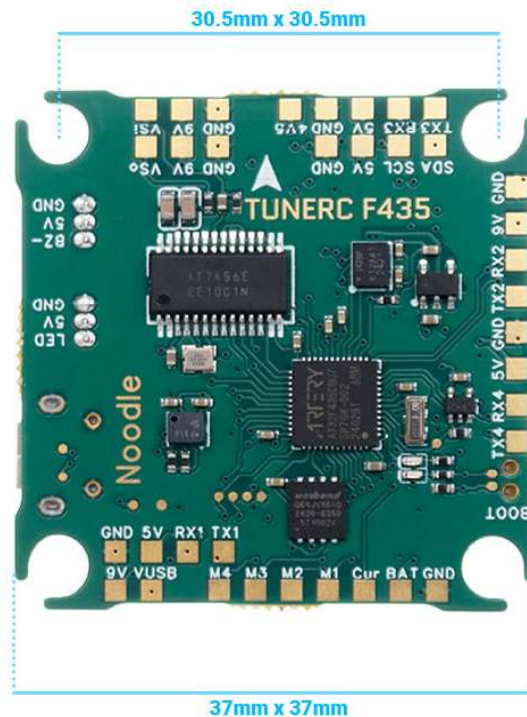


Noodle AT32F435 FC Manual



Hardware Specification

MCU: AT32F435CGU7

OSD: AT7456E

Onboard Gyro: ICM-42688-P

Onboard Barometer: DPS310

Flash: W25Q64 (8M)

ESC Signal: M1-M4

4 x UARTs

1 x I2C

Electronics Specification

Input Voltage: 10.5-28V (3s-6s)

BEC Output: 5V1.5A 9V2A

Firmware

Betaflight Target: TUNERCF435

Dimensions

Widest Dimension: 37mm x 37mm

Mounting Holes Pattern: 30.5mm x 30.5mm (M3 grommets to make M3 mount)

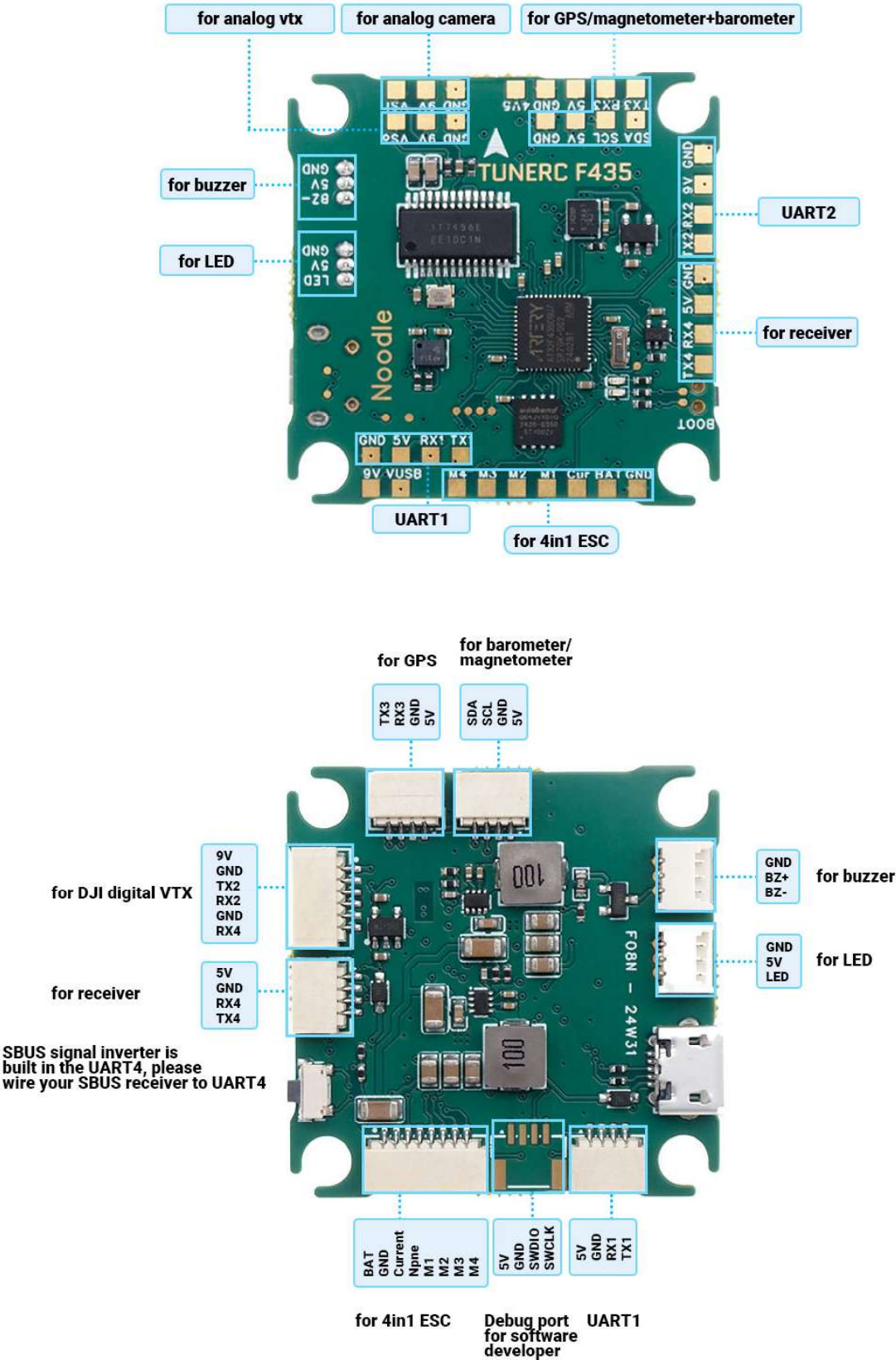
Weight: 7.3g

Connectors

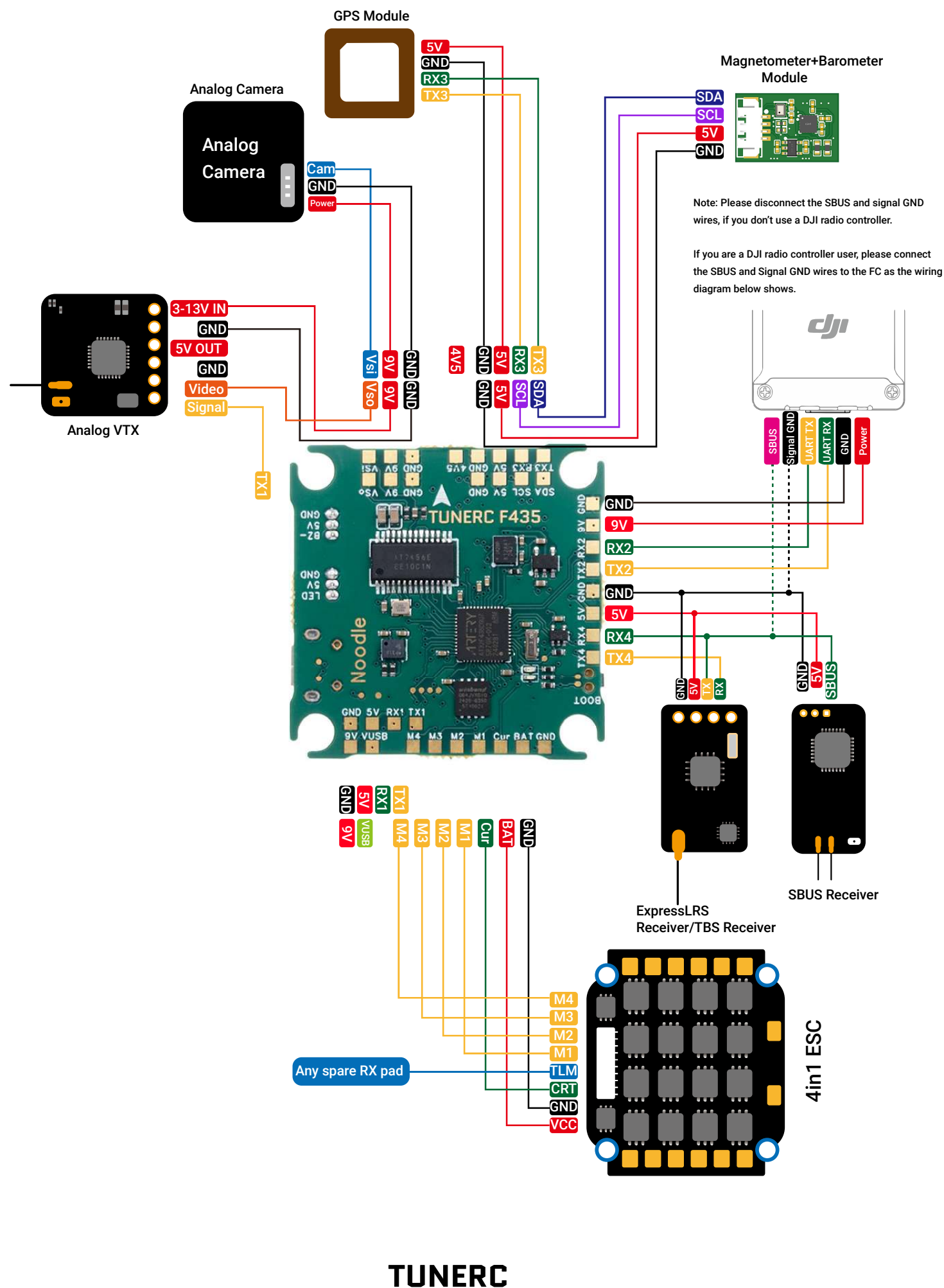
Except LED connector and buzzer connector, all the other connectors onboard apply to Betaflight connector standard

TUNERC

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Noodle AT32F435 FC Wiring Diagram

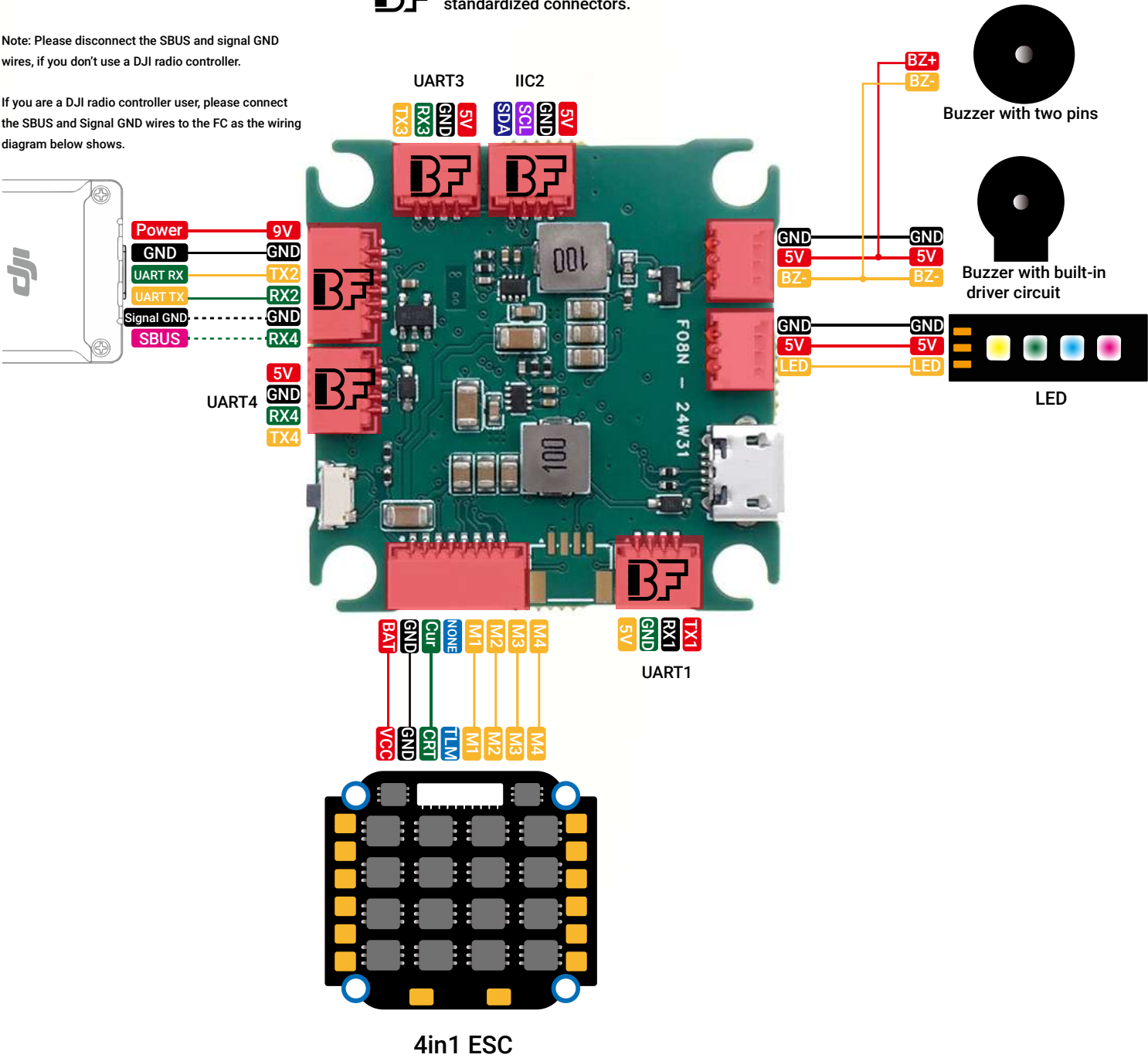


Noodle AT32F435 FC Wiring Diagram

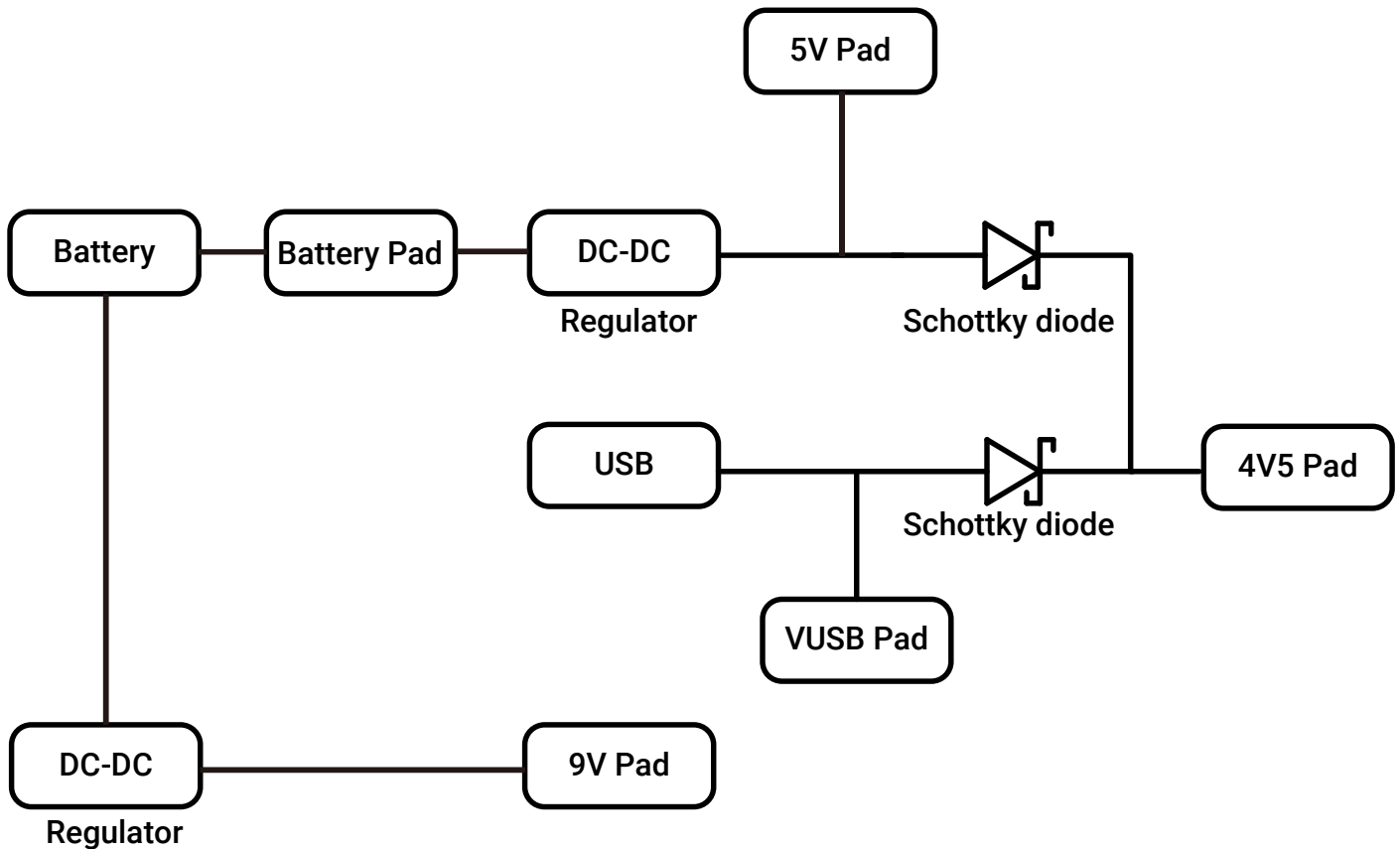
BF Onboard UART, IIC2, digital VTX connectors are Betaflight standardized connectors.

Note: Please disconnect the SBUS and signal GND wires, if you don't use a DJI radio controller.

If you are a DJI radio controller user, please connect the SBUS and Signal GND wires to the FC as the wiring diagram below shows.



Power Supply Diagram for Noodle AT32F435 FC



5V pad is battery powered only pad.

When you set up 5V powered peripherals, such as receivers, please plug in the battery to the FC, because the 5V pad is powered by the battery.

4V5 pad is USB/battery powered pad.

4V5 pad is helpful during the GPS setup, you can wire the GPS to 4V5 pad and power the FC via USB, when the GPS locks enough satellites, you can then plug in the battery.

9V pad is battery powered only pad.

When you set up 9V powered peripherals, such as DJI O3 air unit, please plug in the battery, because the 9V pad is powered by the battery.

VUSB pad is USB powered only pad.

ELRS/ TBS Crossfire Receiver Betaflight Setup

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

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 ▾

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

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

SBUS Receiver Betaflight Setup

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

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 ▾

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

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

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.

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 Sm ▾ AUTO ▾
UART2	 115200 ▾		Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Disabled ▾
UART3	 115200 ▾		Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Benewake LIDAR ▾
UART4	 115200 ▾		Disabled ▾ AUTO ▾	Disabled ▾ AUTO ▾	Blackbox logging ▾

Camera (RunCam Protocol) ▾
OSD (FrSky Protocol) ▾
VTX (IRC Tramp) ▾
VTX (MSP + Displayport) ▾
VTX (TBS SmartAudio) ▾

DJI O3 Air Unit Betaflight Setup

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.

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	VTX (MSP + D AUTO
UART3	 115200		Disabled AUTO	Disabled AUTO	Disabled AUTO
UART4	 115200		Disabled AUTO	Disabled AUTO	Disabled AUTO

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"

Presets

Please make sure you backup your current configuration ("Save backup" button or via CLI if the button is disabled) **before** picking and applying presets. Otherwise there is no way to return

Categories: Select... Keywords: Select...

dji

DJI Normal

Official RC_LINK
Author: UAV Tech (Mark Spatz)
Firmware: 4.3; 4.4; 4.5
Keywords: DJI; rc; link; transmitter

UAV Tech - DJI

Official OSD
Author: UAV Tech (Mark Spatz)
Firmware: 4.3; 4.4; 4.5
Keywords: DJI

OSD for Fpv.wtf, DJI O3, Avatar HD

Community VTX
Author: benlumley
Firmware: 4.4; 4.5
Keywords: vtx; dji; O3 air unit; O3; O3; avatar; walksnail; HD; HD video; vista; air unit; fpv.wtf; wtfos; ...

Options

map to displayport, set HDOSD, [set display...

☒ map to displayport
☒ set HDOSD

set displayport and MSP VTX on uarts

☐ use displayport and MSP VTX on uart 1
☒ use displayport and MSP VTX on uart 2
☐ use displayport and MSP VTX on uart 3
☐ use displayport and MSP VTX on uart 4
☐ use displayport and MSP VTX on uart 5
☐ use displayport and MSP VTX on uart 6
☐ use displayport and MSP VTX on uart 7

Sets up MSP displayport for DJI O3 Air Unit. Preset updated by benlumley. The information provided herein is for entertainment purposes only. Betaflight makes no warranty, the use of any information or ensuring they are complying with a

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

Buzzer Betaflight Setup

The default setting for the buzzer is "set beeper_inversion = ON", this setting works with most 2-pin buzzers. You don't have to make any changes in CLI if you use 2-pin buzzers.

For some 3-pin buzzers, you might have to enter the following CLI command in Betaflight "set beeper_inversion = OFF"

Wrong Betaflight setting will result in the buzzer sounding all the time.