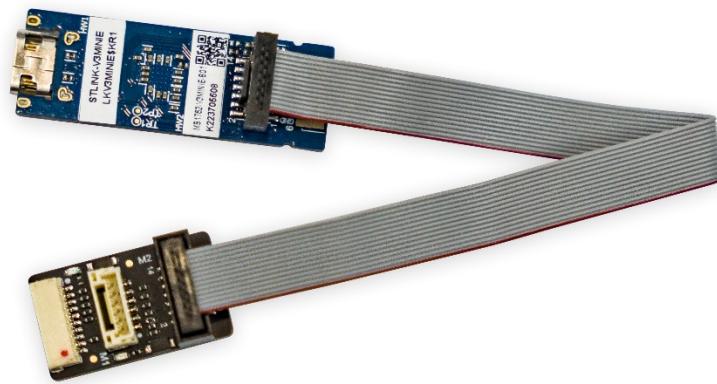

C-ADB debug adapter

user manual

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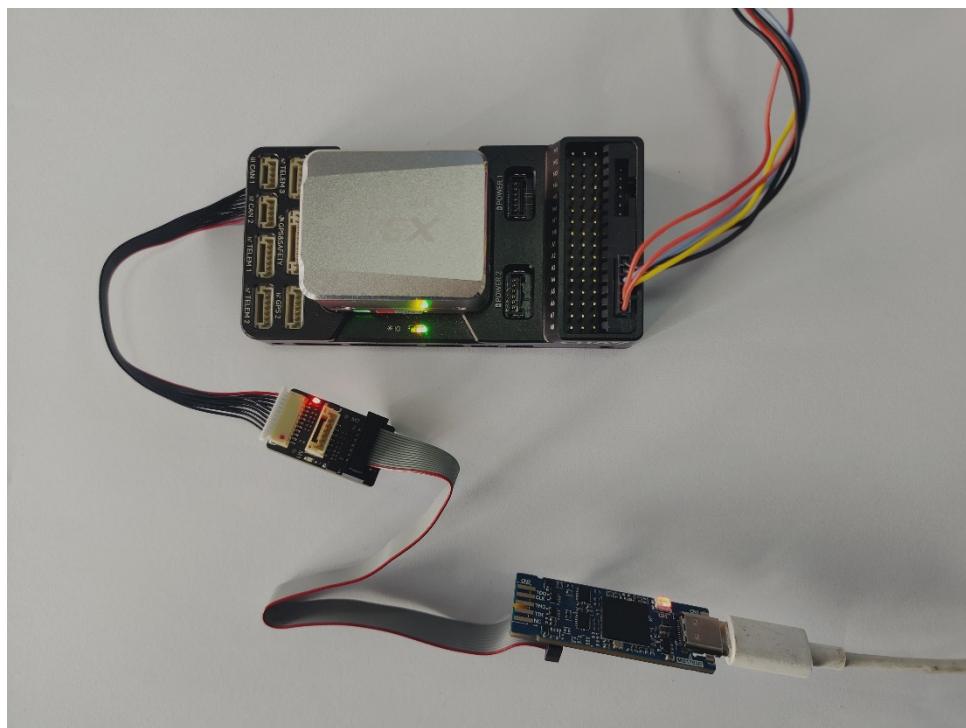
一、 Overview

C-ADB is a debugging adapter designed for the secondary development and debugging of Pixahwk and CUV series flight controllers. Internal integrated JTAG SWD and SERIAL interfaces are used for device firmware development and debugging. Provide 10pin debugging interface of Pixhawk standard and DSU interface of CUAV standard.

C-ADB is matched with STLINK-V3MINI module, no complicated wiring is required, plug and play, quick start for secondary development and debugging.

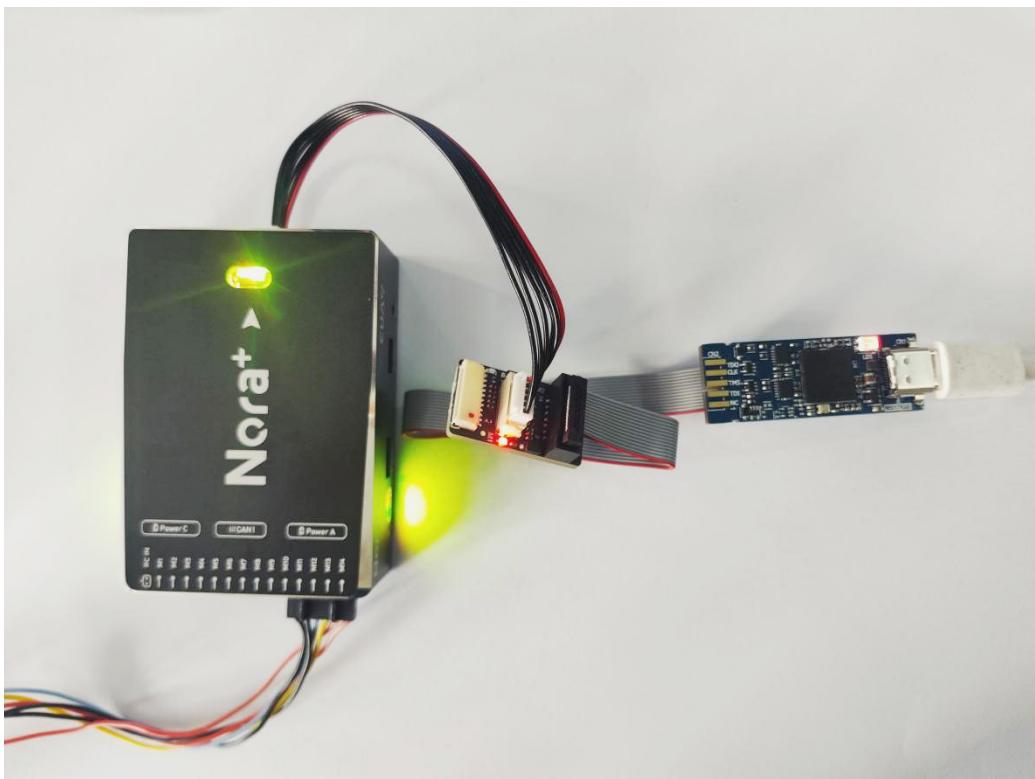
二、 Hardware connection

Depending on the debug standard interface of the connected device, the connection method is different.



Connection to Pixhawk standard debug interface device

- The debug cable is connected to the C-ADB small board and the debug interface of the Pixhawk series flight controller
- Use STLink v3 mini to connect to the computer
- Power the device



CUAV standard DSU interface standard equipment connection

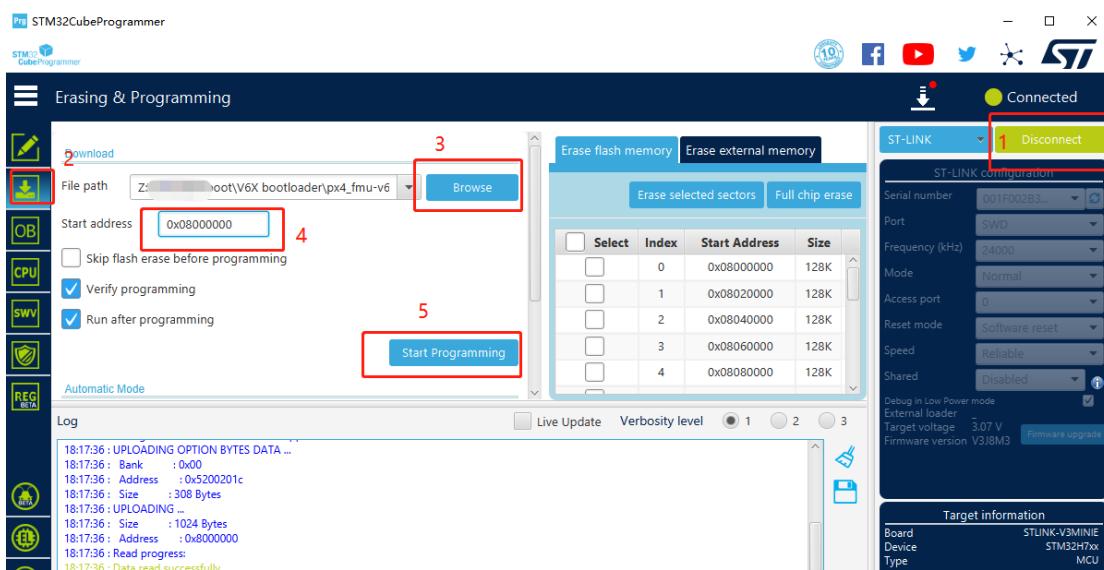
- The debug cable is connected to the C-ADB small board and the DSU interface of the DSU interface standard equipment
- Connect STLiink v3 mini to computer with USB cable
- Power the device

三、 Use guide

Load firmware/bootloader

Take loading Pixhawk v6x bootloader as an example.

After the hardware is connected, Open the STM32CubeProgrammer



- Select the connection method ST-LINK
- Click: “Connect”
- Get CPU information details
- Click on 'Browse' to select the file
- Initially the address is 0x08000000
- Click "start Programming" to write the bootloader file to the device.

Print debug information

串口设置

端口	COM11(USB 串行设备)
波特率	57600
数据位	8
校验位	None
停止位	1
流控	None

接收设置

ASCII	Hex
-------	-----

发送设置

ASCII	Hex
自动重发	1000 ms

```
[boot] Rev 0x1 : Ver 0x2 V6X002001
reset done, 10 ms
[boot] Fault Log info File No 4 Length 3177 flags:0x01 state:1
[boot] Fault Log is Armed
HW arch: PX4_FMU_V6X
HW type: V6X002001
HW version: 0x002
HW revision: 0x001
PX4 git-hash: 45b390b0bfe21fc591b36ec898f6fc0791fc4729
PX4 version: 1.13.0 80 (17629312)
OS: NuttX
OS version: Release 10.2.0 (167903487)
OS git-hash: 6baefc22b7d62184fd1158c0b53c8dbd884275b8
Build datetime: Nov 19 2022 03:19:27
Build uri: localhost
Build variant: default
Toolchain: GNU GCC, 9.3.1 20200408 (release)
PX4GUID: 000600000000031373237330511200410098
MCU: STM32H74[5]xxx, rev. V
ult_log: Fault Log is Armed
INFO [param] selected parameter default file /fs/mtd_params
INFO [param] importing from '/fs/mtd_params'
WARN [parameters] ignoring unrecognised parameter 'PWM_MAIN_OUT'
INFO [parameters] BSON document size 351 bytes, decoded 351 bytes (INT32:11, FLOAT:6)
INFO [param] selected parameter backup file /fs/microsd/parameters_backup.bson
Board architecture defaults: /etc/init.d/rc.board_arch_defaults
Board defaults: /etc/init.d/rc.board_defaults
Loading airframe: /etc/init.d/airframes/1002_standard_vtol.hil
ERROR [param] Parameter HIL_ACT_FUNC1 not found.
ERROR [param] Parameter HIL_ACT_FUNC2 not found.
ERROR [param] Parameter HIL_ACT_FUNC3 not found.
ERROR [param] Parameter HIL_ACT_FUNC4 not found.
ERROR [param] Parameter HIL_ACT_FUNC5 not found.
ERROR [param] Parameter HIL_ACT_FUNC6 not found.
ERROR [param] Parameter HIL_ACT_FUNC7 not found.
ERROR [param] Parameter HIL_ACT_FUNC8 not found.
INFO [dataman] data manager file '/fs/microsd/dataman' size is 62560 bytes
INFO [px4io] IO CRC match
nsh: pwm_out_sim: command not found
ekf2 [1392:237]
Starting MAVLink on /dev/ttyS6
INFO [mavlink] mode: Normal, data rate: 1200 B/s on /dev/ttyS6 @ 57600B
Starting MAVLink on ethernet
INFO [mavlink] mode: Normal, data rate: 100000 B/s on udp port 14550 remote port 14550
INFO [rc_input] valid device required
```

After connecting the hardware, set the port and baud rate, start the device, and the serial

port debugging tool can output debugging information and send debugging instructions.

四、 Product list

- STLINKV3 MINI*1
- C-ADB*1
- SC Cable*1
- Debug Cable*1
- Dsu Cable*1

五、 Product parameters

Name	C-ADB
Power	Debug:3.3V DSU:5V(Convert 5V to 3.3v)
Port	Pixhawk 10Pin Debug port DSU 6Pin Debug port