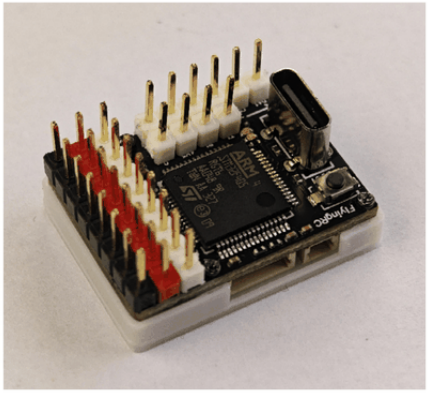
F4Wing Mini MK1

User Manual

FlyingRC F4Wing Mini MK1 flight controller for small fixed-wing models and flying wings



The flight controller has no on-board BEC – it requires an external 5V power supply. The video transmitter is powered directly from the battery; make sure it supports this voltage.

Version 1.0 · Rotorama, s.r.o.

Contents

1. Safety Instructions

1.1 Before you start

1.2 Handling the board

1.3 Li-Po batteries

1.4 Rotating propellers and bench tests

1.5 Temperature and cooling

2. Product Description

2.1 Package contents

2.2 Layout of connectors and components

2.3 Connectors on the bottom side

2.4 Specifications

2.5 PWM outputs

2.6 Serial ports (UART)

2.7 I2C bus

3. Legal Conditions of Operation in the Czech Republic and the EU

3.1 The law of the country where you fly applies

3.2 The board is a component, not a complete model

3.3 Operator registration and categories of operation

4. Installation and Wiring

4.1 What else you need

4.2 Soldering the pin headers

4.3 Installation in the model

4.4 Power supply

4.5 ESC and servos

4.6 Standalone BEC

4.7 Receiver
4.8 GPS module, compass and airspeed sensor
4.9 Digital video transmitter
4.10 LED strip
5. Setup
5.1 Connecting to a computer or smartphone
5.2 Firmware
5.3 Basic settings
5.4 Accelerometer calibration
5.5 Motor and servo check
5.6 Arm, Disarm and failsafe
6. Operation
6.1 Pre-flight check
6.2 Monitoring the battery voltage
6.3 Temperature
7. Maintenance and Troubleshooting
7.1 After every flight
7.2 Soldering and repairs
7.3 Storage
7.4 Troubleshooting
8. Information for the EU and Czech Market
9. Warranty and rights arising from defective performance

1. Safety Instructions

1.1 Before you start

This product is an **electronic component for a model aircraft** – a flight controller (FC) – not a finished product ready for use. It becomes usable only after it has been installed in the model, wired to the other parts and configured.

- Read this entire manual before you start building and keep it for future reference.
- The flight controller is connected to the model's battery. A wiring error can cause a **fire** or destroy the board and the connected devices.
- The build requires experience with soldering and model building. If you are not sure, ask an experienced modeller for help.
- This product is not a toy. It is intended for persons over 14 years of age who have read this manual.
- Do not use a damaged board – after a crash, after overheating, with a cracked board or a burnt component.

1.2 Handling the board

The board is sensitive to static electricity and to mechanical damage.

- Hold the board by its edges; do not touch the solder pads, connectors or components.
- Before handling, discharge static electricity by touching a grounded metal object.
- Do not place the board on metal or conductive surfaces, including carbon parts of the model.
- The SH1.0 connectors are small. When plugging or unplugging, support the rear of the connector by hand to prevent it from being pulled off the board.

1.3 Li-Po batteries

The flight controller measures the battery voltage in the range of **2.5–30 V**, i.e. for **1–6S Li-Po** batteries. Do not connect a battery with more cells.

State	Li-Po	2S	3S	4S	6S
fully charged	4.20 V/cell	8.4 V	12.6 V	16.8 V	25.2 V
end the flight	3.50 V/cell	7.0 V	10.5 V	14.0 V	21.0 V
storage	3.80 V/cell	7.6 V	11.4 V	15.2 V	22.8 V

- Charge only with a charger designed for the given cell type and never leave it unattended.
- Do not use a battery with a swollen casing, a damaged lead or after a hard crash.

- Never connect the battery with reversed polarity – reverse polarity destroys the board and such damage is not a product defect.
- Charge and store batteries in a non-flammable container, away from flammable materials.

1.4 Rotating propellers and bench tests

Most of the setup can be done without the propeller. Do not fit the propeller until the model is completely set up.

- **Always** remove the propeller before connecting the flight controller to a computer or testing the motor.
- When testing the motor, secure the model mechanically and never reach into the propeller plane.
- Watch the servos too: once power is connected, the control surfaces may start to move on their own.
- Never stand, or let other people stand, in the plane of rotation of the propeller.

1.5 Temperature and cooling

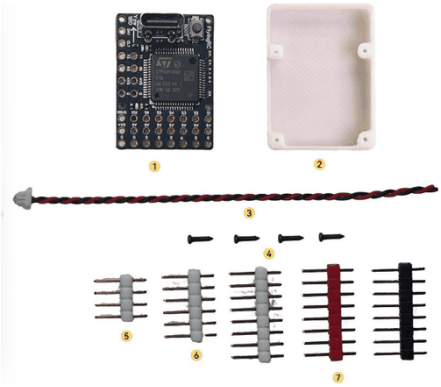
- **Do not** wrap the flight controller in heat-shrink tubing and do not pot it. Such modifications prevent heat dissipation and any resulting damage cannot be claimed under warranty.
- The board must not touch carbon parts of the model, battery connectors or other boards – risk of short circuit.
- After a flight, let the board cool down before touching it.

2. Product Description

The **FlyingRC F4Wing Mini MK1** is an ultra-mini flight controller for **small and micro fixed-wing aircraft and flying wings**, such as the F80, Micro Claw or modified hand-launched models like the Arwing Mini. It is built around the STM32F405RGT6 microcontroller. **ArduPlane** firmware is pre-flashed at the factory; the board is also supported by INAV and Betaflight.

- Direct plug-in for an HD video transmitter (DJI, Walksnail, OpenIPC, etc.) with HD OSD via an SH1.0 6-pin connector, no soldering required. Analog OSD is not supported.
- Pads for direct plug-in of an ExpressLRS receiver.
- Type-C connector on the board – connect a computer or a smartphone.
- **The flight controller has no on-board BEC and no analog current sensor.** It requires an external 5V power supply; current can be measured with an external I2C current sensor.

2.1 Package contents

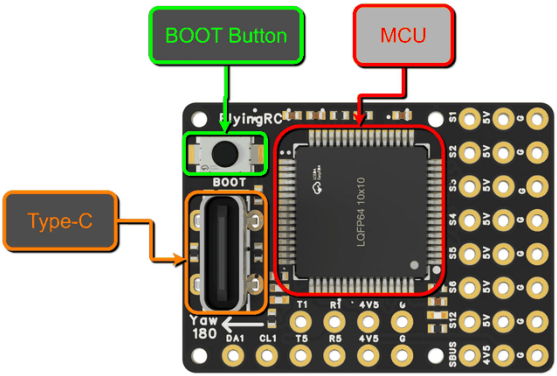


Package contents – numbering matches the table

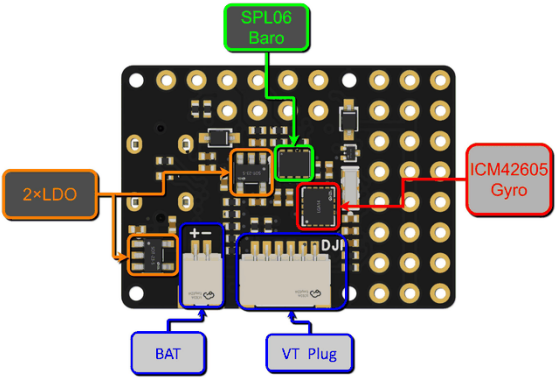
No.	Item	Qty
①	FlyingRC F4Wing Mini MK1 flight controller	1×
②	3D-printed mount base	1×
③	battery cable – voltage detection and VTX power (direct battery connection)	1×
④	M1.2 × 5 mounting screws for FC and base	4×
⑤	4-pin gold-plated pin header	1×
⑥	6-pin gold-plated pin header	1×
⑦	8-pin gold-plated pin header – one each in white, red and black	3×

The battery, BEC, ESC, motor, servos, receiver, GPS module and video transmitter are not included.

2.2 Layout of connectors and components



Front side – BOOT button, Type-C connector and microcontroller (MCU)

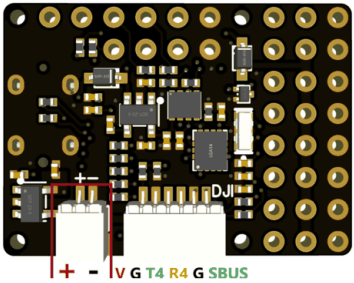


Rear side – LDO regulators, barometer, gyroscope, battery connector (BAT) and video transmitter connector (VT Plug)

Pad	Function
S1–S6, S12	PWM outputs for servos and ESC; S12 is also used for the LED strip
5V, G	5V power rail – the BEC supply is connected here
SBUS, 4V5, G	SBUS receiver input and its power supply
T1, R1, 4V5, G	serial port UART1 – ExpressLRS receiver
T5, R5, 4V5, G	serial port UART5 – GPS module
DA1, CL1	I2C bus (SDA and SCL) – compass, airspeed sensor

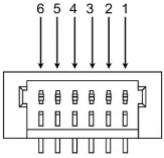
2.3 Connectors on the bottom side

There are two **SH1.0** connectors on the bottom side: a 2-pin connector for the battery and a 6-pin connector for direct plug-in of a digital video transmitter.



Battery connector (left) and DJI video transmitter connector (right)

The HD air unit must support battery voltage power input.



Pin numbering

▶ Battery voltage input

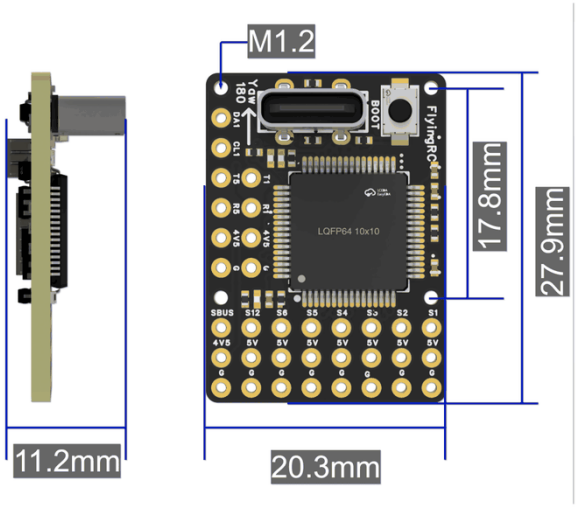
Pad	Pin name	Function
1	–	battery negative terminal
2	+	battery positive terminal

▶ HD video transmitter connector (DJI)

Pad	Pin name	Function
1	SBUS	DJI SBUS remote control signal input
2	G	ground (GND)
3	R4	OSD MSP – RX (UART4)
4	T4	OSD MSP – TX (UART4)
5	G	ground (GND)
6	V	battery direct connection power supply

2.4 Specifications

Model	FlyingRC F4Wing Mini MK1
Microcontroller	STM32F405RGT6, M4 core, 168 MHz
Memory	1 MB Flash, 192 kB RAM
Gyroscope and accelerometer	ICM42688P or ICM42605 (depending on batch)
Barometer	SPL06-001 or SPA06-003, I2C address 0x76
Magnetometer	none; an external one can be connected via I2C
On-screen display (OSD)	digital (HD OSD); no analog OSD
Serial ports	3× UART (UART1, UART4 – DJI connector, UART5) and SBUS input
PWM outputs	7 (S1–S6 and S12, S12 also for LED strip)
I2C bus	1×
LED strip	WS2812
Buzzer	no pad
Black box storage	none
SWD debug	none
Flight controller power input	5V from an external source
Sensor power supply	2× on-board LDO
On-board BEC	none
Battery voltage measurement	2.5–30 V, 1–6S Li-Po
Current measurement	no analog sensor; external I2C current sensor supported
Firmware	ArduPilot (ArduPlane pre-flashed), INAV, Betaflight; PX4 not supported
Dimensions	27.9 × 20.3 × 11.2 mm
Mounting holes	17.8 × 17.8 mm, M1.2
Weight without pin headers	2.8 g
Weight with soldered pin headers	5.3 g
Weight with pin headers and base	6.4 g
Operating temperature	−10 °C to 100 °C
Storage temperature	0 °C to 40 °C



Flight controller dimensions and mounting hole spacing

2.5 PWM outputs

The outputs are divided into groups that share a common timer. All outputs are compatible with DShot.

Group	Output	Timer	DShot
1	S1, S2	TIM8	yes
2	S3, S4	TIM1	yes
3	S5, S6	TIM2	yes
4	S12 – also LED strip	TIM3	yes

- Mixing DShot and normal PWM operation for outputs is restricted into groups: enabling DShot for an output in a group requires that **all** outputs in that group be configured and used as DShot.
- If a servo and a motor are mixed in the same group, make sure this group runs at the lowest PWM frequency according to the servo specification. If the servo supports max. 50 Hz, the ESC must run at 50 Hz in this group.

PWM ports in the same group cannot be used for DShot ESCs and 50 Hz PWM servos simultaneously.

2.6 Serial ports (UART)

In ArduPilot the SERIAL port number **does not match** the UART number printed on the board. Always follow this table.

Silkscreen	UART	DMA	Default function	SERIAL
USB	USB	—	console	SERIAL0
TX1 RX1	USART1	yes	telemetry (telem1)	SERIAL1
TX5 RX5	UART5	no	GPS1	SERIAL3
TX4 RX4	UART4	no	user (USER)	SERIAL4
SBUS	USART2	yes	RC input / receiver	SERIAL6

- UART4 (RX4, TX4 – SERIAL4) is routed to the HD video transmitter connector on the rear side of the board.
- The SBUS pad is active with the default setting *BRD_ALT_CONFIG* = 0.
- Recommended connections: ExpressLRS receiver to RX1 and TX1 (SERIAL1), GPS module to RX5 and TX5 (SERIAL3).
- After connecting a device, set the protocol of the corresponding SERIAL port in the ground station and check that no other port has the same function assigned.

2.7 I2C bus

The I2C bus is routed to the **DA1** (SDA) and **CL1** (SCL) pads. An external compass, a digital airspeed sensor or a current sensor can be connected.

Device	Parameter	Value
external compass	COMPASS_AUTODEC	1
on-board barometer SPL06-001	address	0x76
digital airspeed sensor on I2C	ARSPD_BUS	1
airspeed sensor MS4525	ARSPD_TYPE	1
airspeed sensor DLVLR-L10D	ARSPD_TYPE	9

The built-in barometer occupies address 0x76. Do not connect any external device with address 0x76.

3. Legal Conditions of Operation in the Czech Republic and the EU

3.1 The law of the country where you fly applies

Regulations (EU) 2019/947 and 2019/945 apply in all Member States of the European Union, but the national implementing rules differ from country to country – registration portals, minimum pilot age, geographical zones, compulsory insurance, permitted frequency bands and maximum transmit power. The information in this chapter describes the situation in the Czech Republic on the date of issue of this manual; check the current situation on the website of the Civil Aviation Authority (www.caa.gov.cz). If you operate the model in another country, you must follow the rules of the country in which you fly.

3.2 The board is a component, not a complete model

The flight controller is not an unmanned aircraft. Regulation (EU) 2019/945, which defines classes C0 to C6, applies to complete unmanned aircraft systems bearing a class identification label, not to individual parts. The board therefore does not and cannot carry a class marking. It contains no radio equipment either – the receiver and the video transmitter are bought separately and follow their own documentation.

The **operation** of a model with this board is governed by Regulation (EU) 2019/947 and the related Czech regulations. The operator is responsible for compliance with them.

3.3 Operator registration and categories of operation

- The operator must **register** if the model has a take-off mass of 250 g or more, or if it carries a sensor able to capture personal data, in particular a camera – in that case regardless of its mass. In the Czech Republic, registration is managed by the Civil Aviation Authority at dron.caa.gov.cz; the assigned number must be displayed on the model.
- A model without a class marking can be operated as a **privately built unmanned aircraft system** – in subcategory A1 with a take-off mass below 250 g and a speed below 19 m/s, otherwise in subcategory A3. Subcategory A2 is not available for it.
- The usual limits of the open category apply: height **up to 120 m** above ground, continuous visual line of sight and no flying over assemblies of people. In subcategory A3, additionally keep 150 m away from residential, commercial, industrial and recreational areas.
- If you fly with FPV goggles, an **unmanned aircraft observer** must stand next to you and keep visual contact with the model without optical aids.
- Before flying, check the geographical zones in the official map dronemap.gov.cz.

- **Third-party liability insurance** is compulsory in subcategory A3 if the take-off mass of the model exceeds 4 kg. For lighter models it is not compulsory, but we still recommend it.
- An alternative is membership in a model aircraft association authorised under Article 16 of Regulation (EU) 2019/947.

4. Installation and Wiring

4.1 What else you need

- a temperature-controlled soldering iron, solder and thin silicone wires for signals
- a **5V** source to power the flight controller and servos – a standalone BEC or an ESC with a built-in BEC
- a 1–6S Li-Po battery with sufficient current capability
- an ESC, motor, propeller and servos suitable for the model
- a receiver and, if required, a GPS module and a digital video transmitter
- a computer with a ground station or a smartphone, and a USB-C cable with data wires

4.2 Soldering the pin headers

The pin headers are included with the flight controller. Solder them only where you actually need them – every header adds weight.

▶ Tools and consumables

- digital soldering iron or soldering station, recommended: T12 series or 936 series
- solder wire, recommended: 63% tin content
- pin headers from the package

▶ Soldering tips

① A knife-shaped (K) soldering tip is more efficient for soldering than a pointed tip.

② Prioritise high-quality solder – it is more critical than the soldering iron itself.

③ A premium soldering iron (e.g. T12 series) is still recommended for optimal performance.

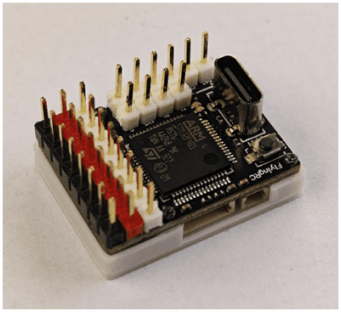
④ If solder fluidity decreases, use soldering flux intended for BGA soldering.

⑤ Ensure no solder bridges form between adjacent pads and components during soldering.

⑥ Pre-soldered pin headers are recommended for convenience.

Use silicone wires for signal lines. The SH1.0 connectors are compact – when plugging or unplugging, support the rear of the connector by hand to prevent it from being pulled off.

4.3 Installation in the model



Flight controller with soldered pin headers and mounted base

- Install the flight controller with the **Type-C port facing toward the nose of the aircraft**. A different orientation can be compensated by setting the board orientation in the ground station.
- Attach it to the supplied base with the four M1.2 × 5 screws.
- Place it as close to the centre of gravity as possible, so that it does not touch conductive parts of the model and the Type-C connector remains accessible.
- Protect the board from motor vibration, for example with a soft pad under the base.

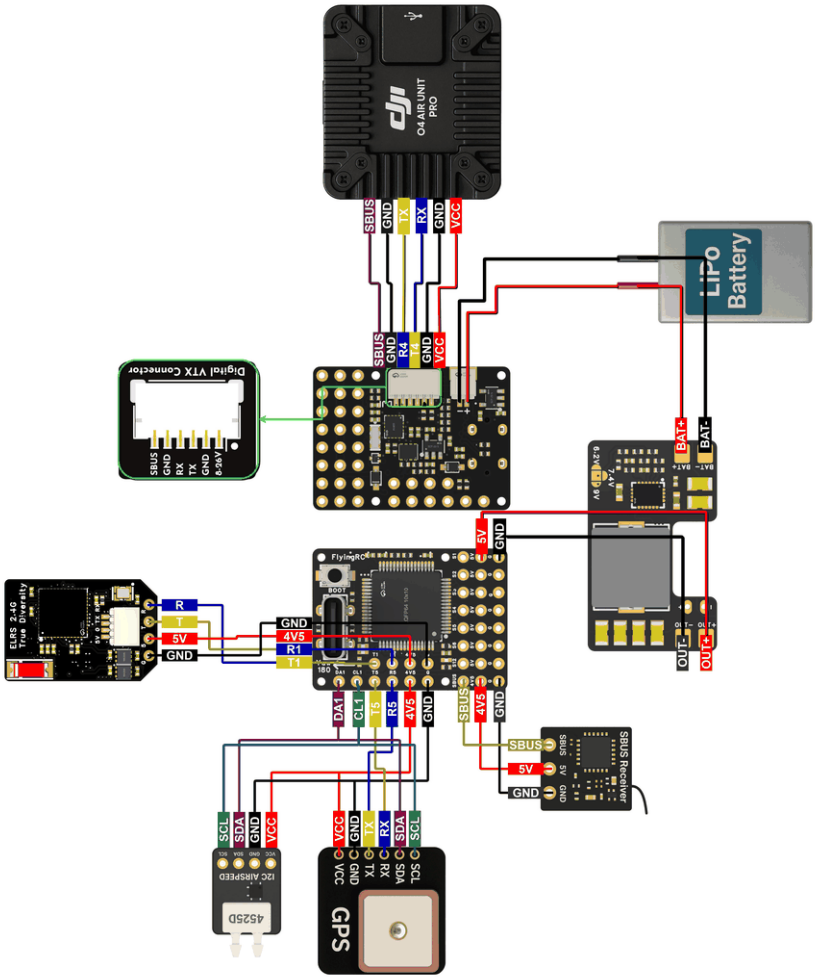
4.4 Power supply

The flight controller **has no on-board BEC**. The 5V supply is connected to the **5V** and **G** power rail next to the PWM outputs – either from a standalone BEC or from an ESC with a built-in BEC. The servos are powered from the same rail.

- Plug cable ③ from the package into the 2-pin battery connector on the rear side of the board and connect its other end directly to the battery. It is used for **voltage detection** and for **powering the video transmitter** through the DJI connector.
- The battery connector **does not power** the flight controller. Without a 5V source, the board will not start when the battery is connected.
- The ESC BEC output must **exceed 3 A**.
- As a guide: a 3 A BEC supports 2–3 × 9 g servos, a 5 A BEC supports 4–5 × 9 g servos.
- Before connecting the battery for the first time, check the polarity and look for short circuits.

▶ Option A – standalone BEC

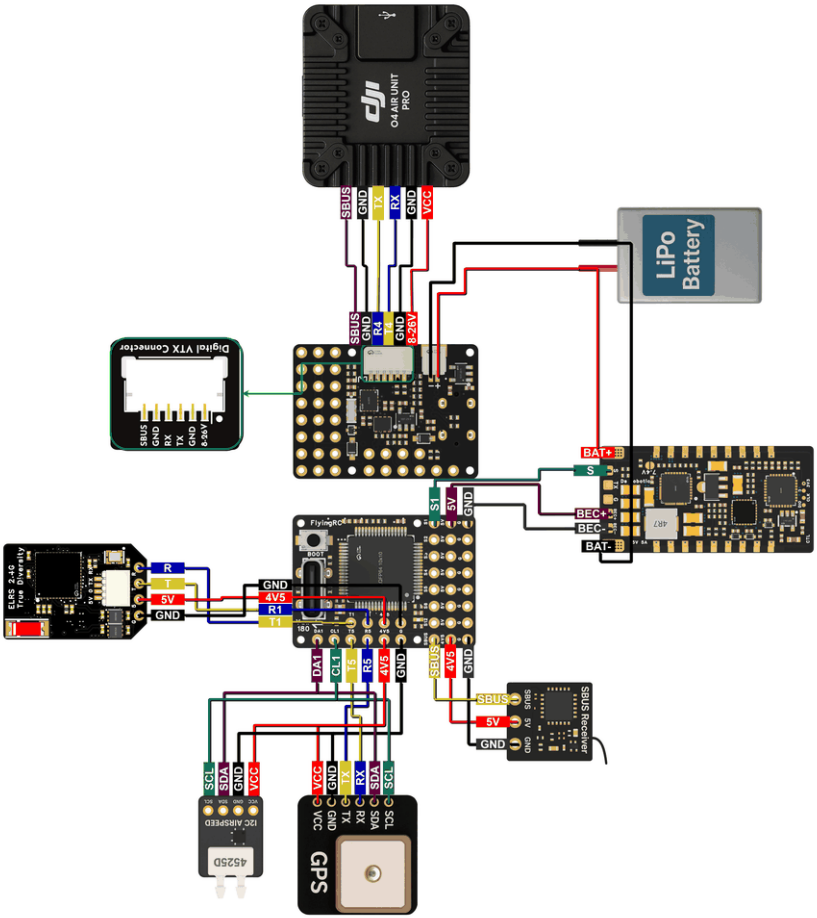
The standalone BEC is powered from the battery and its 5V output is connected to the power rail. A suitable option is, for example, the FlyingRC 5A BEC.



Complete wiring diagram with an external standalone BEC – receiver, GPS, airspeed sensor and HD VTX

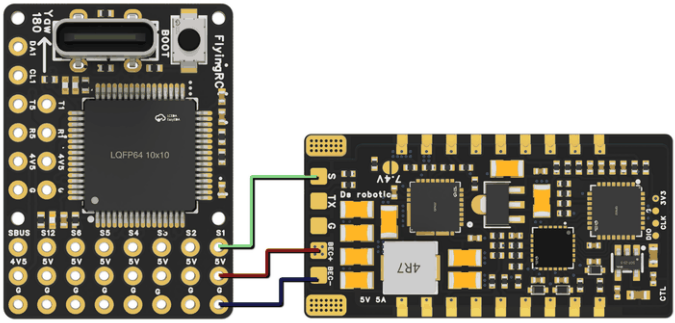
▶ Option B – ESC with built-in BEC

The BEC output of the ESC is connected to the power rail together with the ESC signal. A suitable option is, for example, the FlyingRC AM32 75A V2.5 ESC in the BEC version with an on-board 4.5 A BEC.



Complete wiring diagram for an ESC with built-in BEC

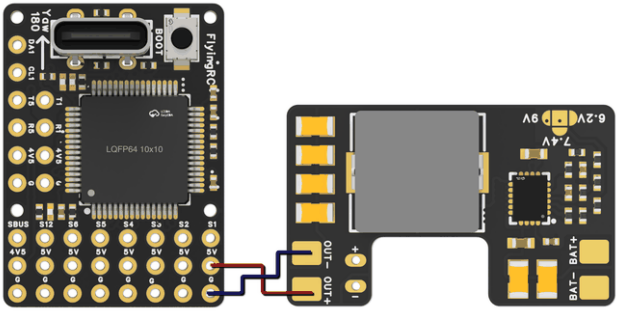
4.5 ESC and servos



Wiring diagram for connection with the FlyingRC AM32 75A ESC with built-in BEC

- Connect the ESC signal (S) to output **S1** and the BEC+ and BEC− wires to the **5V** and **G** pads of the same column.
- Connect the servos to the other outputs S2–S6 or S12. Observe the output groups – see chapter 2.5.
- The total servo current must not exceed the BEC rating.
- Route the motor wires so that they do not touch the components of the board.
- Check that the servos do not hit their end stops at full deflection.

4.6 Standalone BEC



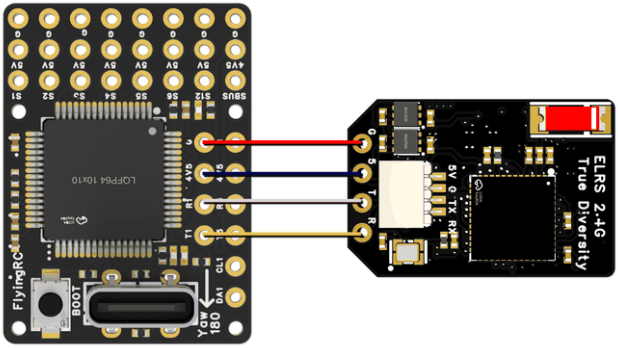
Connecting the standalone BEC output (OUT+ and OUT−) to the power rail

Connect output **OUT+** to the **5V** pad and output **OUT−** to the **G** pad. Connect the BEC input to the battery according to the BEC manual.

4.7 Receiver

▶ ExpressLRS receiver

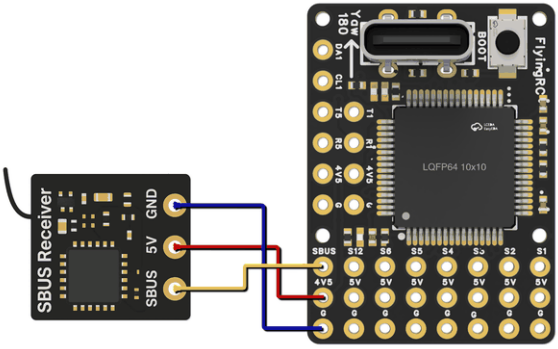
Connect the ExpressLRS receiver to the **T1, R1, 4V5 and G** pads. TX and RX are crossed between the receiver and the flight controller: R1 to the receiver's T, T1 to the receiver's R.



Wiring diagram for an ExpressLRS receiver

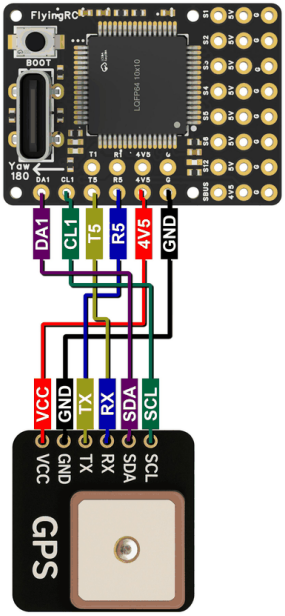
▶ SBUS receiver

Connect the SBUS signal to the **SBUS** pad, power to **4V5** and ground to **G**. In ArduPilot, leave *BRD_ALT_CONFIG* at 0.



Wiring diagram for an SBUS receiver

4.8 GPS module, compass and airspeed sensor



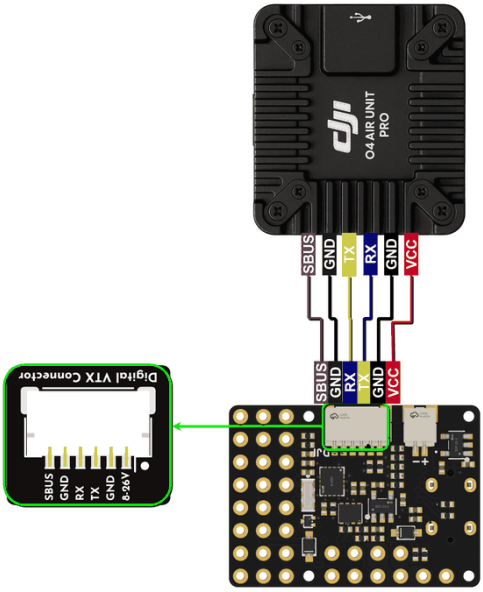
Wiring diagram for a GPS module with compass

Flight controller	GPS module	Note
4V5	VCC	power
G	GND	ground
T5	RX	UART5 – SERIAL3
R5	TX	UART5 – SERIAL3
DA1	SDA	I2C – compass
CL1	SCL	I2C – compass

- Mount the module as far as possible from power wires, the ESC and the video transmitter.
- The flight controller has no on-board compass. For navigation modes use a GPS module with compass or a separate I2C compass.
- A digital airspeed sensor connects to the same I2C bus (DA1, CL1) and is powered from 4V5 – see the complete wiring diagrams in chapter 4.4 and the settings in chapter 2.7.
- Check the pin order against the silkscreen of your particular module.

4.9 Digital video transmitter

The digital video transmitter (DJI O3 and O4, Caddx, Walksnail, OpenIPC) plugs into the **DJI** connector on the rear side of the board with a 6-pin cable. The connector carries serial port UART4 for the OSD, the SBUS signal and battery direct power.



Connecting the DJI O4 Air Unit Pro digital video transmitter

Please ensure the video transmitter is compatible with the battery voltage – with a fully charged 6S battery this is 25.2 V. A video transmitter that does not support battery direct power will be destroyed.

- Power for the video transmitter is available only when cable ③ is connected to the battery – see chapter 4.4.
- TX and RX are crossed between the video transmitter and the flight controller.

4.10 LED strip

An addressable WS2812 LED strip connects to output **S12**. The strip then displays the status of the flight controller (ArduPilot). In ArduPilot set *SERVO12_FUNCTION* = 120 and *NTF_LED_TYPES* to neopixel.

5. Setup

5.1 Connecting to a computer or smartphone

- Remove the propeller.
- Connect the flight controller to a computer with a USB-C cable with data wires.
- Settings can also be made from a smartphone with a USB-C to USB-C cable. For ArduPilot, the **QGroundControl** app is recommended.
- If the board does not respond, first try a different cable. Only then use DFU mode – connect the USB cable while holding the **BOOT** button.

5.2 Firmware

ArduPlane is pre-flashed at the factory and is recommended for fixed-wing aircraft. The board is also supported by INAV and Betaflight; PX4 is not supported.

- The ArduPlane firmware for this flight controller is the one for the **MatekF405-TE** board. You will find it at *firmware.ardupilot.org* under *Plane → stable → MatekF405-TE*; to flash it with a configurator, use the file with bootloader (*arduplane_with_bl.hex*).
- The INAV firmware for this flight controller is provided by the manufacturer. If you need it, contact the retailer.
- Flash the firmware with a ground station, such as Mission Planner, or with the configurator of the respective firmware.

5.3 Basic settings

- Set the board orientation if the flight controller is not mounted with the Type-C port toward the nose.
- Assign protocols to the SERIAL ports according to the connected devices – see chapter 2.6.
- Compare the voltage measured by the flight controller with a voltmeter and adjust the scale in the ground station.
- If you use an external I2C current sensor, configure it according to its manual.

5.4 Accelerometer calibration

- Place the model on a level surface in flight attitude and start the accelerometer calibration in the ground station.
- Follow the on-screen instructions and hold the model still in each position.
- Repeat the calibration every time the flight controller mounting is changed.
- If a compass is connected, calibrate it as well – outdoors, away from metal structures.

5.5 Motor and servo check

Always carry out the following check **without the propeller**.

- In the ground station, check that the motor spins in the correct direction; change the direction in the ESC firmware or by swapping two motor phases.
- Check the deflection and direction of all control surfaces; correct a reversed direction in the settings, not by swapping servo wires.
- Check that the servos do not hit their end stops or bind at full deflection.
- On a flying wing, check that the elevons respond correctly on both axes.

5.6 Arm, Disarm and failsafe

- Assign **Arm** (motors enabled) and **Disarm** (motors disabled) to a switch on the transmitter, not to a throttle stick movement.
- Before every flight, check that the model does not increase motor speed by itself after Arm.
- Set up and test the **failsafe** – the behaviour on signal loss. Model aircraft usually use return to launch, small models an immediate motor stop.
- Test the failsafe on the ground by switching off the transmitter, with the model secured and without the propeller.

6. Operation

6.1 Pre-flight check

Go through this list before every flight:

- The propeller is intact, correctly oriented and tightened.
- The flight controller is firmly mounted, no wire is loose or chafed.
- The control surfaces move freely, the linkages are secured and the servos do not bind.
- The receiver antenna is connected and not kinked.
- The transmitter is switched on, its battery is charged and the Arm switch is in the off position.
- A **fully charged** battery is fitted in the model – 4.20 V per cell.
- The battery connector is secured and the battery is fixed in the model.
- You have checked the range and the failsafe function.

6.2 Monitoring the battery voltage

- End the flight at **3.50 V per cell** at the latest – at 7.0 V for a 2S battery, 10.5 V for 3S, 14.0 V for 4S and 21.0 V for 6S.
- Deep discharge permanently damages the battery and reduces its capacity.
- The voltage reading fluctuates under load; the resting voltage after landing is decisive.
- Let the battery cool down after the flight before charging it.

6.3 Temperature

- Disconnect the battery between flights.
- Do not leave the model with the battery connected in the sun.
- If the BEC gets unusually hot, check the current draw of the servos and other peripherals.

7. Maintenance and Troubleshooting

7.1 After every flight

- Disconnect the battery and let the board cool down.
- Check the solder joints, SH1.0 connectors, control linkages and antenna mounting.
- Remove dirt with a soft brush; do not use solvents.
- After a crash, always inspect the board – look for cracked joints and loose components.

7.2 Soldering and repairs

- Use a temperature-controlled soldering iron; the pads of the flight controller are small.
- Do not overheat the pads – a lifted pad cannot be repaired.
- Always disconnect the battery and USB before soldering.
- Desoldering a component or modifying the board is not a product defect and cannot be claimed under warranty.

7.3 Storage

- Store the board in an antistatic bag, in a dry place at 0 °C to 40 °C and out of the reach of children.
- Store batteries charged to **3.80 V per cell**.
- Check batteries regularly during long-term storage.

7.4 Troubleshooting

Problem	Possible cause	Solution
Board not detected by the configurator	USB cable without data wires	try another cable; if the problem persists, flash the firmware in DFU mode
Board does not start when the battery is connected	no 5V supply from a BEC	connect a BEC or the ESC BEC to the 5V and G pads – see chapter 4.4
Battery voltage not displayed	cable ③ not connected	plug the cable into the battery connector on the rear side of the board
Video transmitter has no power	cable ③ not connected	connect the cable to the battery – the transmitter is powered through it
No on-screen display (OSD)	SERIAL4 not configured	set the OSD protocol on SERIAL4
Servo does not move or jitters	output in the same group as a DShot ESC, overloaded BEC	move the servo to an output in another group according to chapter 2.5
Receiver does not communicate	TX and RX swapped, wrong port assignment	cross the TX and RX wires; for SBUS leave BRD_ALT_CONFIG = 0
GPS does not get a fix	wrong port assignment, interference from power wiring	set SERIAL3 to GPS and move the module away from the wires
External I2C device does not work	conflict with address 0x76 of the on-board barometer	use a device with a different I2C address
Displayed voltage does not match reality	voltage scale not calibrated	compare with a voltmeter and adjust the scale in the ground station

8. Information for the EU and Czech Market

8.1 Importer and responsible person in the EU

The product is placed on the European Union market by the importer stated below, who is at the same time the responsible person within the meaning of Article 16 of Regulation (EU) 2023/988 of the European Parliament and of the Council on general product safety (GPSR).

Importer / responsible person in the EU	Rotorama, s.r.o.
Company ID (IČO)	051 57 692
VAT ID (DIČ)	CZ05157692
Registered office	Okrajová 1351, 674 01 Třebíč, Czech Republic
E-mail	info@rotorama.cz
Phone	+420 252 252 098
Website	www.rotorama.cz

8.2 Product conformity

CE

- The product bears the **CE** marking and complies with the requirements of the applicable European Union harmonisation legislation.
- A copy of the **EU Declaration of Conformity** is available from the importer at the address stated above or at the e-mail address info@rotorama.cz.
- **Product identification:** the type designation *FlyingRC F4Wing Mini MK1* is stated in this manual and in the proof of purchase; the printed circuit board bears the FlyingRC brand marking.

8.3 Disposal of electrical equipment



- The crossed-out wheeled bin symbol on the product, its packaging or in the documentation means that at the end of its service life the product **must not be disposed of together with mixed municipal waste**.
- Hand it over at a take-back point for electrical equipment – at a collection yard, at a take-back point of a collective system, or at the retailer when purchasing a new equivalent product. Take-back is free of charge for the end user.
- The obligations under Act No. 542/2020 Coll., on end-of-life products, are fulfilled by the importer through a collective take-back system.
- Proper disposal helps prevent negative impacts on the environment and human health and contributes to the reuse of secondary raw materials.

Through its contractual partner **ASEKOL a.s.**, the company ensures the take-back of waste electrical equipment from households and the separate collection of waste electrical equipment, batteries and accumulators in accordance with the applicable legislation. The customer is entitled to hand over old electrical equipment or a battery or accumulator at any collection point of the above contractual partner. The addresses of these take-back points are listed at www.asekol.cz, www.ecobat.cz and also https://visoh2.mzp.cz/RegistrMistZO/RegistrMistZOPublic/MapaMistZpetOdberu.

9. Warranty and rights arising from defective performance

The rights and obligations of the contracting parties are governed by Czech law, in particular by Act No. 89/2012 Coll., the Civil Code, and Act No. 634/1992 Coll., on consumer protection. The manufacturer does not issue separate warranty terms for this product.

- The seller is liable to the buyer for the product being free of defects on receipt. If the buyer is a consumer, a defect may be notified **within two years of receipt** of the product (Section 2165 of the Civil Code).
- If a defect appears within **one year** of receipt, the product is deemed to have been defective already at the time of receipt (Section 2161(5) of the Civil Code).
- When purchasing online, a consumer has the right to **withdraw from the contract within 14 days** of receiving the goods without giving a reason (Section 1829 of the Civil Code).
- Claims should be made with the retailer from whom you purchased the product. The importer's contact details are given in Chapter 8.1.
- The competent body for out-of-court settlement of consumer disputes is the **Czech Trade Inspection Authority**, Štěpánská 796/44, 110 00 Prague 1, www.coi.cz.