

Firmware update procedure for Windows



Copy following files in an own directory:

```
flash_typhoon_bootloader
px_uploader.py
yuneec_typhoon_h.fw
```

```
Start script
Flash utility
The firmware itself
```

⚠ The file name for the firmware may change. "yuneec_typhoon_h.fw" is used here as example.

Install Python for Windows if not yet done:

Windows key + R to open command field.

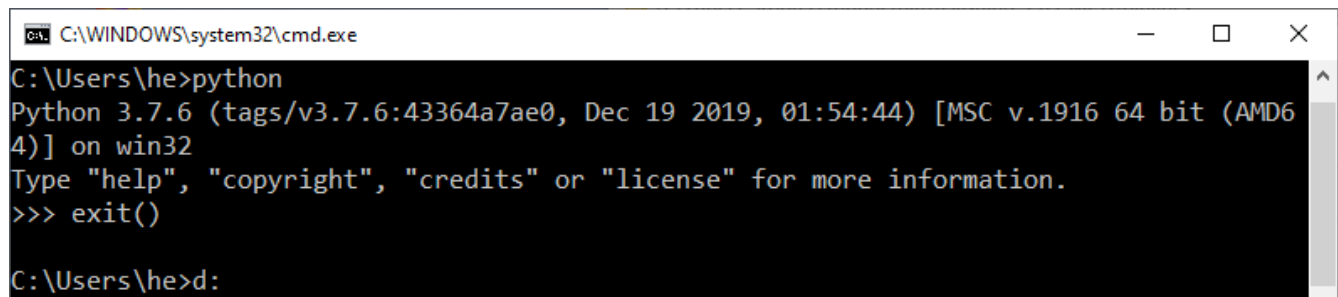
Type **cmd**

The Windows terminal will be opened. Keep it open, we need it all the time.

Type **python**

The Windows Store will be opened and offer Python installation. Follow the instructions to install Python.

If Python is correctly installed it should come up with its own command line >>>.



```
C:\WINDOWS\system32\cmd.exe
C:\Users\he>python
Python 3.7.6 (tags/v3.7.6:43364a7ae0, Dec 19 2019, 01:54:44) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>> exit()
C:\Users\he>d:
```

Leave it with **exit()**.

Then download module 'serial' for Python::

<https://pypi.org/project/pyserial/#files>

File name is "pyserial-3.4-py2.py3-none-any.whl", double click on it to install.

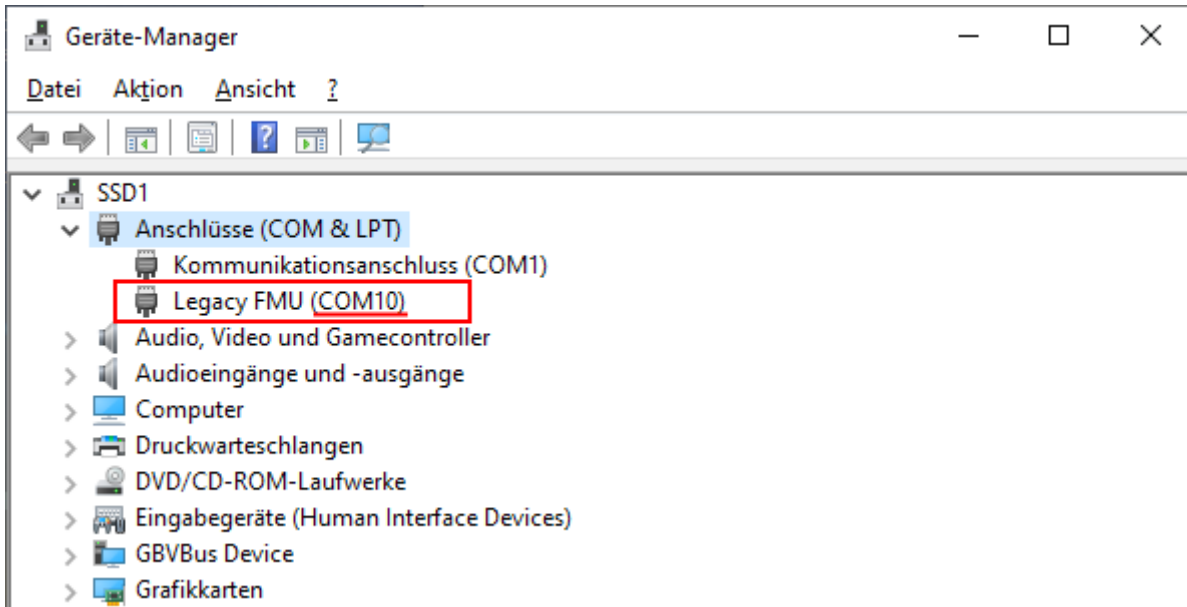
Python is installed now and we can run Python scripts like "px_uploader.py".

To find out what TTY port is used by the drone you have to check the Device Manager.

Windows key + R to open command field.

Type **devmgmt.msc**

The Device Manager will appear. Plug-in the USB cable to connect the drone with the PC. In node "Connections (COM & LPT)" an item "Legacy FMU" with a COM number appears.



Here we see, the port is "**COM10**".

Now we edit the file "flash_typhoon_bootloader" to set the correct port and save it as "**flash_typhoon_bootloader.bat**" to make it executable. The file text should look like that:
`python px_uploader.py --port COM10 --force "yuneec_typhoon_h.fw"`

Note: After power-on the bootloader starts first and after a while the flight controller starts. If flight controller is running we cannot flash anymore. This is the reason why we have to start the script for flashing prior to power-up the MCU board which is powered only via USB cable. If we plug-in the USB cable when the script is already running we will be able to catch the bootloader.

⚠️ Make sure the USB connection is cut and no battery in the drone. (MCU-board powered off).

Start firmware update script:

flash_typhoon_bootloader.bat

Plug in the USB cable immediately. Wait and observe terminal output.

Update process will start soon ...

```
C:\WINDOWS\system32\cmd.exe
C:\Users\he>python
Python 3.7.6 (tags/v3.7.6:43364a7ae0, Dec 19 2019, 01:54:44) [MSC v.1916 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>> exit()

C:\Users\he>D:

D:\>cd temp\tmp

D:\temp\tmp>dir
Datenträger in Laufwerk D: ist Daten
Volumeseriennummer: ECFC-D1D0

Verzeichnis von D:\temp\tmp

01.01.2020  22:29    <DIR>          .
01.01.2020  22:29    <DIR>          ..
31.12.2019  14:14                135 flash_typhoon_bootloader.bat
15.12.2019  19:47                37.478 px_uploader.py
01.01.2020  22:25               193.717 pyserial-3.4-py2.py3-none-any.whl
30.12.2019  16:33               796.268 yuneec_typhoon_h.fw
               4 Datei(en),       1.027.598 Bytes
               2 Verzeichnis(se), 608.017.375.232 Bytes frei

D:\temp\tmp>flash_typhoon_bootloader.bat

D:\temp\tmp>python px_uploader.py --port COM10 --force yuneec_typhoon_h.fw
Loaded firmware for board id: 42,1 size: 985500 bytes (98.55%), waiting for the bootloader...
```

Reboot drone after firmware was flashed successfully. Done! 🍷