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APPLICATION NOTE
UxV35 Flight Controller

UxV/35 Flight Controller Programming

Purpose:

This document will guide an individual on how to set up and program the UxV/35 flight controllers. A person programming the flight controller will be able to program and verify the correct file and process is done

Materials needed:

- Computer with STM-link and mission planner software
- Correct and current hex file
- USB to USB mini-B cable
- 10 pin ribbon cable

1. Connect the STM-link to the computer

2. Using a 10-pin ribbon cable, connect one side to X3 UxV/35 port.

UxV/35™ Flight Controller Programming

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3. The Flight Controller should be alone with no other boards connected
4. Power the Flight Controller using either the mini-USB port on the FC or with a power base board. The FC should be powered on before being connected to STM-Link.
5. Connect the other end of the ribbon cable to the **X3 UxV/35** connector on the flight controller, using the 10-pin ribbon connector.
6. Open the **STM-Link application** on the computer.
7. Up at the top of the application click on **target** and then hit **connect**.
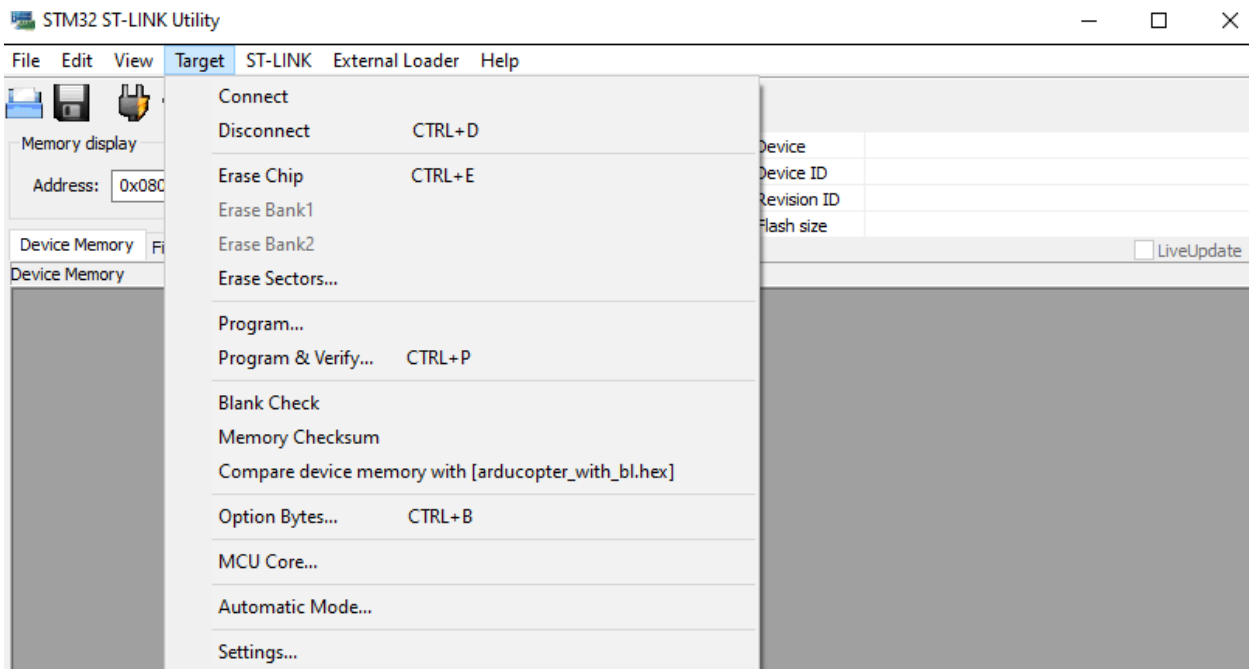
8. If an error comes up during connecting some additional steps may be required. Some troubleshooting steps are:
   - If it asks to connect under reset, select target again up at the top and select settings. Once there select connect under reset under the modes box and try to connect once more.
   - If it says that read out protection is enabled, hit target and to go option bytes. Once there select up at the top left and set the protection to zero and try again.
   - If it gives you a general connection error then switch USB ports

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9. Head back to the target tab and click on **Program &Verify** which will ask for the hex file. The hex file can be downloaded here at this link: kairos82nd.com/downloads

10. Download the "arducopter_with_BL." Hex file

11. Load the file and click ok

12. The program should begin to write and verify with a message that looks like something below:

```
15:48:38 : Device ID:0x413
15:48:38 : Device flash Size : 1MBytes
15:48:38 : Device family :STM32F405xx/F407xx/F415xx/F417xx
15:49:53 : [arducopter_with_bl.hex] opened successfully.
15:49:53 : [arducopter_with_bl.hex] checksum : 0x072382B6
15:50:20 : Memory programmed in 24s and 813ms.
15:50:20 : Verification...OK
15:50:20 : Programmed memory Checksum: 0x072382B6
15:50:21 : Disconnected from device.
15:50:21 : Connection to device is lost: check power supply and debug connection.
```

13. Safely disconnect from the flight controller through the target menu, and unplug the STM-Link.

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