

Explore the next sense



# Getting Started Guide Acconeer XE132 Entry Module Evaluation Kit

Sept 2020

# Installation guide

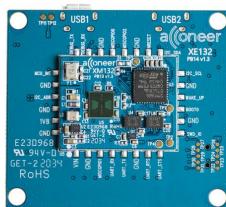
The XE132 is delivered non-flashed. This installation quick guide will show you how to get the Acconeer XE132 Module Server up and running. For a hands-on instruction video, please visit Acconeer channel.

<https://youtu.be/PTcQ0FpRz7E>

# Preparing the HW Installation

The Evaluation kit for Our Entry Module (XE132) differs from previous EVK in that it comes already soldered onto the breakout board. All you need is the micro USB cable.

XE132 EVK



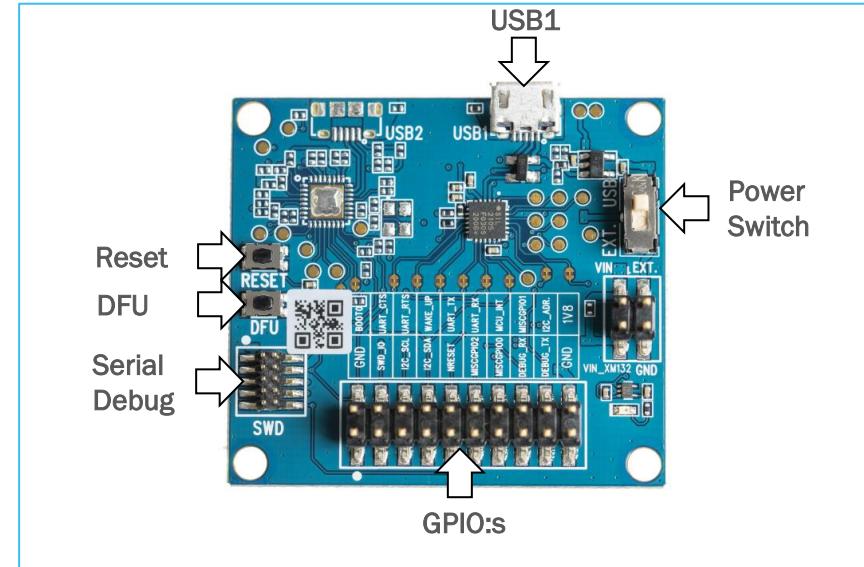
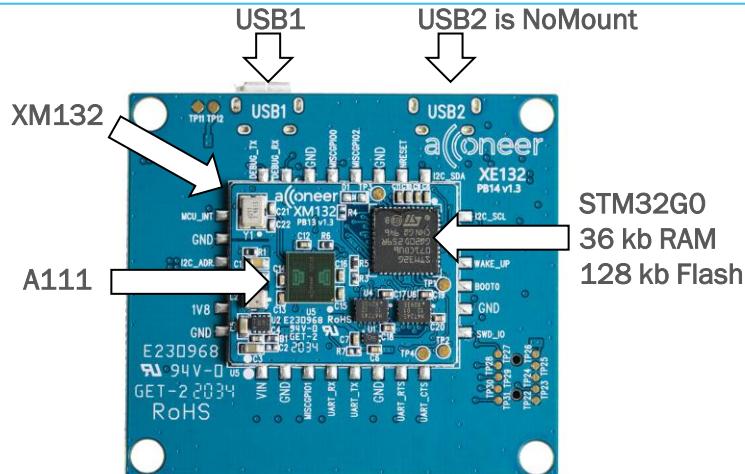
Additionally\*:

- USB Micro Cable for connection to PC

\* Not provided by Acconeer.

# HW Overview

## XE132 EVK Front and Back Side



# 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 Module Server. Please download and install:

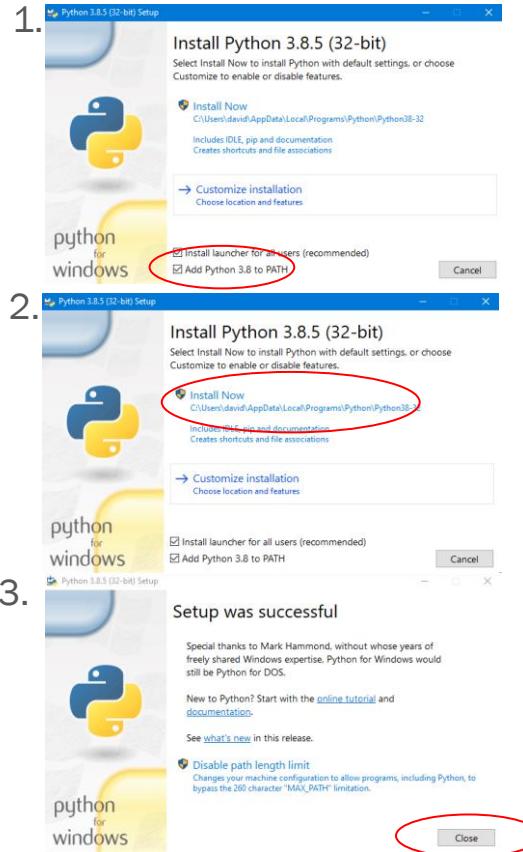
- Acconeer Module SW Image for XM132: Available from <https://developer.acconeer.com/>
- Acconeer Exploration tool: <https://github.com/acconeer/acconeer-python-exploration>

For all users (Windows, Linux):

- Python: Available from <https://python.org/downloads>

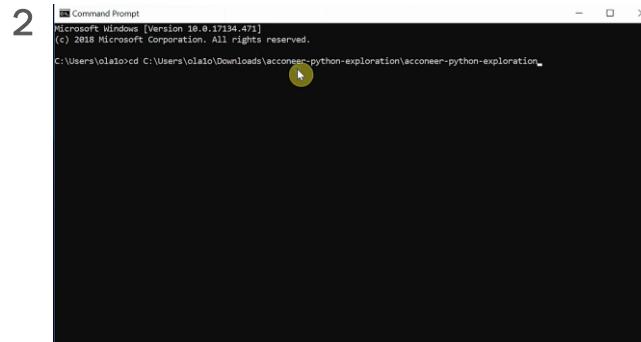
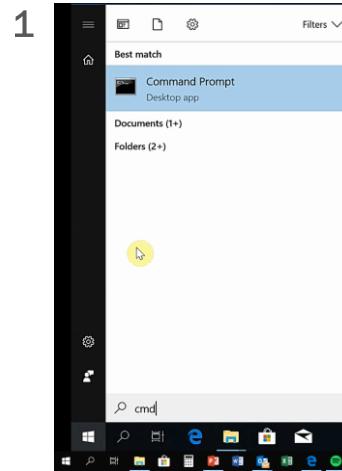
# Installing python

- 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

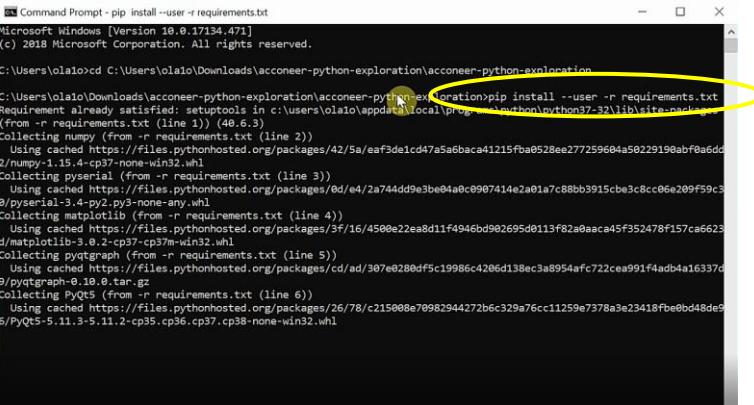
- Unzip the file downloaded from Acconeer. Acconeer-python-exploration
- Start windows command prompt. (Pic 1)  
You can always find it by searching for “cmd”.
- In the command prompt, change the directory to where you unzipped the exploration tool by typing the command `cd` followed by the path to the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



# Installing Exploration tool

- In Command Prompt: Run the command:  
*python -m pip install -U --user setuptools wheel*
- Then the command: *pip install --user -r requirements.txt* (Pic 1)
- Wait until the installation has finished and run the next command: *python setup.py install --user* (Pic 2)

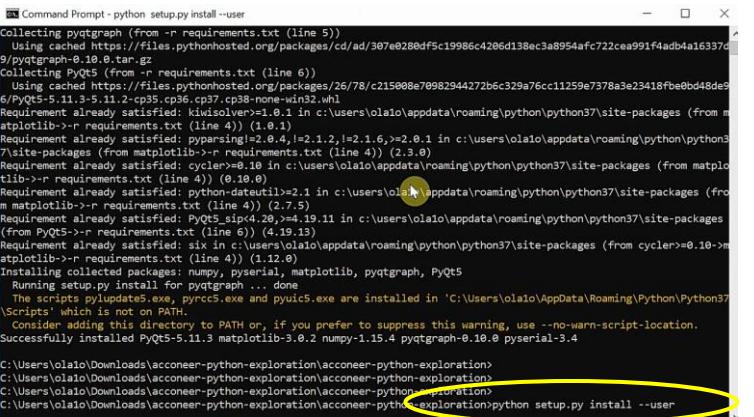
1



```
Command Prompt - pip install --user -r requirements.txt
Microsoft Windows [Version 10.0.17134.471]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\olalo\cd C:\Users\olalo\Downloads\acconeer-python-exploration\acconeer-python-exploration
C:\Users\olalo\Downloads\acconeer-python-exploration\acconeer-python-exploration>pip install --user -r requirements.txt
Requirement already satisfied: setuptools in c:\users\olalo\appdata\local\programs\python\python37-32\lib\site-packages (from -r requirements.txt (line 1)) (48.6.3)
Collecting numpy (from -r requirements.txt (line 2))
  Using cached https://files.pythonhosted.org/packages/42/5a/ea5de1cd47a5a6bac41215fba05228ee277259604a50229190abf0a6d2/1.15.4-cp37-none-win32.whl
    Collecting pyserial (from -r requirements.txt (line 3))
      Using cached https://files.pythonhosted.org/packages/0d/e4/2a744dd9e3be04a0c997414e2a01a7c88bb3915cbe3c8cc96e209f59c3/0/pyserial-3.4-py2.py3-none-any.whl
    Collecting matplotlib (from -r requirements.txt (line 4))
      Using cached https://files.pythonhosted.org/packages/3f/16/4500e22ea8d11f4946bd02695d0113f82a0aac45f352478f157ca6623/d/matplotlib-3.0.2-cp37-cp37m-win32.whl
    Collecting pygraph (from -r requirements.txt (line 5))
      Using cached https://files.pythonhosted.org/packages/cd/307e0280df5c19986c4206d138ec3a8954afc722cea991f4adb4a16337c9/pygraph-0.10.0.tar.gz
    Collecting PyQt5 (from -r requirements.txt (line 6))
      Using cached https://files.pythonhosted.org/packages/26/78/c215008e70982944272b6c329a76cc11259e7378a3e23418fbe0bd48de96/PyQt5-5.11.3-5.11.2-cp35.cp36.cp37.cp38-none-win32.whl
```

2



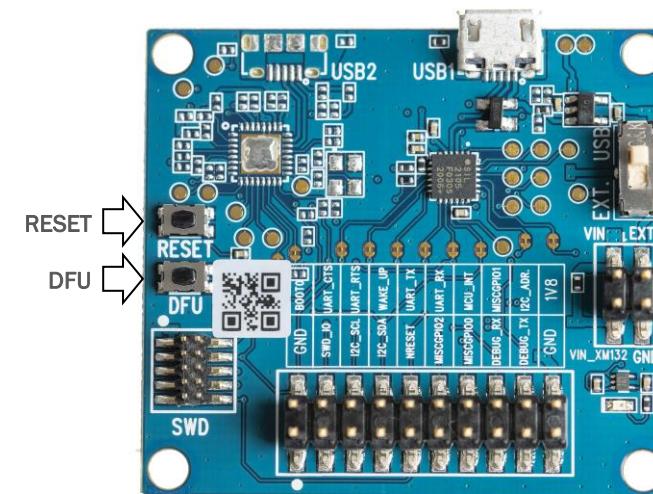
```
Command Prompt - python setup.py install --user
Collecting pygraph (from -r requirements.txt (line 5))
  Using cached https://files.pythonhosted.org/packages/cd/307e0280df5c19986c4206d138ec3a8954afc722cea991f4adb4a16337c9/pygraph-0.10.0.tar.gz
    Collecting PyQt5 (from -r requirements.txt (line 6))
      Using cached https://files.pythonhosted.org/packages/26/78/c215008e70982944272b6c329a76cc11259e7378a3e23418fbe0bd48de96/PyQt5-5.11.3-5.11.2-cp35.cp36.cp37.cp38-none-win32.whl
        Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\olalo\appdata\roaming\python\python37\site-packages (from matplotlib>=1.0.0)
        Requirement already satisfied: pyarsing>=2.0.4,!=1.2.1,!=2.1.6,!=2.0.1 in c:\users\olalo\appdata\roaming\python\python37\site-packages (from matplotlib>=1.0.0)
        Requirement already satisfied: cython>=0.18.0 in c:\users\olalo\appdata\roaming\python\python37\site-packages (from matplotlib>=1.0.0)
        Requirement already satisfied: python-dateutil>=2.1 in c:\users\olalo\appdata\roaming\python\python37\site-packages (from matplotlib>=1.0.0)
        Requirement already satisfied: numpy>=1.19.0,!=1.19.11 in c:\users\olalo\appdata\roaming\python\python37\site-packages (from pyqt5>=5.11.3)
        Requirement already satisfied: six in c:\users\olalo\appdata\roaming\python\python37\site-packages (from cycler>=0.10.0)
        Requirement already satisfied: matplotlib>=1.0.0 in c:\users\olalo\appdata\roaming\python\python37\site-packages (from pyqtgraph>=0.10.0)
        Requirement already satisfied: numpy, pyserial, matplotlib, pyqtgraph, PyQt5
          Installing collected packages: numpy, pyserial, matplotlib, pyqtgraph, PyQt5
            Running setup.py install for pyqtgraph ... done
            The scripts pyupdate5.exe, pyrcs5.exe and pyuic5.exe are installed in 'C:\Users\olalo\AppData\Roaming\Python\Python37\Scripts' which is not on PATH.
            Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.
  Successfully installed PyQt5-5.11.3 matplotlib-3.0.2 numpy-1.15.4 pyqtgraph-0.10.0 pyserial-3.4

C:\Users\olalo\Downloads\acconeer-python-exploration\acconeer-python-exploration>C:\Users\olalo\Downloads\acconeer-python-exploration\acconeer-python-exploration>C:\Users\olalo\Downloads\acconeer-python-exploration\acconeer-python-exploration>C:\Users\olalo\Downloads\acconeer-python-exploration\acconeer-python-exploration>python setup.py install --user
```

# Start Boot Mode (DFU Mode)

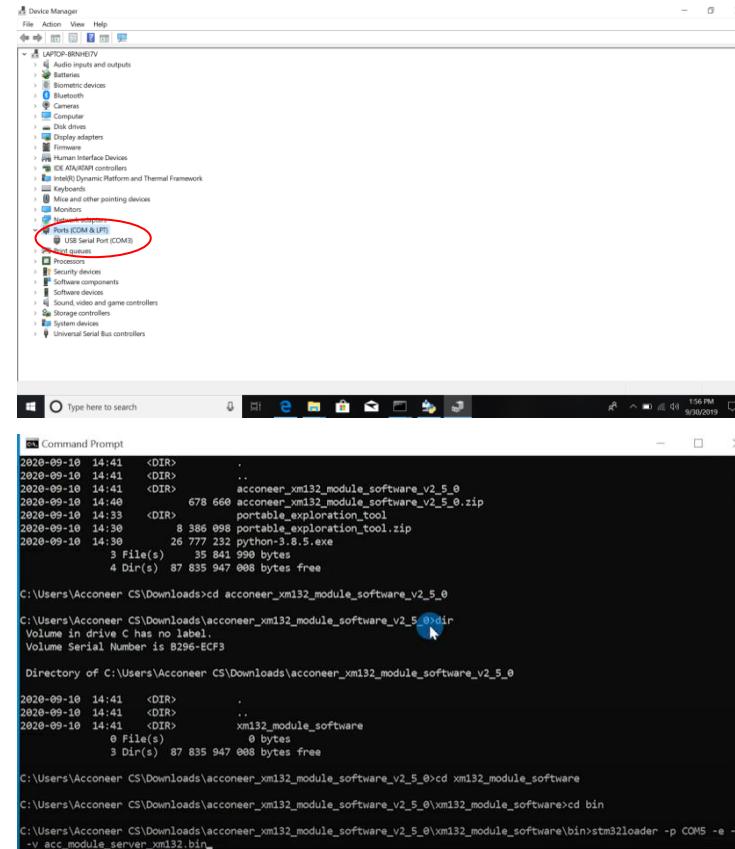
1. Press the DFU-button and hold it.
2. Press the RESET-button and hold it.
3. Release the RESET-button.
4. Release the DFU-button

Now the module is in DFU mode and ready to be flashed.



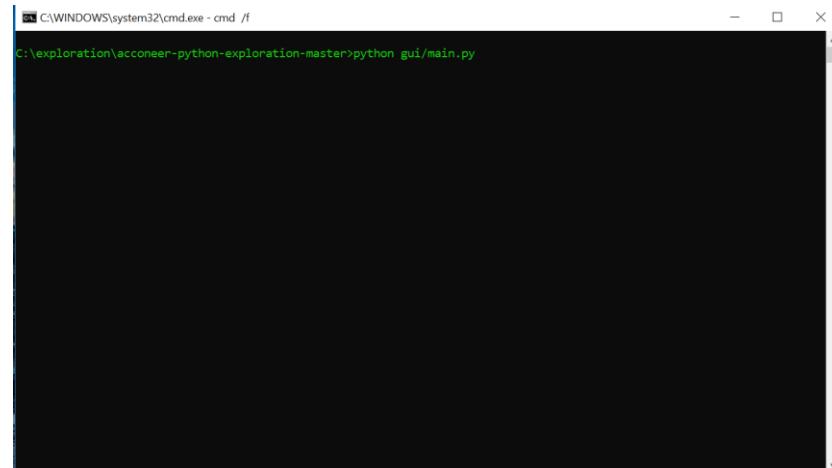
# Flashing

1. Start Device Manager in Windows
2. Find the COM-Port that the XE132 is connected to. COM5 in our example.
3. Install the flashing utility: *pip install stm32loader*
4. In the command prompt directory where you placed XE132 Entry Module Server run the following command: *stm32loader -p COM5 -e -w -v acc\_module\_server\_xm132.bin*
5. Make sure COM5 above is replaced with your COM port.
6. Now the XE132 is flashed and ready to use. Make sure to restart the module by pressing the RESET button.

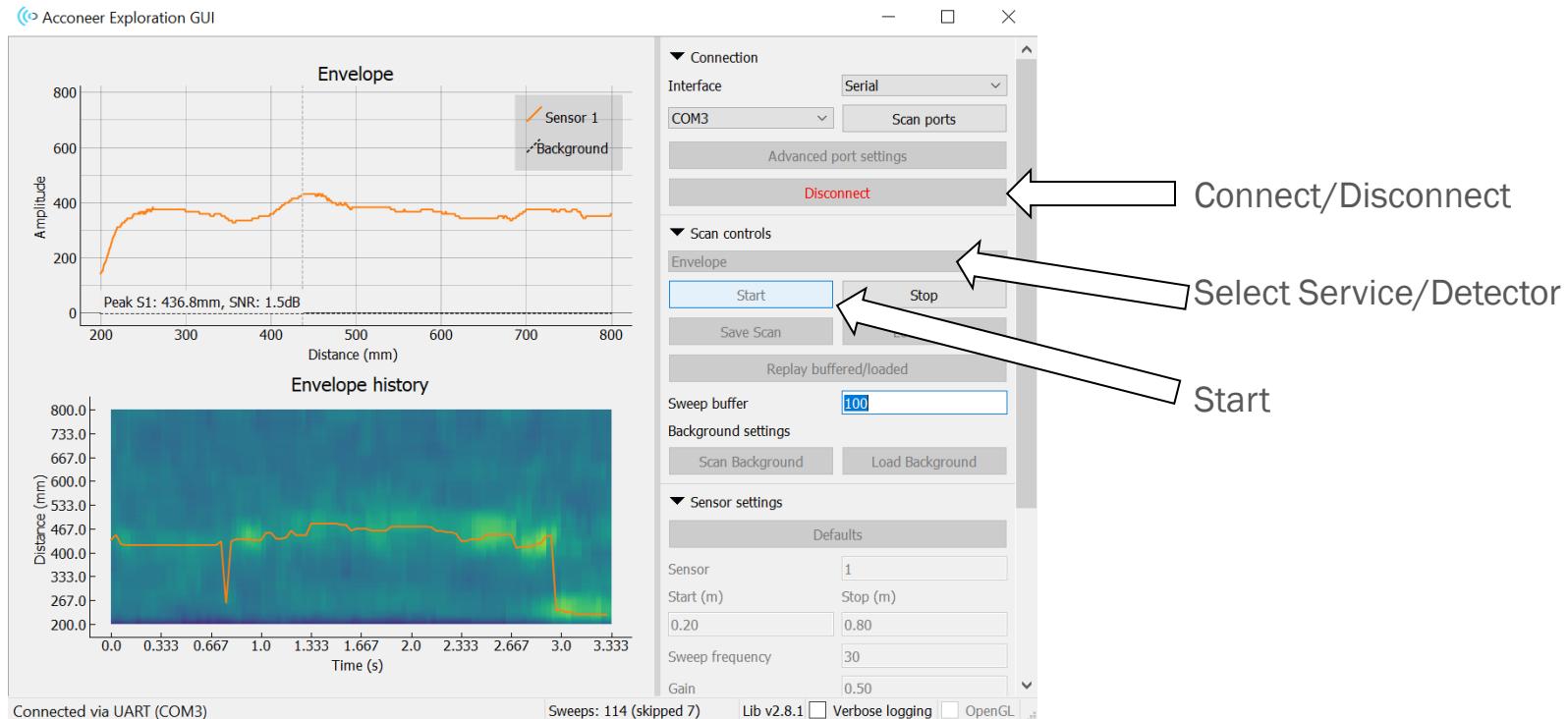


# Run the exploration tool

- Run the following command in the command prompt: `python gui/main.py`
- Choose Serial as Interface in the dropdown.
- Click Connect
- Choose a service or a detector and click Start. (We used Envelope as an example)
- The result should be a graph showing the envelope data output from the sensor. Shown in next page.



# Exploration Tool GUI, Envelope graph



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