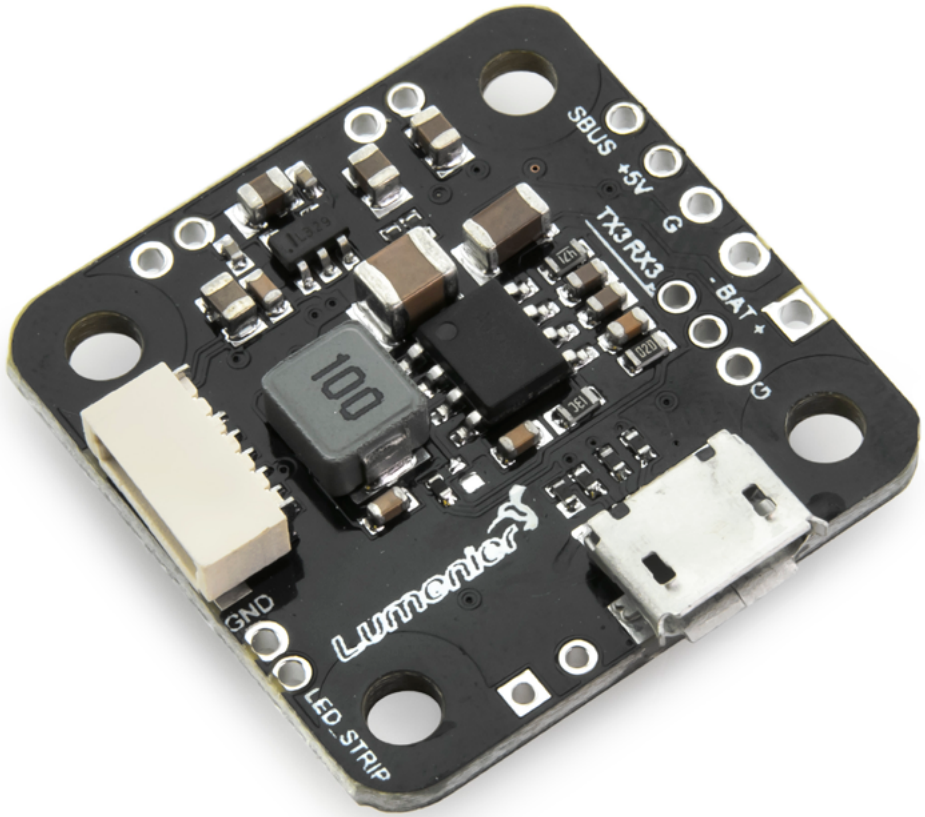
Lumenier

MICRO LUX

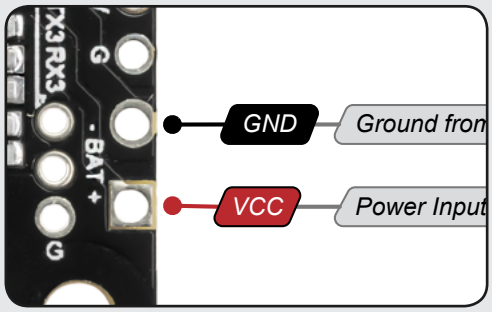
FLIGHT CONTROLLER

Quick Start Guide



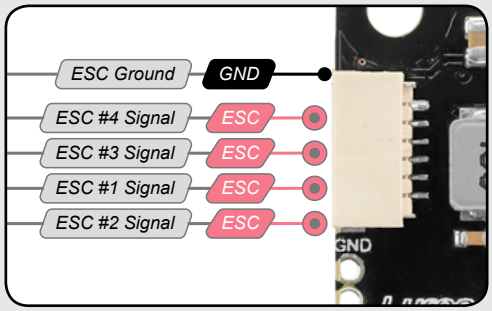
Unleash the capabilities of your FPV Racing Quadcopter with the Lumenier MICRO LUX Flight Controller.

QUICK START GUIDE



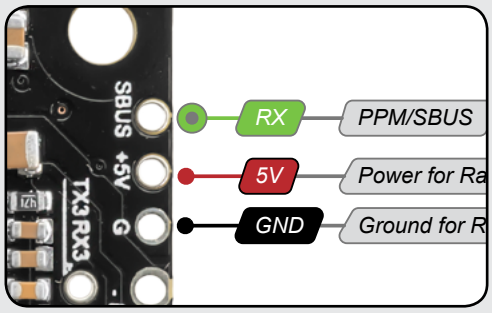
1. Connect Battery (2-4S)

Connect the MICRO LUX to the PDB or Battery. No Voltage Regulator is needed if battery power is between 2 - 4S (5V-16.8V).



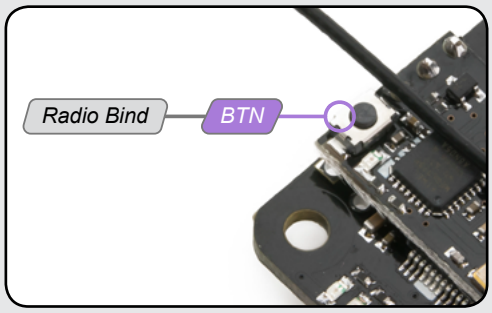
2. Connect ESC's

The MICRO LUX is designed to simplify the signal wires to the ESCs. Using the supplied cables you can connect directly to a Lumenier Mini BLHeli_S 10A 4-in-1 OPTO ESC (verify signal wire order as needed) or use the breakout cable to connect to traditional ESCs.



3a. Connect Radio Receiver (RX)

UART6 (Pin 1) is dedicated as Radio Receiver. It supports PPM and Serial RX. The Pins are positioned in a way that it makes it simple to connect and power the Radio Receiver.



3b. Binding Radio Receiver (RX)

The MICRO LUX can be purchased with an optional built-in FrSky SBUS Radio Receiver. Put Frsky Radio into D8 Mode and initiate Bind Mode. Then Press & Hold the Bind Button on the MICRO LUX, and Power it via the Battery, then release after 2 seconds to put it into bind mode.

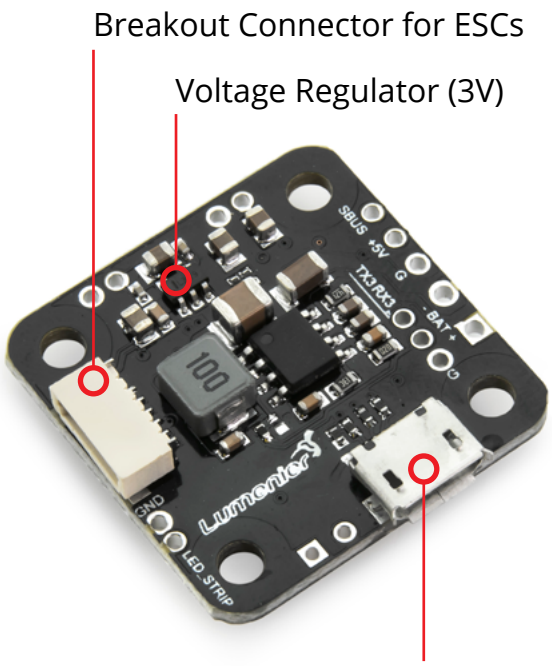
(Can not use USB Power to bind. Binding can take up to 30 seconds.)

4. Setup Software

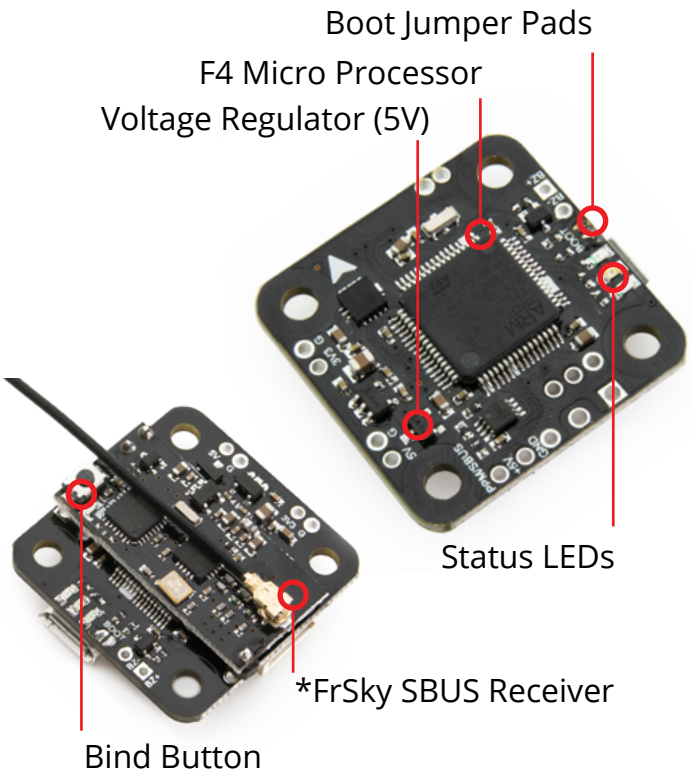
The MICRO LUX supports Betaflight, Cleanflight.

SPECIFICATIONS

The Lumenier MICRO LUX F4 Flight Controller brings incredible power and performance to the micro brushless world. It uses a powerful F4 processor along with top of the line hardware. Now you can get all the performance from a full size F4 based flight controller in a micro size! This flight controller uses 20x20mm mounting holes and a low profile design allowing for smaller airframe designs than ever before. The MICRO LUX comes with BetaFlight pre-installed.



Top

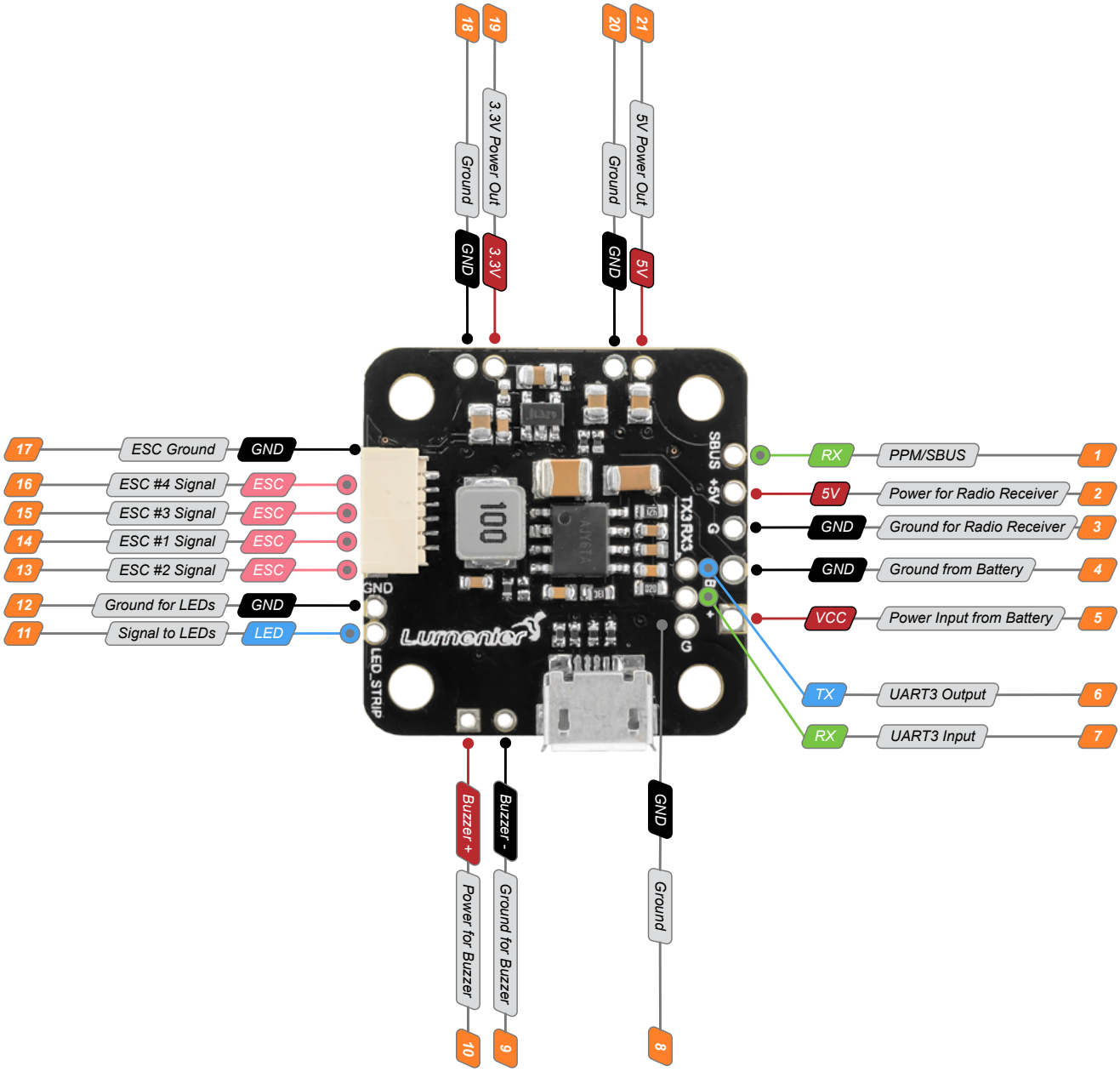


Bottom

Software	• Betaflight support (*Supports DSHOT protocol*). • Cleanflight support (BlueJayF4 Target). • BLHeli passthrough flashing supported by hardware.
Physical	• **Dimensions:** 27x27x6mm (includes USB in height). • **Mounting Holes:** 20mm square to center of holes. • **Weight:** 4g
Electronics	• STM32F405 (**1MB flash**) 32-bit processor • ICM-20608-G SPI Gyro/Accelerometer • Micro USB connector for programming • *Optional built-in FrSky SBUS Receiver
Power	• Voltage in: 5V - 16.8V (2-4S) • Voltage out: 5v/2A and 3.3v/0.2A
Recommended ESCs	• Lumenier Mini BLHeli_S 10A 4-in-1 OPTO ESC • Lumenier BLHeli_S 20A 2-in-1 OPTO ESCs (20x20mm)

Optional, must be included when purchase.

PINOUT (PINS 1-10)



Pin	Description
1	**UART6 RX Input for PPM/SBUS:** Connect to Signal wire of the Radio Receiver.
2	**5V Power Out:** Connect to the Positive/Power (+) input wire of the Radio Receiver.
3	**Ground:** Connect to the Ground wire of the Radio Receiver.
4	**Ground:** Connect to the Negative/Ground (-) wire of the Battery or PDB (Power Distribution Board).
5	**VCC Battery Input:** Connect to the Positive/Power (+) wire of the Battery or PDB (Power Distribution Board). Input Voltage 5V - 16.8V (2S-4S LIPO Battery).
6	**UART3 TX Output:** Can be used for connecting extra peripherals / Sensors.
7	**UART3 RX Input:** Can be used for connecting extra peripherals / Sensors.
8	**Ground:** Connect to a device that requires a Negative/Ground (-) connection.
9	**Buzzer + :** Connect to the Positive/Power (+) wire of a Buzzer. (5V/2A)
10	**Buzzer - :** Connect to the Negative/Ground (-) wire of a Buzzer.

PINOUT (PINS 11-21)

Pin	Description
11	**LED Output:** Connect to the Signal wire of a LED Tail Board or LED Pixel Array. This can not be used to power the LEDs.
12	**Ground:** Connect to the Negative/Ground (-) wire of a LED Tail Board or LED Pixel Array.
13	**ESC #2 Signal:** Connect to the Signal wire of the ESC that is connected to the Motor in the #2 position.
14	**ESC #1 Signal:** Connect to the Signal wire of the ESC that is connected to the Motor in the #1 position.
15	**ESC #3 Signal:** Connect to the Signal wire of the ESC that is connected to the Motor in the #3 position.
16	**ESC #4 Signal:** Connect to the Signal wire of the ESC that is connected to the Motor in the #4 position.
17	**ESC Ground:** Connect to the Negative/Ground (-) wire of the ESCs that are connected to the Motors.
18	**Ground:** Connect to a device that requires a Negative/Ground (-) connection.
19	**3.3V Power Out:** Connect to a device that requires a Positive/Power (+) 3.3V/0.2A connection. Like a Spectrum Radio Receiver.
20	**Ground:** Connect to a device that requires a Negative/Ground (-) connection.
21	**5V Power Out:** Connect to a device that requires a Positive/Power (+) 5V/2A connection.