

# User guide AX'ware Starter

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# 1 Révision

| Description   | Date       | Version | Author   | Check |
|---------------|------------|---------|----------|-------|
| First release | 2020/12/09 | 1.0     | LDU, CLO | LDU   |
|               | 2020/12/15 | 1.1     | CLO      | ACA   |

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# 1. Introduction

AX'ware Starter requires a license and therefore an internet connection.

# 1.1 Versions et licenses

The application is available in two versions:

- Free trial version with a 30-day trial period
- Pro Version: paid license (one license per device)

You will find the software version information and the AXEM Technology support contact in the "Settings" menu of the software.

## 1.2 Device compatibility

This software is integrated in the following mobile terminals:

- MBA5-P23
- ATX-800 V9



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# 2 Settings

## 2.1 Changing language

You can set up the software in English or French.

|              |          | 🗇 🖹 🛔 4:50   |
|--------------|----------|--------------|
| $\leftarrow$ | Settings |              |
| Langu        | age      |              |
| English      |          | $\checkmark$ |
| French       |          |              |

## 2.2 Modify the coding of the tag

The coding language for reading and writing a UHF tag can be set in ASCII or Hexadecimal.

|              |                     | 😌 🖹 🛔 4:50   |
|--------------|---------------------|--------------|
| $\leftarrow$ | Settings            |              |
| Langu        | age                 |              |
| English      |                     | $\checkmark$ |
| French       |                     |              |
| Tao En       | codina              |              |
| ASCII        |                     | $\checkmark$ |
| Hexade       | cimal               |              |
| RFID p       | ower range          |              |
|              | Low range : 13 dBm  |              |
| 8 dBm        | •                   | 23 dBm       |
|              | Long range : 33 dBm |              |
| 23 dBm       | . <u>-</u>          | 33 dBm       |
|              |                     |              |
|              |                     |              |

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#### 2.3 Définir la plage de puissance RFID

In all menus of the application, it is possible to select a Min power or a Max power.

Puissance Min 📄 Max

These can be set in the **Settings**:

- From 8 dBm to 23 dBm for Min power (short range)
- From 23 dBm to 33 dBm for Max power (long range)



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#### 2.4 Setting up RSSI

To optimize the performance of the search mode, it is possible to set the RSSI Min and Max in the **Settings**:

- From -90 dBm to -58 dBm for Min power (short range)
- From -58 dBm to -25 dBm for Max power (long range)

| Rssi      |                    |                  |        |         |
|-----------|--------------------|------------------|--------|---------|
|           | R                  | SSI Min : -90 dE | 3m     |         |
| -90 dBm 🤇 | -                  |                  |        | -58 dBm |
|           | RS                 | SI max : -25 dl  | Bm     |         |
| -58 dBm   | 4-<br>1            |                  |        | -25 dBm |
|           |                    |                  |        |         |
|           |                    | AXEM             |        |         |
|           | Version            | 1.0.1 - Model    | · MBA5 |         |
|           | supp               | ort@axemte       | c.com  |         |
|           |                    |                  |        |         |
|           | $\bigtriangledown$ | 0                |        |         |

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# 3 Modes

The AX'ware software includes 4 modes of UHF which are detailed in this chapter.



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#### 3.1 Detect

The "Detection" mode enables to trigger the reading of all UHF tags in the reader field.



<u>Note:</u> to optimize tag detection, it is possible to set the RSSI Min and Max as mentioned in chapter <u>2.3.Setting the RSSI.</u>

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#### 3.1.1 Inventory reference

3.1.1.1 Create an inventory list

It is possible to create an inventory reference list from a list of detected tags:



#### 3.1.1.2 Recording Data

The reference inventory list is stored under the following conditions:

- In .csv format
- In the folder: MBA5\Shared internal storage space\Axem\inventory
- File name: detection

## 3.2 Inventory





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#### 3.2.1 Inventory mode

The inventory report is as follows:



## 3.4. Filtered inventory

The filtered inventory allows you to perform an inventory against predefined criteria.



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#### 3.3 Write





It is recommended to click the trigger regularly to ensure that the tag to be written is always within reach.

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**Note:** it is important to check first whether you are writing in ASCII or Hexadecimal.

#### 3.3.1 Operating mode

To write tags, it is recommended to follow the following procedure:

- 1. Place tag 1 in front of the antenna
- 2. Reading tag 1: trigger click
- 3. Write the prefix and the counter in the reserved fields.
- 4. Encoding tag 1: click on the confirm button
- 5. Verification reading tag 1: trigger click
- 6. Remove tag 1 from the antenna field
- 7. Place tag 2 in front of the antenna
- 8. ...

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#### 3.3.2 Tag encoding

To encode a unique tag it is not necessary to fill in the 'Counter' field.

To encode a series of tags with incrementation, it is required to write the first digit of the series to be incremented in the counter field. Then the incrementation will be done automatically.

|  | 🖪 👽 🗟 🛔 5:01                                 | 🖪 🔍 🗑 🚊 5:01                  |
|--|--|-------------------------------|
|  | ← Write                                      | ← Write                       |
|  | Output power Min 🔵 Max                       | Output power Min O Max.       |
|  |  |                               |
|  | Tag detected<br>4E4F4543382D41322D5146343200 | Tag detected<br>NOEC8-A2-QF42 |
|  | Prefix settings                              | Prefix settings               |
|  | NOEC8-A2-QF42                                | NOEC8-A2-QF42                 |
|  | Counter                                      | Counter                       |
|  | 0001   | 0001                          |
| Once the code has been entered:<br>confirm to write it down. | Confirm                                      | Success                       |
|  | < 0 □  | < ○ □                         |

Example of encoding a series of tags with incrementation:

Once the incrementation n is encoded, the counter automatically changes to n+1.



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## 3.4 Search for a tag

| The tag sear                 | h is accessible in most menus via the loupe logo.  |
|------------------------------|--|
| Cutput power                 | $\begin{array}{c} 52 \\ \vdots \\ ax \end{array} \qquad \begin{array}{c} \hline \\ Output power \\ \hline \\ \hline \\ Output power \\ \hline \\ \hline \\ Max \\ \hline \\ \hline \\ Max \\ \hline \\ 0\% \\ \hline \\ \hline \\ 0\% \\ 0\%$ |
| E20000172617015623202A1F     | E28011700000020CC37CC2A5 E200001D7311014916607D85  |
| 6178656D3030303400000000     | E2806894000050034A375DB3   |
| 1111222233334444555566667777 | E28011700000020CC37CC3AD   |
| 3536                         |  |
| Γhe list of tags then appea  | S:<br>M E * N 16:49<br>Cutput power Min Max  |
| Select in the list the t     | E2806894000050106CE62568 1<br>303020726669642064617461 1<br>X Search for tag 8<br>Localize a specific tag around you   |
| 1                            | E2806894000050106CE62568 >   |

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E2806894000050106CE62567

E2806894000040106CE67461

E2806D9200000002225CCCDF



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# 4 Data export

## 4.1 Quick export

A simple export function is available in all menus:



#### 4.2 Inventory export

Exporting inventory reports provides more information, including the presence or absence of tags and the success rate.



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#### 4.3 Storage of exported files

The exported files are stored under the following conditions:

- In .csv format
- In the folder: \MBA5\Shared internal storage space\Axem\export
- File name:
  - o Date-time: for inventory and detection list exports
  - o Date-time\_filter: for exports of filtered inventories

## 4.4 File contents

The file export is as follows:



Tag identifier = EPC

## 4.5 Using the exported data

To collect the data in table form in Excel, the procedure is as follows:

1. In the taskbar: go to Data - retrieve and transform data from a text/CSV file

| FILE | с<br>Н      | 2                      | INSERT                  | PAGE LAYOUT             | FOF              |                                     | A        | REVIEW      | VIEW   | QuickBooks-Cu                   | stomer-List        | - Excel       |                      |                            |                  |                       |               |       | ?       | <b>B</b> = |         | × |
|------|-------------|------------------------|-------------------------|-------------------------|------------------|-------------------------------------|----------|-------------|--------|---------------------------------|--------------------|---------------|----------------------|----------------------------|------------------|-----------------------|---------------|-------|---------|------------|---------|---|
| From | From<br>Web | From<br>Text<br>Get Er | From Other<br>Sources * | Existing<br>Connections | Refresh<br>All - | Connecti<br>Propertie<br>Edit Links | 24<br>71 | Z A<br>Sort | Filter | Clear<br>To Reapply<br>Advanced | Text to<br>Columns | Flash<br>Fill | Remove<br>Duplicates | Dato<br>Validation<br>Data | Consolidate<br>• | What-If<br>Analysis * | Relationships | Group | Ungroup | Subtotal   | 5 (Å (Å | ~ |
| Δ1   |             | -                      | Xv                      | f <sub>x</sub>          |                  |                                     |          |             |        |                                 |                    |               |                      |                            |                  |                       |               |       |         |            |         | ¥ |
| 1    | A           | В                      | c                       | D                       | E                | F                                   | G        | ł           | H      | 3 3                             | J                  | K             | L                    | М                          | N                | 0                     | P             | Q     | R       | 3          | S       |   |

2. Select 'do not detect data types' and then 'load'.

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The data is then displayed as follows:

| Quick export:      |                       |                      | Export of invent           | ory repo  | ort :       | E | Export of filter     | ed inve | ento |
|--------------------|-----------------------|----------------------|----------------------------|-----------|-------------|---|----------------------|---------|------|
| Colonn             | Colonne 2 💌           |                      | Colonn                     | Count 🛛 💌 | Found 🗾 🗾   |   | Colonne1             | Count   |      |
| 4158454D3032       | 0                     |                      | 4158454D3032               | 0         | Not founded |   | 4158454D3032         |         | 1    |
| 415804132030303000 | 0                     |                      | 415804132030303000         | 0         | Notfounded  |   | 415804132030303000   |         | 1    |
| 4158454D3033       | 9                     |                      | 4158454D3033               | 9         | founded     |   | 4158454D3033         |         | 1    |
|                    |                       |                      |                            |           |             |   |                      |         | _    |
| <u></u>            |                       |                      |                            |           |             |   |                      |         |      |
|                    |                       |                      | Total number of tags       | 3         |             |   | Total number of tags | 51      |      |
|                    |                       |                      | Number of inventoried tags | 1         |             |   | Matching tags found  | 23      |      |
|                    |                       |                      | Success rate               | 0,33      |             |   | Filter               | *01*    |      |
| Co<br>de           | ount = ne<br>tections | umber o<br>s per tag | of<br>J                    |           |             |   |                      |         |      |
| identifier = EPC   |                       |                      |                            |           |             |   |                      |         |      |