

User guide

AX'Up Air

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1 Revisions

Description	Date	Version	Auteur	Check
First release	2021/07/08	1.0	LDU	
	2022/03/11	1.4	AT	
Add laser class 1 information	2022/06/01	1.5	LDU	AT
Add UHF band EU and power RF	25/07/22	1.6	AT	LDU
Update for Bluetooth version	12/04/2023	1.7	LDU/DGA	AT
Add symbol ISO 7000 (care in use)	11/05/2023	1.8	AT	
Update Mode charge Battery +10°C to +37°C and Mode Discharge -20°C to +50°C	21/06/2023	1.9		
Update IHM	13/07/2023	2.0	AT	
Mise en forme, revue du contenu	21/07/2023	2.1	LDU	
Add android app for BLE and BLE DFU	22/04/2024	2.2	THA	LDU

2 Product description, HMI

AX'Up Air is a UHF and 2D reader using USB and BLE communication.

Working modes:

- keyboard emulator in BLE and USB
- Virtual com port in USB
- Bidirectional service in BLE



LED status



Power On / Power off
Press the 2 buttons for 4 seconds.



Reset
Press the 2 buttons for 14 seconds.



Scan

Press either the RFID button or 2D button. A beep sounds and the RFID/2D LED is green when reading is successful.



Green
Successful scan



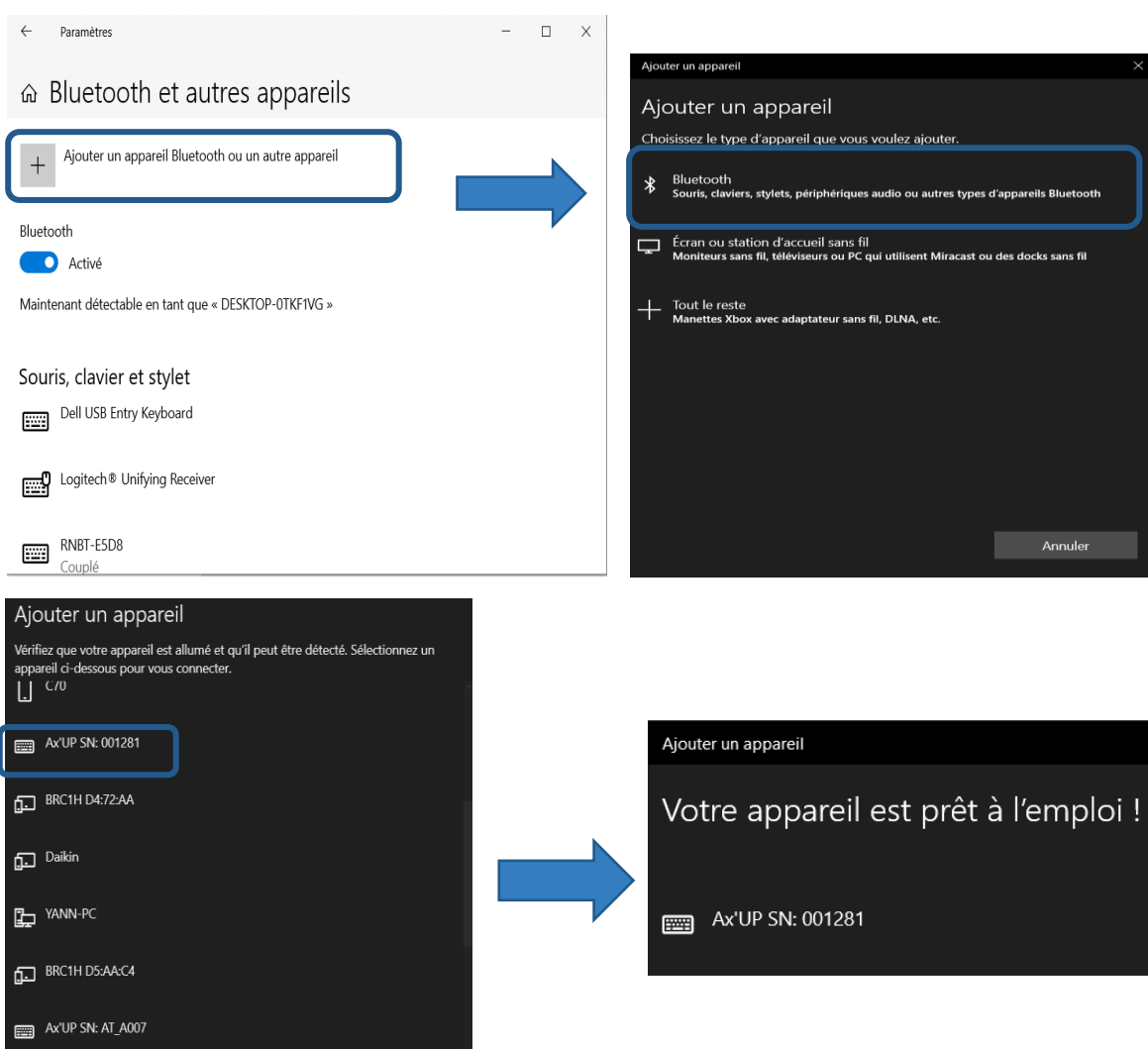
Red
Scan failure

3 Start-up guide for BLE mode

First you must know the name of the device to connect it in Bluetooth mode with Android or Windows. Usually, it is located on the label on the back of the shell. If is not the case, it can be recovered with Easy config app.



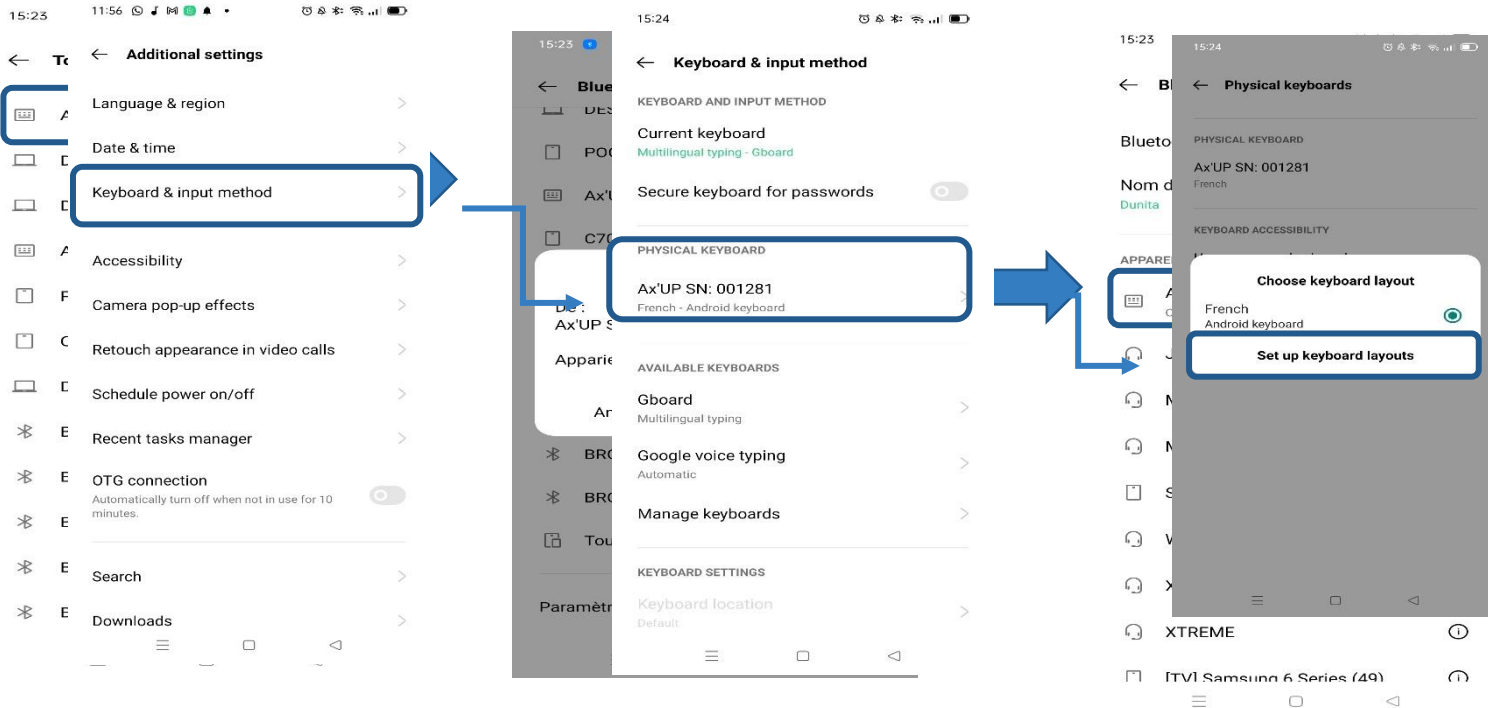
3.1 Connection Windows Bluetooth Mode



The process is shown in four steps:

- Windows Settings: **Bluetooth et autres appareils**. The option **Ajouter un appareil Bluetooth ou un autre appareil** is selected.
- Ajouter un appareil** dialog box: **Bluetooth** is selected as the device type.
- Ajouter un appareil** dialog box: The device **Ax'UP SN: 001281** is selected from the list.
- Ajouter un appareil** dialog box: The message **Votre appareil est prêt à l'emploi !** is displayed for **Ax'UP SN: 001281**.

3.2 Connection smartphone Bluetooth Mode



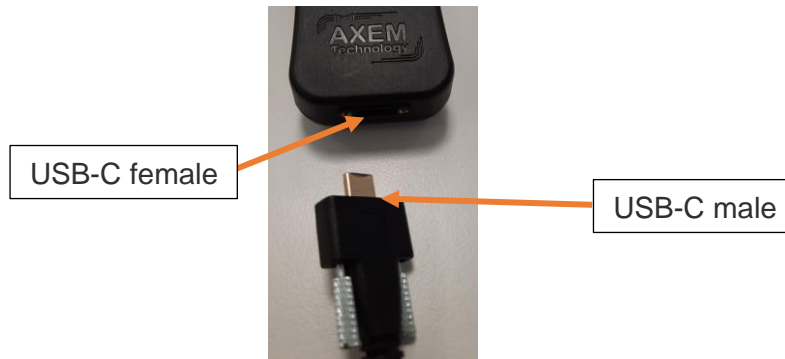
Important to know : By default, AX'Up is supposed to be recognize as an AZERTY keyboard by any smartphone. If you are using AX'Up in QWERTY or data don't show correctly on your smartphone:

- 1- Go to settings in the keyboard and input method part
- 2- Press physical keyboard and change the keyboard layout by putting French keyboard for AZERTY or United State keyboard for QWERTY

4 Start-up guide For USB mode

4.1 USB-C to PC

1. Connect and screw the USB-C cable to the device:



The connector can be screwed by hand or with a screwdriver:



Don't need to squeeze too much: it's well connected as soon as the spanner adjuster is in contact with the connector.



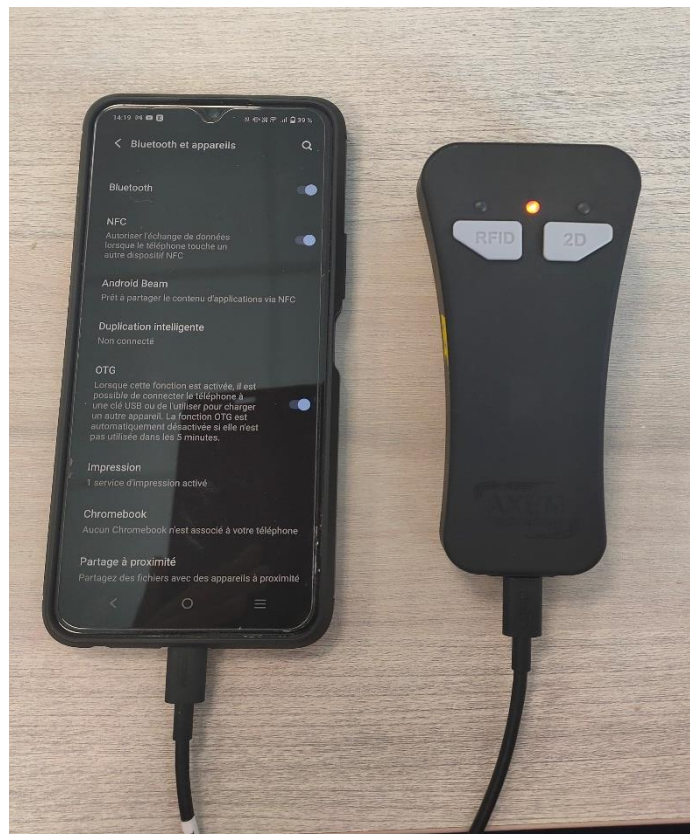
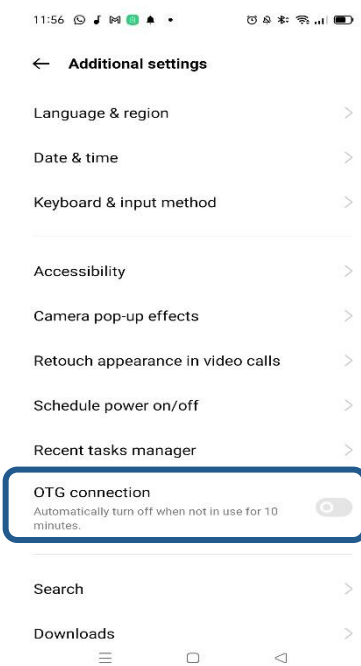
2. Connect the USB-A side of the cable to the device

- The **status led** will **blink blue** = **Connection is ok.**
- Then the **status led** will remain **red** until **initialization is done.**
- **2D led** and **RFID led** will **blink green** = The **2D and RFID initialization are in running**
- Then the **status led** will turn **green** = There was no failure : reader is ready to use.



4.2 Connect USB-C to C (Android)

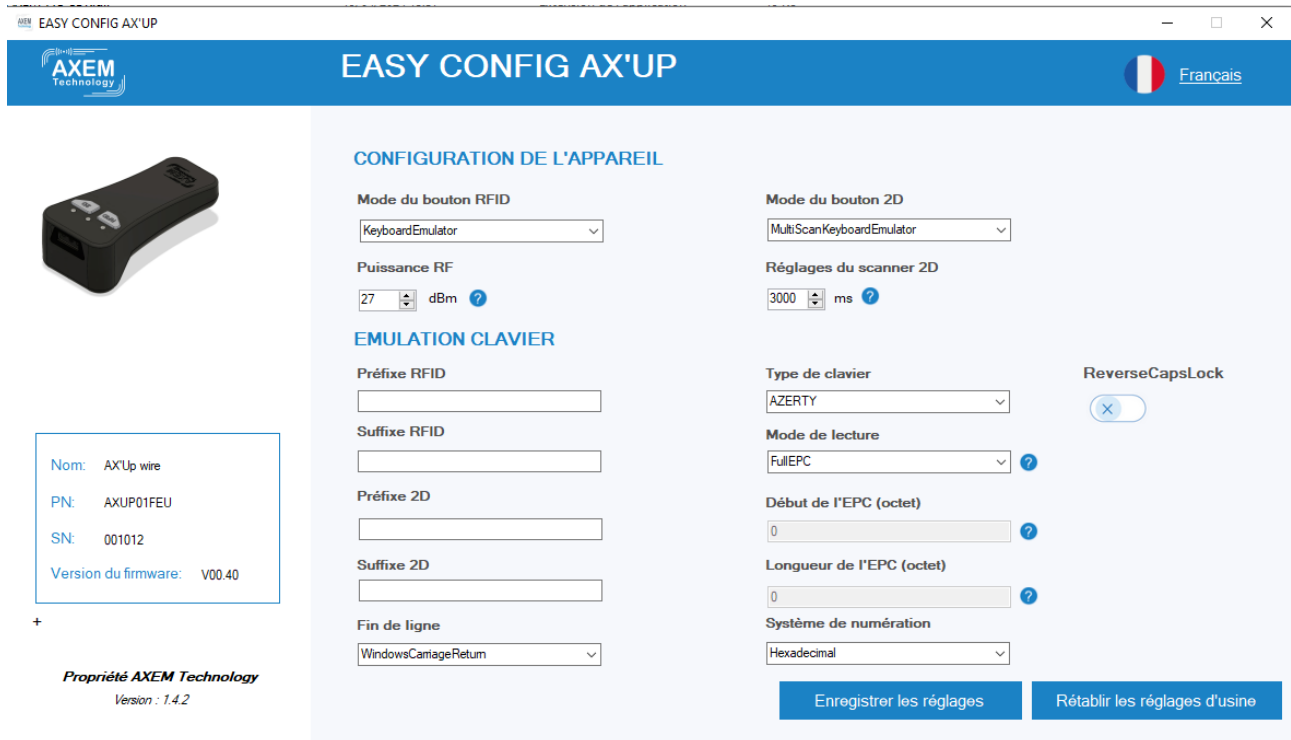
To charge the AX'Up with an android device, go to settings, then to additional settings and activate the OTG connection.



5 AX'Up Easy config App description

The easy config app is a tool that allows users to make basic settings simply on their AX'Up.

It also contains information on the PN, SN, firmware info, etc..



EASY CONFIG AX'UP

Francis

CONFIGURATION DE L'APPAREIL

Mode du bouton RFID
KeyboardEmulator

Puissance RF
27 dBm

Mode du bouton 2D
MultiScanKeyboardEmulator

Réglages du scanner 2D
3000 ms

EMULATION CLAVIER

Préfixe RFID
Suffixe RFID

Préfixe 2D
Suffixe 2D

Fin de ligne
WindowsCarriageReturn

Type de clavier
AZERTY

Mode de lecture
FullEPC

Début de l'EPC (octet)
0

Longueur de l'EPC (octet)
0

Système de numération
Hexadecimal

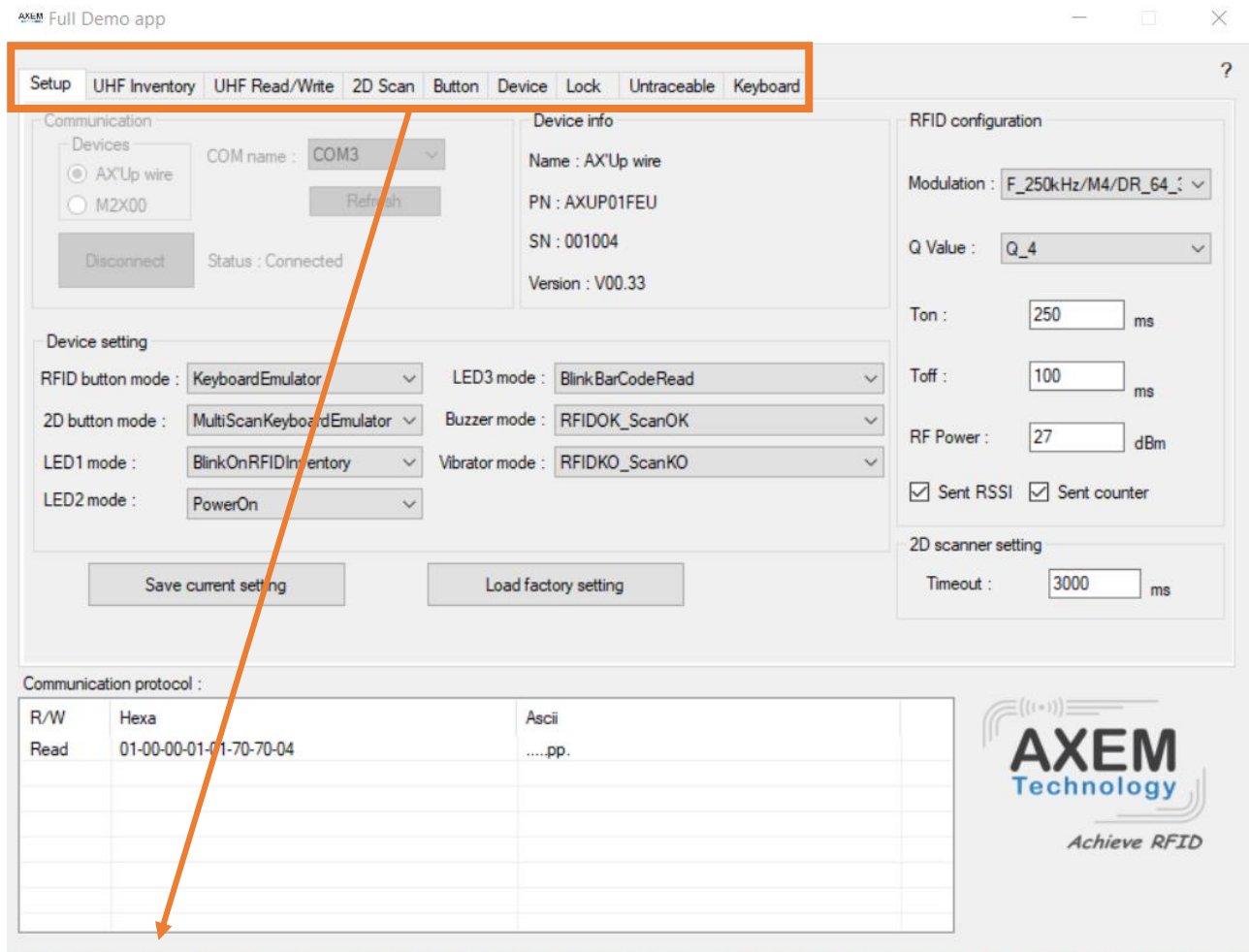
ReverseCapsLock

Enregistrer les réglages Rétablir les réglages d'usine

Nom: AX'Up wire
PN: AXUP01FEU
SN: 001012
Version du firmware: V00.40

Propriété AXEM Technology
Version : 1.4.2

6 AX'Up Windows demo App description

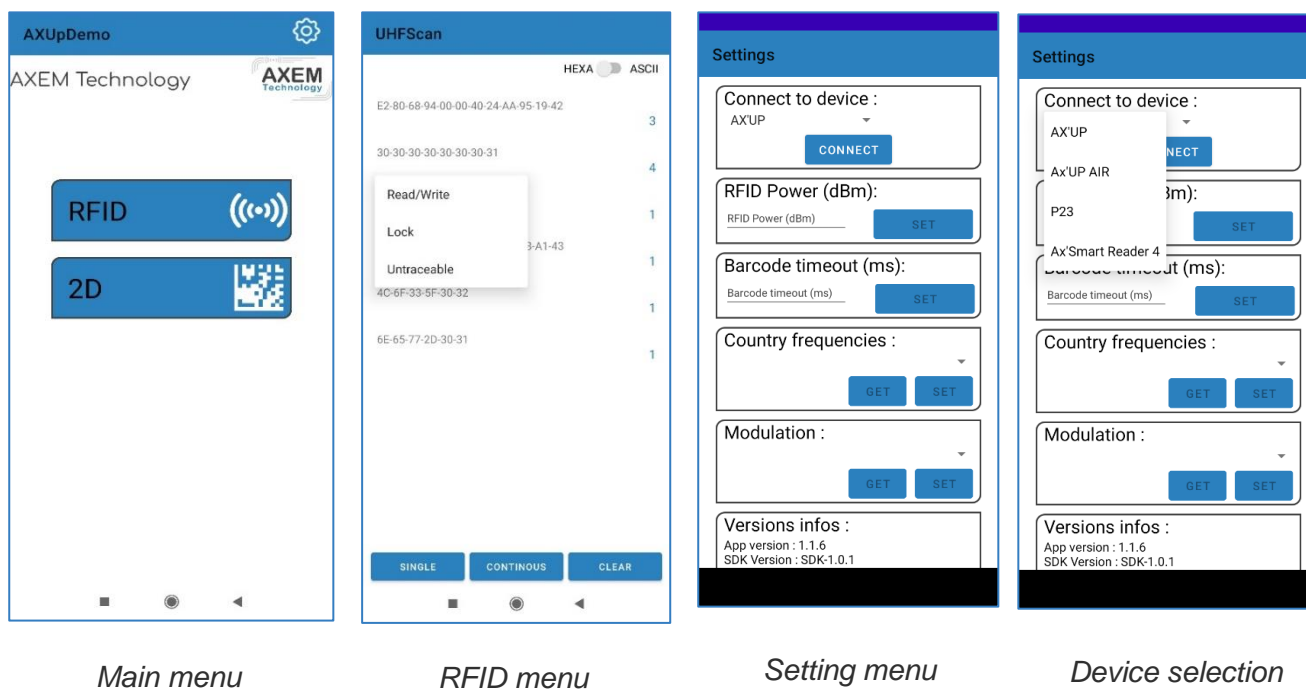


- **SETUP** : All setting are available in this tag
- **UHF INVENTORY** : Basic RFID actions (read EPCs) from demo app
- **UHF READ/WRITE** : Reading and writing UHF tags memory.
- **2D SCAN** : Barcodes scanning from demo app
- **BUTTON** : UHF and barcodes actions from buttons of the device
- **DEVICE** : Master control settings for the HMI (Human machine interface)
- **LOCK** : RFID lock and kill actions
- **Untraceable** : RFID Untraceable settings
- **Keyboard** : Keyboard emulator settings

7 AX'Up Android demo App description

The android demo app allow RFID and Barcode readings with an AX'Up connected either in USB or bluetooth.

In the RFID menu it is possible to do **read/write, lock and untraceable** operations on a tag with a **long click on its EPC code**. The device selection appears when clicking on 'AX'Up' field in the settings menu.



Before starting the android app, make sure the AX'Up is connected in the proper way, either USB or Bluetooth. For **Bluetooth** using, AX'Up Air **has to be connect in Android settings** (as described in [3.2 Connection smartphone Bluetooth Mode](#)) **before starting** the app.

In the app, to use the AX'Up via USB go to settings, and select 'AX'Up' in the device selection; for Bluetooth utilization choose 'AX'Up air'. Press 'connect', the **button should become blue**, and connect replace by '**connected to AX'Up Sn: XXXXXX**'. By default, the Demo application will connect to the first AX'Up in Android Bluetooth settings.

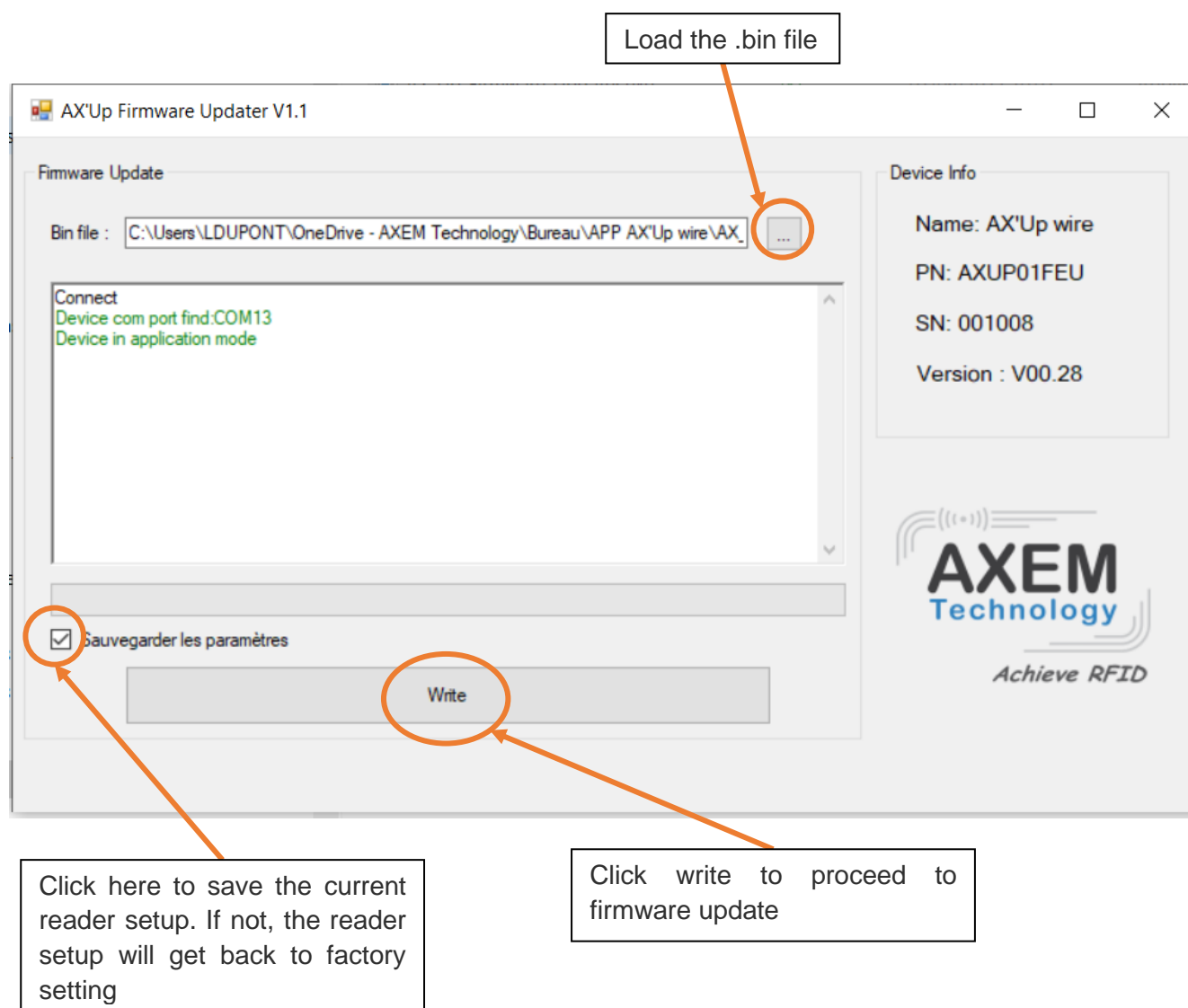
8 Firmwares Update

The AX'Up is composed of 2 main intelligence, divided in 2 firmware: the main firmware and the Bluetooth. Both firmware can be updated.

8.1 Main firmware update

Windows Software: Firmware Updater

If the main firmware needs to be updated, AXEM will provide a .bin file.



Load the .bin file

Click here to save the current reader setup. If not, the reader setup will get back to factory setting

Click write to proceed to firmware update

8.2 Bluetooth module firmware update

If the Bluetooth firmware need to be updated, AXEM will provide a .zip file.

The update will be realize over the air and can be done via any smartphone supporting Nordic Semiconductor **nRF Connect** for **mobile** application (<https://www.nordicsemi.com/Products/Development-tools/nRF-Connect-for-mobile>) .

1st step: Make Sure your **AX'Up** is not connected to any smartphone (Status LED blinking blue)



Blue
Bluetooth connected

Blinking blue
Bluetooth waiting for connection

2nd step: Put your **AX'Up** in charge (either charger or USB to a PC). Status LED should go to charge state (blinking orange or green). **Your AX'Up Air has to be charging the whole upgrade process.**



Green
Full battery

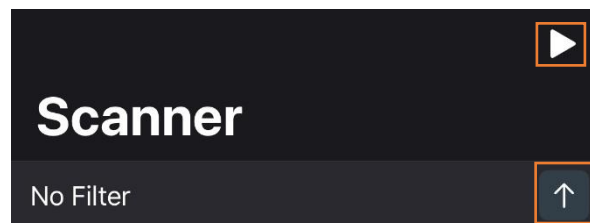
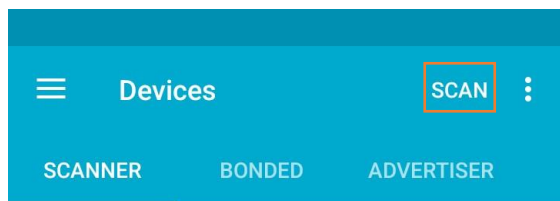


Orange
Charging in progress

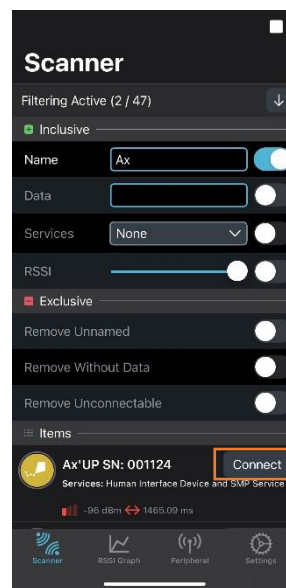
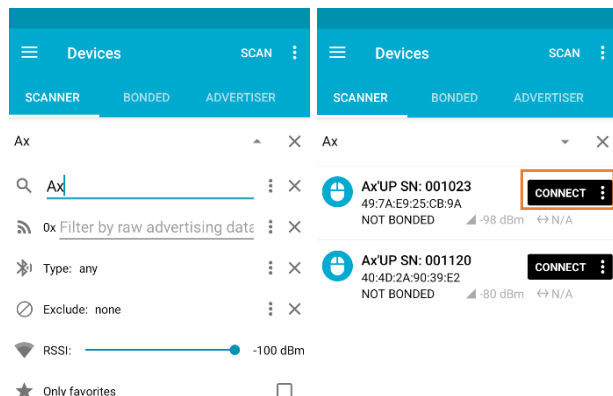
3rd step: Open Nordic Semiconductor nRF Connect for mobile application. Start the Bluetooth scan: Press scan button on Android, and play logo in IOS. And put a filter on "Ax" to find the AX'Up.

Android

IOS



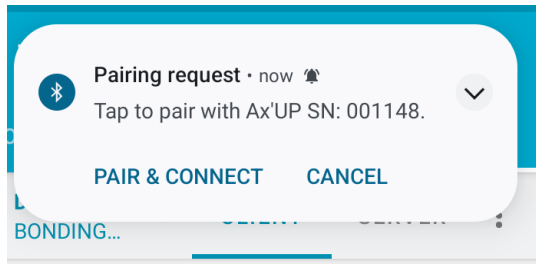
No filter



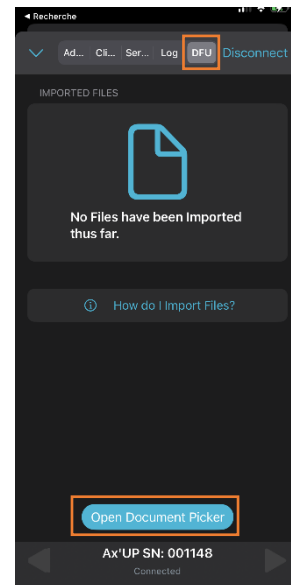
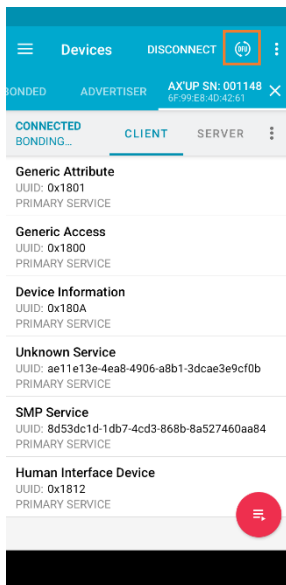
4th step: Connect to the AX'Up by clicking on Connect.

5th step: Pairing is supposed to be optional but sometimes Android may requires it. In connection tab go to DFU.

Android



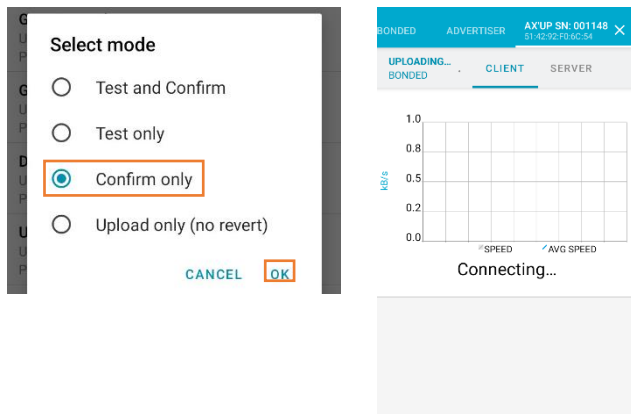
IOS



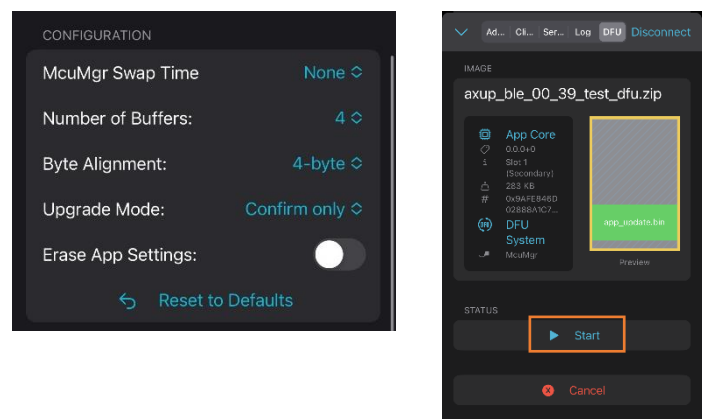
6th step: After selecting the proper file choose the following settings for the Upgrade:

- No swap time
- Number of buffers 4
- Byte alignment 4-byte
- Upgrade mode: CONFIRM ONLY - MANDATORY !!!
- Erase App Settings: no

Android

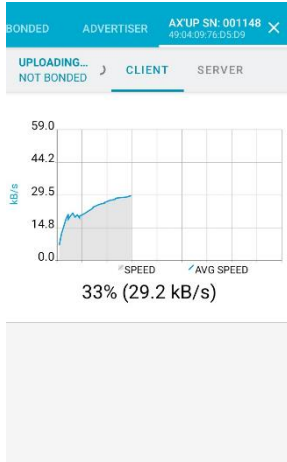


IOS



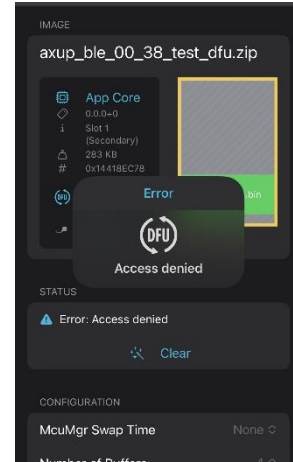
7th step: Download the update. If your AX'Up is not charging the download will fail. AX'Up can stay up to 30s at 0%.

Android

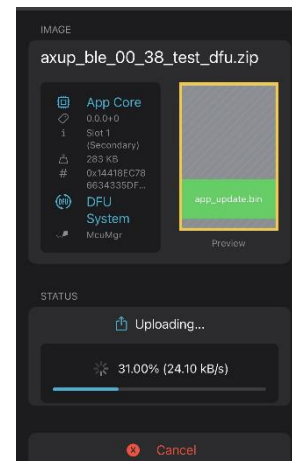


AX'Up in charge

IOS



AX'Up not in charge



AX'Up in charge

8th step: The AX'Up installs the new firmware. During installation Status LED will blink white.



Blinking white
Bluetooth upgrade
installation

Important : AX'Up has to be charging until the LED stop blinking white and the AX'Up has restarted.

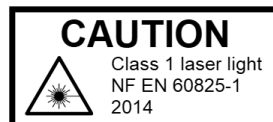
8 Operating range and technical data

- UHF EU band, Channels 4, 7, 10, 13 (865.70Mhz / 866.30Mhz / 866.90Mhz / 867.50Mhz).
- Maximum power UHF: +27dBm
- Temperature operating discharge: -20°C to +50°C.
- Temperature storage: -40°C to +70°C.
- Temperature Charging mode: +10°C to +37°C
- IP 54.
- CE / RoHS.
- Product weight: 200gr.
- Battery capacity: 1000mAh

9 Safety instruction

9.1 laser equipment

- The product use white Lamp, as case with any brightness source, as the sun, tests following IEC 62471 has been done to demonstrate that the engine is safe for its intended application under usage conditions. However, the user should avoid looking into beam.
- The product uses a laser diode to form intuitive aiming aid. This Laser diode has been tested and found to comply with the limits for a **Class 1 laser product**, pursuant to Safety of laser products - Part 1: Equipment classification and requirements of IEC 60825-1:2014. A class 1 laser is safe under all conditions of normal use. However, the user should avoid looking into beam. Class 1 laser devices are not considered dangerous, but only if they are used for their intended purpose.



9.2 Battery

The product includes a rechargeable Lithium polymer battery equipment.



Li-Pol 3,7V 3,7Wh



A caution is necessary when operating the device. Do not open, crush, disassemble or dispose of in fire.

9.3 Power supply

⎓ : Applied a direct current (DC): 600mA and voltage 5V0.