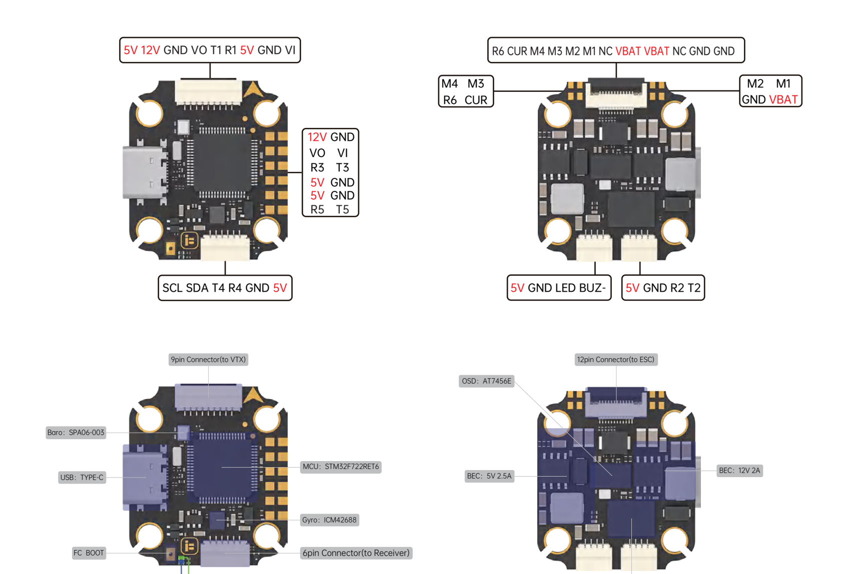
iFlight Borg F7 Mini FC Wiring diagram

Parameters:

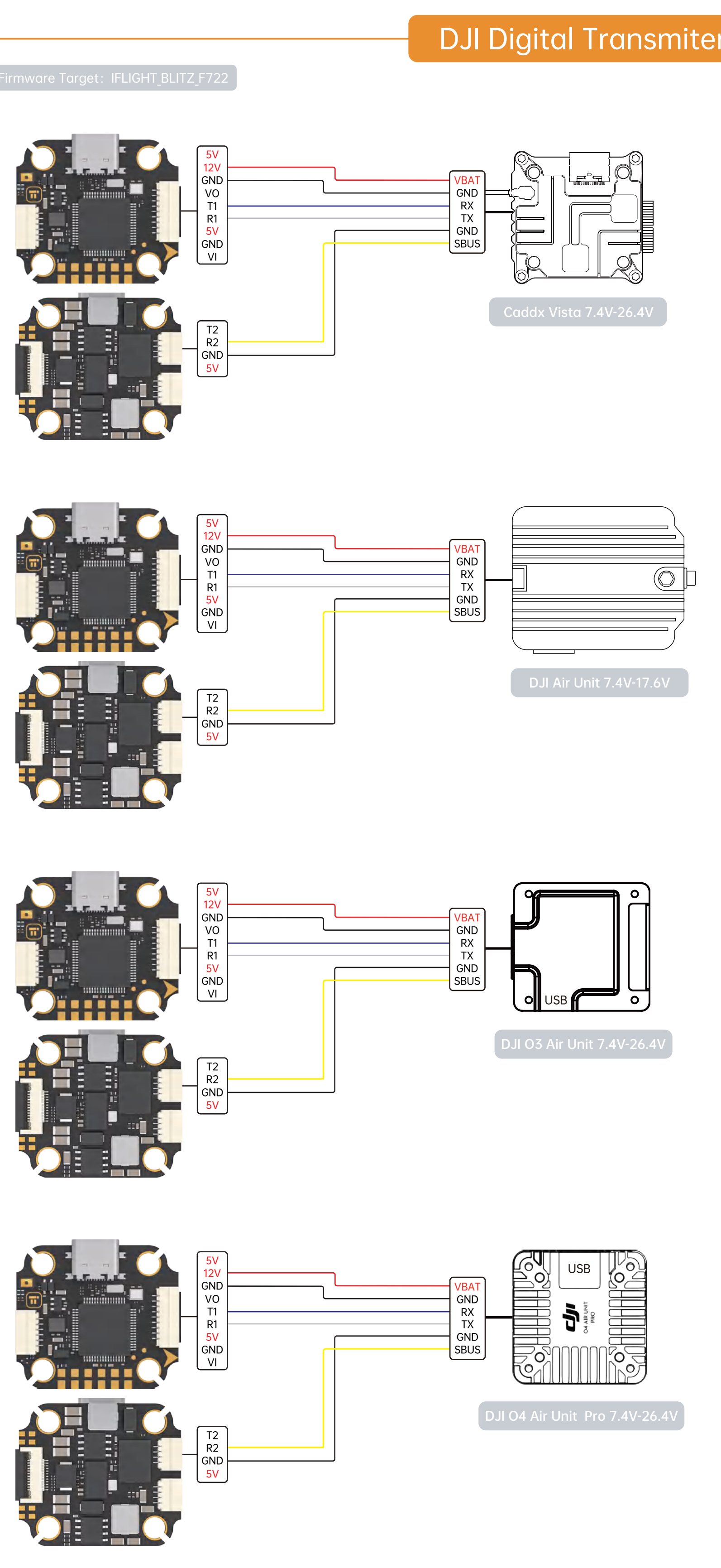
MCU: STM32F722RET6
Gyro: ICM42688
Baro: SPA06-003
OSD: AT7456E
①BEC: 5V 2.5A
②BEC: 12V 2A
BlackBox: 32MB
UART: 6*UART(UART1、UART2、UART3、UART4、UART5、UART6)
UART1 for VTX HD/Analog
UART2 for Receiver
UART3 for GPS/Receiver
UART4 for GPS
UART5 for GPS/Receiver
UART6 for ESC Telemetry
4xDshot/PWM outputs
1xAFC01 12pin connector for ESC (R6/CUR/M4/M3/M2/M1/NC/VBAT/VBAT/NC/GND/GND)
1xSH1.0 9pin connector for VTX HD/Aanlog (5V/12V/GND/VO/T1/R1/5V/GND/VI)
1xSH1.0 6pin connector for GPS/Receiver (SCL/SDA/T4/R4/GND/5V)
1xSH1.0 4pin connector for BUZ-/LED (BUZ-/LED/GND/5V)
1xSH1.0 4pin connector for Receiver (TX2/RX2/GND/5V)
WS2812 ledStrip: Yes
Beeper: Yes
Dimensions: 27*30.6mm
Mount pattern: 20*20mm/φ4
Weight: 6.8g

Firmware:
Betaflight: IFLIGHT_BLITZ_F722
INAV: IFLIGHT_BLITZ_F722



DJI Digital Transmiters

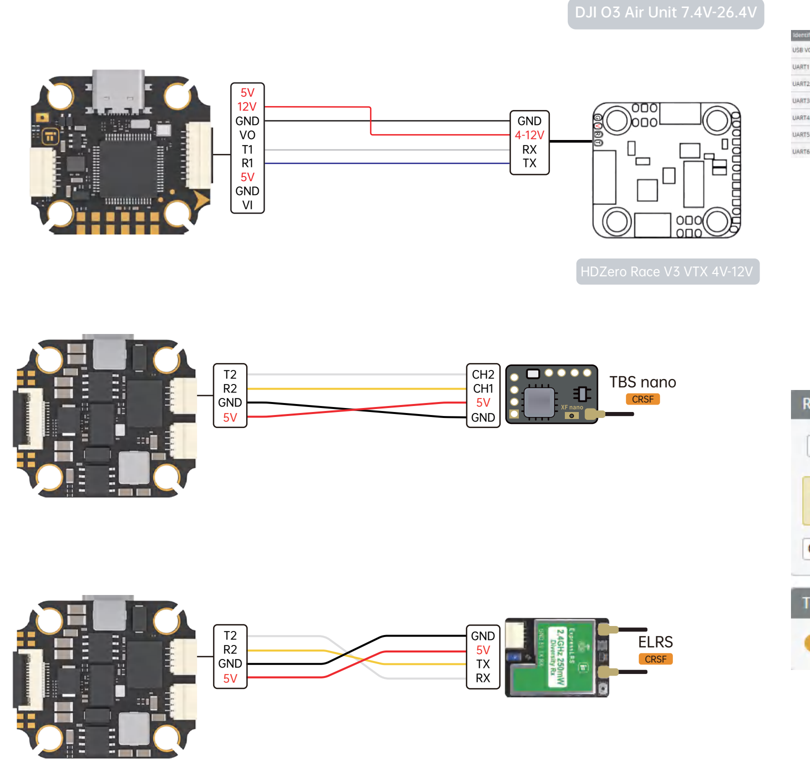
Firmware Target: IFLIGHT_BLITZ_F722

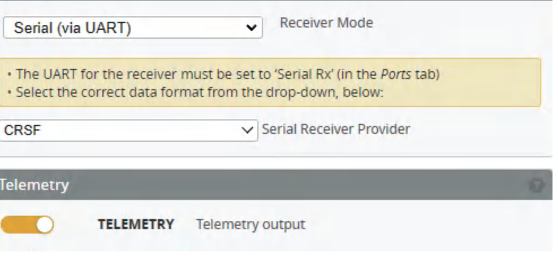


- To enable the air unit OSD under Betaflight 4.4 version, you need to select VTX (MSP+Displayport) in the peripheral port where the air unit signal is connected to the port interface.
- note: DJI FPV Remote Controller2 is for DJI O3 Air Unit
  DJI FPV Remote Controller is for DJI Air Unit and Vista
- Please check your protocols, otherwise your DJI Radio won't input signals!
  DJI Goggle protocol and Betaflight protocol has to match!
  For lower signallatency use the SBUS BAUD_FAST protocol option on both ends.
- For Betafllght Copy Paste"set sbus_baud_fast=on"into your Beatafllght Configurator CLI then hit enter.
  Use"save"and hit enter to save the changes.
  Default: sbus_baud_fast=off, Goggle protocol set to NORMAL

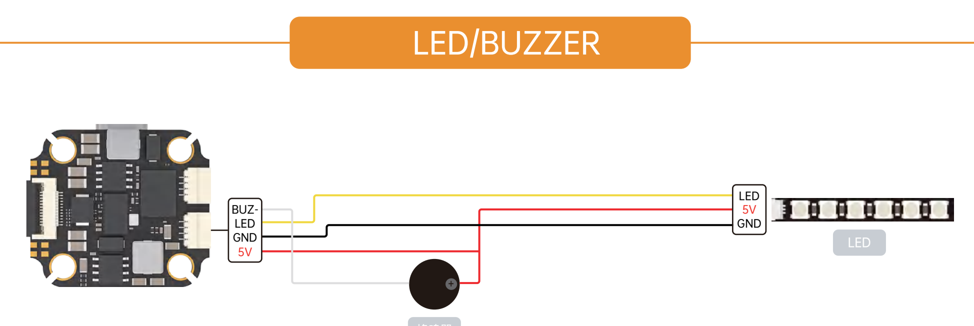
Any other Receiver

Firmware Target: IFLIGHT_BLITZ_F722

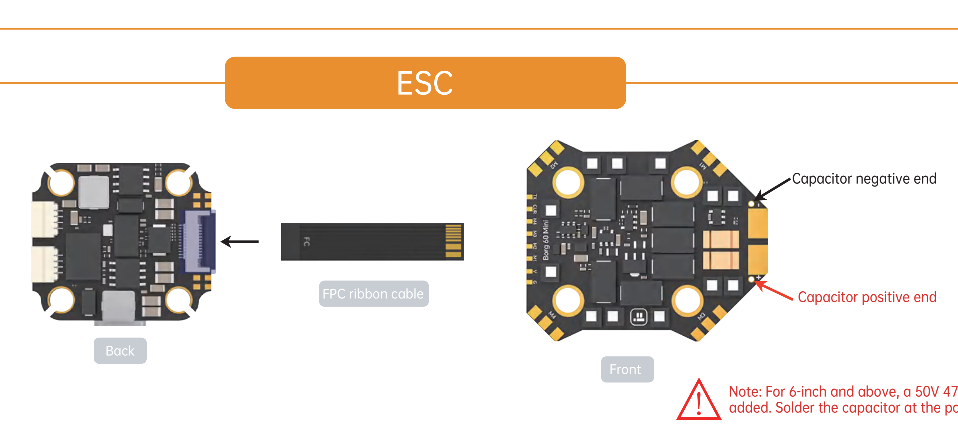




LED/BUZZER



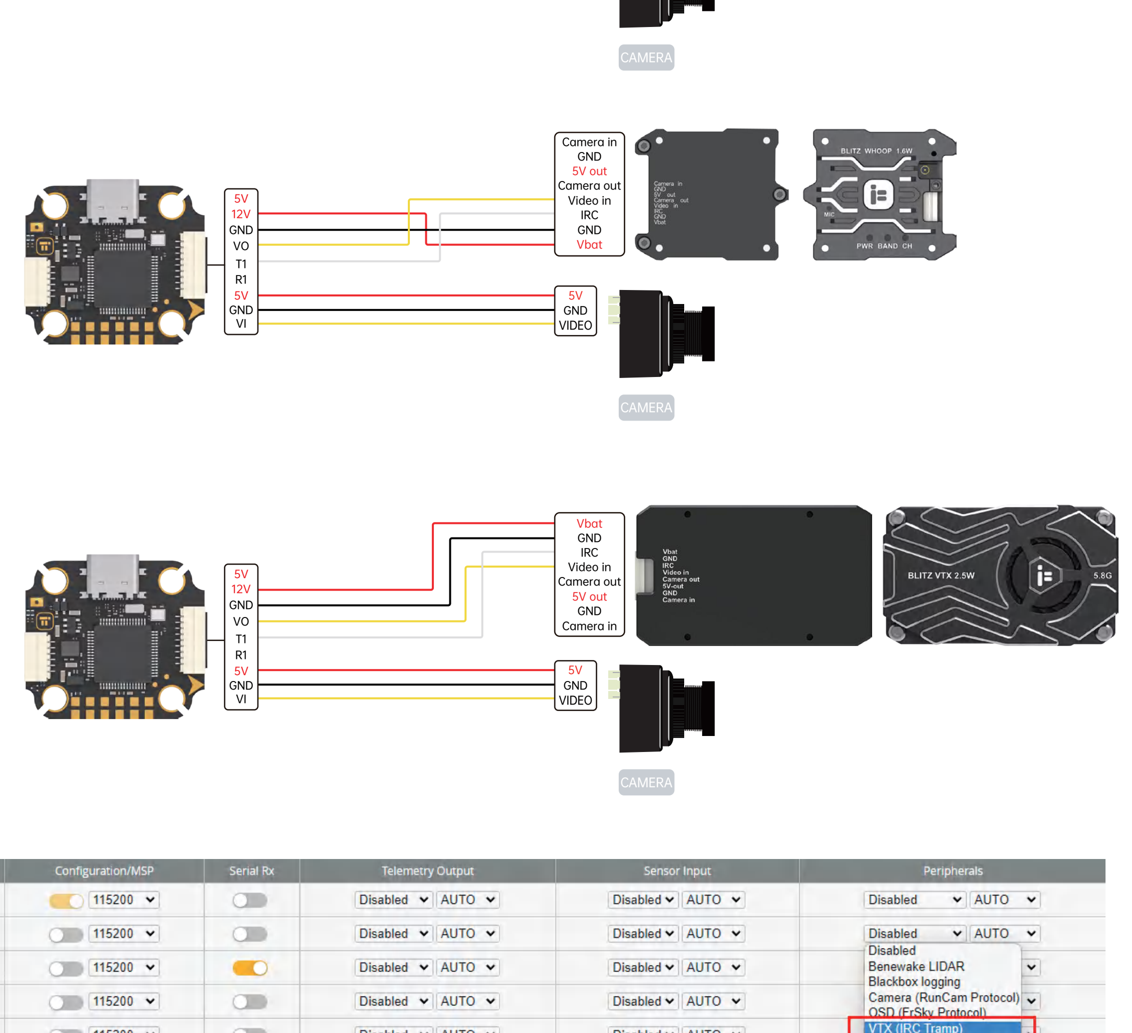
ESC



Note: For 6-inch and above, a 50V 470uF capacitor needs to be added. Solder the capacitor at the position indicated by the arrow.

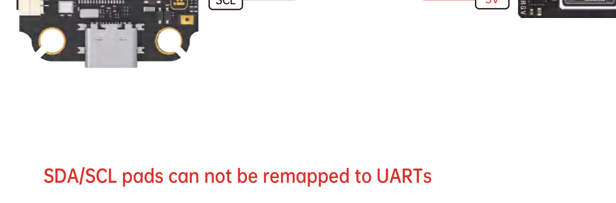
Note: If using ESCs from other brands, please ensure the wiring is connected correctly.
5-inch models do not require an external capacitor to fly, while 6-inch or larger models need to add a 50V 470uF capacitor.

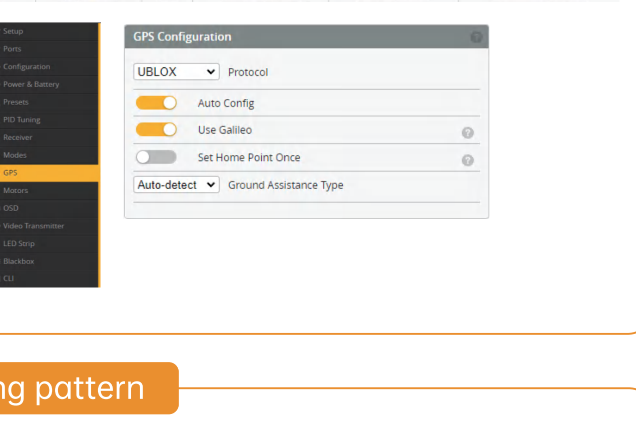
VTX/CAM



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 / Benewake LIDAR / Blackbox logging / Camera (RunCam Protocol) / OSD (FrSky Protocol) / VTX (IRC Tramp) / VTX (MSP + Displayport) / VTX (TBS SmartAudio)
UART3	115200		Disabled AUTO	Disabled AUTO	
UART4	115200		Disabled AUTO	Disabled AUTO	
UART5	115200		Disabled AUTO	Disabled AUTO	
UART6	115200		Disabled AUTO	Disabled AUTO	Disabled AUTO

GPS





SDA/SCL pads can not be remapped to UARTs

Dimensions/Mounting pattern