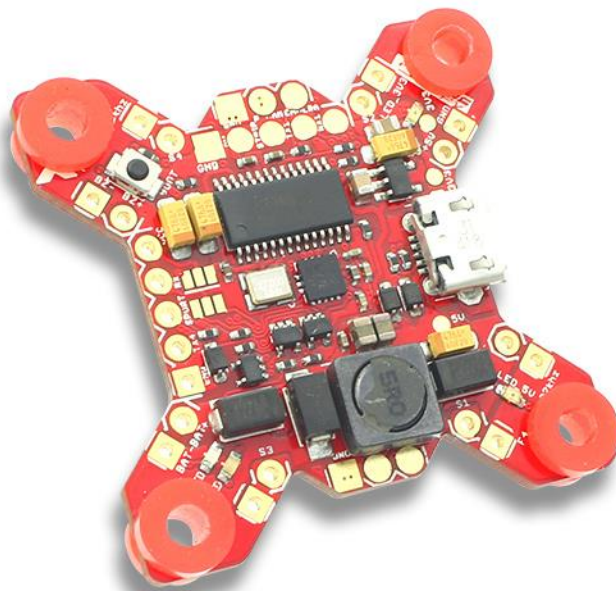




# FORTINI F4 OSD

Flight Controller

USER MANUAL VERSION 1.2



Please contact us if you need further assistance:

Tech support: [tech@furiousfpv.com](mailto:tech@furiousfpv.com)

Sales support: [sales@furiousfpv.com](mailto:sales@furiousfpv.com)

Website: <http://furiousfpv.com/>



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## Change Log

### v1.1

- ❖ Add External device:
  - Connect Runcam Split2 using Stealth Race VTx
  - Connect Runcam Split2 using Tramp HV VTx
  - Connect Runcam Split2 using TBS Unify Pro VTx
  - Connect with GPS

### v1.2

- Change Camera OSD Control to use LED\_Strip

## Introduction

Building upon the powerful Fortini F4, Furious FPV introduces the all new Fortini F4 OSD, introducing new capability & functionality to simplify setup & redefine your next FPV experience. Hold on - it's about to get really good.

Utilizing the cutting edge & feature packed Fortini F4 platform, we have introduced BetaFlight OSD, with the full ability to alter every setting you need direct via your transmitter. No need for your PC - just a few simple stick movements, and you're there - simple and straightforward, just the way it should be.

From PID's, camera settings, VTx power and beyond, the Fortini F4 OSD builds upon the previous F4 with powerful and easy to use operating capability without the need of a PC. Need more? We added a built in LC filter for even greater video image, allowing you to push the ragged edge with your next FPV ride.

Designed to be nothing but the very best, the Fortini OSD utilizes high performance, low noise 32kHz Invensense 20602 gyros, (5) UARTS, built in Input / Output Inrush Voltage Protection, and the capability to allow S.PORT direct connection with the receiver without any aspect of receiver modification. This massive feature dense packaging offers everything you could ever want from the most sophisticated flight controller available today.

Feature rich and ultra-powerful, the Fortini is the full up package, breaking new ground in true FC brilliance. Toss compromise out the window and open your FPV world to the most functional and feature packed FC you have ever seen before.

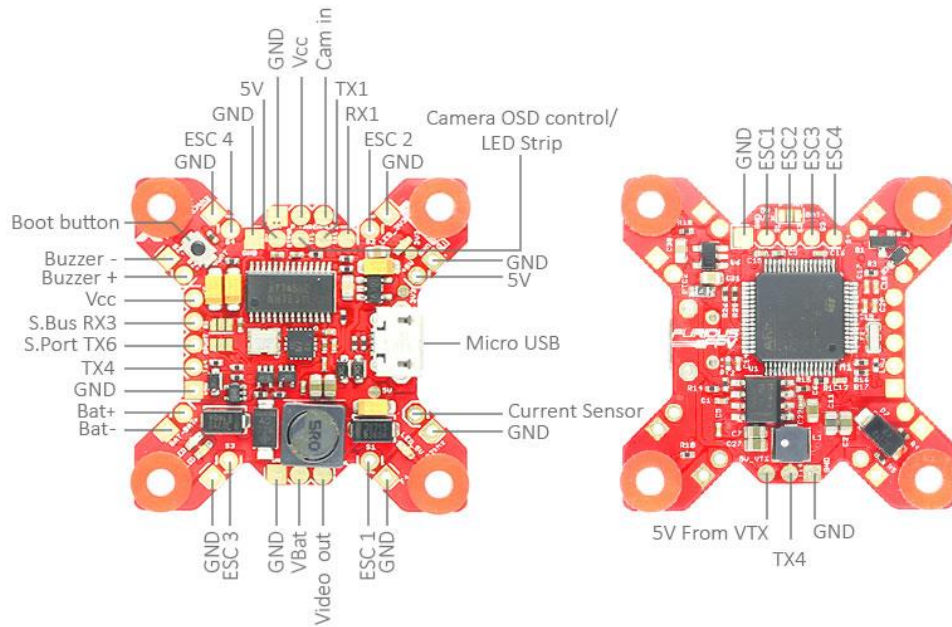
## Features

- Built-in OSD
- Built-in Camera OSD Control for FPV camera
- Selectable 3.3V or 5V voltage for RX
- Silicone damper for better anti-vibration
- Fortini F4 OSD modifies camera settings by transmitter
- 5x Serial UARTs for USB, SBUS, SPORT, TBS Receiver or GPS, Telemetry VTX
- Separate power supply for gyro with LDO low noise and high accuracy
- Built-in driver inverter for S-bus and Smart-Port connection directly to FC
- Inrush voltage protection input and output by transient voltage suppressor



- Invensense 20602 gyro for high speed 32khz, lowest noise floor and highest sensitivity
- Weight: 5.5gr

## Pinout



## Dimensions



## Connections

**\*WARNING:** Fortini F4 OSD can support up to 6S Lipo battery but make sure other devices also support it.

### Connect with Receiver:

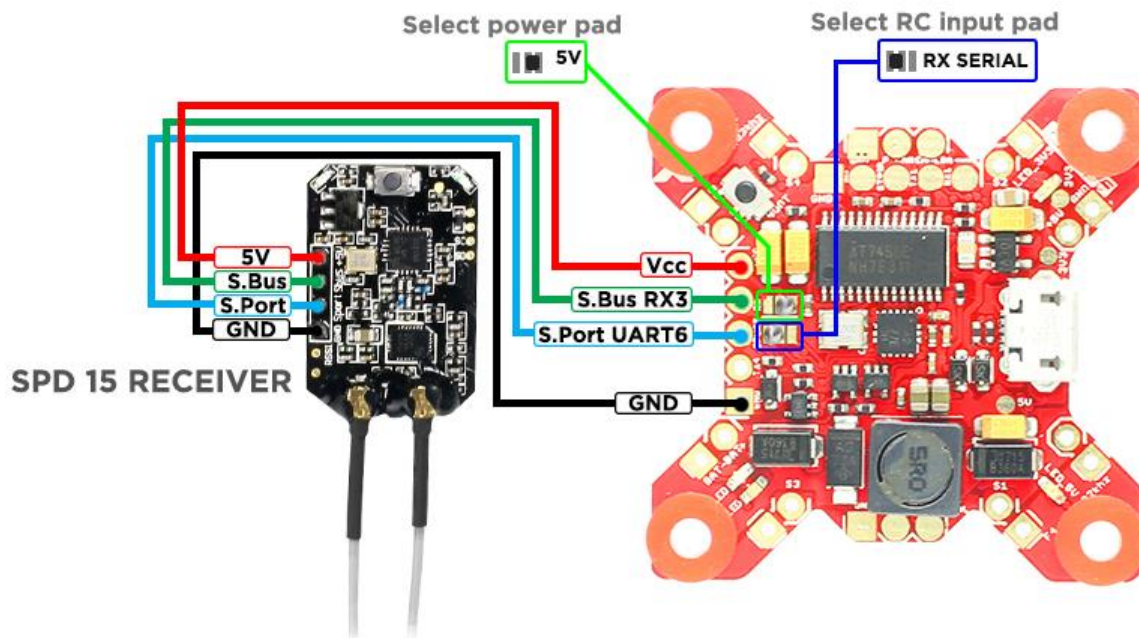
#### ❖ Using SPD15 Receiver:

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.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART1	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART3	<input type="checkbox"/> 115200 ▾	<input checked="" type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART4	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART6	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	SmartPort ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾



**FORTINI F4 OSD**  
 Connection with SPD 15

You can buy SPD15 Receiver right here: <https://goo.gl/FTnrpR>

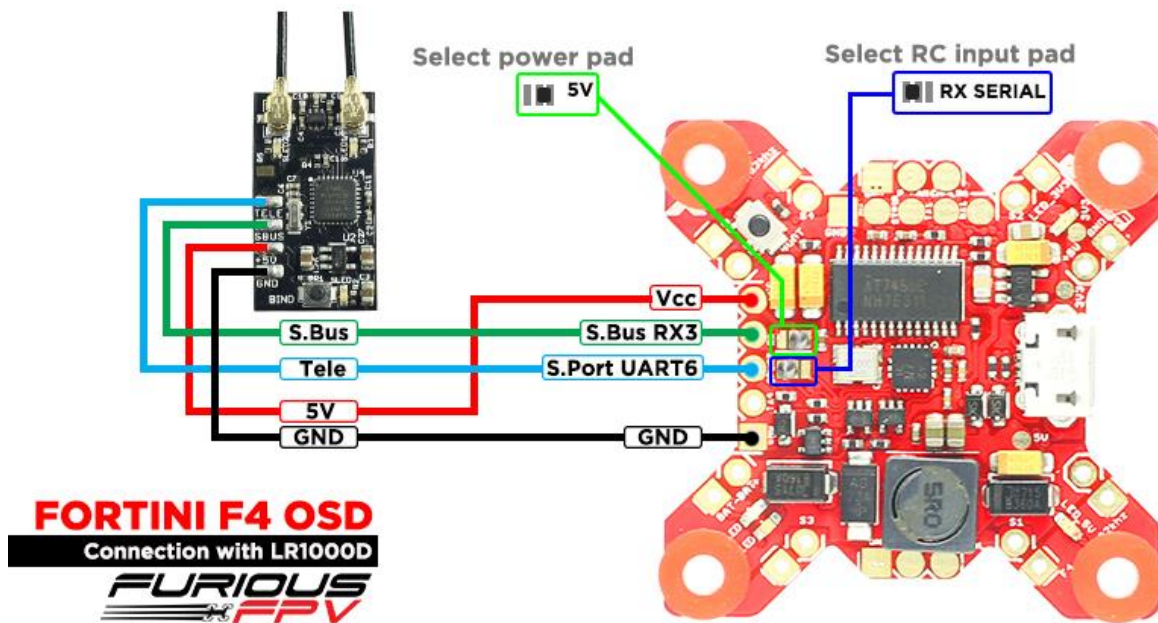
## ❖ Using LR1000D Receiver:

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.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART1	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART3	<input type="checkbox"/> 115200 ▾	<input checked="" type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART4	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART6	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	FrSky ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾



You can buy LR1000D Receiver right here: <https://goo.gl/4Cr0HI>

\* **NOTE:** If you use LR1000D Receiver please go to CLI and type the following commands:

```
set sbus_inversion = OFF
```

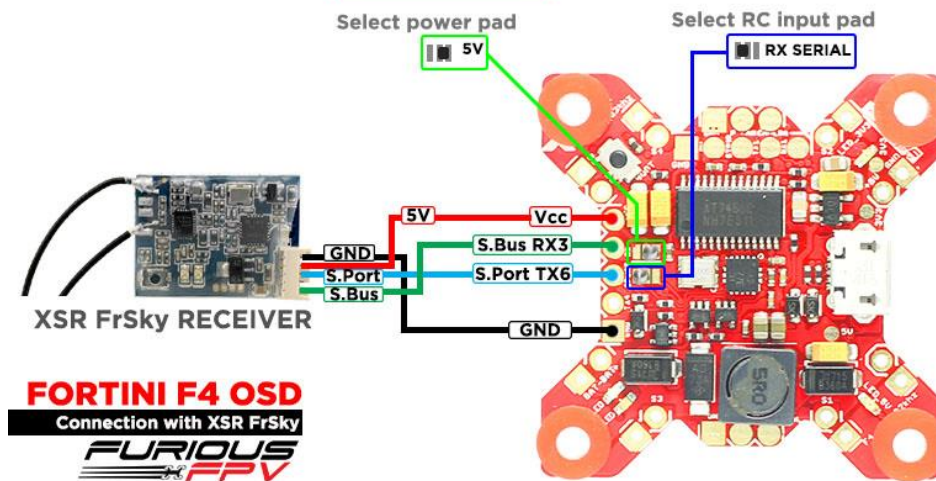
```
save
```

## ❖ Using XSR FrSky Receiver:

**\*NOTE:** If telemetry of XSR is not working with FORTINI F4 OSD, please update firmware for XSR receiver

Download firmware here: <https://goo.gl/t1LMT5>

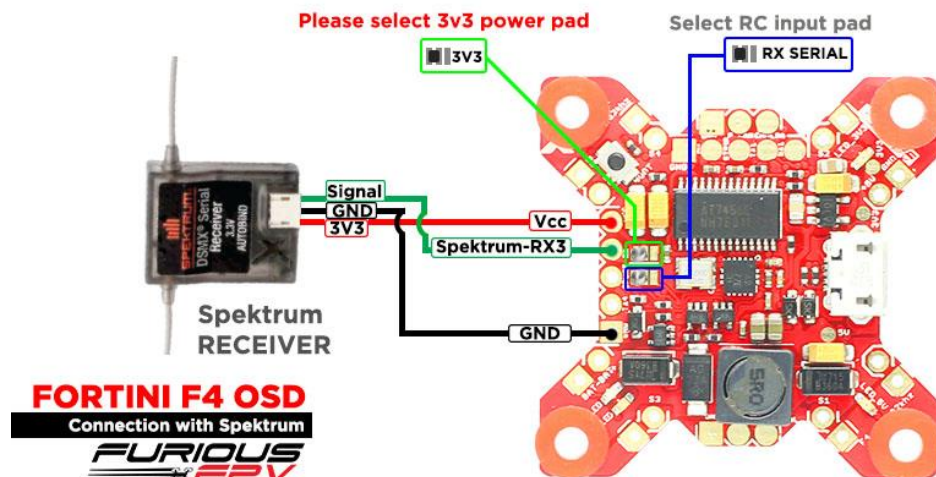
Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART1	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART3	<input type="checkbox"/> 115200	<input checked="" type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART4	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART6	<input type="checkbox"/> 115200	<input type="checkbox"/>	SmartPort   AUTO	Disabled   AUTO	Disabled   AUTO



## ❖ Using Spektrum Satellite Receiver:

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART1	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART3	<input type="checkbox"/> 115200	<input checked="" type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART4	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART6	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO

**NOTE:** When use Spektrum Satellite for Fortini F4 OSD, you must use battery for FC's power





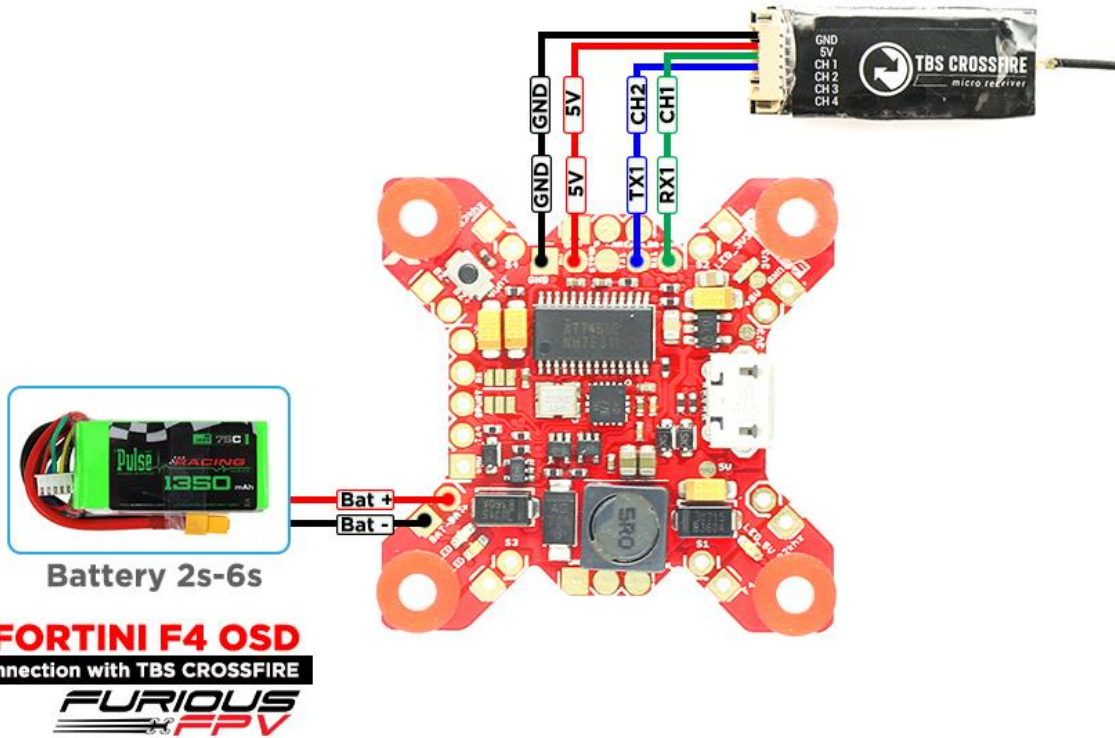
## ❖ Using TBS Crossfire Receiver:

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.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200 ▼	<input type="checkbox"/>	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼
UART1	<input type="checkbox"/> 115200 ▼	<input checked="" type="checkbox"/>	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼
UART3	<input type="checkbox"/> 115200 ▼	<input type="checkbox"/>	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼
UART4	<input type="checkbox"/> 115200 ▼	<input type="checkbox"/>	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼
UART6	<input type="checkbox"/> 115200 ▼	<input type="checkbox"/>	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼	Disabled ▼ AUTO ▼



### Receiver

Serial-based receiver (SPEKSAT, S ▼) Receiver Mode

**Note:** Remember to configure a Serial Port (via Ports tab) and choose a Serial Receiver Provider when using RX\_SERIAL feature.

CRSF ▼ Serial Receiver Provider

## Connect with Video Transmitter:

### ❖ Using Stealth Race VTx:

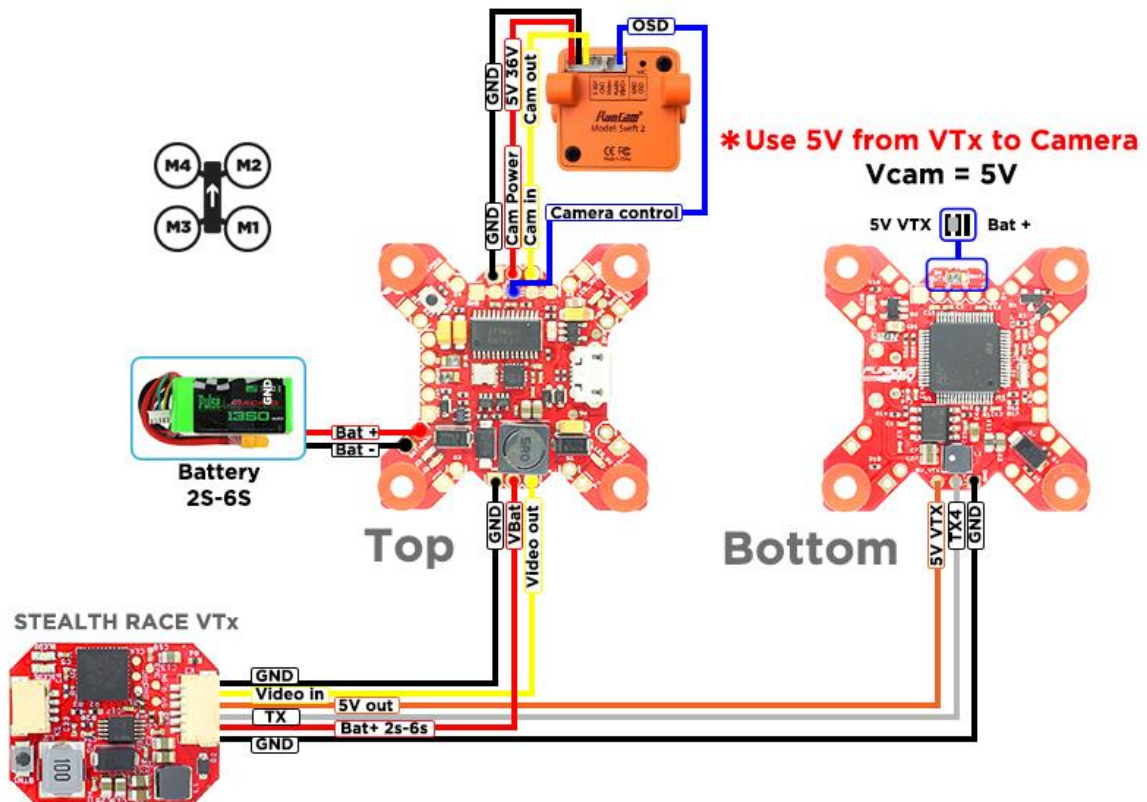
- Using 5V from VTx to power Camera

**\*NOTE:** Fortini F4 OSD can support up to 6S Lipo battery but make sure other devices also support it.

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.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART1	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART3	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART4	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	<b>IRC Tramp ▾ AUTO ▾</b>
UART6	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾



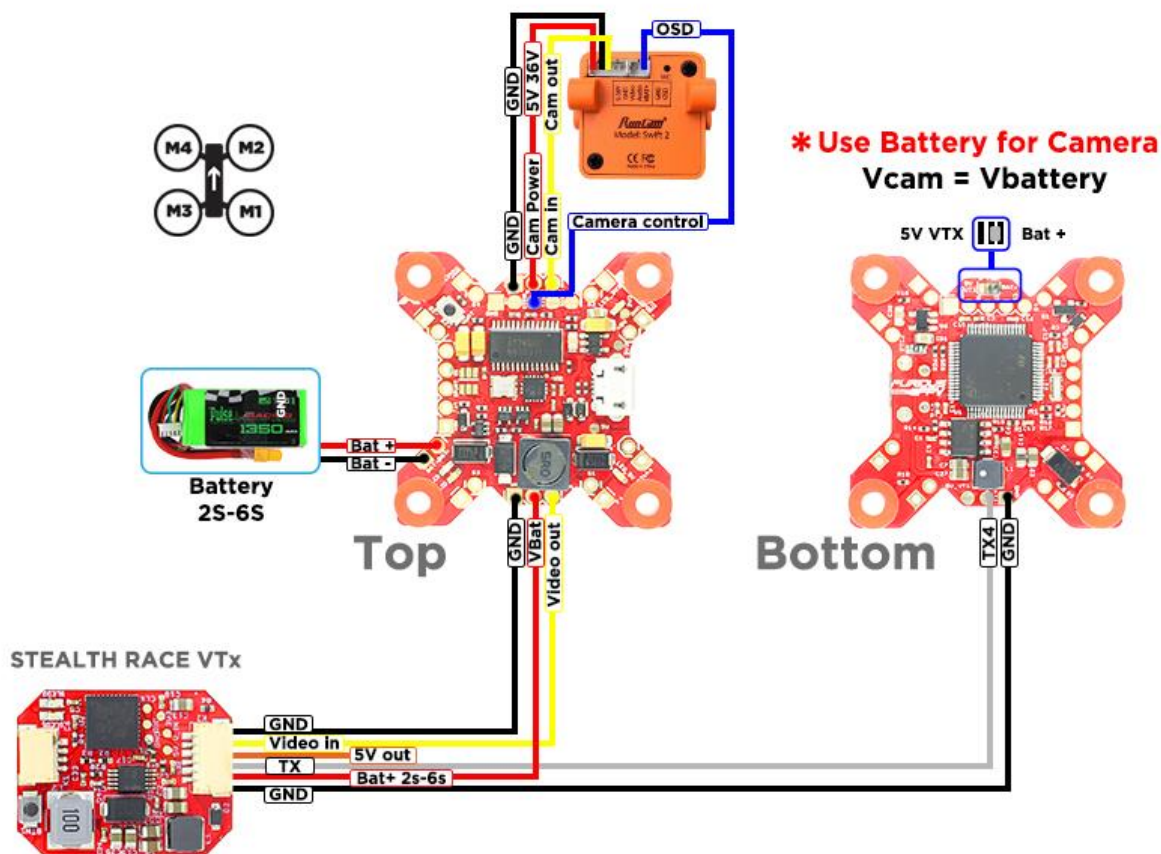
- Using Battery from VTx to power Camera

**\*NOTE:** Fortini F4 OSD can support up to 6S Lipo battery but make sure other devices also support it.

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.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART1	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART3	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART4	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	<b>IRC Tramp ▾ AUTO ▾</b>
UART6	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾



**FORTINI F4 OSD**  
 Connection with Stealth Race VTx

## ❖ Using Tramp HV VTx:

- Using 5V from VTx to power Camera

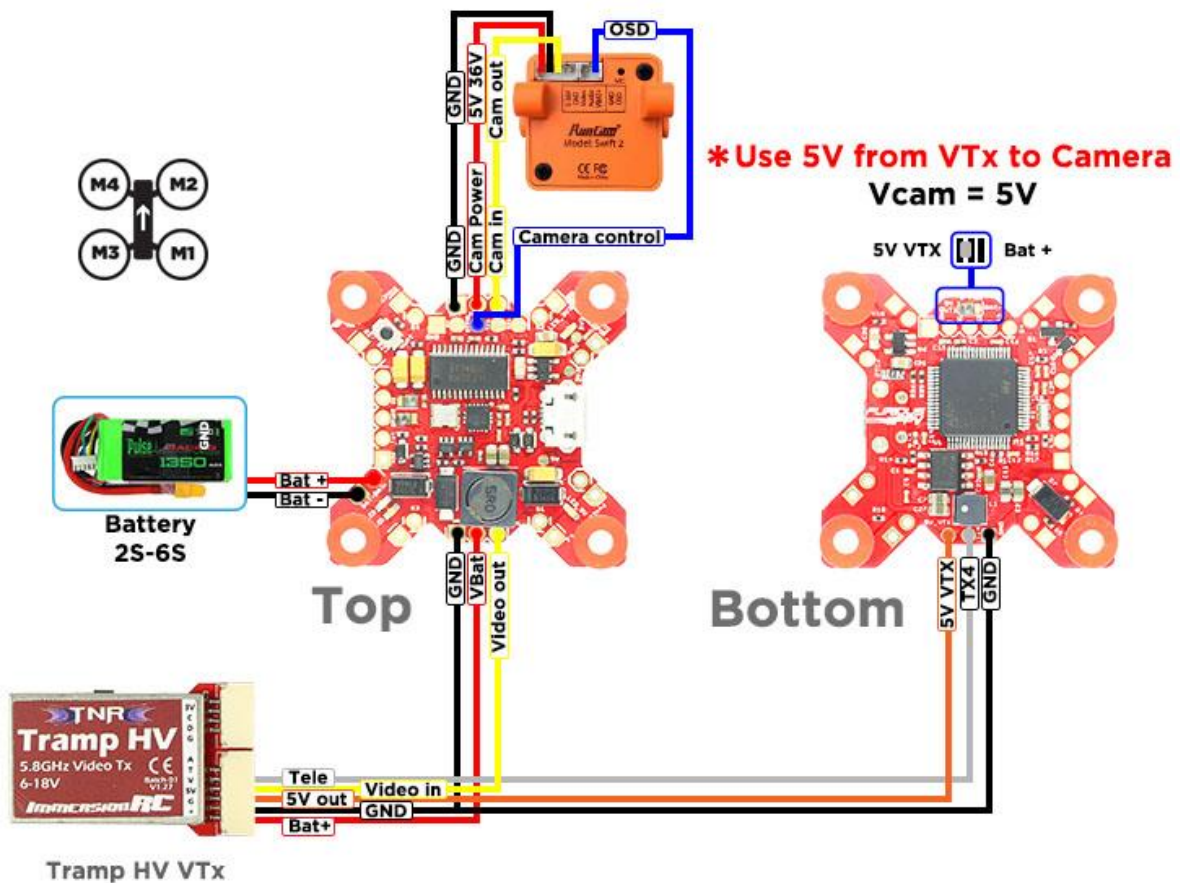
**\*NOTE:** Fortini F4 OSD can support up to 6S Lipo battery but make sure other devices also support it.

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.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART1	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART3	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART4	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	IRC Tramp ▾ AUTO ▾
UART6	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾



## FORTINI F4 OSD

Connection with Tramp HV VTx

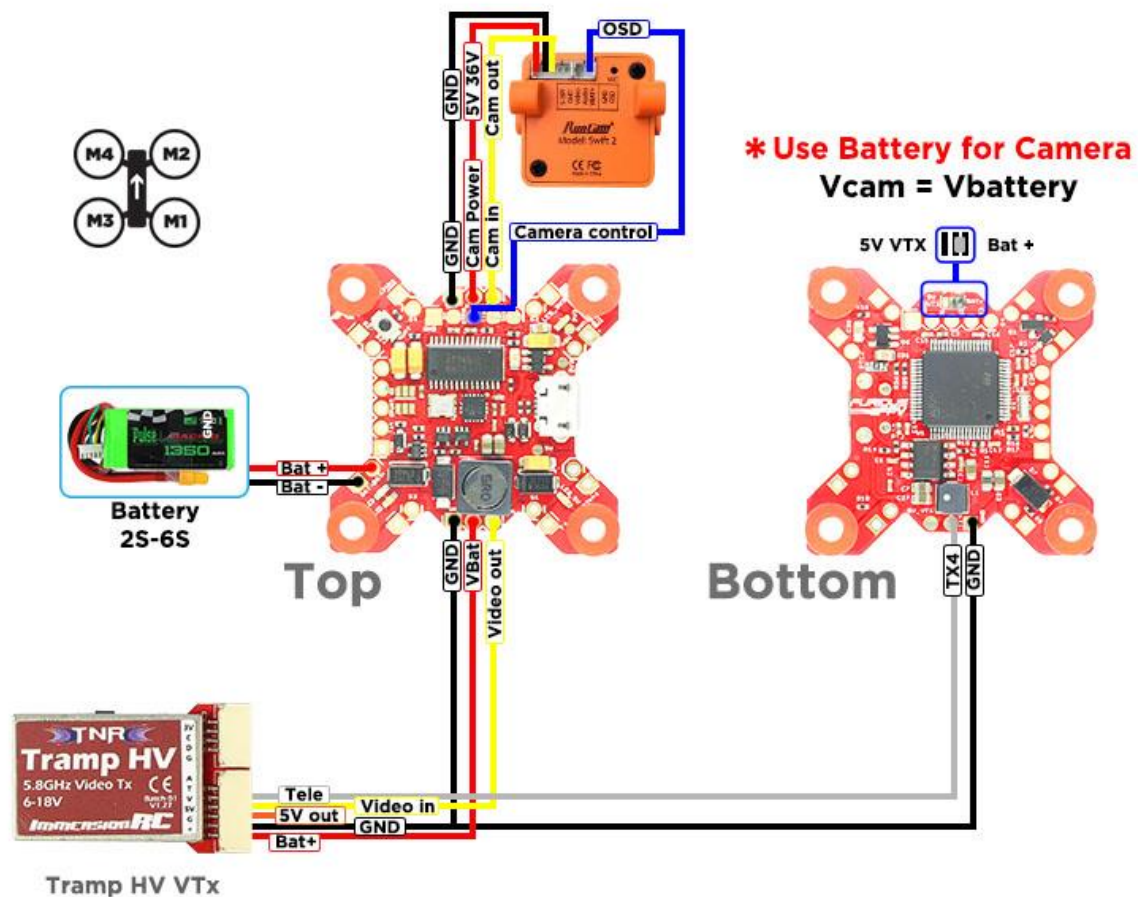
- Using Battery from VTx to power Camera

**\*NOTE:** Fortini F4 OSD can support up to 6S Lipo battery but make sure other devices also support it.

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.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART1	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART3	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART4	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	<b>IRC Tramp ▾ AUTO ▾</b>
UART6	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾



## ❖ Using TBS Unify Pro VTx:

- Using 5V from VTx to power Camera

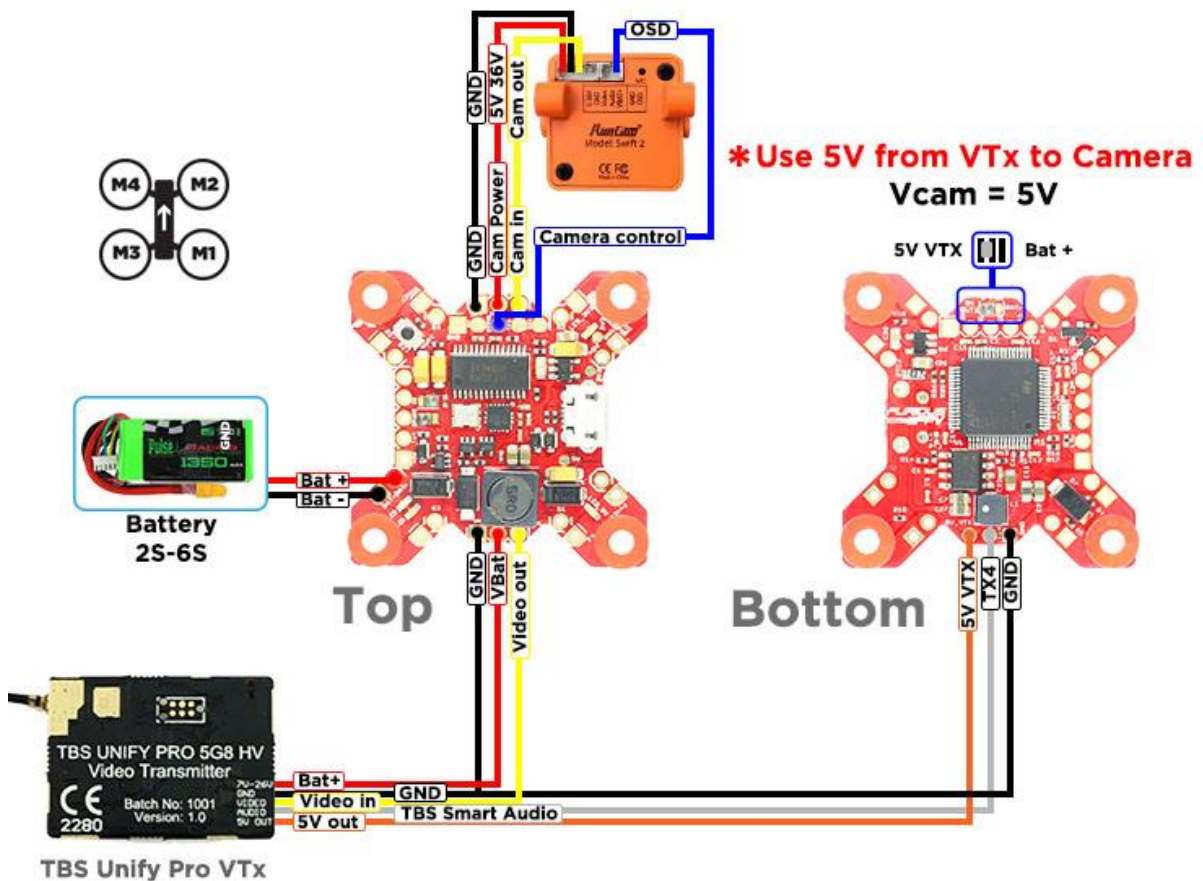
**\*NOTE:** Fortini F4 OSD can support up to 6S Lipo battery but make sure other devices also support it.

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.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART1	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART3	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART4	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	TBS SmartAuc ▾ AUTO ▾
UART6	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾



**FORTINI F4 OSD**  
 Connection with TBS Unify Pro VTx

- Using Battery from VTx to power Camera

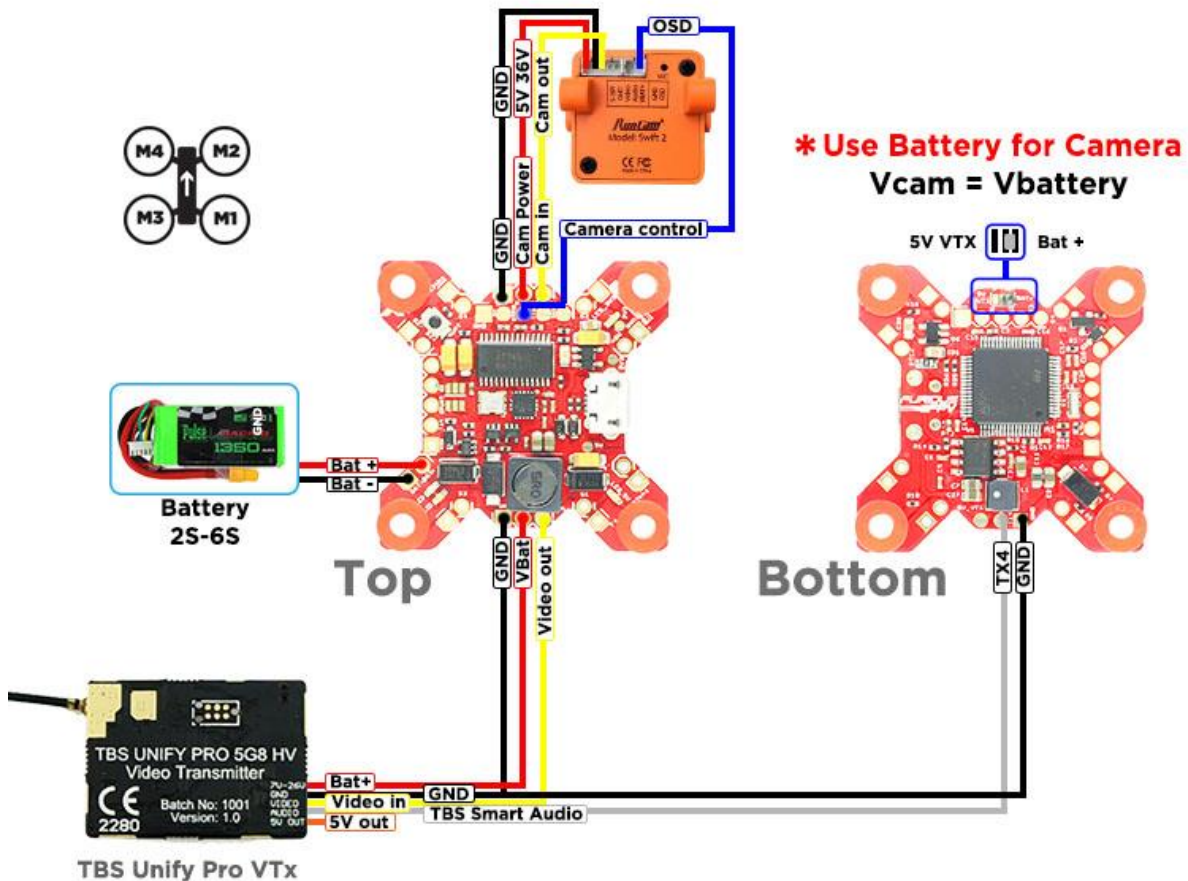
**\*NOTE:** Fortini F4 OSD can support up to 6S Lipo battery but make sure other devices also support it.

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.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART1	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART3	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART4	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	<b>TBS SmartAuc ▾ AUTO ▾</b>
UART6	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾



**FORTINI F4 OSD**  
 Connection with TBS Unify Pro VTx

## ❖ Using FX FX799T:

- Using 5V from VTx to power Camera

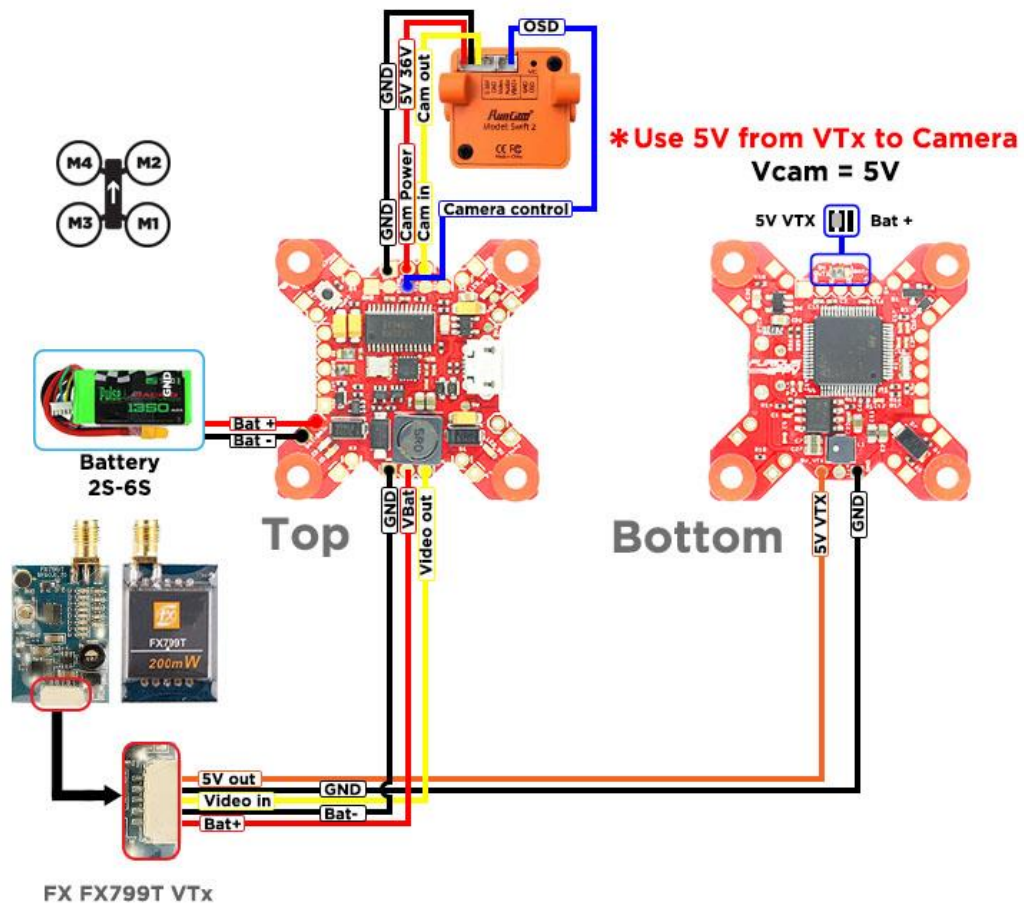
**\*NOTE:** Fortini F4 OSD can support up to 6S Lipo battery but make sure other devices also support it.

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.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART1	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART3	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART4	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART6	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO



**FORTINI F4 OSD**  
 Connection with FX FX799T VTX



- Using Battery from VTx to power Camera

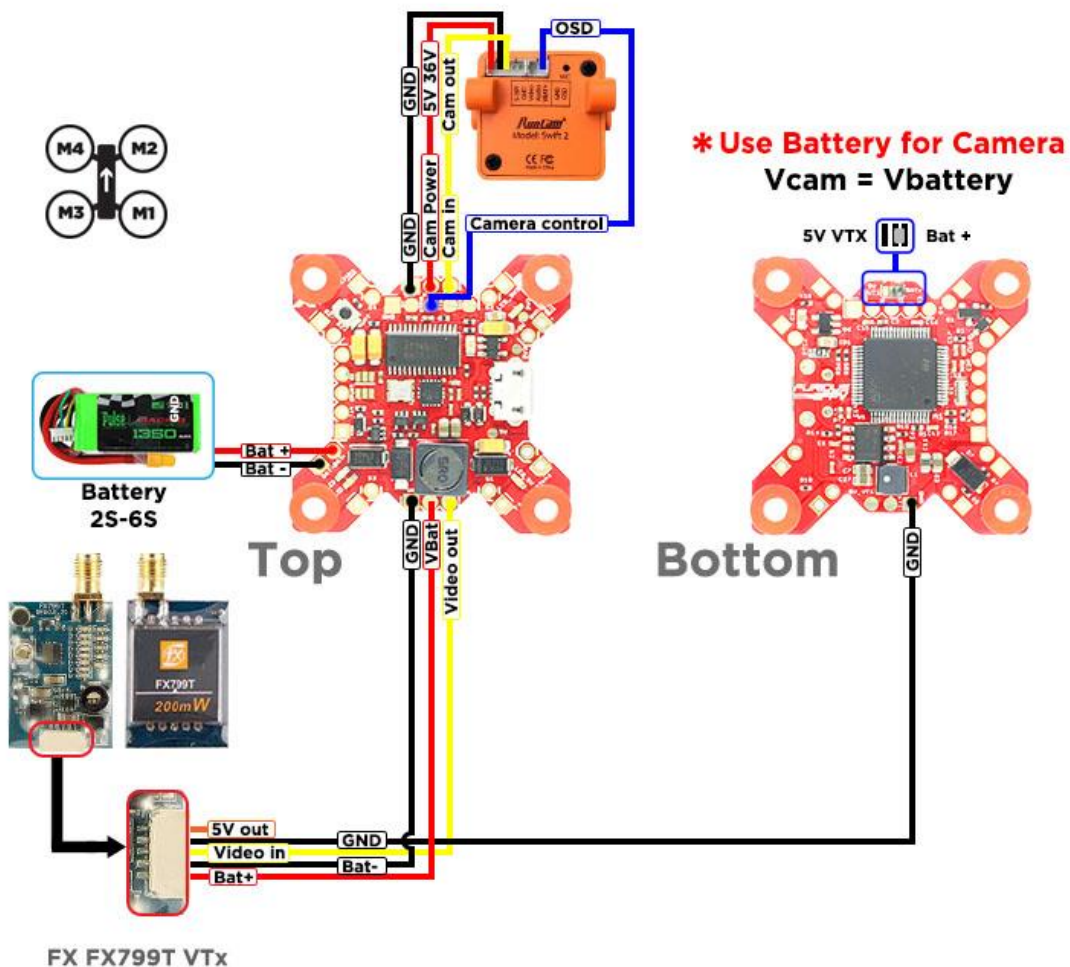
**\*NOTE:** Fortini F4 OSD can support up to 6S Lipo battery but make sure other devices also support it.

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.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART1	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART3	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART4	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART6	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾



**FORTINI F4 OSD**  
 Connection with FX799T VTx  
**FURIOUS FPV**

## External Device:

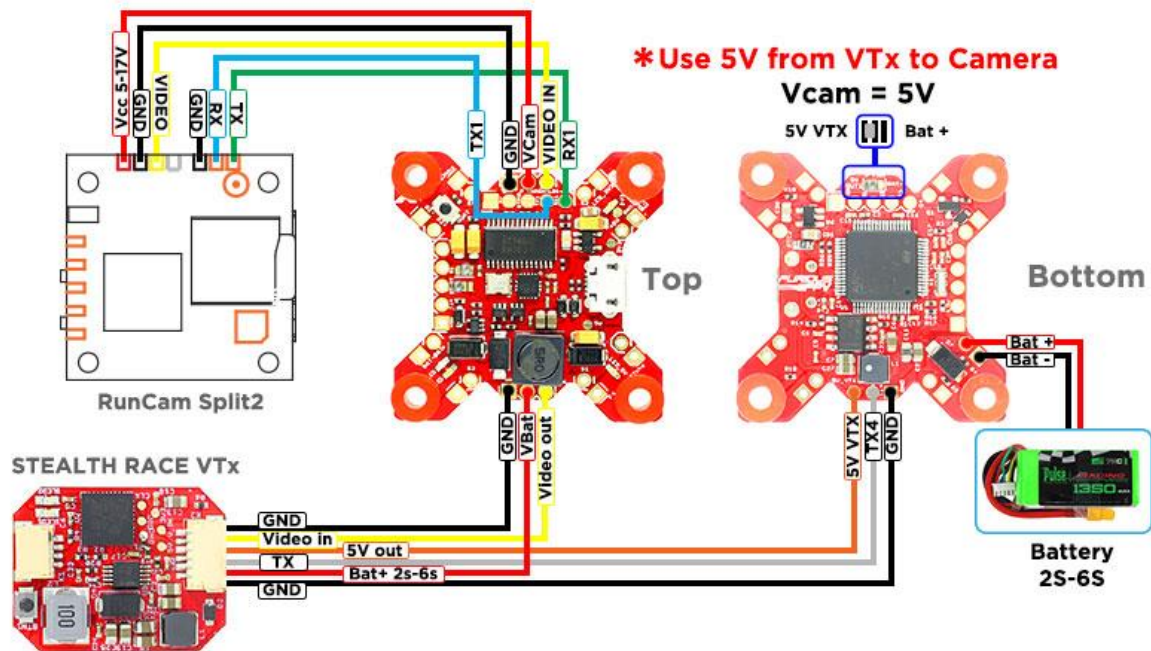
### ❖ Connect RunCam Split2 using Stealth Race VTx

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.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART1	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	RunCam Split ▾ AUTO ▾
UART3	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART4	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	IRC Tramp ▾ AUTO ▾
UART6	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾



**FORTINI F4 OSD**  
 Connection with RunCam Split 2

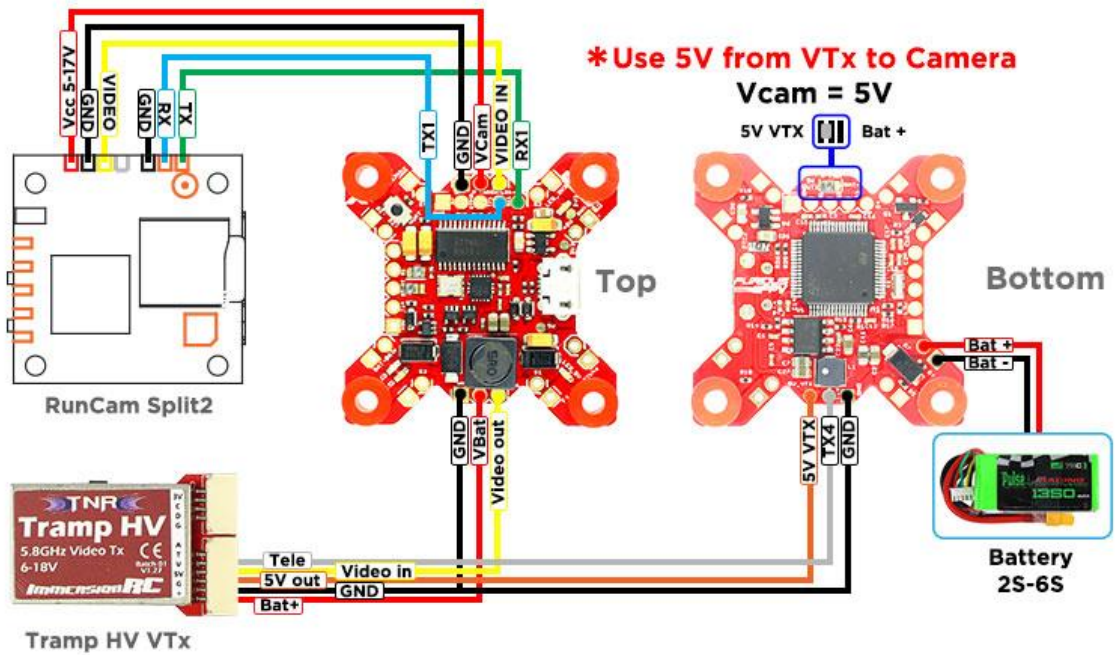
## ❖ Connect Runcam Split2 using Tramp HV VTx

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.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART1	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	<b>RunCam Split AUTO</b>
UART3	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO
UART4	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	<b>IRC Tramp AUTO</b>
UART6	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled AUTO	Disabled AUTO	Disabled AUTO



### FORTINI F4 OSD

Connection with RunCam Split 2 + Tramp HV

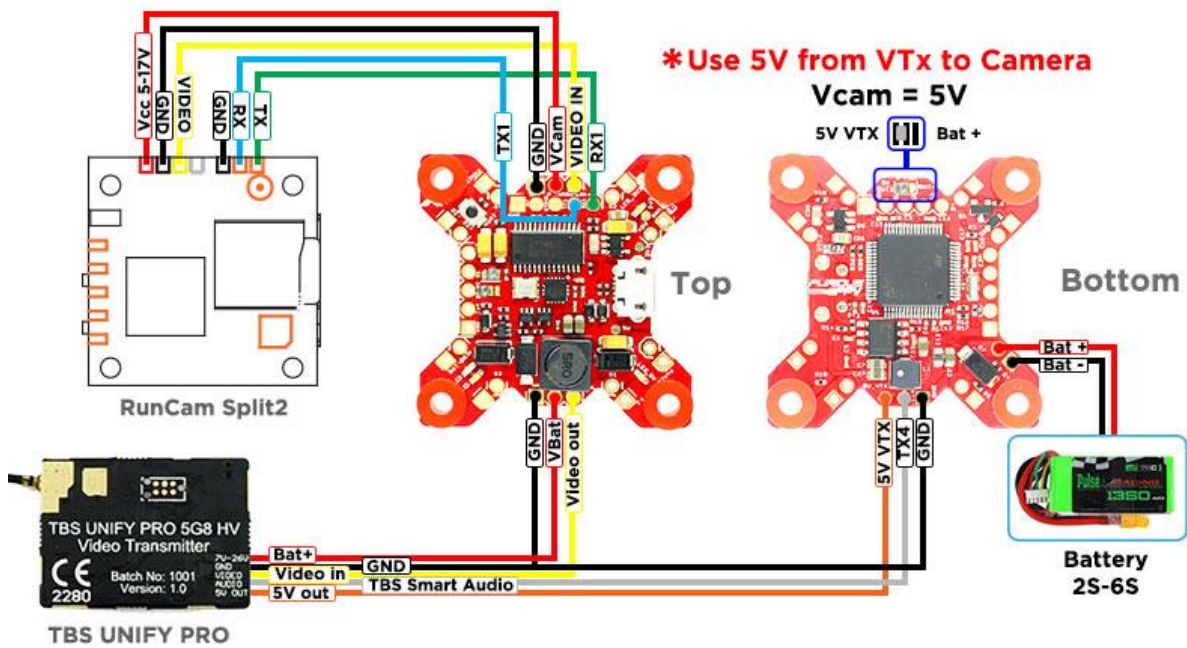
## ❖ Connect Runcam Split2 using TBS Unify Pro VTx

Ports

WIKI

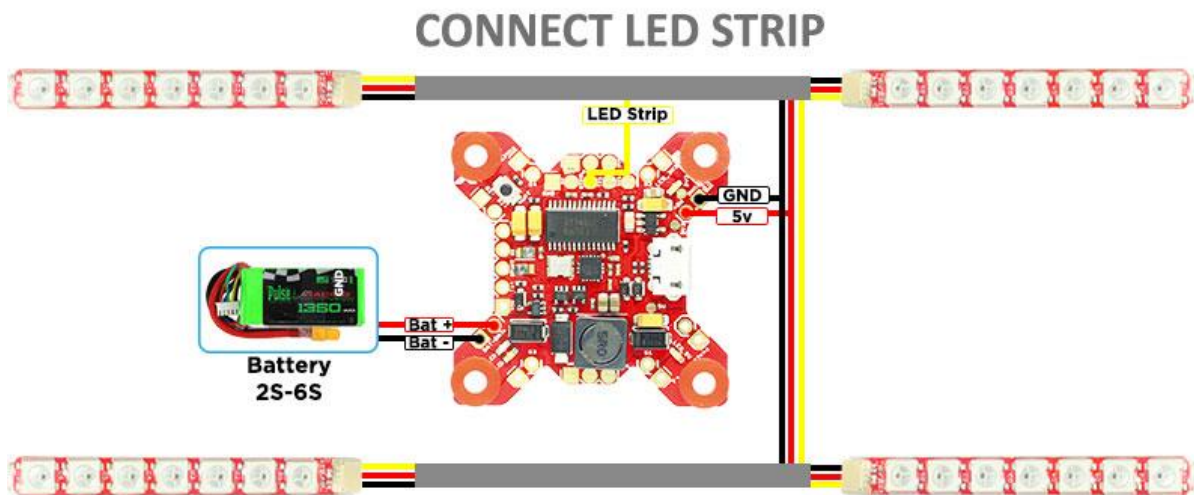
**Note:** not all combinations are valid. When the flight controller firmware detects this the serial port configuration will be reset.  
**Note:** Do **NOT** disable MSP on the first serial port unless you know what you are doing. You may have to reflash and erase your configuration if you do.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART1	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	RunCam Split ▾ AUTO ▾
UART3	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART4	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	TBS SmartAuc ▾ AUTO ▾
UART6	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾



**FORTINI F4 OSD**  
 Connection with RunCam Split 2 + Unify

## ❖ Change Camera OSD Control to use LED\_Strip



Change Camera OSD Control to use LED\_Strip  
Go to CLI in Betaflight paste this string:

Resource CAMERA\_CONTROL none  
Resource LED\_STRIP 1 B07  
Save

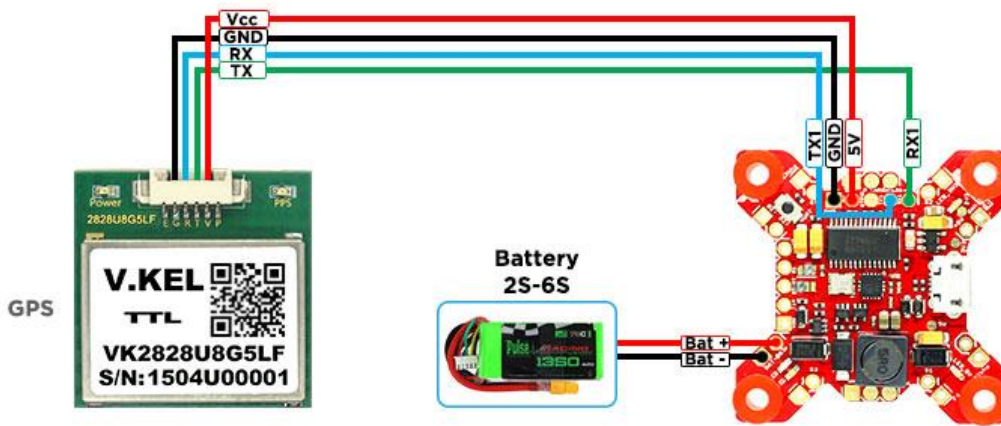
## ❖ Connect with GPS

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.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART1	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	<b>GPS ▾ 57600 ▾</b>	Disabled ▾ AUTO ▾
UART3	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART4	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾
UART6	<input type="checkbox"/> 115200 ▾	<input type="checkbox"/>	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾



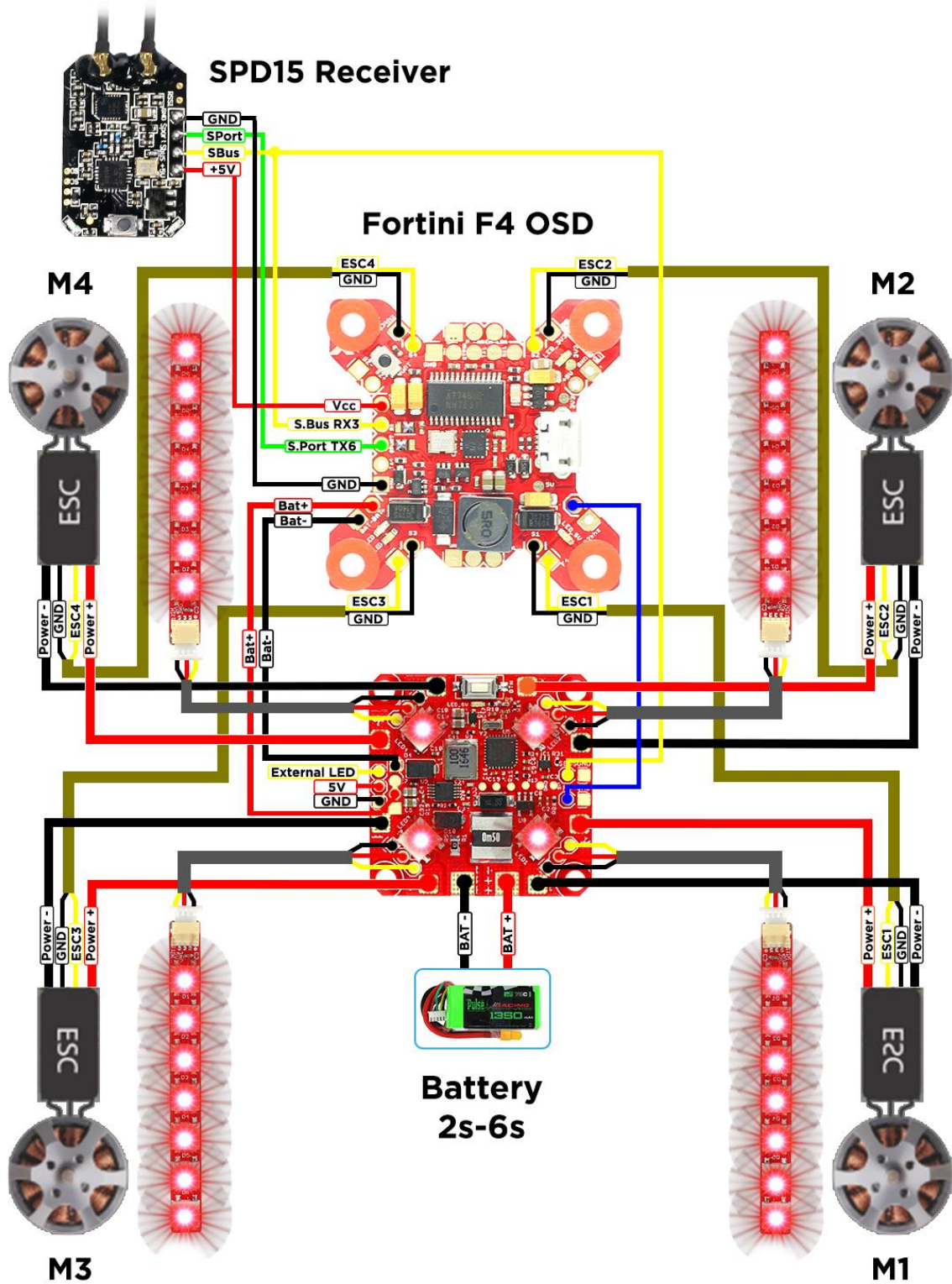
### FORTINI F4 OSD

Connection with GPS



## Connect with Lightning PDB:

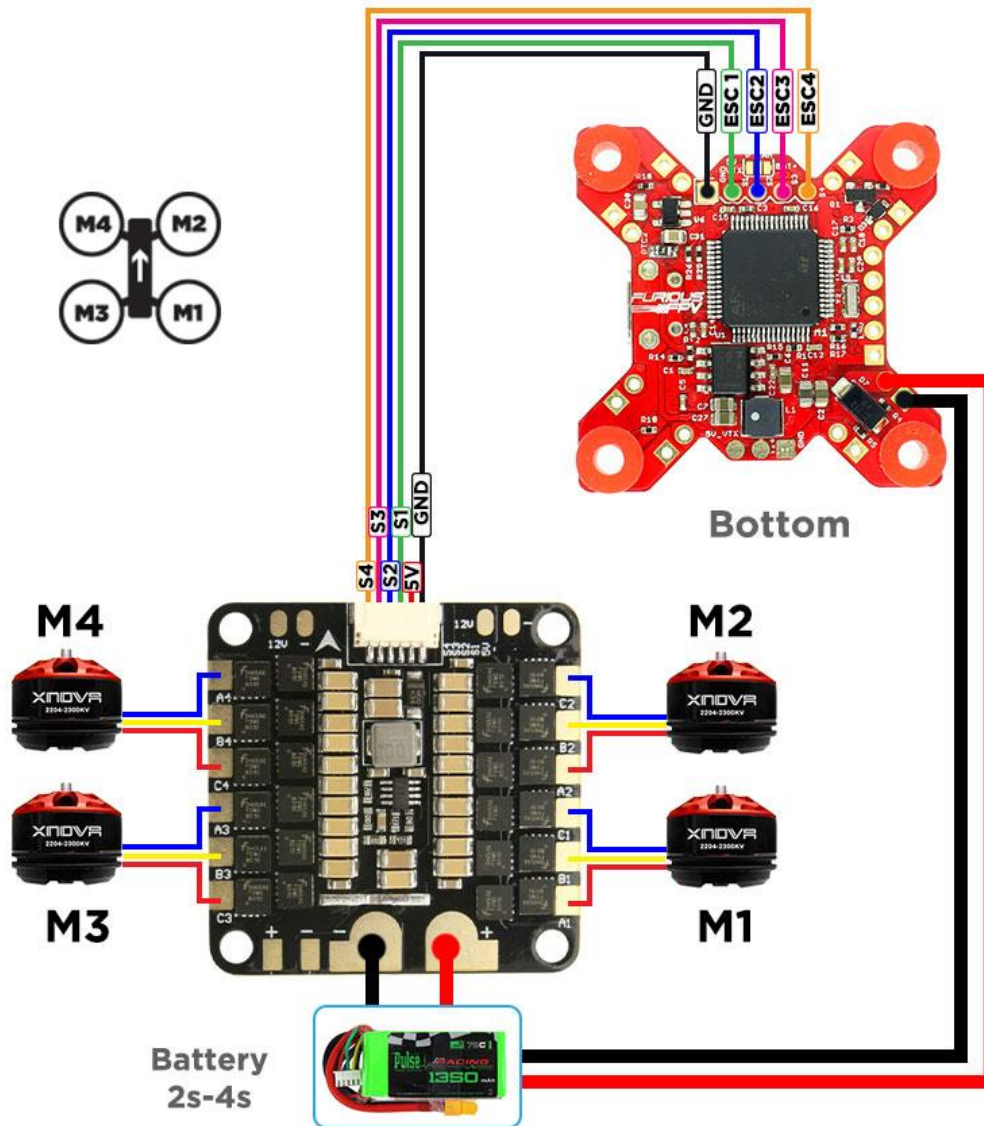
**\*NOTE:** Fortini F4 OSD can support up to 6S Lipo battery but make sure other devices also support it.



## Connect with ESC 4 in 1:

### ❖ Using Aikon SEFM 30A:

**\*NOTE:** Fortini F4 OSD can support up to 6S Lipo battery but make sure other devices also support it.



### Aikon SEFM 30A 4-in-1

**FORTINI F4 OSD**

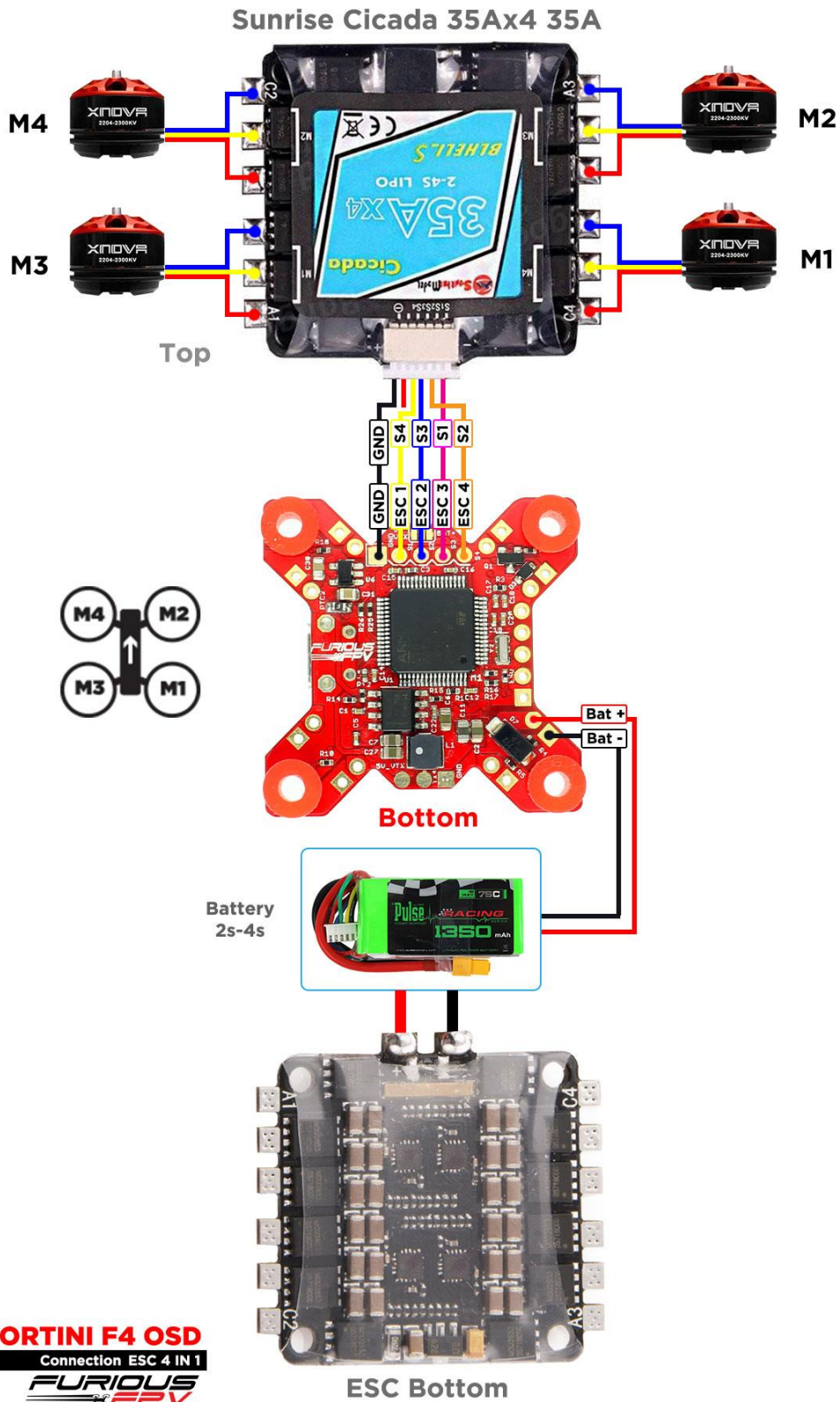
Connection ESC 4 IN 1

**FURIOUS**  
FPV



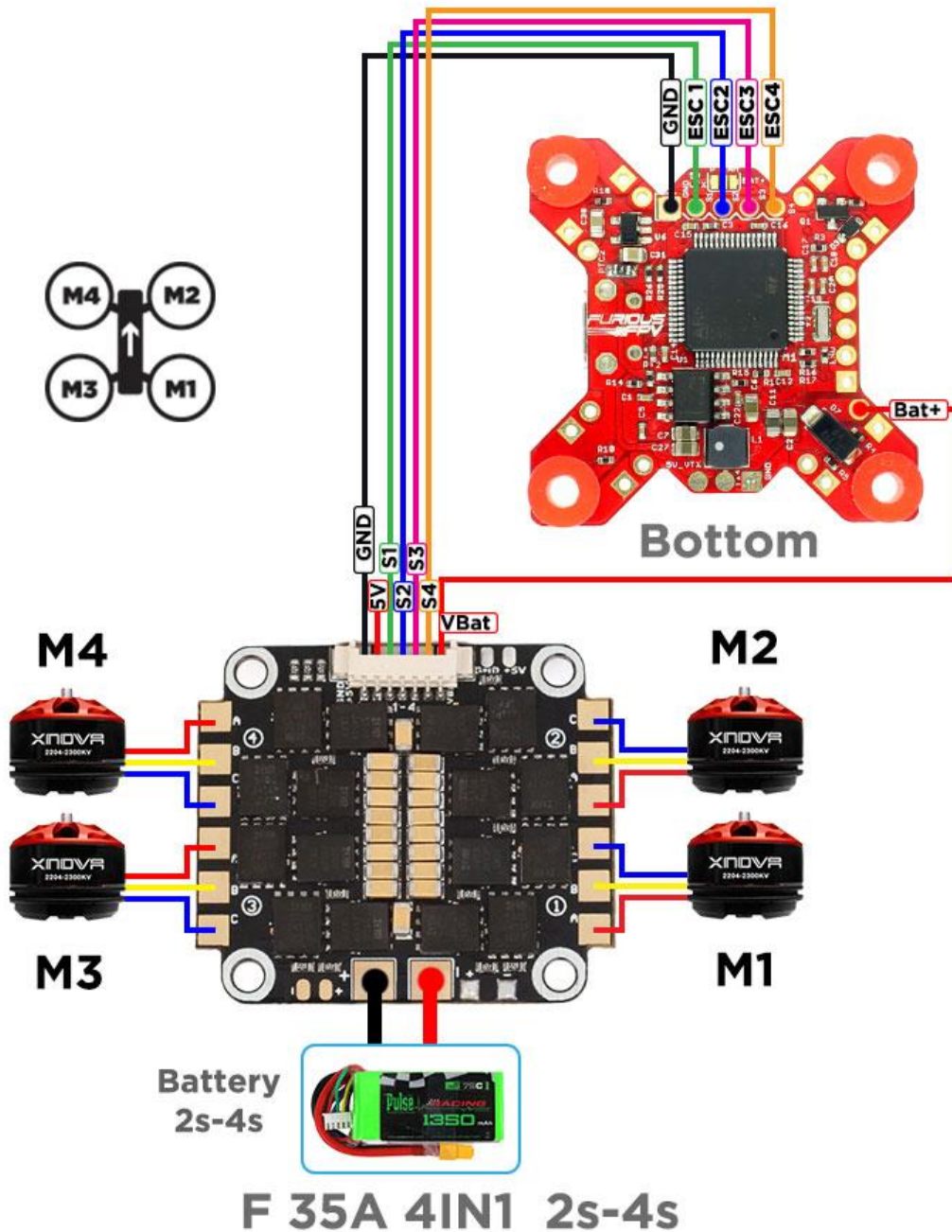
## ❖ Using Cicada 35x4 35A:

**\*NOTE:** Fortini F4 OSD can support up to 6S Lipo battery but make sure other devices also support it.



### ❖ Using T-Motor F 35A 4IN1-4S:

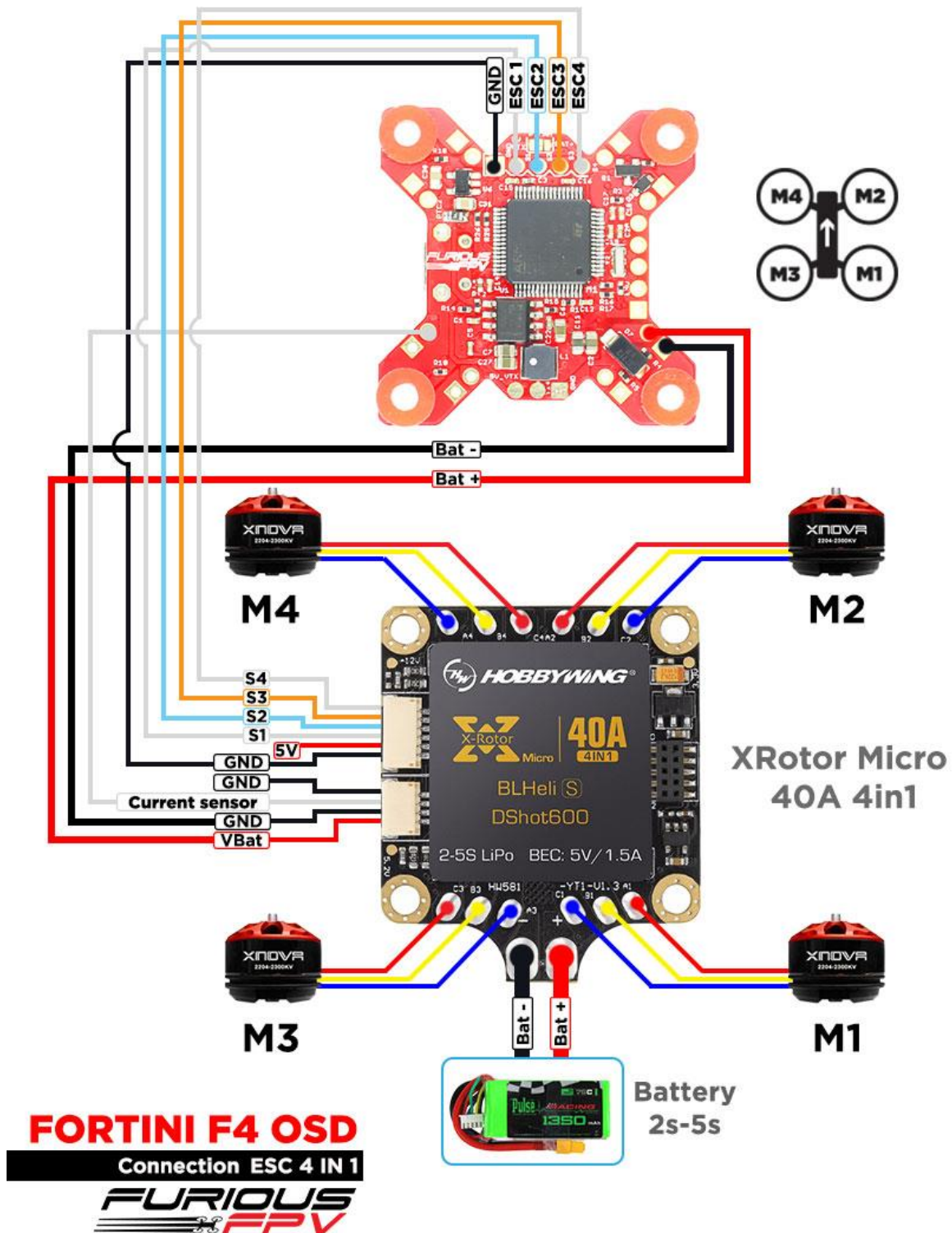
**\*NOTE:** Fortini F4 OSD can support up to 6S Lipo battery but make sure other devices also support it.



**FORTINI F4 OSD**  
 Connection ESC 4 IN 1

## ❖ Using Hobbywing XRotor Micro 40A 4in1:

**\*NOTE:** Fortini F4 OSD can support up to 6S Lipo battery but make sure other devices also support it.



## Basic configuration

Please follow carefully these next steps, and always **remove** your propellers when you're configuring your quad

**STEP 1: Connect Fortini F4 OSD with computer via USB cable and then open BetaFlight**

**STEP 2: Configure Ports.**

### (1) Configure Receiver:

- **With TBS Crossfire Receiver: Turn on Serial Rx of UART 1 to use Receiver Mode**

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 refresh and erase your configuration if you do.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART1	<input type="checkbox"/> 115200	<input checked="" type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART3	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART4	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART6	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO

- **With RX Serial:**
  - Turn on **Serial Rx of UART 3** to use **Receiver Mode**
  - Select **SmartPort** of **UART 6** to use **S.Port TX 6**

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 refresh and erase your configuration if you do.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART1	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART3	<input type="checkbox"/> 115200	<input checked="" type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART4	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART6	<input type="checkbox"/> 115200	<input type="checkbox"/>	SmartPort   AUTO	Disabled   AUTO	Disabled   AUTO

### (2) In Peripherals of UART 4:

- Select **IRC Tramp** for **Tramp HV VTx** and **Stealth Race VTx**

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 refresh and erase your configuration if you do.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART1	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART3	<input type="checkbox"/> 115200	<input checked="" type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART4	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	IRC Tramp   AUTO
UART6	<input type="checkbox"/> 115200	<input type="checkbox"/>	SmartPort   AUTO	Disabled   AUTO	Disabled   AUTO

- Select TBS Smartaudio for TBS Unify Pro VTx

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 refresh and erase your configuration if you do.

Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	<input checked="" type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART1	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART3	<input type="checkbox"/> 115200	<input checked="" type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	Disabled   AUTO
UART4	<input type="checkbox"/> 115200	<input type="checkbox"/>	Disabled   AUTO	Disabled   AUTO	TBS SmartAuc   AUTO
UART6	<input type="checkbox"/> 115200	<input type="checkbox"/>	SmartPort   AUTO	Disabled   AUTO	Disabled   AUTO

\* **NOTE:** Please make sure that all the connections are correct.

**STEP 3:** Go to Configuration tab and choose ESC/Motor protocol in ESC/Motor Features

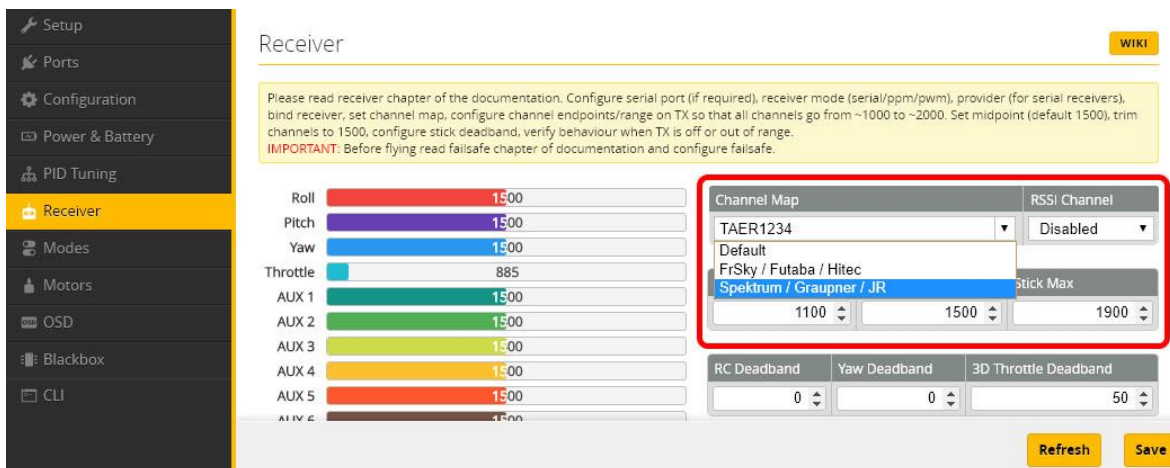
**STEP 4:** Select Serial- based receiver in Receiver Mode

If you are using SBus, iBus or a Spektrum Satellite, you will need to pick your Serial Receiver Provider. Follow below table:

RX Type	Serial Receiver Provider
DSM2 1024bit/22ms	SPEKTRUM1024
DSM2 2048bit/11ms	SPEKTRUM2048
DSMX 1024bit/22ms	SPEKTRUM1024
DSMX 2048bit/11ms	SPEKTRUM2048
FrSky RX	SBUS
Futaba RX	SBUS
FlySky RX	IBUS
Turnigy RX	IBUS

Click **“Save and Reboot”**.

Finally, go to the **Receiver** tab. Pull down the drop down that says **“Channel Map”** and select the suitable option with your RX.



Receiver WIKI

Please read receiver chapter of the documentation. Configure serial port (if required), receiver mode (serial/ppm/pwm), provider (for serial receivers), bind receiver, set channel map, configure channel endpoints/range on TX so that all channels go from ~1000 to ~2000. Set midpoint (default 1500), trim channels to 1500, configure stick deadband, verify behaviour when TX is off or out of range.  
**IMPORTANT:** Before flying read failsafe chapter of documentation and configure failsafe.

Roll	1500	Channel Map	RSSI Channel
Pitch	1500	TAER1234	Disabled
Yaw	1500	Default	
Throttle	885	FrSky / Futaba / Hitec	
AUX 1	1500	Spektrum / Graupner / JR	Stick Max
AUX 2	1500	1100	1500
AUX 3	1500		1900
AUX 4	1500	RC Deadband	Yaw Deadband
AUX 5	1500	0	0
AUX 6	1500		3D Throttle Deadband
			50

Refresh Save

Once again, click **“Save”**.

## Tips

### Guideline configuration OSD with BetaFlight

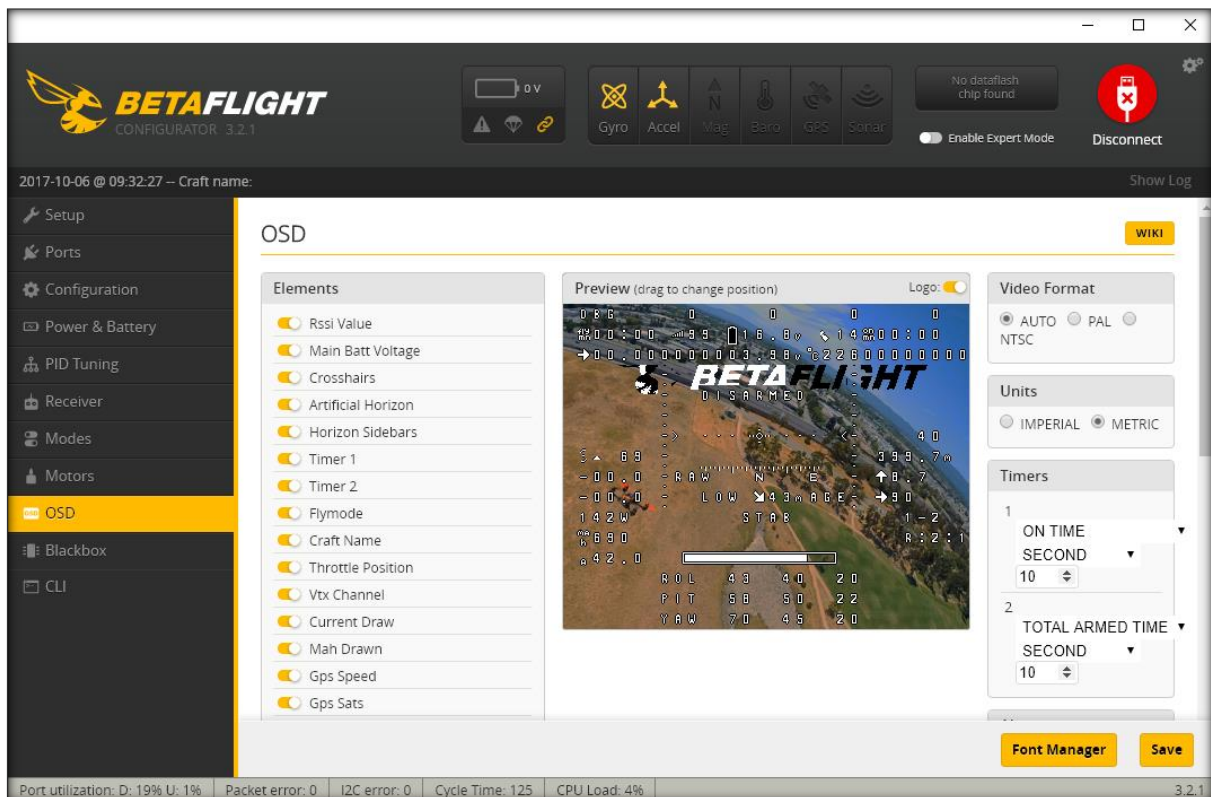
**STEP 1:** Connect Fortini F4 OSD with PC via USB cable.

**STEP 2:** Open **Betaflight configurator** on Google Chrome.



Betaflight

**STEP 3:** Click **Connect** on **Betaflight** interface then go to **OSD** tab to configure.



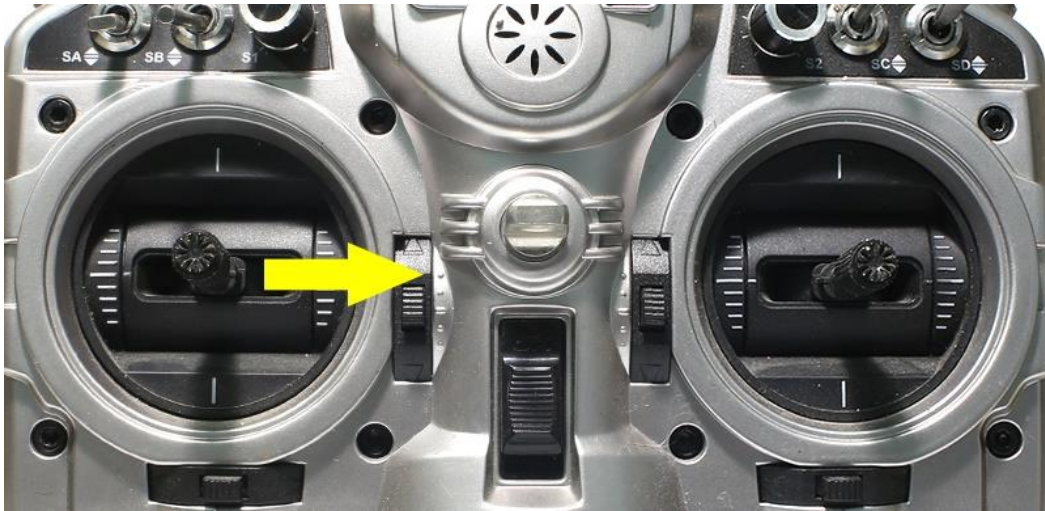
The screenshot shows the Betaflight configurator interface. The top bar includes the Betaflight logo, a battery level indicator (0V), and various sensor status icons (Gyro, Accel, Mag, Baro, GPS, Sonar). A "No dataflash chip found" warning is present. The main interface is divided into a sidebar on the left with navigation options (Setup, Ports, Configuration, Power & Battery, PID Tuning, Receiver, Modes, Motors, OSD, Blackbox, CLI) and a main content area. The main content area is titled "OSD" and features a "WIKI" button. On the left, there is a list of "Elements" to be configured, each with a toggle switch: Rssi Value, Main Batt Voltage, Crosshairs, Artificial Horizon, Horizon Sidebars, Timer 1, Timer 2, Flymode, Craft Name, Throttle Position, Vtx Channel, Current Draw, Mah Drawn, Gps Speed, and Gps Sats. The central "Preview" window shows a live video feed with the Betaflight OSD overlay, including the text "BETAFLIGHT" and "DISARMED". The right-hand panel contains settings for "Video Format" (AUTO, PAL, NTSC), "Units" (IMPERIAL, METRIC), and "Timers" (ON TIME, TOTAL ARMED TIME). At the bottom right, there are "Font Manager" and "Save" buttons. The status bar at the very bottom displays system metrics: Port utilization: D: 19% U: 1%, Packet error: 0, I2C error: 0, Cycle Time: 125, CPU Load: 4%, and version 3.2.1.

**STEP 4:** After configuring OSD please click **Save** to save your configuration.

## How to open camera setting by Transmitter

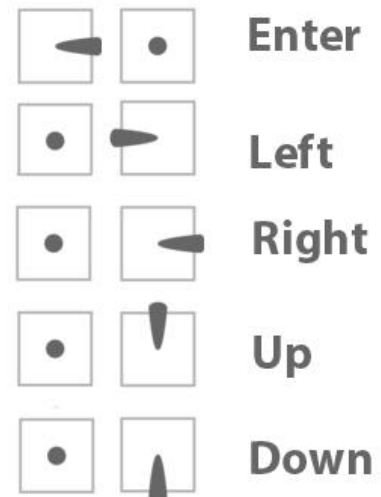
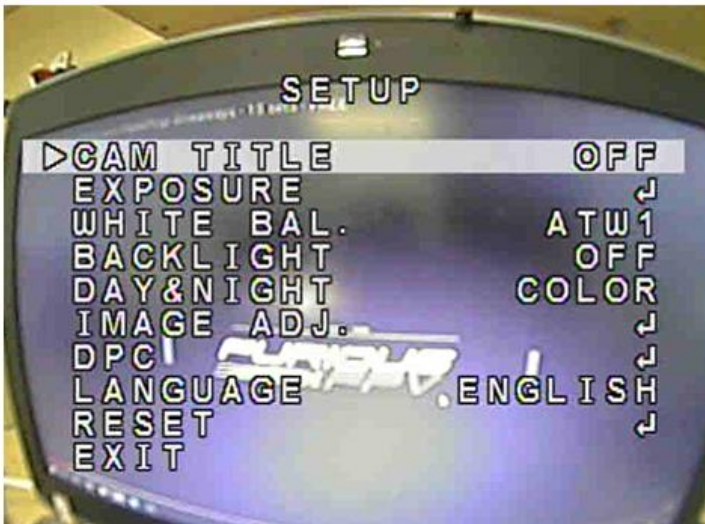
### Stick command:

- THROTTLE MIDDLE
- YAW RIGHT
- PITCH MIDDLE
- ROLL MIDDLE



### To navigate through menu:

- PITCH/ROLL sticks are used to navigate
- YAW stick is used to **adjust / change** values





## How to open Betaflight OSD by Transmitter

Stick command:

- THROTTLE MIDDLE + YAW LEFT + PITCH FULL + ROLL MIDDLE



To navigate through menu:

- PITCH/ROLL sticks are used to navigate
- YAW stick is used to **adjust / change** values



## VTx configuration by Transmitter

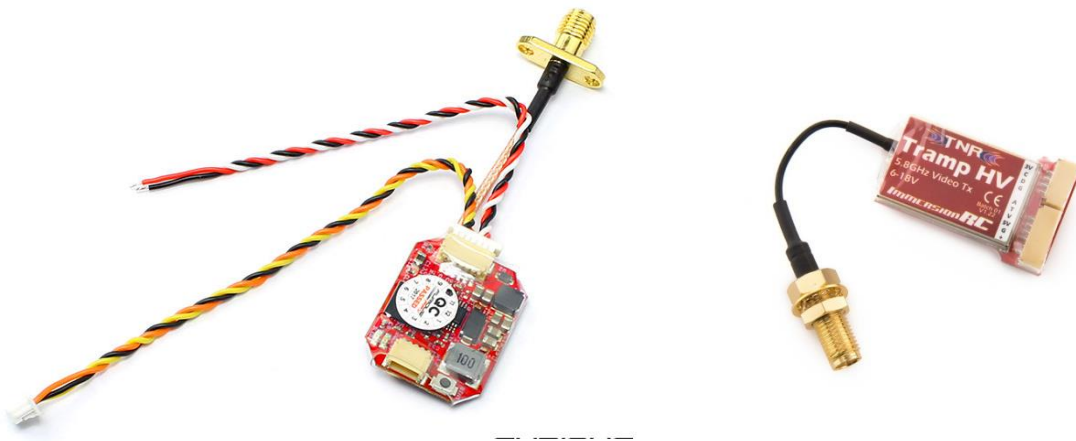
From **Betaflight OSD** menu use stick go to: **Main menu > Features**



- Select **SA** if using **TBS Unify Pro VTx**



- Select **TR** if using **Stealth Race VTx** or **Tramp HV VTx**



**STEALTH RACE VTX**

**TRAMP HV VTX**

## PIDs tuning on Betaflight OSD

From **Betaflight OSD** menu use stick go to: **Main menu > Profile > PID**

```
-- PID -- 1
> ROLL P 40
  ROLL I 40
  ROLL D 30
  PITCH P 58
  PITCH I 50
  PITCH D 35
  YAW P 70
  YAW I 45
  YAW D 20
  BACK
```



*Thanks for using our product*