

iFlight BORG H7 Pro Instructions

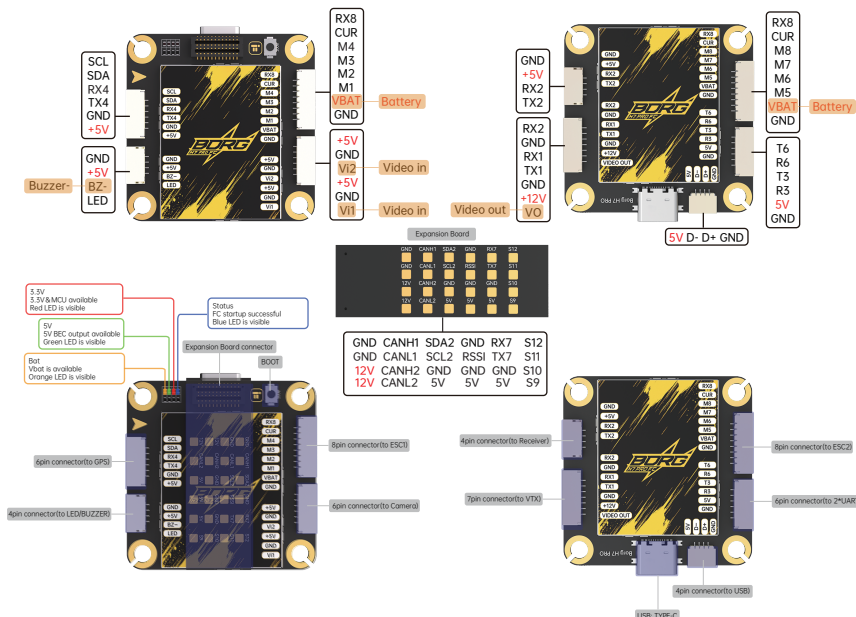
Parameters:

FC Specifications:
Input voltage: 4-12S Support LiHV battery
Dimensions: 42x42x11.3mm±1
Mount pattern: 35x35±4
Weight: 22g±1
MCU: STM32H743VIT6
Gyro: ICM42688P2
Baro: SPAD6-003
OSD: AT7456E (LGA)
Blackbox: 32G (with removable memory card)
Motor outputs: 8
I2C: I2C*2
CAN: CAN*2
RSSI ADC: Yes
BEC: 5V 2.5A, 12V 2A (12V with VTX switch)
LED Strip: Supported
Beeper: Yes
VTX protocol: Support DJI MSP/SmartAudio/RCTramp/HDDZero
UARTS: 7
Uart: 7*UART (UART1, UART2, UART3, UART4, UART6, UART7, UART8)
UART1: VTX HD / Analog
UART2: ELRS Receiver
UART3: GPS or other sensors that require a serial port
UART4: GPS
UART6/UART7: GPS or other sensors that require a serial port
UART8: ESC Telemetry
FC Firmware: iFLIGHT_BORG_H7

VTX ON OFF Mode Command:
resource PINIO 1 D10
set pinio_config = 1,1,1
set pinio_box = 40,41,255,255
set box_user_1_name = VTX_ON_OFF
aux 0 40 8 900 2100 0 0
save

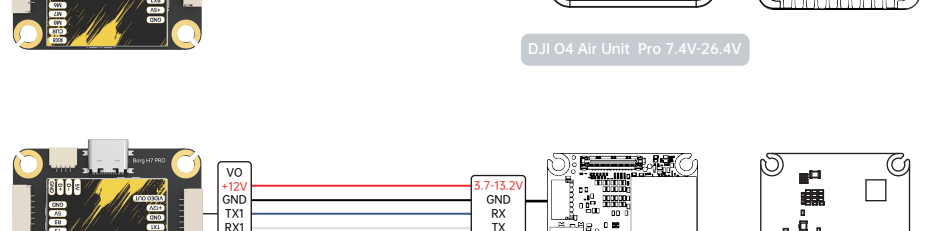
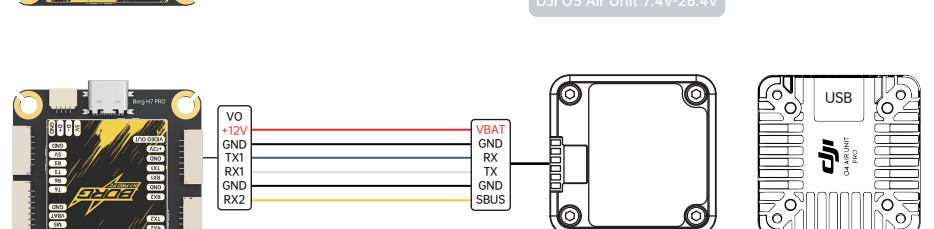
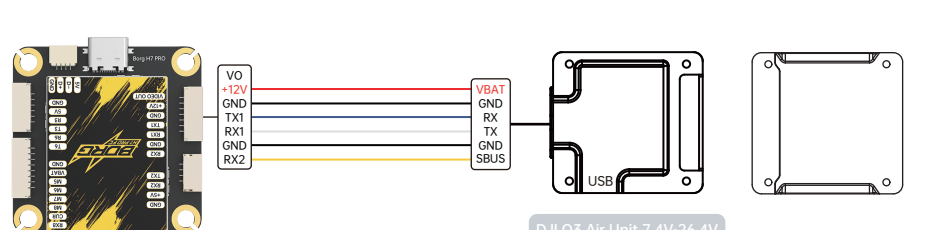
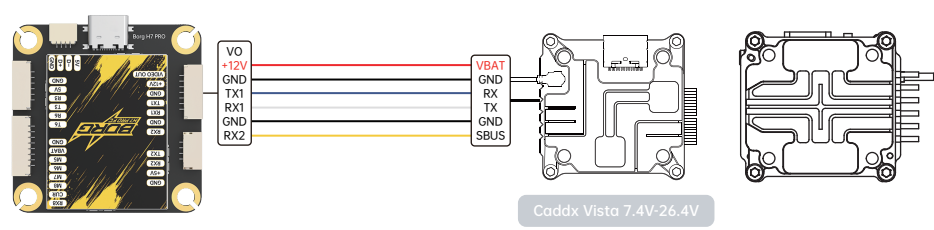
Camera Switch Command:
resource PINIO 2 D11
set pinio_config = 1,1,1
set pinio_box = 40,41,255,255
set box_user_2_name = CAM_SW
aux 1 41 9 900 2100 0 0
save

Firmware:
Betaflight: iFLIGHT_BORG_H7



DJI Digital Transmitters: SBUS Protocol

Firmware Target: iFLIGHT_BORG_H7



Receiver	Configuration	Port	Mode	Protocol	Receiver Mode	Receiver Mode
UART1	115200	1	Disabled	AUTO	Disabled	AUTO
UART2	115200	2	Disabled	AUTO	Disabled	AUTO
UART3	115200	3	Disabled	AUTO	Disabled	AUTO
UART4	115200	4	Disabled	AUTO	Disabled	AUTO
UART5	115200	5	Disabled	AUTO	Disabled	AUTO
UART6	115200	6	Disabled	AUTO	Disabled	AUTO
UART7	115200	7	Disabled	AUTO	Disabled	AUTO
UART8	115200	8	Disabled	AUTO	Disabled	AUTO

Receiver Mode: SBUS

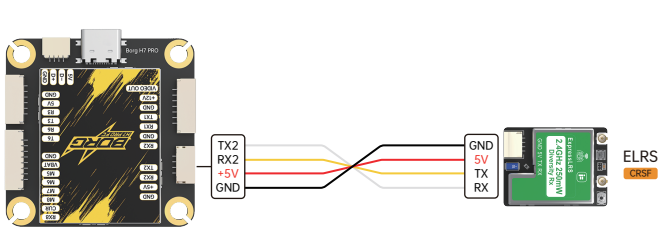
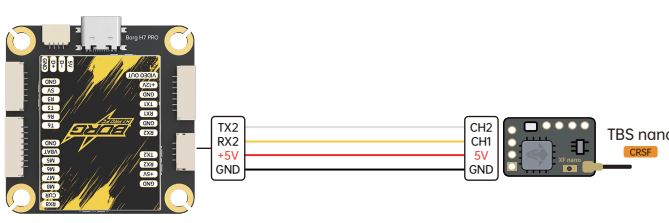
The UART for the receiver must be set to 'Serial Rx' (in the Ports tab)

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

Serial Receiver Provider

- 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.
- Please check your protocols, otherwise your DJI Radio won't input signals!
- DJI Goggle protocol and Betaflight protocol has to match! For lower signal latency use the SBUS BAUD FAST protocol option on both ends.
- For Betaflight Copy Paste"set sbus baud fast=on"into your Betaflight Configurator CLI then hit enter. Use"save"and hit enter to save the changes. Default: sbus baud fast=off, Goggle protocol set to NORMAL

Others Receivers(TBS/ELRS): CRSF Protocol



Receiver Mode: CRSF

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:

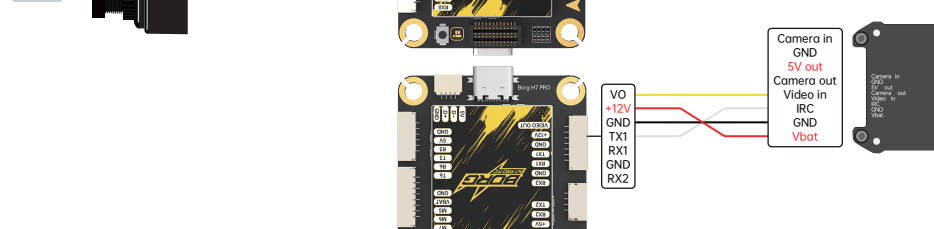
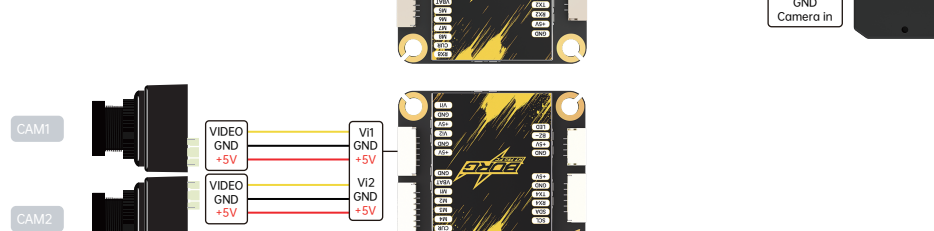
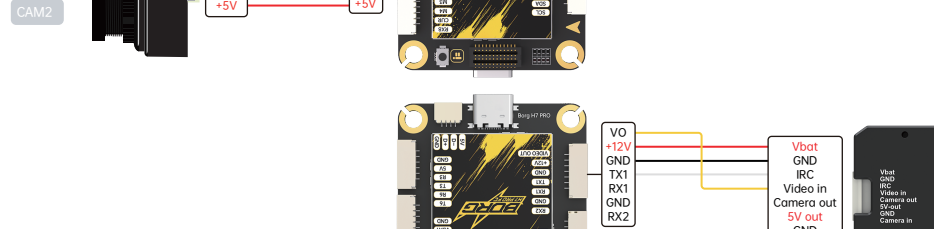
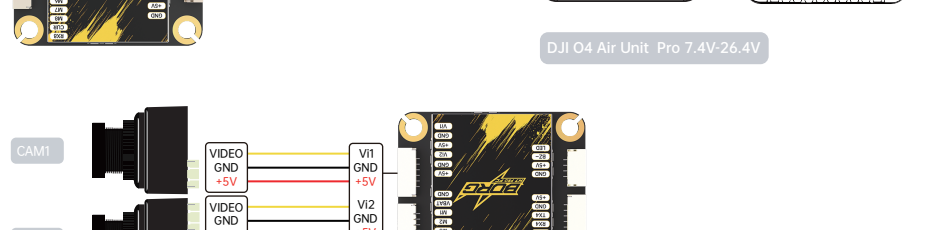
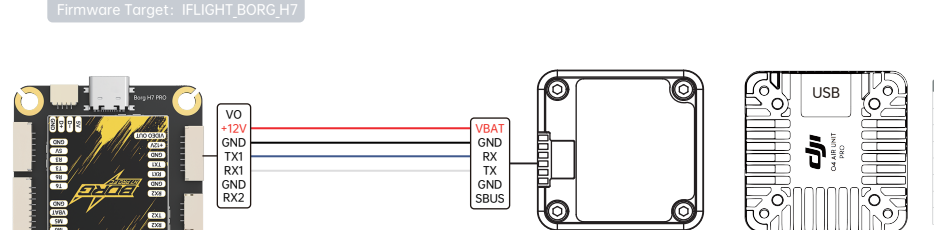
Serial Receiver Provider

TELEMETRY

TELEMETRY output

VTX/CAM

Firmware Target: iFLIGHT_BORG_H7



Identifier	Configuration/MSP	Serial Rx	Telemetry Output	Sensor Input	Peripherals
USB VCP	115200	Disabled	Disabled	Disabled	Disabled
UART1	115200	Disabled	Disabled	Disabled	Disabled
UART2	115200	Disabled	Disabled	Disabled	Disabled
UART3	115200	Disabled	Disabled	Disabled	Disabled
UART4	115200	Disabled	Disabled	Disabled	Disabled
UART5	115200	Disabled	Disabled	Disabled	Disabled
UART6	115200	Disabled	Disabled	Disabled	Disabled
UART7	115200	Disabled	Disabled	Disabled	Disabled
UART8	115200	Disabled	Disabled	Disabled	Disabled

VTX_ON_OFF

AUX 9

Min: 900 Max: 2100

Add Link

Add Range

12V is a controllable VTX output port. The default factory setting is AUX9, this mode is always on. Users can set the AUX channel according to actual needs.

VTX_ON_OFF

AUX 9

Min: 1600 Max: 2100

Add Link

Add Range

VTX_ON_OFF Mode On

VTX_ON_OFF

AUX 9

Min: 1600 Max: 2100

Add Link

Add Range

VTX_ON_OFF Mode Off

CAM_SW

AUX 10

Min: 1600 Max: 2100

Add Link

Add Range

The flight controller supports dual-camera switching. By default, full-channel activation outputs V71, with the channel set to AUX10.

CAM_SW

AUX 10

Min: 1600 Max: 2100

Add Link

Add Range

Enable V71 Camera

CAM_SW

AUX 10

Min: 1600 Max: 2100

Add Link

Add Range

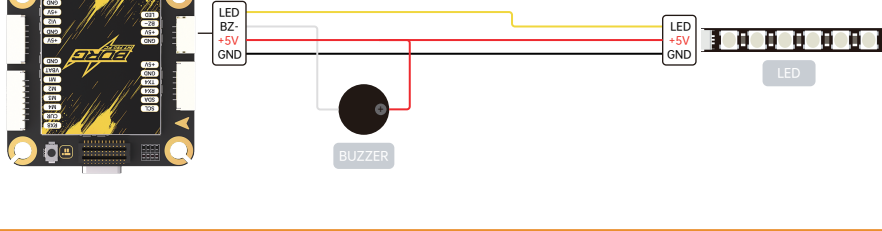
Enable V72 Camera

Note: When using dual cameras, ensure both cameras have the same format. Inconsistent formats may cause the OSD to fail to appear. Reflashing firmware or restoring the default factory settings requires manually entering the following commands in Betaflight CLI:

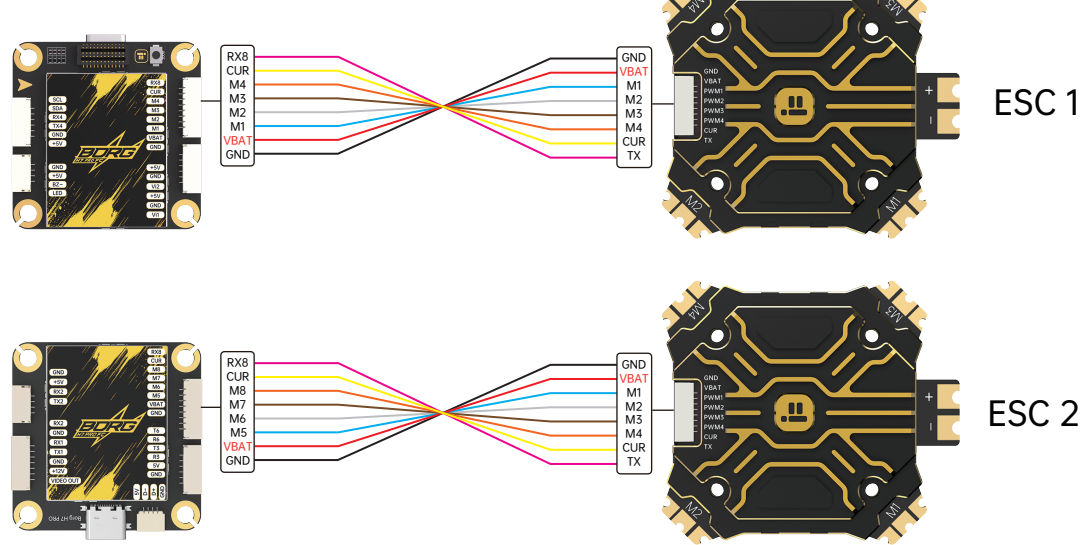
VTX_ON_OFF Mode command:
resource PINIO 1 D10
set pinio_config = 1,1,1
set pinio_box = 40,41,255,255
set box_user_1_name = VTX_ON_OFF
aux 0 40 8 900 2100 0 0
save

Camera switch command:
resource PINIO 2 D11
set pinio_config = 1,1,1
set pinio_box = 40,41,255,255
set box_user_2_name = CAM_SW
aux 1 41 9 900 2100 0 0
save

LED/BUZZER

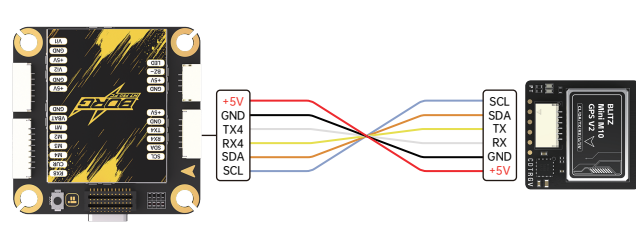


ESC



Note: If not using iFlight electronics, please make sure the plug pinout is identical or the wire harness needs to be reordered.

GPS



SDA/SCL pads can not be remapped to UARTs

GPS Configuration

UBLOX

Protocol

Auto Config

Use Galileo

Set Home Point Once

Auto-detect

Ground Assistance Type

Dimensions/Mounting pattern

