

# USER GUIDE

## RFDT50 UHF Pistol Grip



Note:

\* This Guide introduced general functions of RFDT50. Your PDA device may have different functions wherein or description.

\* There may be differences between the illustrations in this Guide and the actual product. And the actual product shall prevail.

## Terms of usage

### Statement

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### Product improvement

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Urovo shall not be liable for personal and property safety of users in the following cases:

- User fails to use the battery in the correct way set out in this Guide;
- User or any third party delegated fails to transport or store the battery in the correct way specified in this Guide;
- The battery used by the user is not purchased from any official channel of Urovo;

## History of preparation

Modification records are as follows:

<b>Prepared by</b>	<b>Date</b>	<b>Description</b>
<i>RFDT50-UGV01 Rev A</i>	April 2022	First edition

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# About the Guide

## Introduction

This Guide offers information on usage of RFDT50 mobile computer and its accessories.

## Chapter description

This Guide covers the following topics:

- **Getting Started** offers information on putting RFDT50 into operation for the first time.
- **How to use** is an operation instruction on RFDT50.
- **Applications** describes usage of built-in apps.
- **Data Capture** describes acquisition of data information via RFID(UHF).
- **Accessories** describes information on standard and optional parts.

## Sign convention

The following convention applies in the text:

**Bold:**

- Emphasis
- Title
- Dialog box, window, part name, and screen icon
- Keyword
- Button name

(•):

- Operational option
- Order list
- Step list needed, which may not be continuous

(√):

- Functional option

*Italic:*

- Marked emphasis

## Relevant Document

- Quick Start Guide for RFDT50 UHF Pistol Grip
- RFDT50 Brochure

- RFDT50 Specification

## Service information

You can visit the official website ([enurovo.com](http://enurovo.com)) of Urovo Technology Co., Ltd. (hereinafter referred to as Urovo) whenever possible to gain quick network support services:

Click the search box and enter corresponding product model to query the machine's configuration information. Click maintenance query to query information of the nearest service center or enter the serial number (SN) of your device in the search box for maintenance progress to query the maintenance state to follow up the state of the device in maintenance in time! Service hotline: 400-888-6989

Please offer the following information while contacting the Support Center:

- Device SN (Serial Number)
- Model or product name

Thanks for your cooperation!

## Provision of document feedback

If you have any comment, question or advice on this Guide, please e-mail to [tech@urovo.com](mailto:tech@urovo.com) or [service@urovo.com](mailto:service@urovo.com)

# Chapter I Start Guide

## Introduction

This chapter describes the product information and makes some instructions for the first use.

## Unwrap Packing

### Check accessories

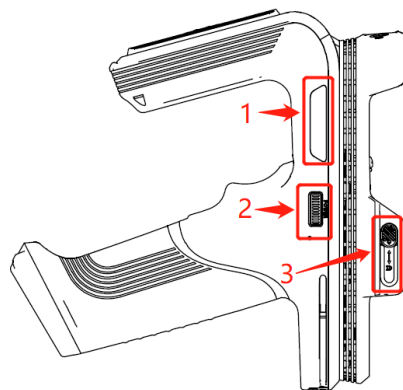
1. Please carefully remove all protective materials around RFDT50 and keep the packing box properly for future storage and transportation.

2. Please check the following contents:

- RFDT50 Enterprise Intelligent Terminal×1
- Adapter×1
- USB Cable×1
- Certificate of Approval×1
- Quick Operation Guide×1

3. Check whether the device is damaged. If any item is damaged or missing, please contact our customer service support or ask the supplier for it.

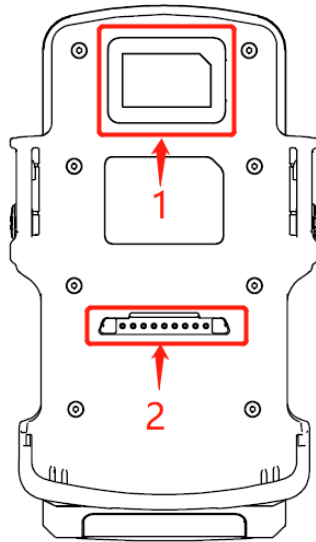
### Side View



1. Status light; 2. Power button; 3. Device fixing lock catch

Figure 1-1 Side View

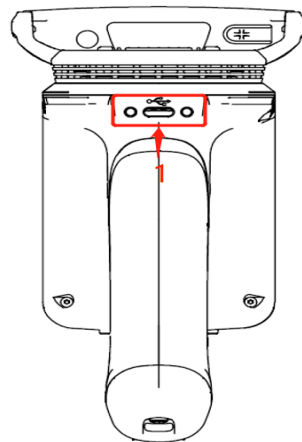
## Top View



1. PSAM card slot; 2. Pogopin contact

Figure 1-2 Top View

## Back View



1. Type-C interface

Figure 1-3 RFDT50 Back View



## Installation Guide

- Open the device fixing lock catch.

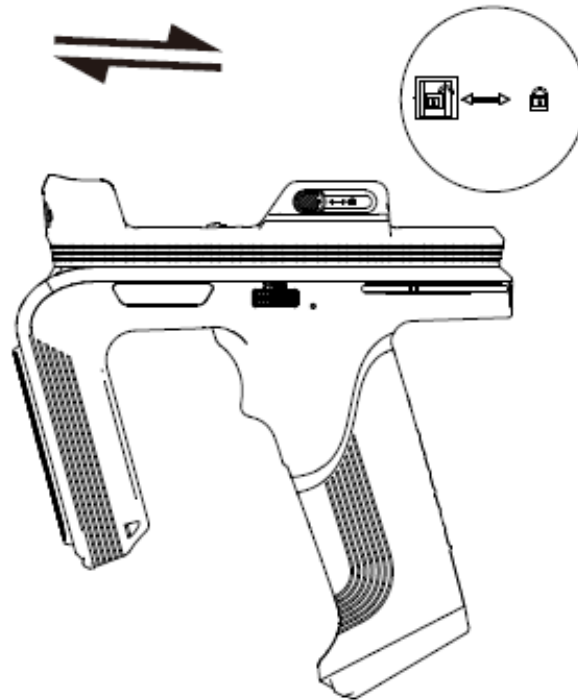


Figure 1-4 Installation Guide Diagram 1

- Insert the device into the grip and press down towards the tail.

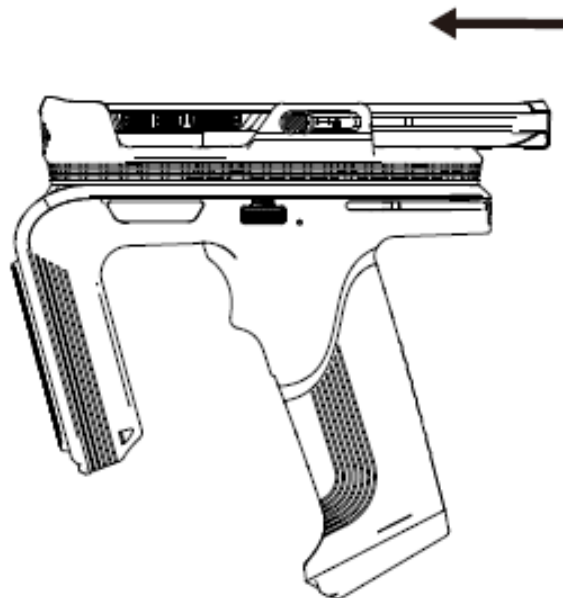


Figure 1-5 Installation Guide Diagram 2

- Close the device fixing lock catch.



Figure 1-6 Installation Guide Diagram 3

## Instructions for RFID Function

- Press and hold 2 (power button). When 1 (status light) turns on and the buzzer rings, the RFID module of the grip is powered on. You can use the RFID function through RFID-Demo.

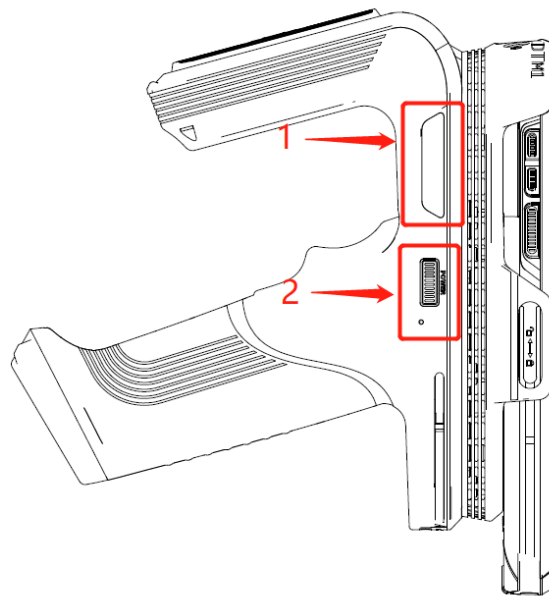
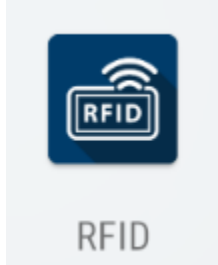


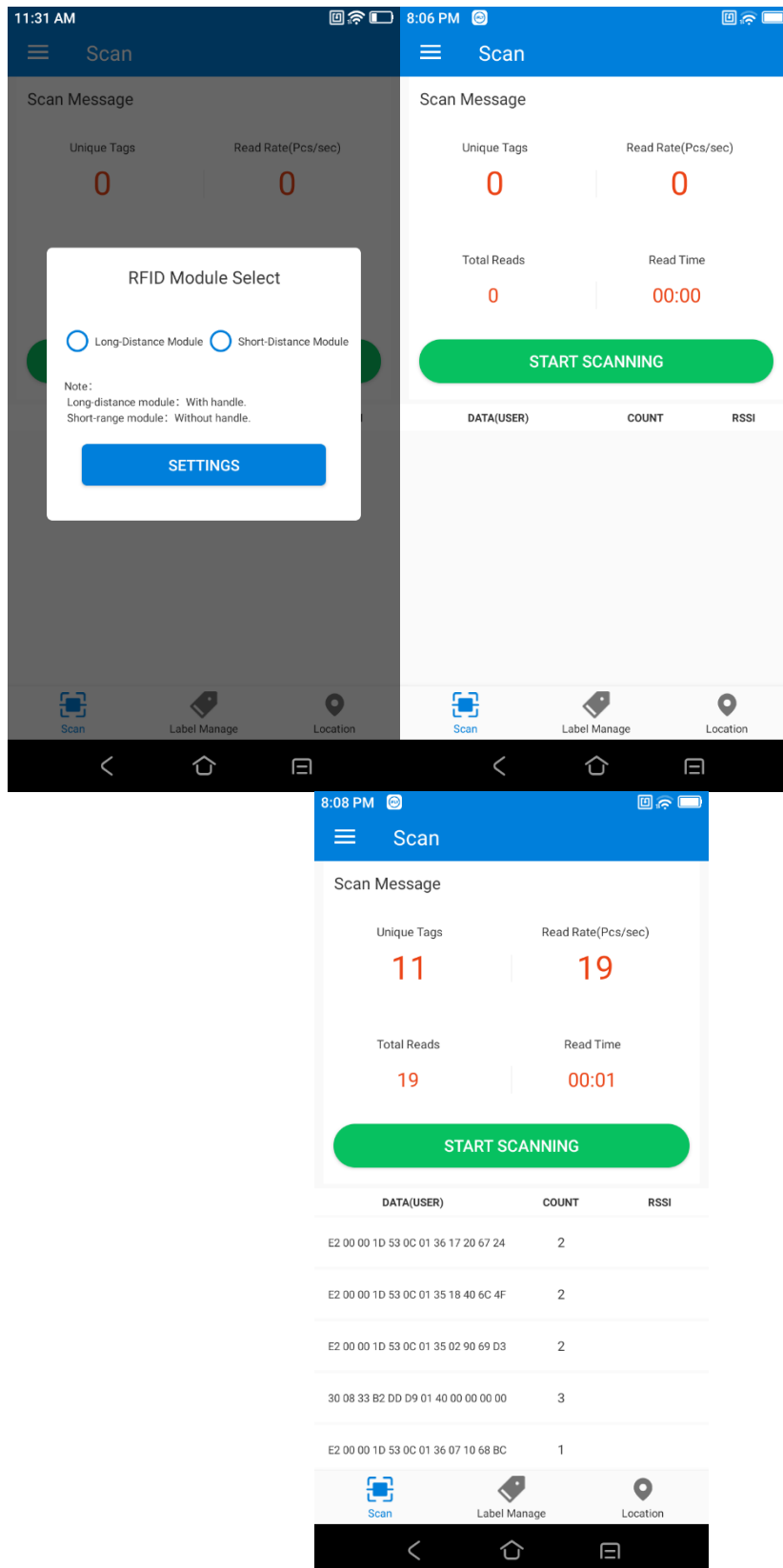
Figure 1-7 Instructions for RFID Function

## Instructions for RFID-Demo

Scan



Click on the RFID icon to enter the main page of the program, you will be prompted to select the UHF module first time, follow the instructions to set the corresponding module according to the type of the device, and then click on start scanning to scan the RFID tag by default.



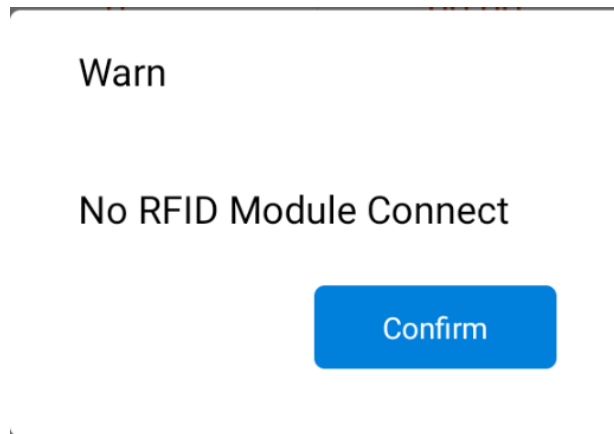
The meaning of the data displayed is as follows:

Unique Tags (Pcs)	The count of unique tags that have been scanned in total since tapping the Start Scanning button.
Read Rate (Pcs/sec)	The rate of tag read.
Total Reads	One tag EPC is recorded as one piece of tag data. Here shows the counted total numbers of data in real time, including the data of the same tag read repeatedly.
Read Time	The total read duration since tapping the Start Scanning button.

The fields in the tag list have the following meanings:

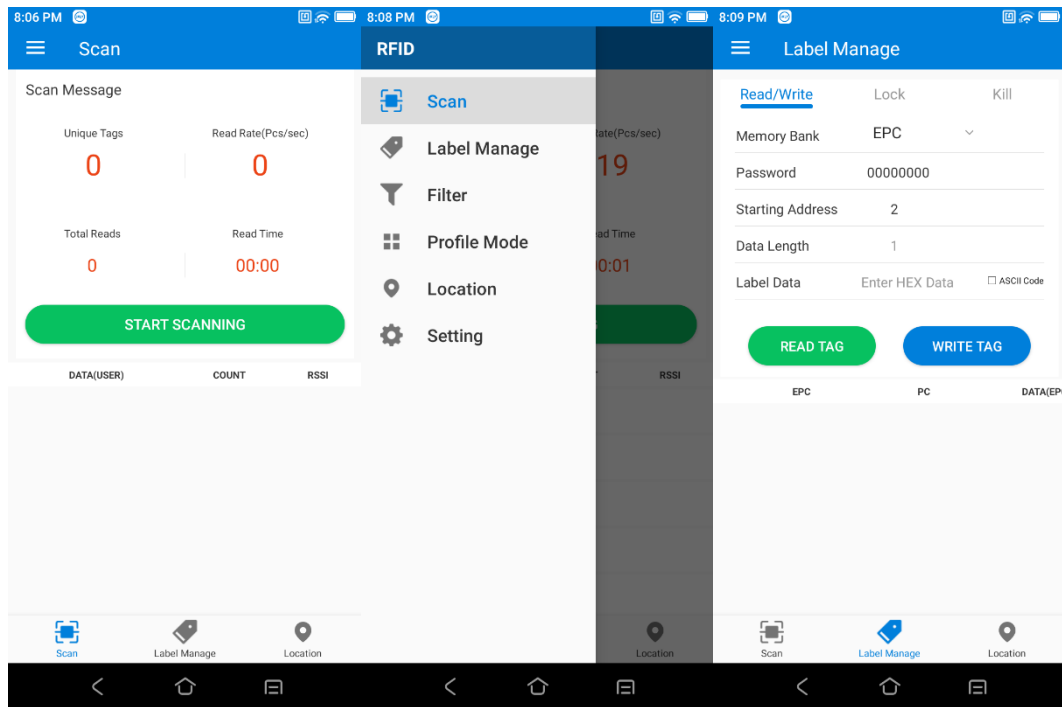
DATA(??)	The specific data scanned in the area (?? depending on the scan area selected, the corresponding area is displayed)
COUNT	Number of times of tag being recognized
RSSI	Signal intensity at the last time of tag being recognized

**Note:** If you do not have an RFID module or cannot connect to an RFID module, the following message will pop up when you open the program.



## Tag Management

The tag management page can be accessed through the Tag Management / Sidebar at the bottom of the home page. The main functions of the module are to read, write, lock and kill tags.



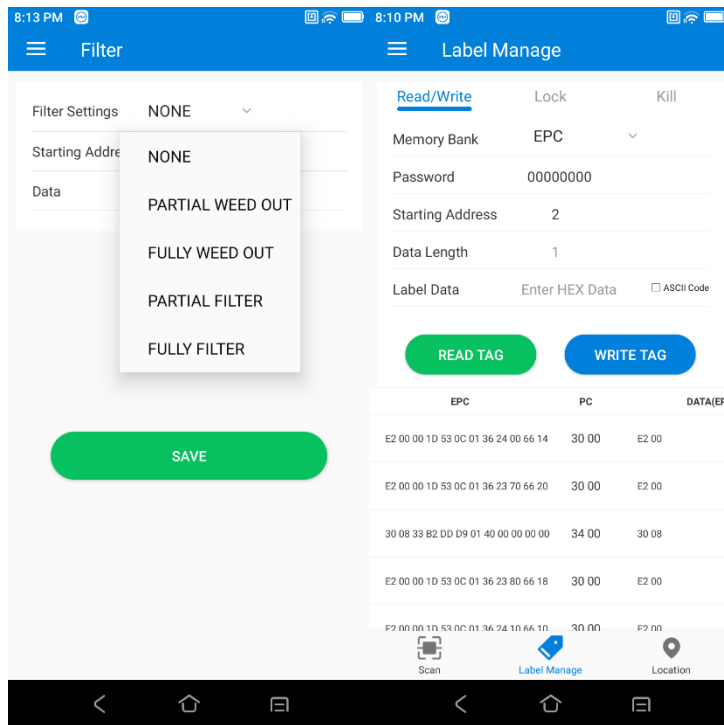
## 1. Read/Write

To read a tag, three parameters need to be entered: the tag area to be read, the starting address and the data length.

Note that the input parameters should be in accordance with the tag specifications. Otherwise, an error message will be prompted.

The interface for writing tag is in the same area as the reading, except that the writing requires the access password and the data to be written.

(The default access password is 00000000)



As many tags are processed, as many pieces of data are displayed in the tag list.

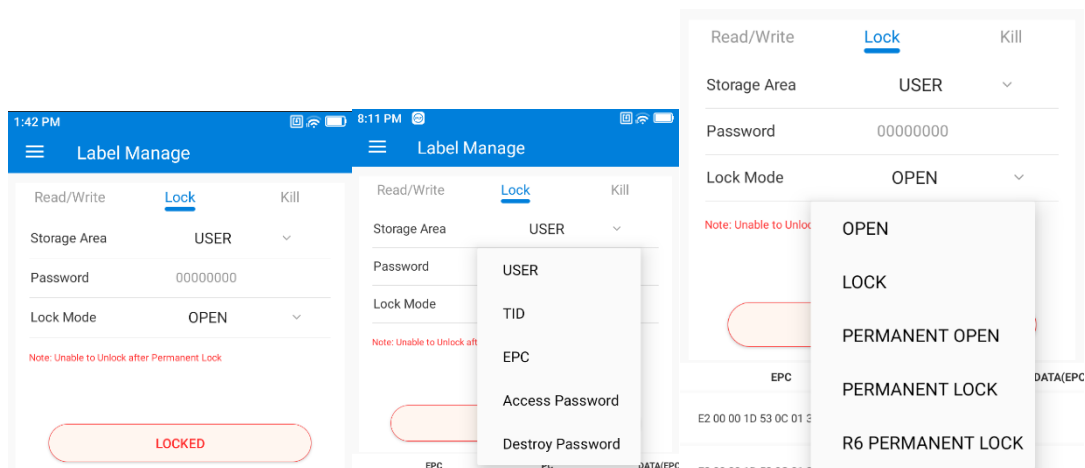
Note: The maximum writing length at one time is 32 words (64 bytes, 512bits).

## 2.Lock

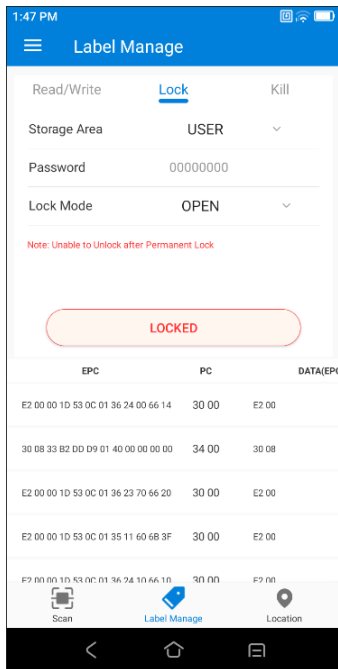
The operation interface for locking tags is as follows:

An access password must be provided to lock the tag.

Note: The original password is not valid for locking. It is recommended that the user change the access password before locking the tag.



After successful operation, the following information will be returned.



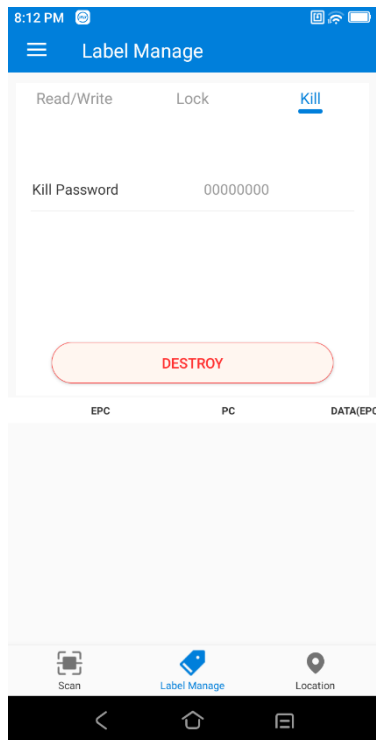
Similarly, as many tags are processed, as many pieces of data are displayed in the tag list.

### 3. Kill

The operation interface for destroying tags is as follows:

To destroy a tag, the kill password must be provided, and the kill password cannot be 00 00 00 00. So to destroy a tag, you must first modify the content of the kill password in the password area by the command to write tag.





Similar with all tag write/read operations, as many tags are killed, as many pieces of data are displayed in the tag list.

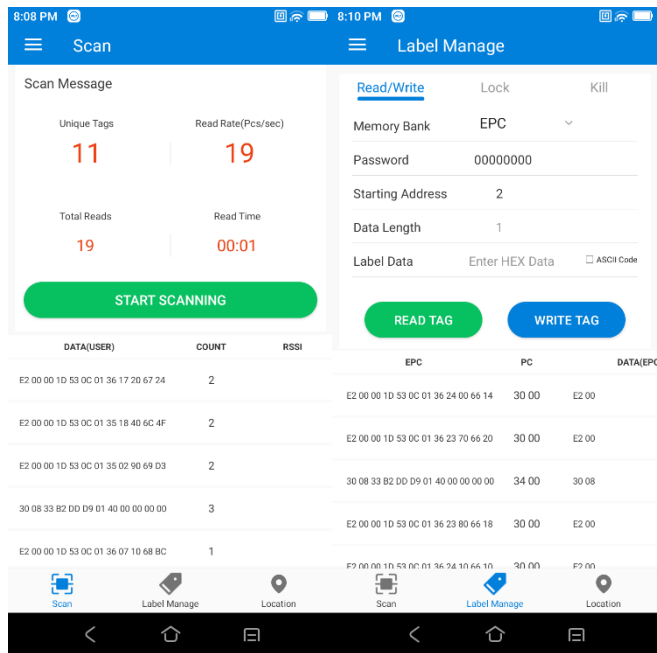
## 4. Tag Selection

In many cases, we want to write/read only one tag with a known EPC code regardless of other tags in the RF area. At this point, we need to use the tag function of location (EPC matching function).

First scan the tags, then select a particular tag.

Switch to the tag management page.

Next, all write/read/lock/kill operations will be performed only for the tag with this EPC code.



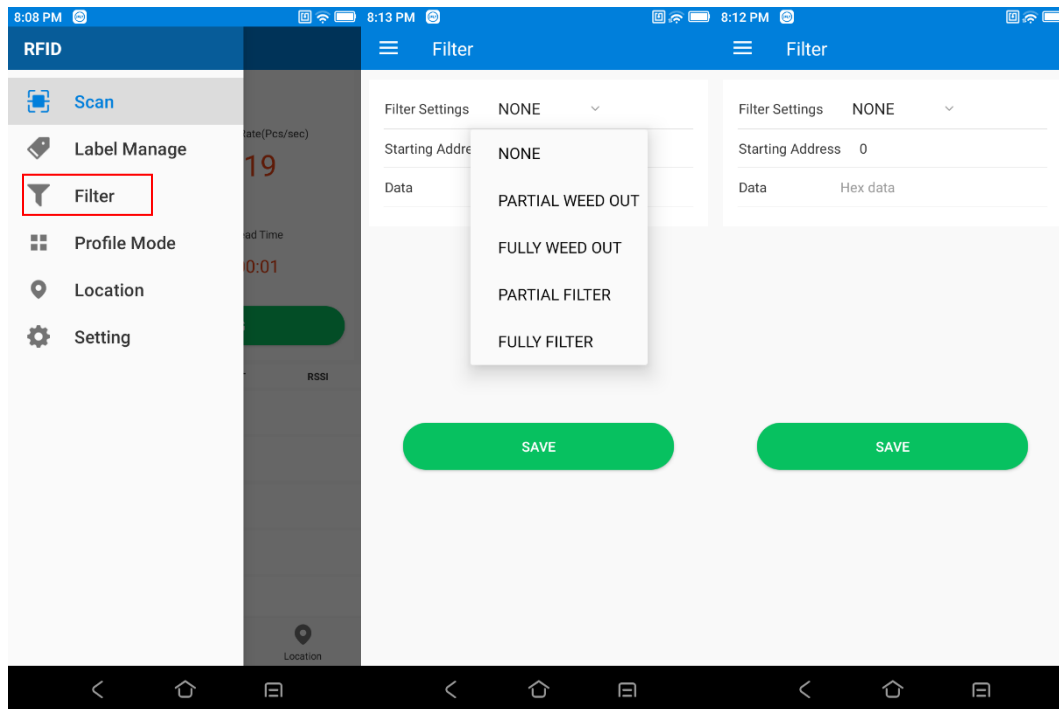
## Filter

Tap sidebar Filter to enter the filter settings page, and main functions of the module is to filter and weed out the content of the tag scanning.

Filtering settings include 4 types: Partial Filter, Fully Filter, Partial Weed out, Fully Weed out

1. Partial Filter: If the input data information and tag information are partially continuously overlapped, then filter out accordingly (for example: input 123, filter tag 123455, 645674123; retain: 14552443)
2. Fully Filter: If the data information and tag information are identical, filter out (for example: input 123456, filter: tag 123456, retain: 123456789, 33123456, 1233456)
3. Partial Weed out: If the data information and tag information are partially continuously overlapped, weed out and display these tags
4. Fully Weed out: If the data information and tag information are identical, weed out and display these tags

Note: The starting address can be set for Fully Filter and Fully Weed out

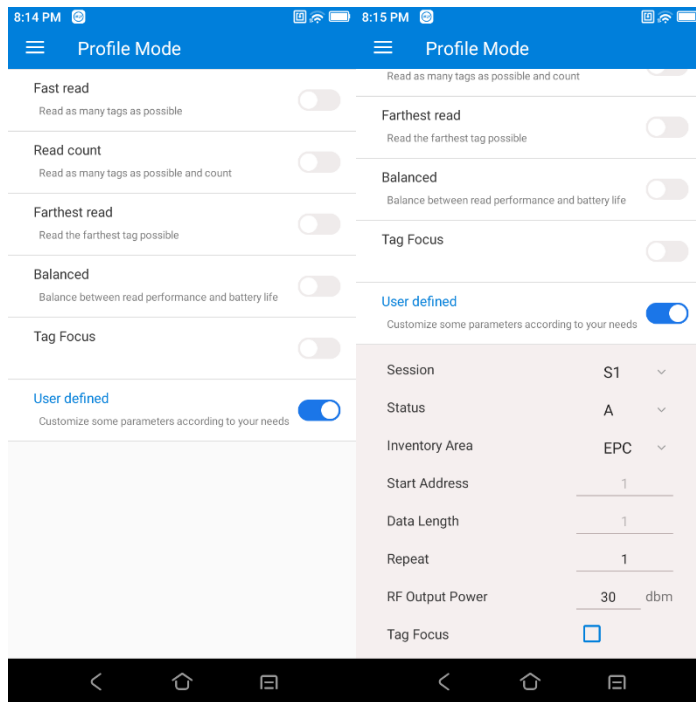


## Profile Mode

Tap sidebar Profile Mode to enter the mode selection settings page, and main functions of the module is to select specific mode for tag scanning.

The default is the User Defined mode, with the default value as follows. The user can adjust the options as needed, with several preset modes.

1. Fast read: Read as many tags as possible
2. Read count: Read as many tags as possible and count
3. Farthest read: Read the farthest tag possible
4. Balanced: Balance between read performance and battery life
5. Tag Focus

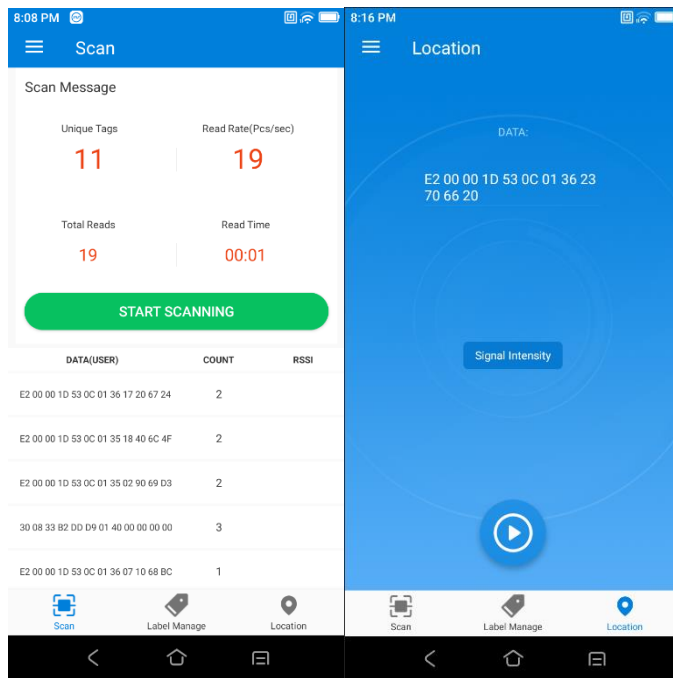


## Location

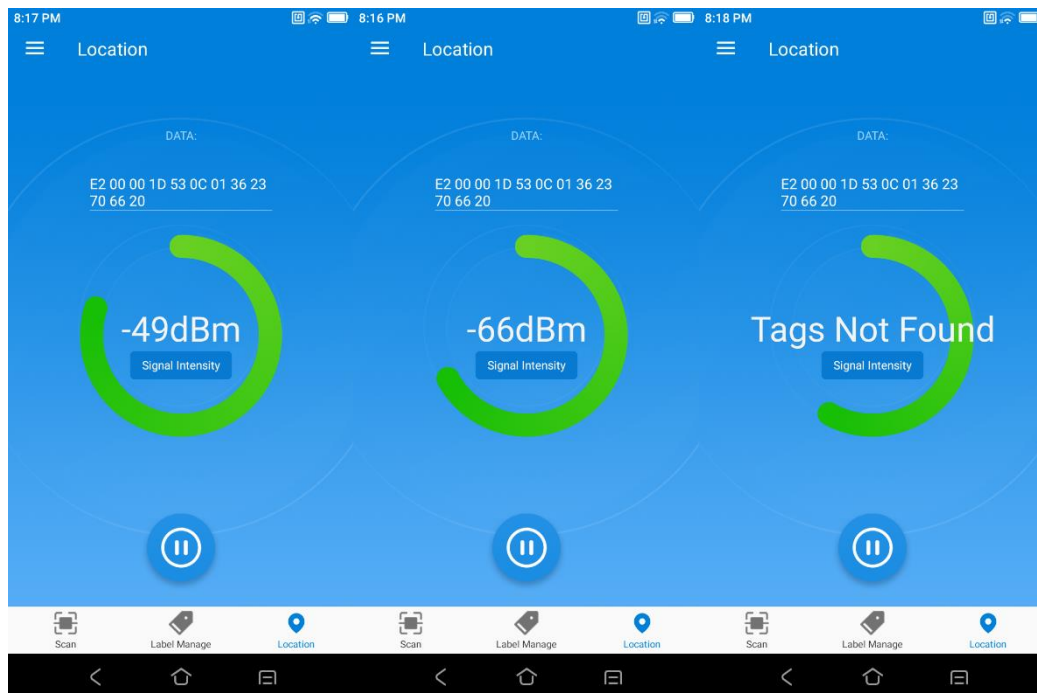
The main purpose of this function is to display the relative positional relationship between the RFID Reader and the tag.

First scan the tags, then select a particular tag.

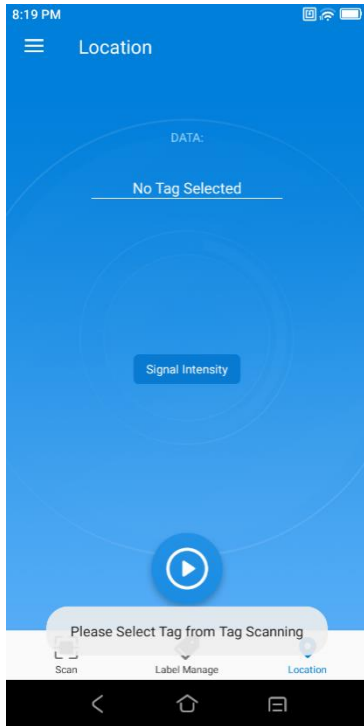
Switch to the Location page (the tag just selected will be displayed above) and click the start button.



After starting, the page will display the Signal Intensity in real time. The larger value means the stronger signal and closer to the tag

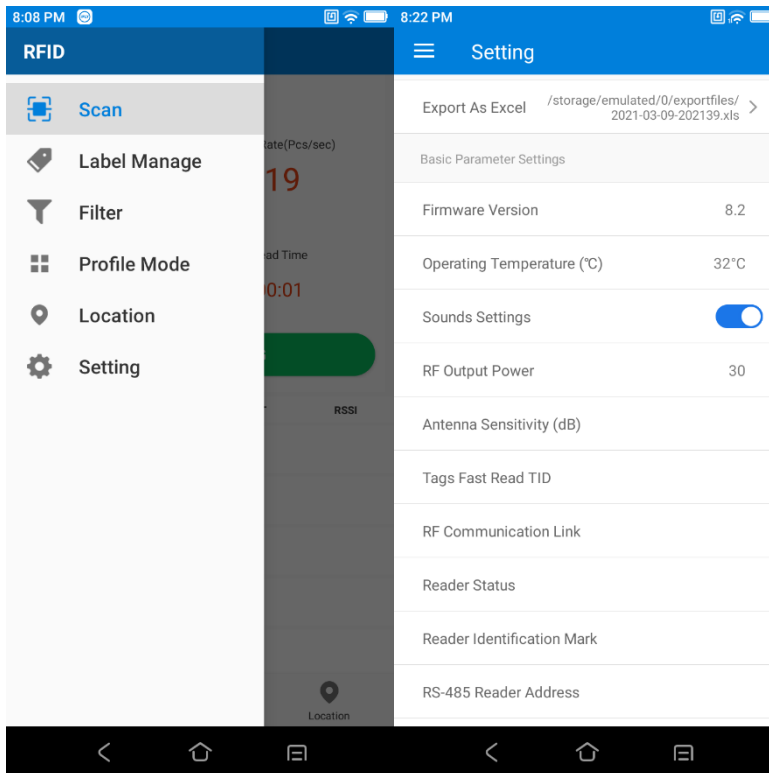


Note: If tapping Location when not selecting a tag, a prompt will show "Please Select Tag from Tag Scanning".



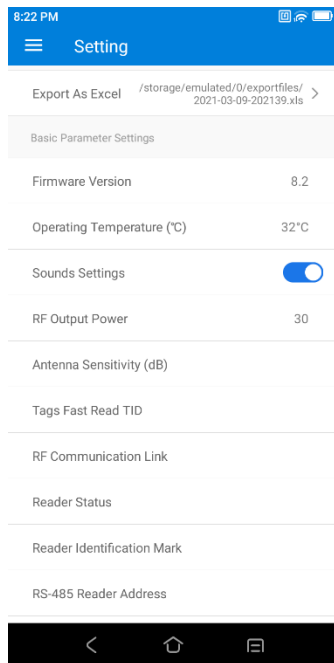
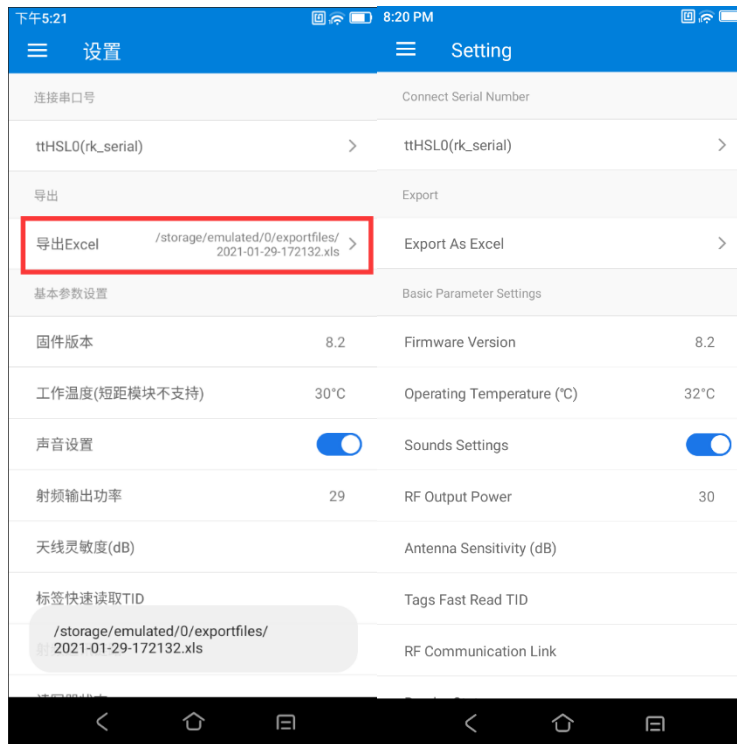
## Settings

Tap sidebar Setting to enter the setting page, mainly for the configuration of the RFID Reader.



Connect Serial Number: It can be used by default and does not need to be modified

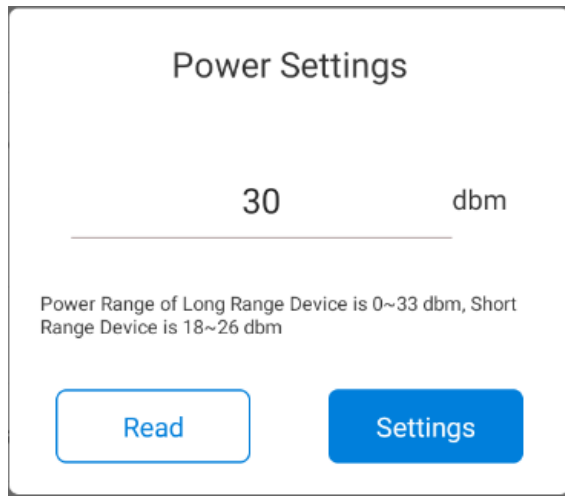
Export: The current tag scanning data can be exported to Excel



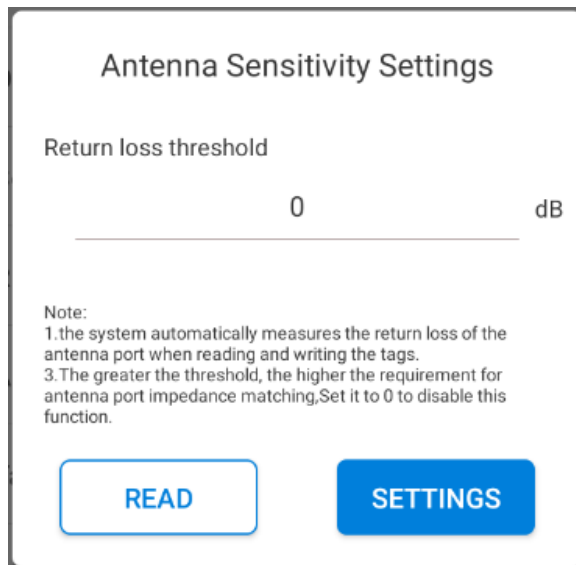
Basic Parameter Settings:

1. Firmware Version: Display the current firmware version

2. Operating Temperature (°C): Display the current action module temperature
3. Sounds Settings: Set whether to beep during scanning, which is enabled by default
4. RF Output Power: The default is as follows, which can be read and set

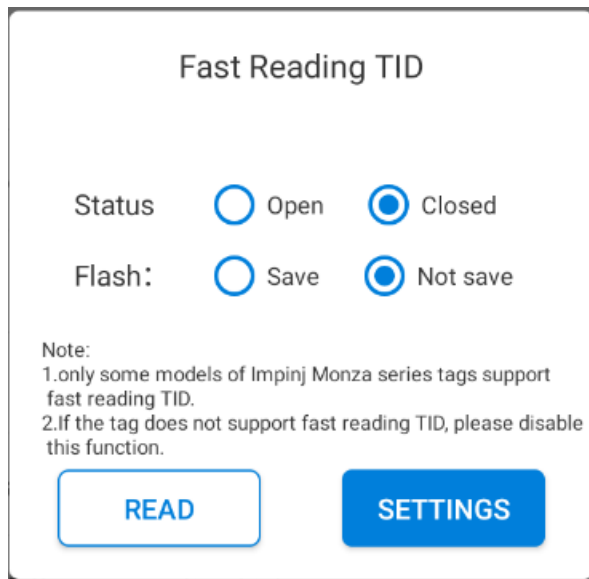


5. Antenna Sensitivity (dB): The default is as follows, which can be read and set

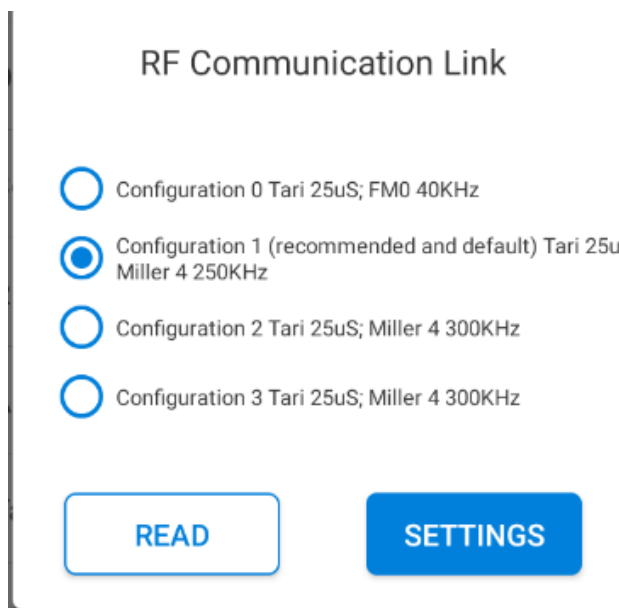


6. Tags Fast Read TID: The default is as follows, which can be read and set

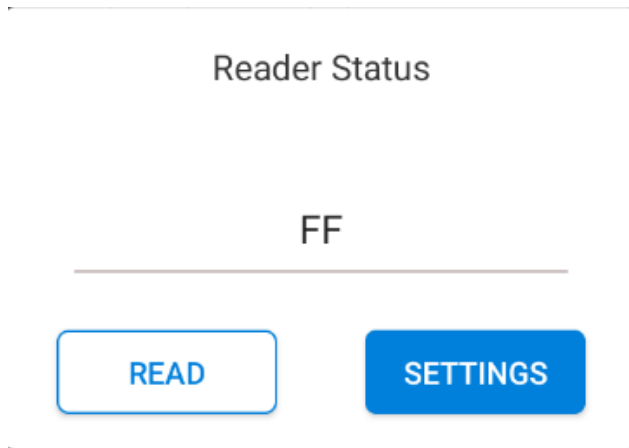




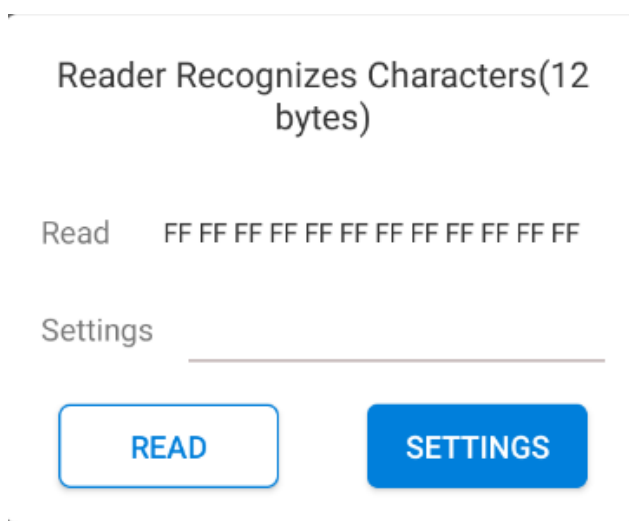
7. RF Communication Link: The default is as follows, which can be read and set



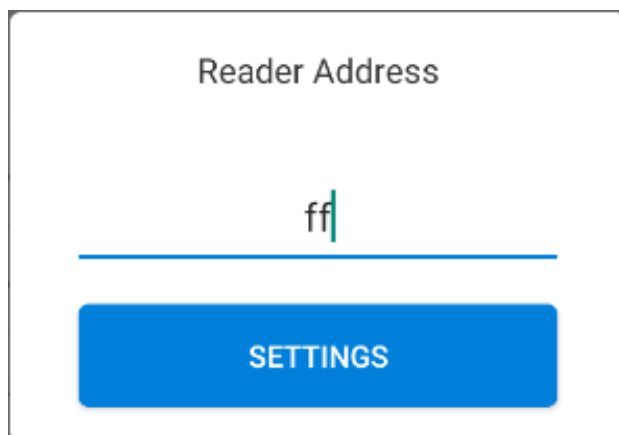
8. Reader Status: The default is as follows, which can be read and set



9. Reader Identification Mark: The default is as follows, which can be read and set



10. RS-485 Reader Address: The default is as follows, which can be read and set



11. RF Spectrum: The default is as follows, which can be read and set

## RF Spectrum

United States Standard

European Standard

National Standard

Customization

Initial Frequency 902.00  MHz

Cutoff Frequency 928.00  MHz

READ

SETTINGS

12. Handle indicator: for products with a removable handle, the second indicator on the right side of the removable handle will flash when you scan if it is turned on. To turn it off, click it again.

Handle indicator



## Caution on Battery Charging

1. Please do not use or charge the device in any environment with too high or low temperature;
2. Please charge the battery by the product's charger in standard configuration or desktop charger only;
3. Please do not idle the device for over 3 months; be sure to charge and discharge the battery not used for the moment once per 3 months;
4. The lithium battery should be stored somewhere cool, dry and ventilated. It is advised to be stored in a 0~28°C environment.

## Charging Method

### Charge by USB

For TYPE-C USB cable, link one end to computer and the other to device. In charging, the device's charge indicator is red, which will turn green when the device is fully charged.



Figure 1-8 TYPE-C USB Cable

### Charge by desktop charger

A desktop charger can charge the device (including the battery) and a battery at the same time.

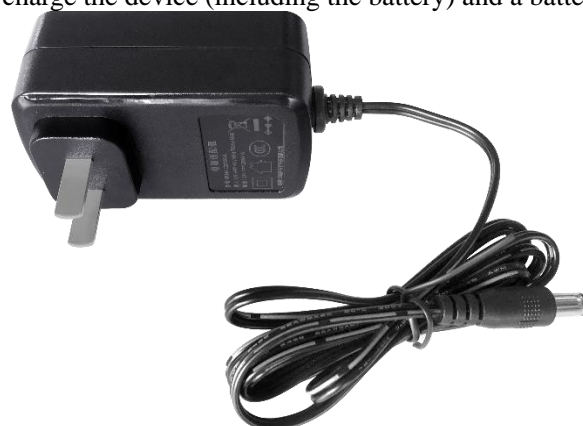


Figure 1-9 Power Adapter to Desktop Charger

1. Connect the DC interface of the base to the power adapter.

2. Load the front end of the battery into the battery slot and push the bottom of the battery into the battery slot to complete battery installation. When the battery is correctly installed, the charge indicator will turn red. When the battery is fully charged, the indicator will turn green.
3. Put the back of the device body in the body slot of the base and fasten left and right fasteners to complete installation of the body. And in this case, the body's charge indicator will turn red.



Figure 1-10 Charging



Charge Completed

## Chapter II Accessories

### Introduction

This chapter describes RFDT50 accessories.

### List of Standard Accessories



Figure 5-1 Power adapter



Figure 5-2 TYPE-C USB cable

### List of Optional Accessories

Single charger:



Figure 2-3 Single charger

# Chapter III Maintenance and Troubleshooting

## Introduction

This chapter describes the maintenance method and troubleshooting to help users better use and maintain this product.

## Maintenance

To ensure that the device does not fail, the following tips should be followed when using RFDT50:

- Avoid exposing RFDT50 to too-high or too-low temperature. Do not place it on the car dashboard on hot days and keep it away from heat sources.
- Do not use or store RFDT50 in dusty, damp or humid areas.

## Cleaning of RFDT50

### Housing

Wipe the housing, including the button, with an alcohol cloth.

## Troubleshooting

### Troubleshoot RFDT50

Problem	Cause	Solution
After pressing the power button, the RFDT50 status light does not turn on.	The battery is not charged.	Charge the battery in RFDT50.
The battery fails to be charged.	Battery failure.	Replace battery.
	Battery temperature exception.	Contact the manufacturer for technical support.
The host shows that the RFID module is not connected.	RFDT50 is in an inactive state.	After a period of inactivity, the device will automatically power off the RFID module. You can press the power button again.
	Dead battery.	Charge the battery.
	Module exception.	Contact the manufacturer for technical support.