Explore the next sense

Getting Started Guide Acconeer XM112-XB112 Module Evaluation Kit

Aug 2022

Installation guide

The XM112 is delivered non-flashed. This installation quick guide will show you how to get the Acconeer XM112-XB112 Module Evaluation Kit (EVK) up and running. For a hands-on instruction video, please visit https://www.youtube.com/watch?v=FjYTIySbLZk

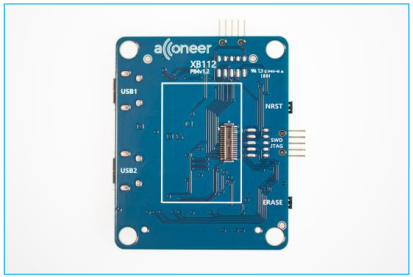
Preparing the HW Installation

To complete a successful installation of Acconeer EVK, the following HW components will be required:

XM112 Module

+

XB112 Breakout Board



Additionally*:

- USB Micro Cable for connection to PC

* Not provided by Acconeer.

Preparing the SW installation

The following applications will be required to complete an installation. Also, they will be very useful when working with the Radar Sensor EVK. Please download and install:

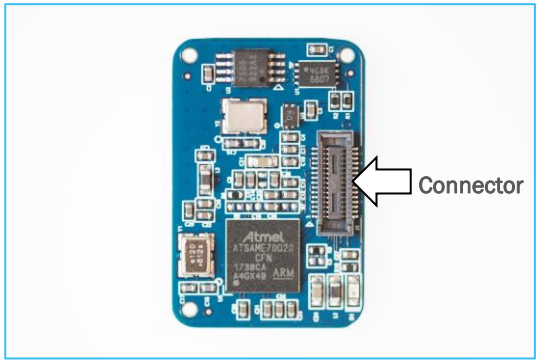
- Acconeer Module SW Image for XM112: Available from https://developer.acconeer.com/
- Acconeer Exploration tool: https://github.com/acconeer/acconeer-python-exploration

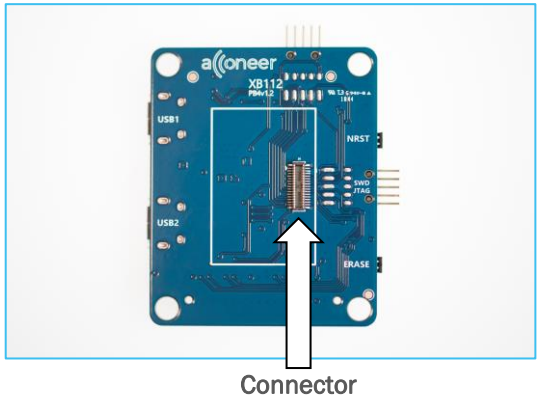
For all users (Windows, Linux):

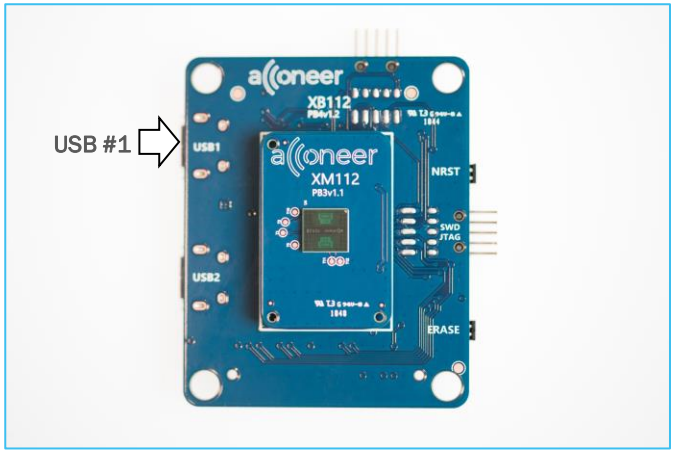
- Bossa: Available from https://github.com/shumatech/BOSSA/releases
- Python: Available from https://python.org/downloads

Assemble the HW XM112/XB112

- Connect the XM112 Module to the XB112 Breakout Board.
- Connect the USB cable to USB slot #1
- End result in the rightmost picture



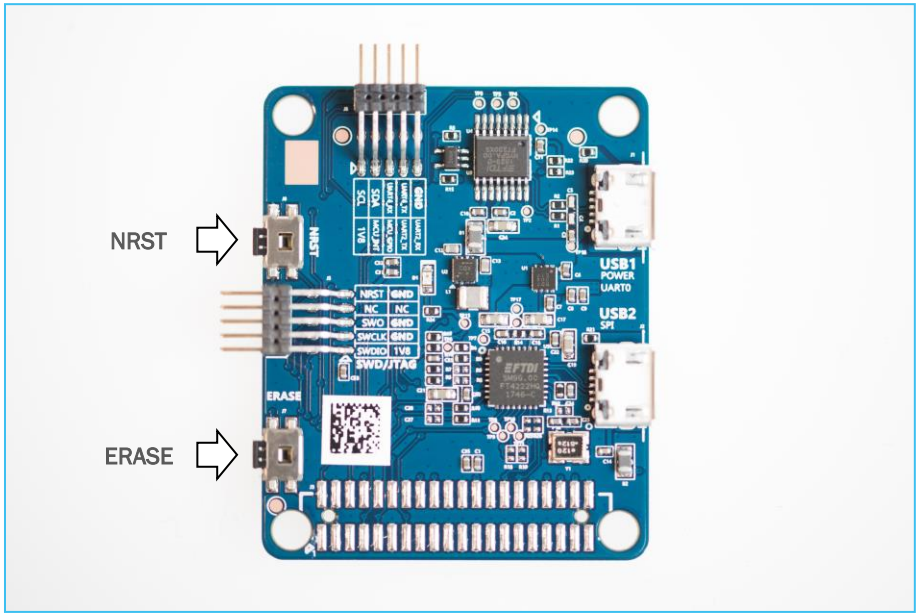




Start Boot Mode

1. Press the ERASE-button and hold it.
2. Press the NRST-button and hold it.
3. Release the NRST-button.
4. Release the ERASE-button

Now the module is in boot mode



Installing BOSSA

1. Open the installer that you have downloaded.
2. Follow the instructions in the setup wizard and accept the license agreement. No changes needed.
3. Next – Next – Next – Install - Finish

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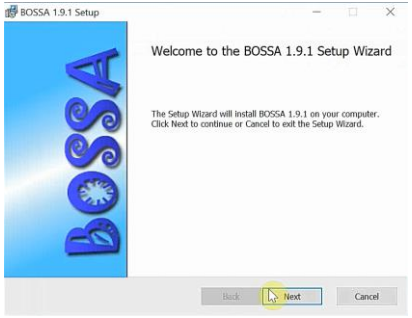
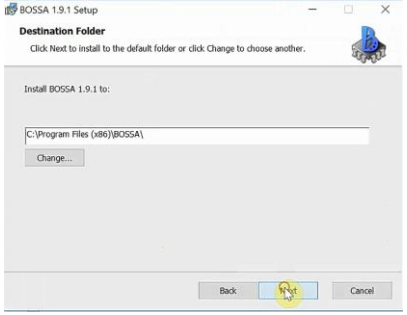
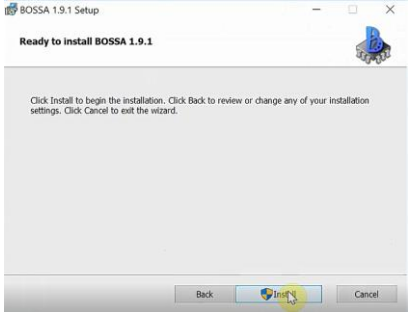
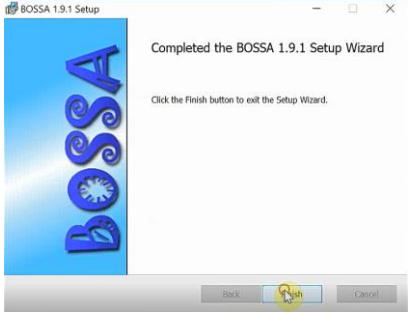




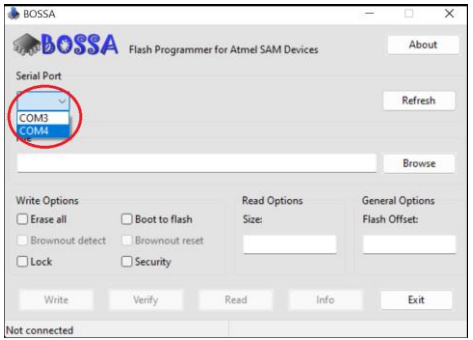




Flashing

1. Start Bossa
2. Choose serial port (Pic 1). The one you have plugged XM112 into.
3. Browse and select the module server SW image downloaded from the Acconeer web page. It is located in folder *xm112_module_software/bin/*. (Pic 2,3)
4. Make sure *Erase all* AND *Boot to flash* options are selected and click Write (Pic 3)
5. Wait for the flashing to complete. (Pic 4)

1



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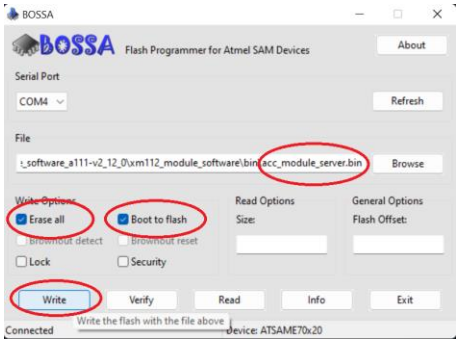

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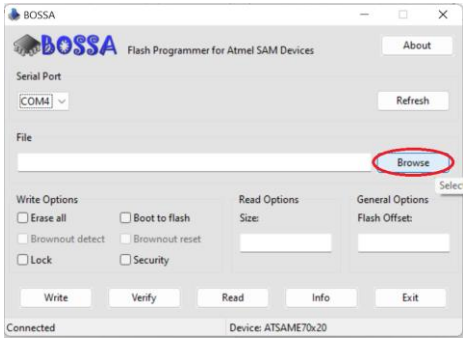

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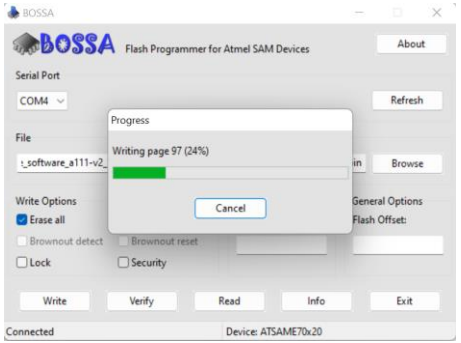
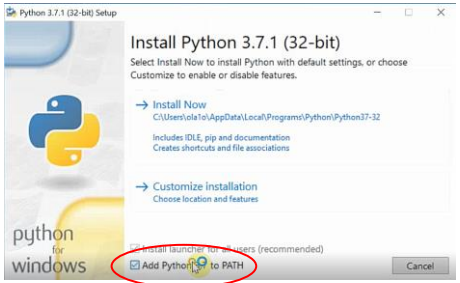
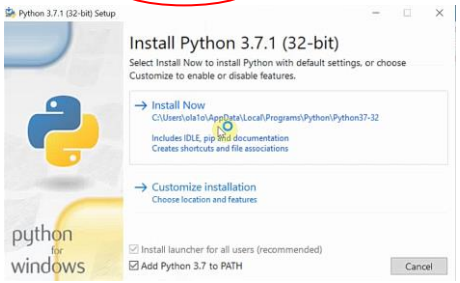
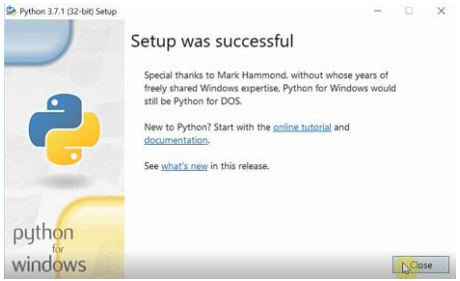


Installing python

- Start the installer file that you downloaded from python.
- Make sure the Add Python to PATH option is selected. (Pic 1)
- Click Install Now. No need for a customized Installation. (Pic 2)
- Close once the installation is completed. (Pic 3)



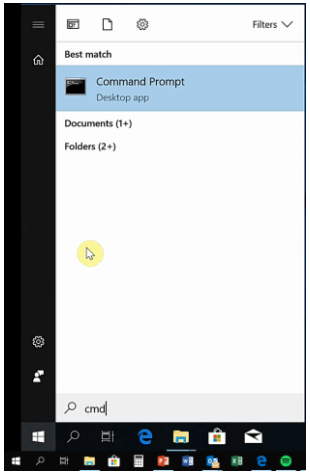




Installing Exploration tool

- Unzip the file downloaded from Acconeer. Acconeer-python-exploration
- Start windows command prompt. (Pic 1) You can always find it by searching for “cmd”.
- In the command prompt, change the directory to where you unzipped the exploration tool by typing the command *cd* followed by the path to the folder. (Pic 2)

1



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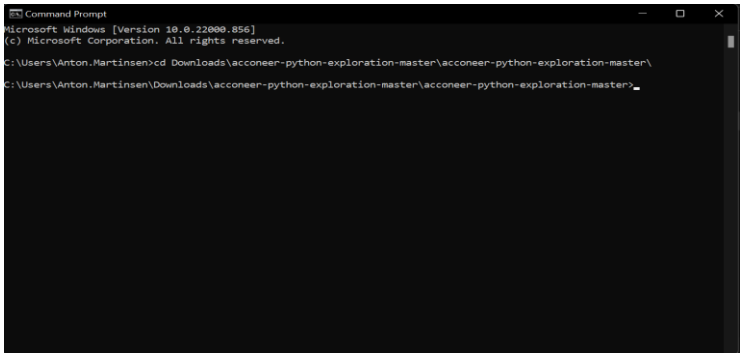
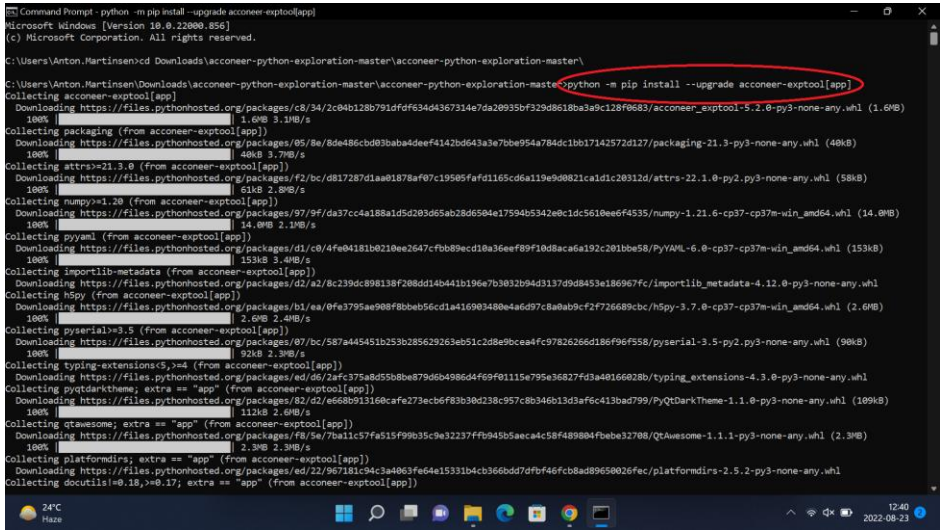


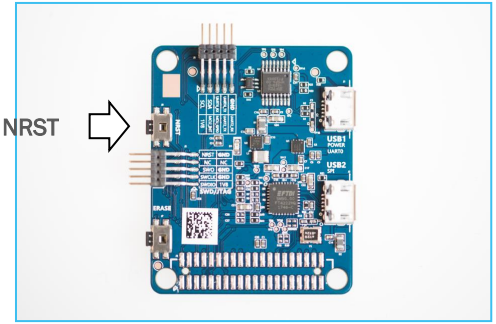
Installing Exploration tool

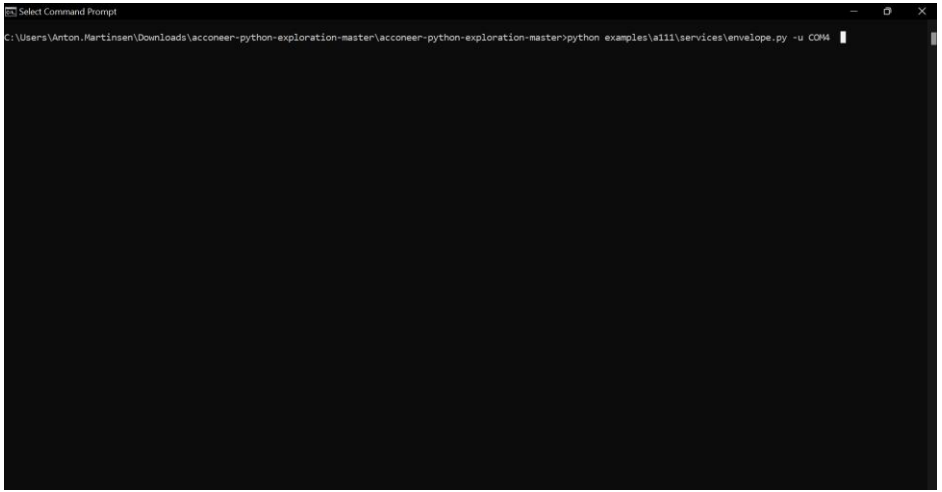
- Run the command: python –m pip install --upgrade acconeer-exptool[app]
- Wait until the installation has finished
- You might also need to install COM-Port drivers: https://ftdichip.com/wp-content/uploads/2021/08/CDM212364_Setup.zip



Run the exploration tool

- You need to start by rebooting the XM112 module.
- Press the NRST button on the XM112 card and hold for 1s.
- Run the following command in the command promt: *python examples\a111\services\envelope.py –u [port id]* In our example we have used port 4.
- The result should be a graph showing the envelope data output from the sensor. Shown in next page.





Envelope graph