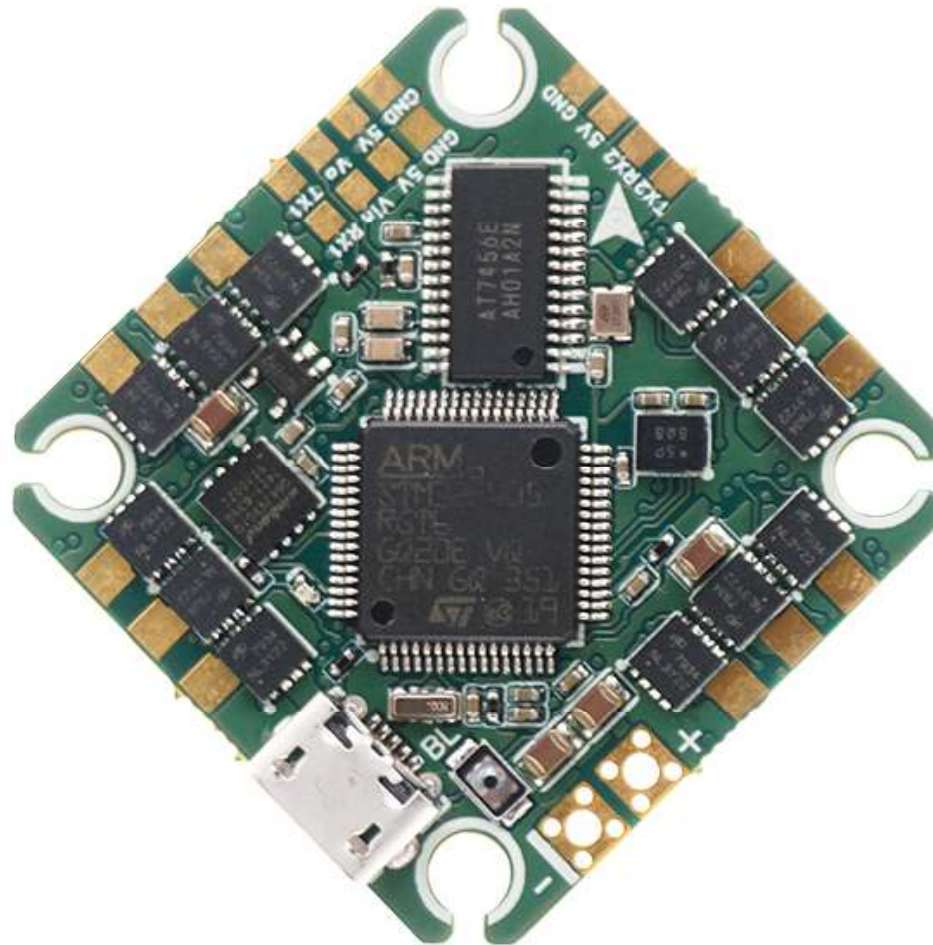
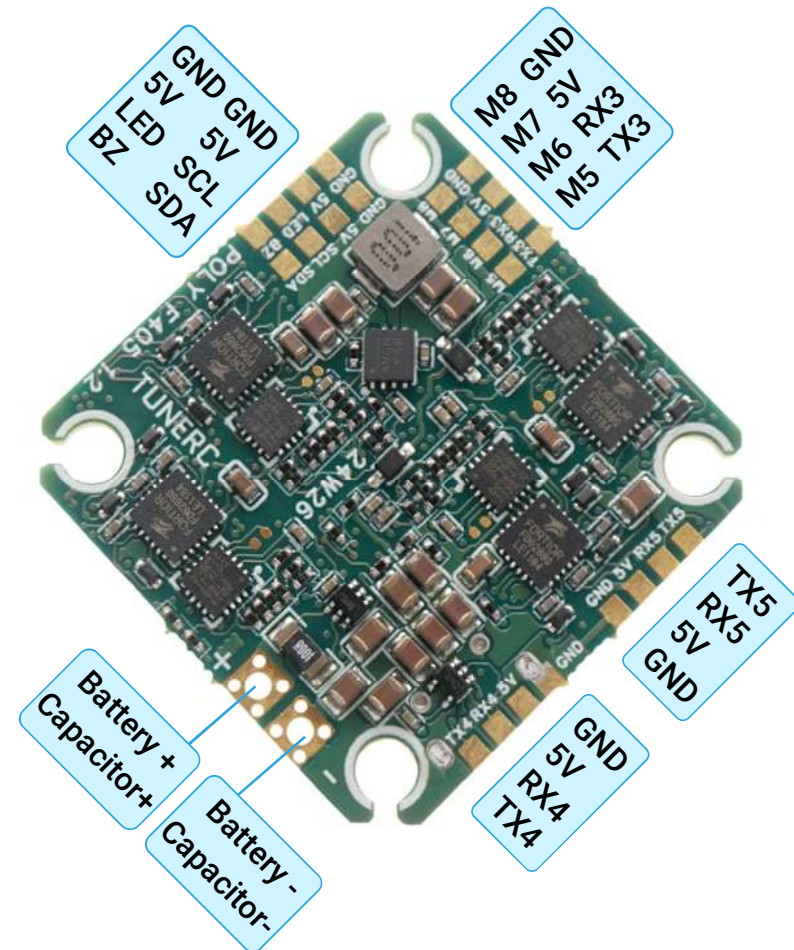
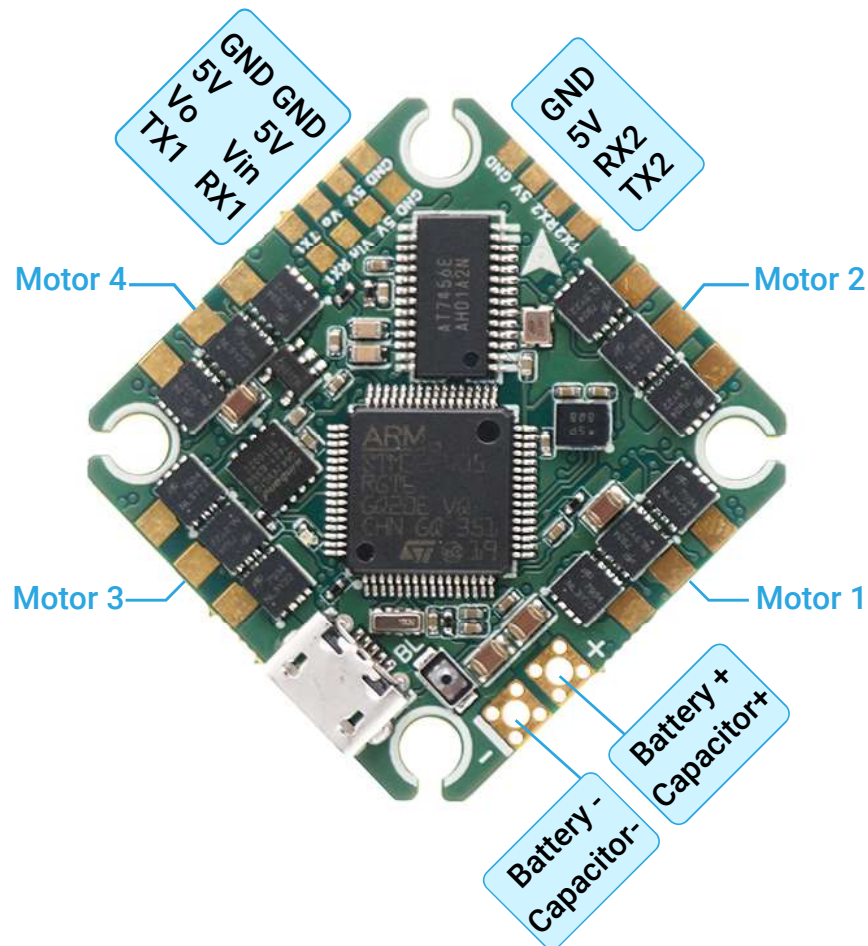


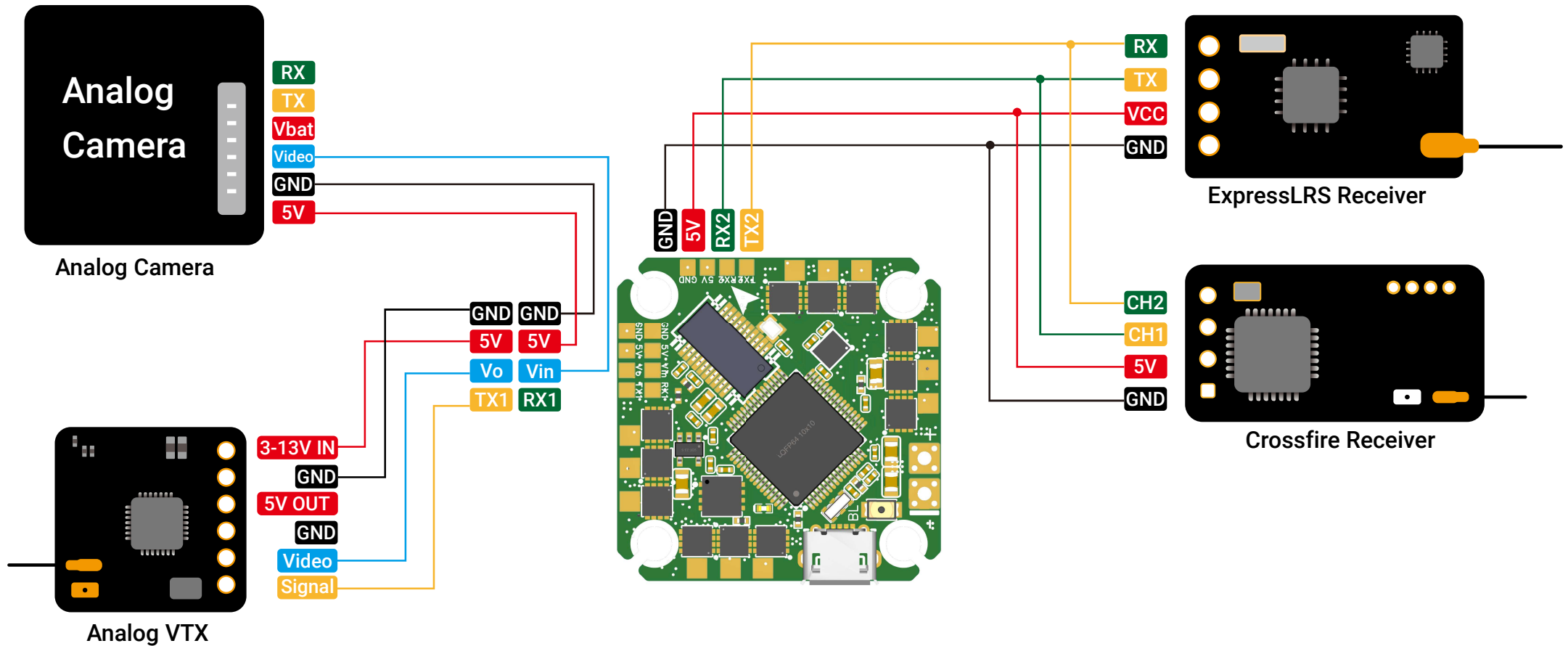
Wiring Diagram for Poly F405 2S-4S AIO V1.2



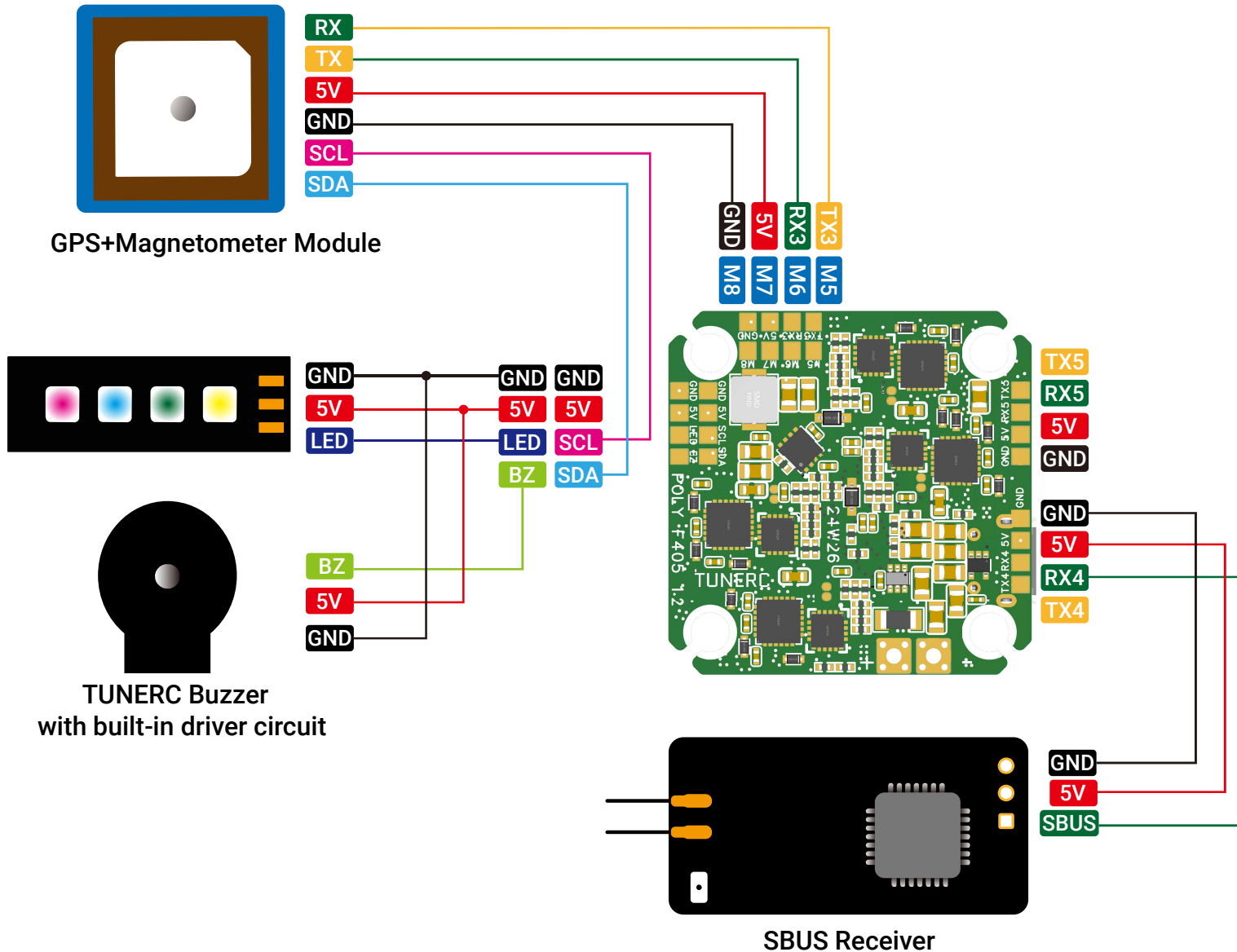
Pinout Diagram for Poly F405 V1.2



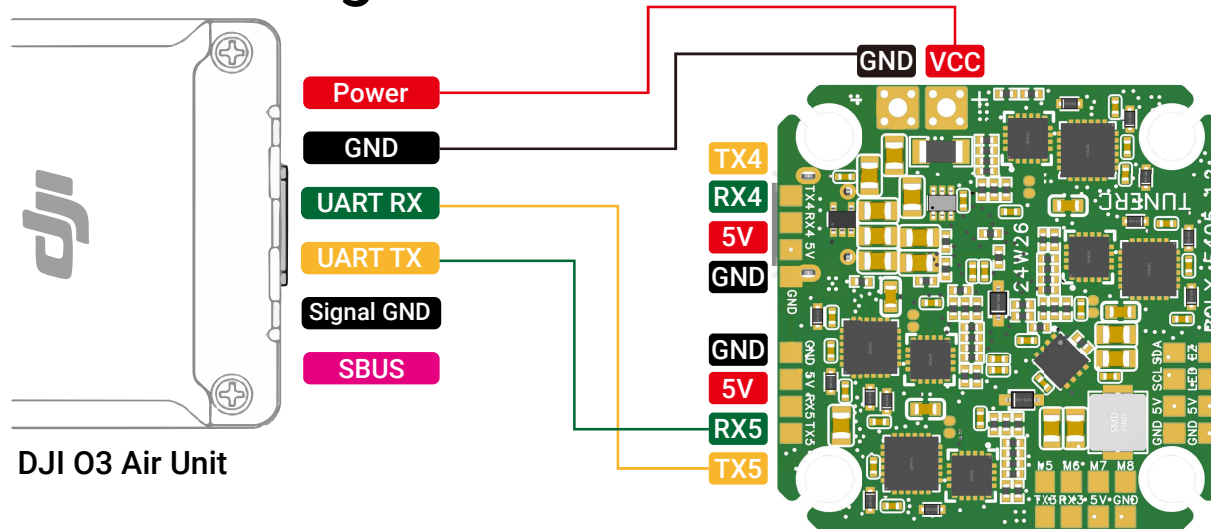
ELRS/ TBS Crossfire Receiver/ Analog System Wiring



GPS/ LED/Buzzer/SBUS Receiver Wiring



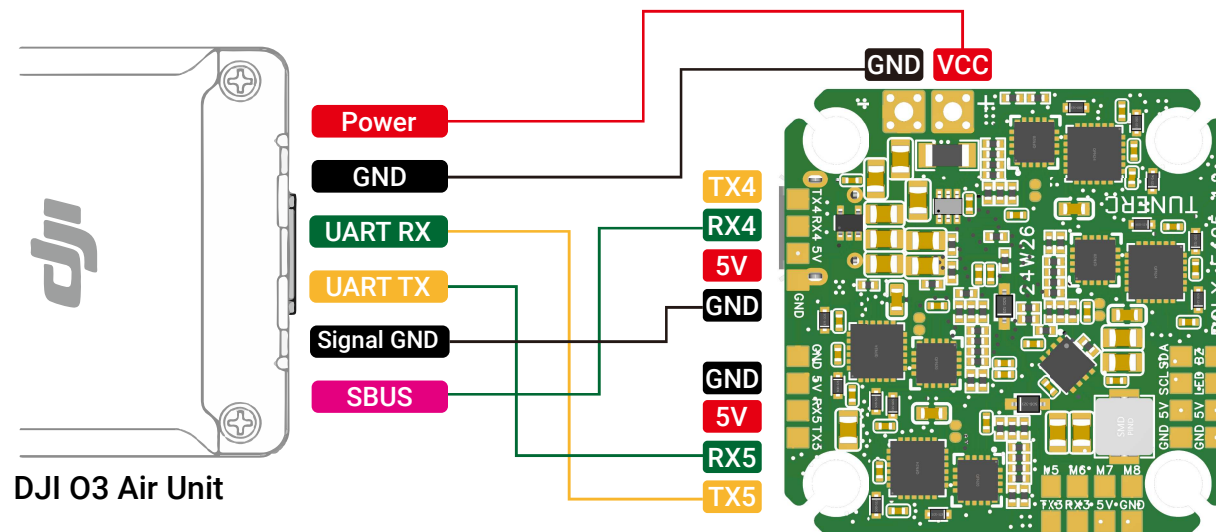
DJI 03 Wiring



In general, you can wire the DJI 03 unit to any free UART on the Poly board.

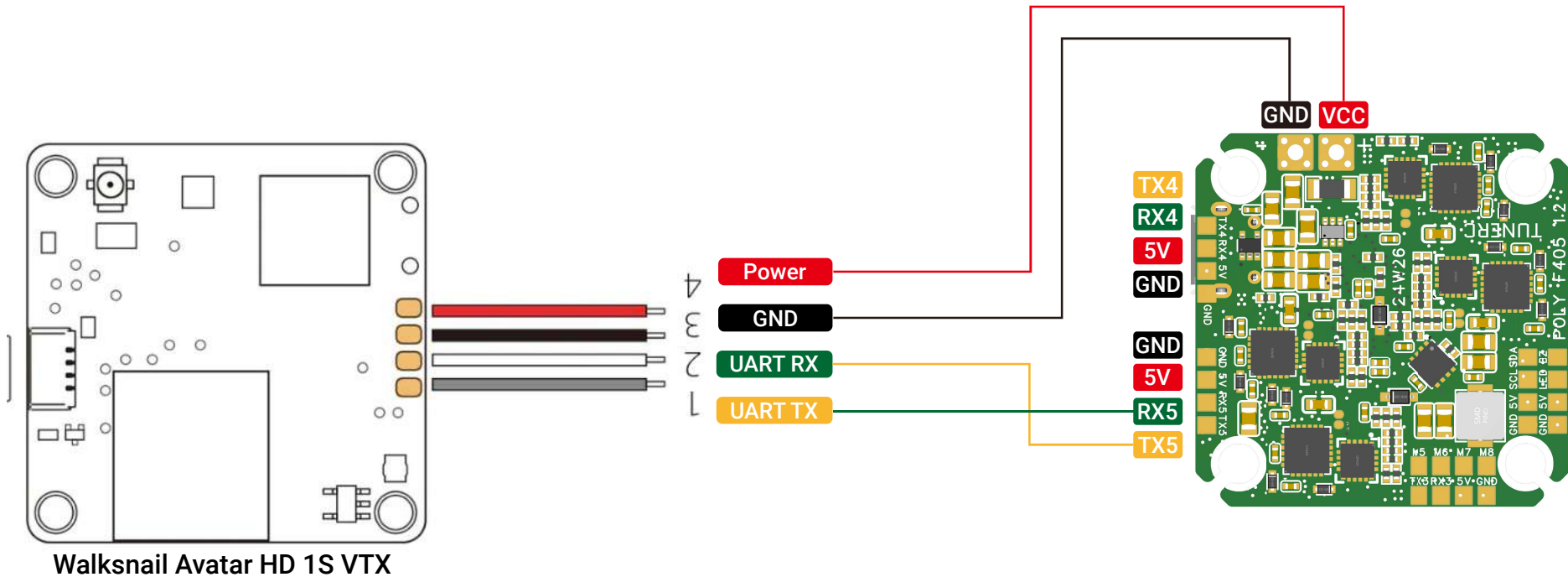
For users that don't use DJI radio controller, please refer to this diagram.

You don't need to wire the "Signal GND" and "SBUS" wire from the DJI VTX plug.



For users that use DJI radio controller, please refer to this diagram.

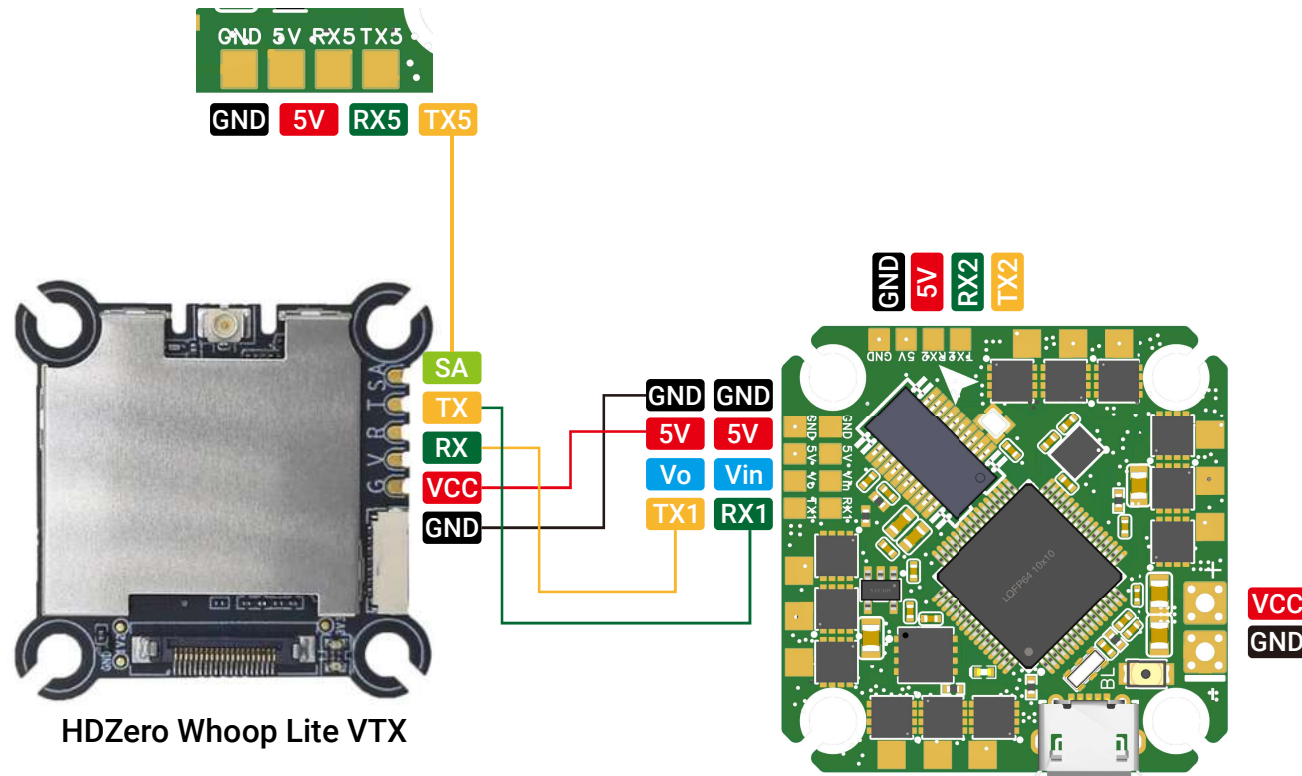
Walksnail HD Avatar 1S VTX Wiring



- 1. Uart TX(Connects to Flight Controller RX)
- 2. Uart RX(Connects to Flight Controller TX)
- 3. Power GND
- 4. Power 3.1~5V (V2 version)
3.1~13V (V3 version)*

Please note that the V3 Avatar 1S VTX only supports 1s-3s battery input.

HDZero Whoop Lite VTX Wiring



Actually, you can wire HDZero Whoop Lite VTX to any spare UART pads on Poly F405 board. The wiring diagram above is only for reference.

ELRS/ TBS Crossfire Receiver Betaflight Setup

In Betaflight 4.5, under “Ports” tab, enable “Serial Rx” under corresponding uart you set for the RX.

Setup

Ports

Configuration

Power & Battery

Presets

PID Tuning

Receiver

Modes

Motors

OSD

Video Transmitter

Blackbox

Ports

WIKI

Note: not all combinations are valid. When the flight controller firmware detects this the serial port configuration will be reset.

Note: Do **NOT** disable MSP on the first serial port unless you know what you are doing. You may have to reflash and erase your configuration if you do.

WARNING: The VTX table has not been set up correctly and without it VTX control will not be possible. Please set up the VTX table in Video Transmitter tab.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	☒ 115200 ▾	☐	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART1	☐ 115200 ▾	☐	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART2	☐ 115200 ▾	☒	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART3	☐ 115200 ▾	☐	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART4	☐ 115200 ▾	☐	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART5	☐ 115200 ▾	☐	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾

Under “Receiver” tab, choose “Serial (via UART)” receiver mode and “CRSF” serial receiver provider.

Setup

Ports

Configuration

Power & Battery

Presets

PID Tuning

Receiver

Modes

Motors

OSD

Video Transmitter

Receiver

WIKI

- **Always check that your Failsafe is working properly!** The settings are in the Failsafe tab, which requires Expert Mode.
- **Use the latest Tx firmware!**
- **Disable the hardware ADC filter** in the Transmitter if using OpenTx or EdgeTx.

Basic Setup: Configure the 'Receiver' settings correctly. Choose the correct 'Channel Map' for your radio. Check that the Roll, Pitch and other bar graphs move correctly. Adjust the channel endpoint or range values in the transmitter to ~1000 to ~2000, and set the midpoint to 1500. For more information, read the [documentation](#).

Preview



Receiver

Serial (via UART) ▾ Receiver Mode

- The UART for the receiver must be set to 'Serial Rx' (in the Ports tab)
- Select the correct data format from the drop-down, below:

CRSF ▾ Serial Receiver Provider

TUNERC

SBUS Receiver Betaflight Setup

In Betaflight 4.5, under “Ports” tab, enable “Serial Rx” under corresponding uart you set for the RX.

Setup

Ports

Configuration

Power & Battery

Presets

PID Tuning

Receiver

Modes

Motors

OSD

Video Transmitter

Blackbox

Ports

WIKI

Note: not all combinations are valid. When the flight controller firmware detects this the serial port configuration will be reset.

Note: Do **NOT** disable MSP on the first serial port unless you know what you are doing. You may have to reflash and erase your configuration if you do.

WARNING: The VTX table has not been set up correctly and without it VTX control will not be possible. Please set up the VTX table in Video Transmitter tab.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	☒ 115200 ▾	☐	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART1	☐ 115200 ▾	☐	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART2	☐ 115200 ▾	☐	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART3	☐ 115200 ▾	☐	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART4	☐ 115200 ▾	☒	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART5	☐ 115200 ▾	☐	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾

Under “Receiver” tab, choose “Serial (via UART)” receiver mode and “SBUS” serial receiver provider.

Setup

Ports

Configuration

Power & Battery

Presets

PID Tuning

Receiver

Modes

Motors

OSD

Video Transmitter

Receiver

WIKI

• **Always check that your Failsafe is working properly!** The settings are in the Failsafe tab, which requires Expert Mode.

• **Use the latest Tx firmware!**

• **Disable the hardware ADC filter** in the Transmitter if using OpenTx or EdgeTx.

Basic Setup: Configure the 'Receiver' settings correctly. Choose the correct 'Channel Map' for your radio. Check that the Roll, Pitch and other bar graphs move correctly. Adjust the channel endpoint or range values in the transmitter to -1000 to -2000, and set the midpoint to 1500. For more information, read the [documentation](#).

Preview

Receiver

Serial (via UART) ▾ Receiver Mode

• The UART for the receiver must be set to 'Serial Rx' (in the Ports tab)

• Select the correct data format from the drop-down, below:

SBUS ▾ Serial Receiver Provider

TUNERC

Analog VTX Betaflight Setup

In Betaflight 4.5, under “Ports” tab, choose “VTX (TBS Smart Audio)” under corresponding uart you set for the analog VTX.

Setup

Ports

Configuration

Power & Battery

Presets

PID Tuning

Receiver

Modes

Motors

Ports

WIKI

Note: not all combinations are valid. When the flight controller firmware detects this the serial port configuration will be reset.

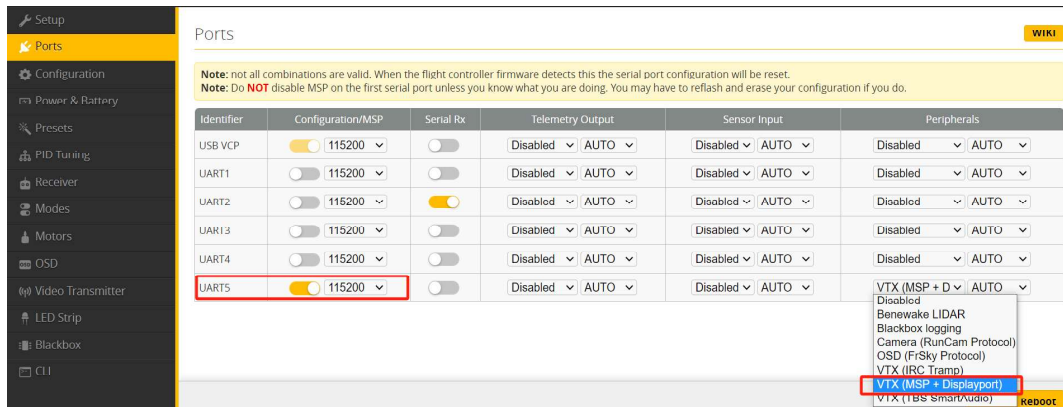
Note: Do **NOT** disable MSP on the first serial port unless you know what you are doing. You may have to reflash and erase your configuration if you do.

WARNING: The VTX table has not been set up correctly and without it VTX control will not be possible. Please set up the VTX table in Video Transmitter tab.

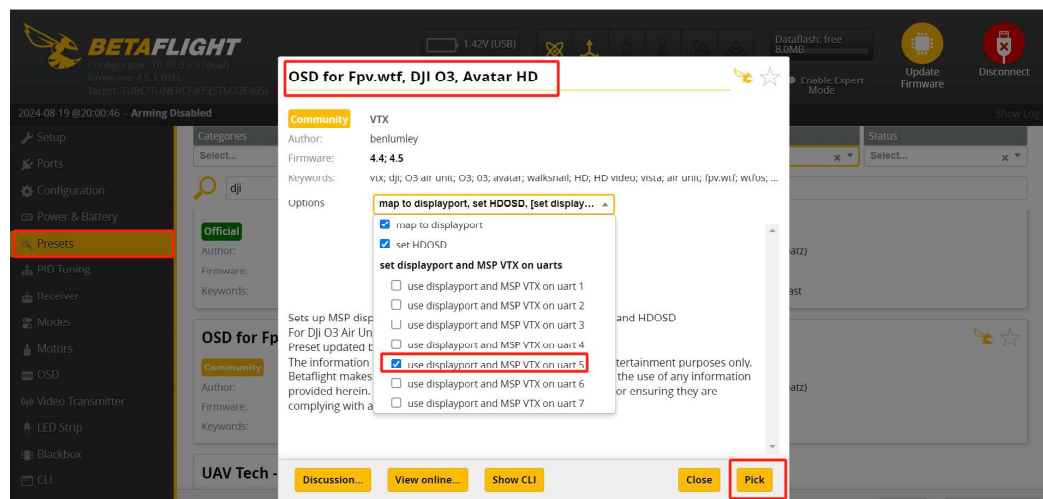
Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	☒ 115200	☐	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART1	☐ 115200	☐	Disabled AUTO	Disabled AUTO	VTX (TBS Smart Audio) AUTO
UART2	☐ 115200	☒	Disabled AUTO	Disabled AUTO	Disabled AUTO

DJI O3 and Walksnail Avatar HD 1S VTX Betaflight Setup

1. In Betaflight 4.5, under "Ports" tab, please enable "Configuration MSP" and choose "VTX (MSP + Displayport)" for corresponding UART you set for DJI O3 VTX.



1.2. Under "Presets" tab, search DJI OSD, select "OSD for Fpv.wtf, DJI O3, Avatar HD " and select the corresponding uartyou set for the DJI VTX under "Options", finally click "Pick"



HDZero WhoopLite VTX Betaflight Setup

1. In Betaflight 4.5, under "Ports" tab, please enable "Configuration MSP" and choose "VTX (MSP + Displayport)" for corresponding UART.

2. To setup smart audio in Betaflight 4.5, please choose "VTX (Smartaudio)" under "Peripherals" for the corresponding UART.

Ports

Note: not all combinations are valid. When the flight controller firmware detects this the serial port configuration will be reset.
Note: Do **NOT** disable MSP on the first serial port unless you know what you are doing. You may have to reflash and erase your configuration if you do.

WARNING: The VTX table has not been set up correctly and without it VTX control will not be possible. Please set up the VTX table in Video Transmitter tab.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	☒ 115200	☐	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART1	☒ 115200	☐	Disabled AUTO	Disabled AUTO	VTX (MSP + D) AUTO
UART2	☐ 115200	☒	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART3	☐ 115200	☐	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART4	☐ 115200	☐	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART5	☒ 115200	☐	Disabled AUTO	Disabled AUTO	VTX (TBS Smk) AUTO

Save and Reboot

3. Under "Presets" tab, search "HDZero VTXs" and select the corresponding UART you set for the HDZero VTX under "Options", finally click "Pick"

Betaflight Configurator

HDZero VTXs

Community VTX

Author: sugark

Firmware: 4.5

Keywords: vtx vtx table: HDZero; dsm2math: SA 2 1; digital: whoop; whoop lite; race v1; race v2; free

Options

4 of 14 selected

VTX options

- ☒ Set HD OSD
- ☒ Map to displayport
- ☒ Disable colored warnings (not compatible with HDZERO)

Select port for VTX

- ☒ UART1
- ☐ UART2
- ☐ UART3
- ☐ UART4
- ☐ UART5

VTX setup

The information provided on this preset is for educational and entertainment purposes only. Betaflight makes no representations as to the safety or legality of the use of any information

Discussion... View online... Show CLI... Close... Pick