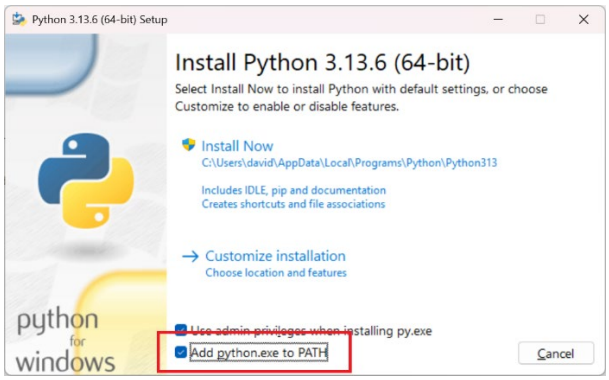
AN260217 **iMS Python Library Release Notes**:

To use, please install latest Python from the official website

(https://www.python.org/downloads/windows/)

Please make sure the Python install folder is on the system path(*). The imslib.pyd library will need to be able to find python3.dll (and python3x.dll, currently python313.dll).
* Check box as shown



It is always a good idea to create a virtual environment.
In a Command Prompt navigate to the folder where you extracted the zipfile contents and type the following:

> **python -m venv env**
> **.\env\Scripts\activate.bat**

e.g.
C:\Users\name>E:

E:\> cd \Dropbox\iMS-Python\imslib_py_20250807
E:\Dropbox\iMS-Python\imslib_py_20250807>**python -m venv env**
E:\Dropbox\iMS-Python\imslib_py_20250807>**.\env\Scripts\activate.bat**
(env) E:\Dropbox\iMS-Python\imslib_py_20250807> **pip install matplotlib**

You should see the prompt now starts with (env).
Some of the examples require an external library called matplotlib which can be installed with **pip install matplotlib** (as shown above)

Now you can try running the examples e.g. Test 04 (does not iMS4 connected), with the following command format-

>**python .\test04_types.py**

Tip: hit tab after entering *test04* to auto complete. (applies to all tests).

(env) E:\Dropbox\iMS-Python\imslib_py_20250807>**python .\test04_types.py**

If it fails with the following error:

ImportError: DLL load failed while importing _imslib: The specified module could not be found.

it cannot find python3.dll. Copy in python3.dll and python313.dll (dependent on version number) from your Python install folder. Note that the python313.dll must match the version of python3.exe that you are invoking when you run the script - watch out for this if there are multiple Python versions installed.

If is runs, the output is .....

```
Test 04: iMS Defined Types
Using iMS Library version  1.9.1

Let's test some useful basic types
f is 1500.0Hz
f is now 2500.0Hz
a is 75%
a is now 60%
But it cannot be 125: 100%
Or negative: 0%
p is 90deg
p is now 30deg
You can go around more than once: 420deg
Or go backwards: -90deg
Now let's try some types derived from iMS::Frequency
f is also 2.5kHz
and 0.0025MHz
I can also see that k is 0.0025MHz
If I want to go really fast, I can try 5.0MHz
But beware. In python, assignment just rebinds the object so this is not the same in Hertz: 5.0MHz
Instead, I must use the assign operator: 5000000.0Hz
I can iterate using mixed types, so let's start at 75.0kHz
  iteration 1: 75100.0Hz / 75.1kHz / 0.0751MHz
  iteration 2: 75200.0Hz / 75.2kHz / 0.0752MHz
  iteration 3: 75300.0Hz / 75.3kHz / 0.0753MHz
  iteration 4: 75400.0Hz / 75.4kHz / 0.0754MHz
  iteration 5: 75500.0Hz / 75.5kHz / 0.0755MHz
  iteration 6: 75600.0Hz / 75.6kHz / 0.0756MHz
  iteration 7: 75700.0Hz / 75.7kHz / 0.0757MHz
  iteration 8: 75800.0Hz / 75.8kHz / 0.0758MHz
  iteration 9: 75900.0Hz / 75.9kHz / 0.0759MHz
  iteration 10: 76000.0Hz / 76.0kHz / 0.076MHz
Or 1.5MHz
  iteration 1: 1.45MHz
  iteration 2: 1.4MHz
  iteration 3: 1.35MHz
  iteration 4: 1.3MHz
  iteration 5: 1.25MHz
```

(+ more...)

For subsequent use, it is only necessary to open a CMD window and Activate virtual environment e.g.

```
E:\>cd \Dropbox\iMS-Python\imslib_py_20250807
E:\Dropbox\iMS-Python\imslib_py_20250807>.\env\Scripts\activate.bat
(env) E:\Dropbox\iMS-Python\imslib_py_20250807>
```

AN260217 **iMS Python Library Release Notes**:

With iMS4 connected USB.....
Test01 checks for connection

(env) E:\Dropbox\iMS-Python\imslib_py_20250807>python .\test01_scan.py

Test 01: Scan for iMS Systems
Using iMS Library version 1.9.1
Scanning for iMS Systems . . .
iMS System 1: iMSP2404:USB

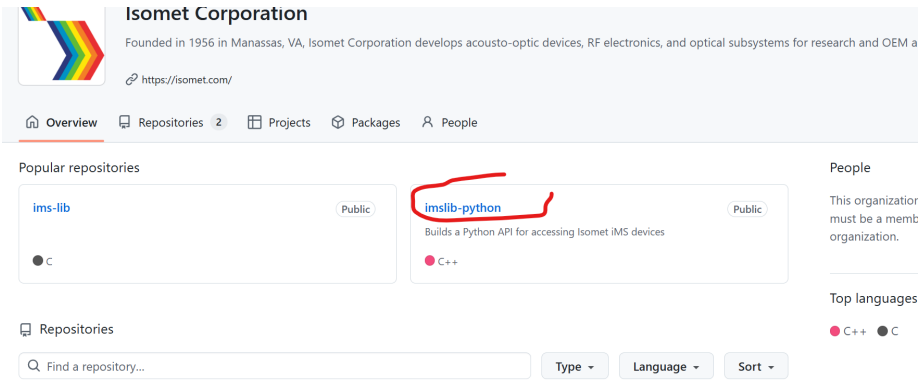
Found Synthesiser: iMS4d : iMS-4d 10.0-225MHz 4-Channel RF Synthesiser
-> FW Version: 4.1.154 Mon Dec 18 2024 10:07 GMT Standard Time
-> # Channels = 4 Freq Range = 10.17-228.92 MHz

Found Controller: iMSP : iMS-Pro Controller
-> FW Version: 2.5.111 Mon Jan 17 2025 10:34 GMT Standard Time
-> Max Image Size = 18000000 Max Image Rate = 5000000.0

GIT HUB

Update from Git hub:

Go to: https://github.com/Isomet-Corporation



Select imslib-python

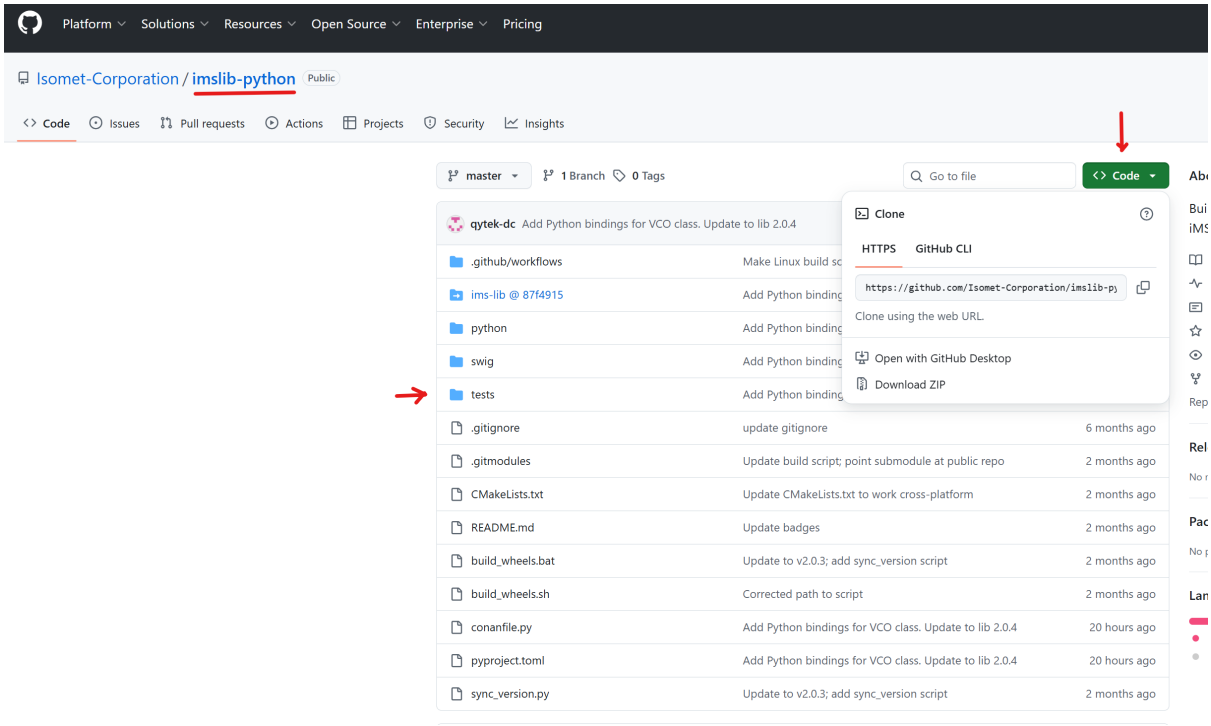
AN260217 **iMS Python Library Release Notes**:

Download options:

- For a complete download of repository

(Select imslib-python)

Hit [<> Code] button, to reveal download options



For single files e.g. in ‘test’ folder

Click on ‘test’ to open folder

Double click on the required file to see code and download