

Eagle UHF



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1 Background

| Description | Date | Version | Author | Auditor |
|----------------|------------|---------|--------|---------|
| First parution | 27/05/2020 | V1.0 | CLO | ACA |

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2 Product introduction

2.1 Introduction

The Eagle racket offers a powerful UHF RFID module up to **30dBm** (adjustable from 5 to 30dBm) and 1D/2D barcode scanner.

It communicates with any mobile device or computer in **Bluetooth** communication.

The device is perfectly adapted to inventory management, asset management, inspection etc.



1.1 Precaution before using battery

- Do not leave battery unused for long time, no matter it is in device or inventory. If battery has been used for 6 months already, it should be check for charging function or it should be disposed correctly.
- The lifespan of Li-ion battery is around 2 to 3 years, it can be circularly charged for 300 to 500 times. (One full battery charge period means completely charged and completely discharged.)
- When Li-ion battery is not in used, it will continue discharge slowly. Therefore, battery charging status should be checked frequently and take reference of the related battery charging information on the manuals.
- Observe and record the information of a new unused and non-fully charged battery. On the basis of operating time of new battery and compare with a battery that has been used for long time. According to product configuration and application program, the operating time of battery would be different.
- Check battery charging status at regular intervals.
- When battery operating time drops below about 80%, charging time will be increased remarkably.
- If a battery is stored or otherwise unused for an extended period, be sure to follow the storage instructions in this document. If you do not follow the instructions, and the battery has no charge remaining when you check it, consider it to be damaged. Do not attempt to recharge it or to use it. Replace it with a new battery.
- Store the battery at temperatures between 5 °C and 20 °C (41 °F and 68 °F).

1.2 Charger

The charger type is GME10D-050200FGu, output voltage/current is 5V DC/2A. The plug considered as disconnect device of adapter.

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1.3 Notes

Note 1:

Using the incorrect type battery has danger of explosion. Please dispose the used battery according to instructions.

Note 2:

Due to the used enclosure material, the product shall only be connected to a USB Interface of version 2.0 or higher. The connection to so called power USB is prohibited.

Note 3:

The adapter shall be installed near the equipment and shall be easily accessible.

Note 4:

The suitable temperature for the product and accessories is 010°C to 50°C.

Note 5:

CAUTION RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.



3 Installation Instructions

3.1 Appearance

The Eagle racket back and front appearances are showing as follows:



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3.2 Battery charge

By using micro USB contact, the original adaptor should be used for charging the device. Make sure not to use other adaptors to charge the device.

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3.3 Buttons and functions area display

Eagle racket UHF swing reader has 4 function buttons and 1 SCAN button, UHF scanning area, 1 display screen. Power key on the right side.



Buttons and Indicating Lamps instruction

| Buttor | is and Lamps | Description | | |
|---------------|--------------|-------------------------------------|--|--|
| la dia atia a | WIFI | Display WIFI connection status | | |
| Indicating | Power | Display power status | | |
| Lamps | Bluetooth | Display Bluetooth connection status | | |
| | UP | Move up cursor | | |
| Main | DOWN | Move down cursor | | |
| button | OK | Press to confirm current selection. | | |
| | | Escape current page | | |

| Power | The LED is green when the device is turned on |
|-------|---|
| Work | The LED is blue when the device is reading tags |





Bluetooth The LED is blue when Bluetooth is turn on

4 Manual of the Eagle racket unpaired

4.1 Buttons and functions

4.1.1 Turn on/off the device

Press the power button to turn on or off the device.

4.1.2 Functions buttons

To access the menu, press the button **.** This button also allows you to go back in the menu.

| | ок |
|------------------|----|
| To confirm press | 9 |

Sound, mode and language can be configured to in "Config" menu.

4.1.2.1 Sound

To turn on or off the sound, go to the menu by pressing the button . Select "Config". Select "Sound". Choose "ON" or "OFF" by using the button

OK.

Sound, mode and language can be configured to

4.1.2.2 Language



4.1.2.3 <u>Mode</u>

••• To switch from scanning mode, go to the menu by pressing the button Select "Config". OK Select "Mode" and choose the mode "Auto" or "Once" by using the button

4.2 Barcodes scanning

. Select "BarCode". To scan barcodes, access the menu by pressing the button

Press the button

Be careful to position the racket so that it can read the barcode.



The barcode number is then displayed on the screen.

4.3 RFID UHF scanning

To scan tags, access the menu by pressing the button . Select "Inventory".

Siret : 45071140300045 - APE : 4652Z - RCS : CRETEIL 450711403 - N° TVA intracom : FR05450711403 - Capital : 500 000,00 €

Press the button

Be careful to position the racket so that it can read tags.

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The number of tags identified will be seen on the screen of the racket.

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5 Demo test

5.1 Install demo-uhf-bt (1.0.8)

- 1. Copy demo-uhf-bt (1.0.8) into internal storage of smartphone or MBA5 device.
- 2. Click to install.
- 3. Click icon to open demo.



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3.2 Pairing Device

- 1. Switch on Bluetooth function of smartphone or MBA5 device.
- 2. Power on Eagle racket.
- 3. On your MBA5 or smartphone, click BLUETOOTH in the demo.
- 4. Click on SEARCH to search for Nordic_UART_CW.

| | == * 👻 🛛 🗷 | 13% 6 : | 07 AM |
|--------------|-------------------------------------|----------------|---------------------|
| d | demo-uhf-bt(1.0.8) | | : |
| | Select a device | (i | \supset |
| No | 1B:F3:FB:A0:75:B3 | Rssi = -6 | 5 |
| mc | Nordic_UART_CW D7:3B:AA:46:B4:E0 | Rssi = -5 | 57 |
| | 3C:98:1F:B0:C8:94 | Rssi = -8 | CON |
| | 0A:FF:87:1F:BE:79 | Rssi = -6 | 53 |
| EPC | 2A:CD:37:FD:30:5E | Rssi = -9 | 3 RSSI |
| EPC: | 39:24:C0:7C:5A:72 | Rssi = -7 | /5 |
| 0000 | 10:EB:8D:10:0F:5C | Rssi = -6 | 8 |
| EPC: | 48:D8:B5:83:D4:DD | Rssi = -8 | 39 |
| EPC: | 07:D9:DF:58:A0:71 | Rssi = -6 | 5 1 8/74. |
| 0000 | 2A:85:E2:54:22:7E | Rssi = -7 | '4 |
| EPC: EPC: | Scan | | |
| EPC: | | _ | |

- 5. Click on Nordic_UART_CW to connect.
- 6. After connecting successfully, user could click 3 dots on top right to check UHF version, battery percentage and UHF module temperature.



| | 12 | = * 💎 Ì | 📕 🛃 14% 🤅 | 5:15 AM | |
|--------------------|-----------|--------------|-------------|---------|--|
| demo-uhf-bt(1.0.8) | | | | | |
| DISCONNEC | T | | SEARCH | | |
| Nordic_UART_CW(| (D7:3B:AA | :46:B4:E0 |)-connected | | |
| mode: BLUETOO | ГН | | | | |
| INVENTORY | BA | BARCODE SCAN | | | |
| START | ST | OP | CLE | EAR | |
| EPC 0 | 0 | | Count | RSSI | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
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3.3 Scan Function

- 1. Click START in demo or press SCAN button on Eagle racket, the UHF tags could be read.
- 2. Click STOP in demo or click again on SCAN to stop reading of UHF tags.
- 3. Click CLEAR to clean all EPC information.

| | 22 | * * | 1 💆 | 5% 6:1 | 9 AM |
|---|---|----------------------------------|-------------------|---------------|------|
| demo-uhf-b | t(1.0.8 |) | | | : |
| DISCONNEC | т | | SEAR | сн | |
| Nordic_UART_CW | (D7:3B:AA | :46:B4:E0 |)-conne | ected | |
| mode: BLUETOO | TH | | | | |
| INVENTORY | BA | RCODE S | CAN | | CON |
| START | ST | OP | | CLEAR | |
| EPC 36 | 64 | | С | ount l | RSSI |
| EPC:300ED89F33500 | 007FE25E | AE85 | 2 | N/ | A |
| EPC:1234860202190 00000000000000000000000000000000 | 008508000 000000000 000000000 00000000 | C4DA0000 00000000 00000000 | 000 00 00 1 | N/ | A |
| EPC:300ED89F33500 | 007FE25E | ADC2 | 2 | N/ | A |
| EPC:E200860202190 00000000000000000000000000000000 | 008506600 000000000 000000000 00000000 | 03C40000 00000000 00000000 | 000 00 00 2 | N/ | Ά |
| EPC:E200400078060 | 07915707 | 7535 | 2 | N/ | A |
| EPC:3456600813040 |)1430900E | BD1 | 1 | N/ | A |
| EPC:E200400078060 | 08015707 | 752E | 2 | N/ | A |

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3.4 UHF Configuration

1. Click CONFIG in demo to adjust working mode and output power.

3.5 UHF Encryption

1. Click ENCRYPTION to decrypt and encrypt the special zones of UHF tags such as USER, EPC, etc.

3.6 UHF Tag Reading and Writing

1. The storage of one tag has 4 zones: RESERVED, EPC, TID and USER. Normally, the default password is 00000000. And TID zone can only be read, other zones can be read and written.

| Ę | 🛎 🎗 🏵 🖹 💈 24% 7:40 AM | 📟 🏅 💝 📉 💆 24% 7:40 AM | | | |
|----------------------|-----------------------|--|--------------------|--|--|
| demo-uhf-bt(1.0.9 |) : | demo-uhf-bt(1.0.9) | | | |
| CONNECT | SEARCH | CONNECT | SEARCH | | |
| mode: BLUETOOTH | | mode: BLUETOOT | н | | |
| TION READ | WRITE | TION REA | D WRITE | | |
| filter | | filter | | | |
| Enable | | Enable | | | |
| Ptr: <u>32</u> (bit) | 长度:(bit) | Ptr: <u>32</u> (bit) 长度 <u>0</u> (bit) | | | |
| Data: | | Data: | | | |
| EPC T | ID USER | EPC | TID USER | | |
| Bank: RESERVED | • | Bank: RESERVE |) | | |
| Ptr: 0 (word) | Len: (word) | Ptr: 0 | (word) Len: (word) | | |
| Access Pwd: 0000000 |) | Access Pwd: 000 | 00000 | | |
| Data: | | Write Data: | | | |

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3.7 UHF Tag Lock and Kill

5.1.1 Lock Function: For example. User could try to lock down EPC zone.

5.1.2 Kill Function:

Kill function can be used to kill the tag permanently. Input the correct access password and click kill.

3.8 Firmware Upgrade

- 1. Copy the firmware bin. file into internal storage.
- 2. Click Select file to search for bin.
- 3. Click Upgrade to upgrade firmware.



3.9 Barcode Scan Test

Select BARCODE SCAN in the demo and click SCAN button on the screen to scan barcodes.

| 📟 🔻 💎 🖹 🛢 44% 2:52 AM | | | | | |
|--|--------|----------------------|-----|--|--|
| demo-uhf-bt(1.0.9) | | | | | |
| DISCONNECT | | SEARCH | | | |
| Nordic_UART_CW(DD | :E6:CC | :29:1B:60)-connected | | | |
| mode: BLUETOOTH | | | | | |
| INVENTORY | BA | RCODE SCAN | CON | | |
| 08/08/2018 H3000C180500085 H3000C180500085 08/08/2018 08/08/2018 08/08/2018 H3000C180500085 H3000C180500085 | | | | | |
| SCAN | | CLEAR | | | |

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