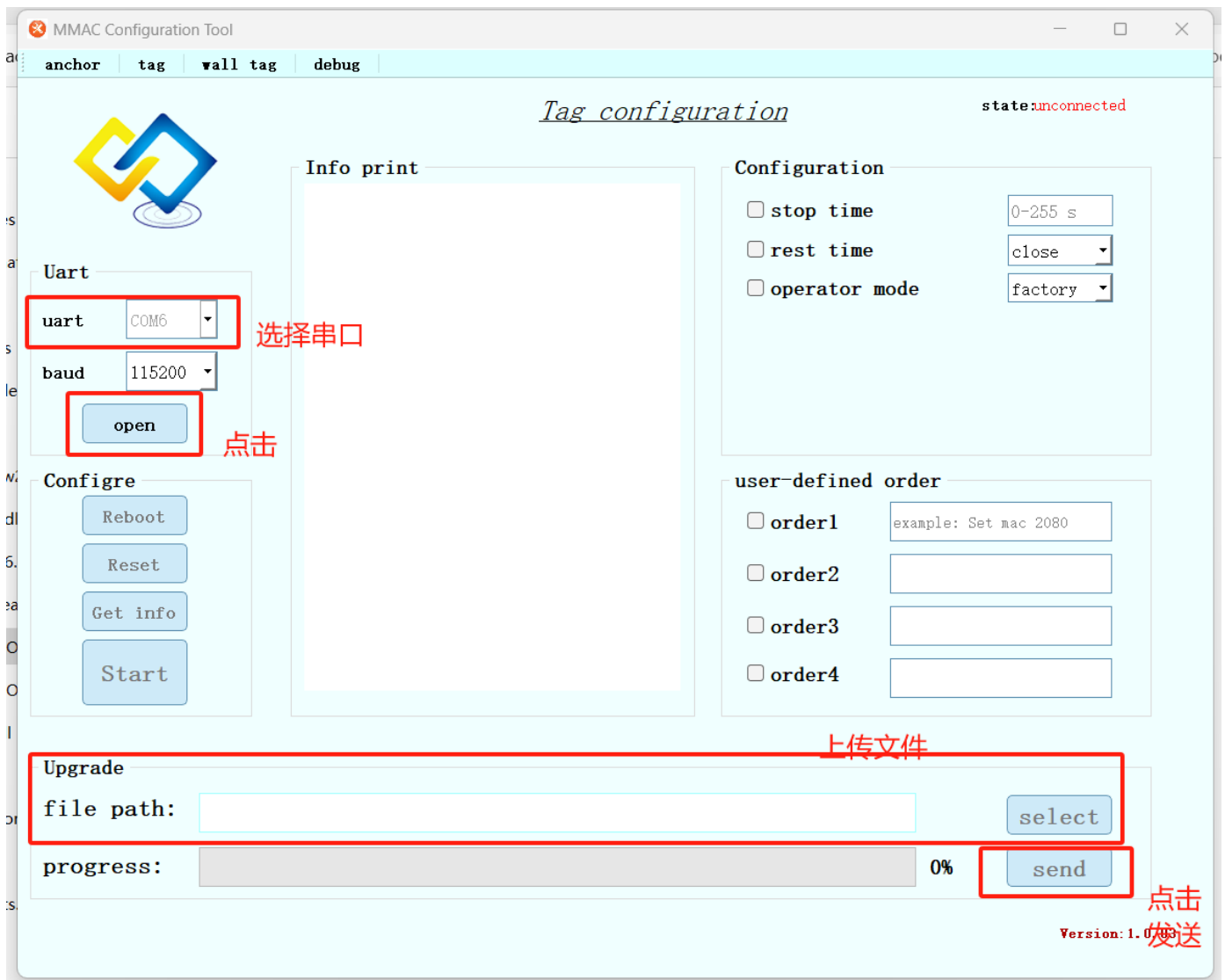
Note: Reboot is required after configuration, and Reset is required after firmware upgrade.

2. Configuration example (alarm distance set to 100 cm)



After clicking Start, the Info print interface displays specific parameters. If an error occurs, click the Start button again.

3. Upgrade example



Click select to choose the firmware upgrade file, then click send. Wait until the progress bar reaches 100% to complete the upgrade. After the upgrade is complete, click the Reboot button to restart and finish the upgrade.