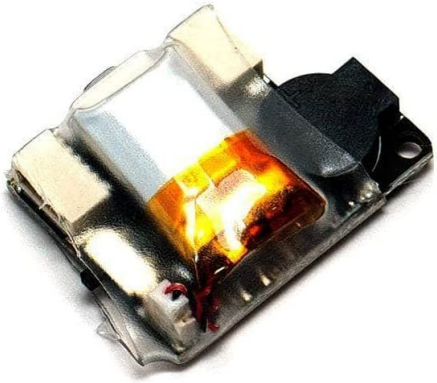
VIFLY GPS-mate

GPS power module with buzzer
User manual



Read the entire manual before installation and keep it for future reference.

Rotorama, s.r.o. · www.rotorama.com

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1. Product description

1.1 What it is for

The VIFLY GPS-mate is a standalone power module for the GPS module of an FPV drone. It has its own small Li-Po battery and an on/off switch. When the module is switched on, only the GPS is powered, so you can wait for the satellite lock (GPS fix) without connecting the flight battery and powering up the flight controller (FC) and video transmitter (VTX), which would needlessly heat up on the ground. The GPS stays powered even while you change the flight battery, and as long as you do not switch the module off, it does not need to acquire satellites again for the whole flying session.

The module also has a built-in buzzer with the VIFLY Finder 2 function. With the flight battery connected it works as a standard buzzer controlled from the radio; when the flight battery is ejected (e.g. in a crash), it beeps on its own from its internal battery and helps you find the lost drone. The built-in battery is recharged in flight from the flight controller – you do not need to charge it separately.



GPS-mate with the supplied cables

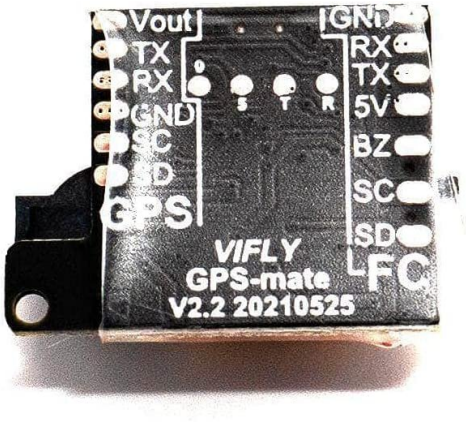
1.2 Specifications and package contents

Product designation	VIFLY GPS-mate (on the back of the board)
Manufacturer	VIFLY (www.viflydrone.com)
Input voltage	4.5–5.5 V (from the flight controller)
GPS output voltage	3.3 V or 5 V (selectable)
Output current	up to 80 mA
Built-in battery	Li-Po 3.7 V, 50 mAh
Charging time	1.5 hours
Buzzer volume	up to 90 dB
Standalone beeping time	up to 4 hours
Dimensions / weight	26 × 20 × 8 mm / 3.5 g
Package contents	1× GPS-mate, 1× 4-pin cable, 1× 5-pin cable, 1× cable tie, manufacturer's manual
Not included	GPS module, flight controller, flight battery

2. Use

2.1 Module pinout

One side of the board carries the pins for the GPS module (group **GPS**), the other side the pins for the flight controller (group **FC**). The same signals are available on the connectors on the top side and on the solder pads on the back.

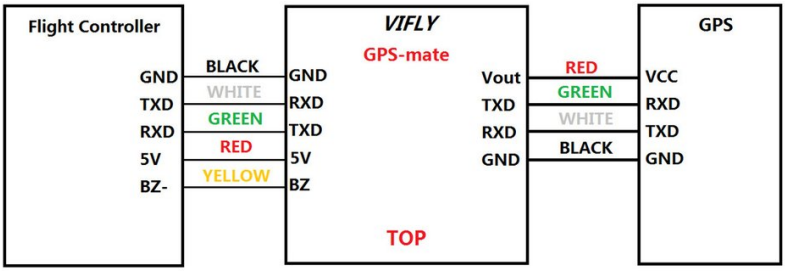


Back of the module with the solder pad labels

GPS	Meaning	FC	Meaning
Vout	GPS power (VCC)	GND	ground
TX	to GPS RX	RX	to FC TX
RX	to GPS TX	TX	to FC RX
GND	ground	5V	5 V supply from FC
SC	compass SCL	BZ	to FC BZ−
SD	compass SDA	SC / SD	to FC SCL / SDA

2.2 Connecting a GPS without compass (connectors)

Connect a GPS module without compass with the supplied cables to the connectors on the top side of the module. The 5-pin cable goes to the flight controller, the 4-pin cable to the GPS. The TX and RX signals are always crossed (TX to RX and vice versa).



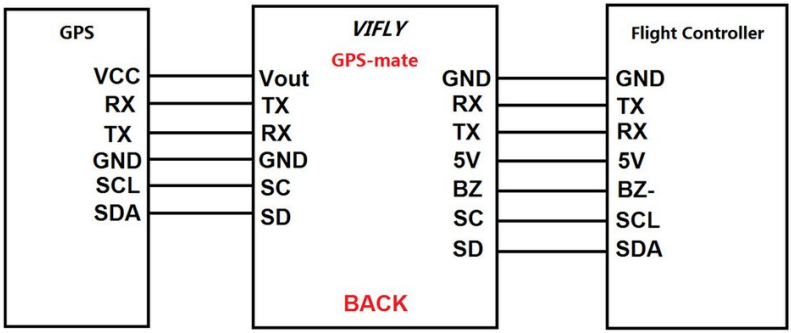
Manufacturer's wiring diagram – connectors (TOP).

Flight controller	Wire	GPS-mate	GPS
GND	black	GND	–
TX	white	RX	–
RX	green	TX	–
5V	red	5V	–
BZ−	yellow	BZ	–
–	red	Vout	VCC
–	green	TX	RX
–	white	RX	TX
–	black	GND	GND

The wire colours apply to the cables supplied with the module. Before applying power, always check the pin labels on the flight controller and on the GPS – swapping power and ground can destroy the electronics.

2.3 Connecting a GPS with compass (soldering)

Connect a GPS module with compass using wires soldered to the pads on the back of the module. In addition to power and the serial line, the compass wires are connected as well: GPS SCL to pad SC and GPS SDA to pad SD on the GPS side, and pads SC and SD on the FC side to SCL and SDA of the flight controller.



Manufacturer's wiring diagram – solder pads (BACK).

- Use a temperature-controlled soldering iron and solder quickly so that neither the built-in battery nor the surrounding components overheat.
- The module must be switched off and disconnected from the flight controller while soldering.
- Leave unused connectors and pads free and do not make any other modifications to the board.

2.4 GPS voltage selection and flight controller setup

The module supplies the GPS with **3.3 V or 5 V**; select the required voltage with the switch on the module. Before switching on for the first time, check the GPS manufacturer's data for the supply voltage your GPS module requires and select it. An incorrectly selected voltage may damage the GPS module or make it work unreliably.

The manufacturer states an output current of up to 80 mA – make sure the consumption of your GPS module does not exceed this value.

In the flight controller configurator (e.g. Betaflight), set things up just as for a directly connected GPS:

- on the *Ports* tab, enable GPS on the UART to which the TX and RX wires are connected,
- on the *Configuration* tab, enable the GPS feature and, if applicable, the compass (for a GPS with compass),
- control the buzzer connected to BZ− like a standard buzzer – in Betaflight e.g. with the *BEEPER* mode on a radio switch (*Modes* tab).

2.5 Use at the flying field

① At the flying field, switch the GPS-mate on with its switch. The GPS is powered and starts acquiring satellites – the drone itself stays off.

② Once the satellites are acquired, connect the flight battery. The drone is powered by the flight battery, which at the same time recharges the GPS-mate battery.

③ When changing the flight battery, leave the GPS-mate switched on – the GPS stays powered and does not need to acquire satellites again.

④ When you have finished flying, disconnect the flight battery and switch the GPS-mate off so that the built-in battery is not drained unnecessarily.

▶ Buzzer for finding a lost drone

- With the flight battery connected, the buzzer works as a standard flight controller buzzer (warnings, control from the radio).
- When the flight battery is ejected (e.g. in a crash), it beeps on its own from the built-in battery – according to the manufacturer for up to 4 hours, at up to 90 dB.
- Standalone beeping is only possible when the built-in battery is charged. After longer storage, let the module charge from the drone before flying.

2.6 Built-in battery and safety

The built-in Li-Po battery is charged only from the 5 V supply of the flight controller, i.e. with the flight battery connected. The manufacturer states a charging time of 1.5 hours. The battery may be supplied in a storage state of charge – let it charge in the drone before first use.

- Do not remove the heat-shrink, do not desolder, puncture, crush or short-circuit the battery.
- Do not expose the module to high temperatures, direct sunlight in a closed car, fire or water.
- If the battery is swollen or damaged, or the module gets excessively hot, stop using it and hand it in for disposal (Chapter 3.2).
- Mount the module in the drone frame so that it is protected against impacts and cannot touch the propellers; use the supplied cable tie.
- The buzzer is very loud – do not hold it close to your ear.
- The product is not a toy and is not intended for children. It is intended for installation in FPV drones by experienced users.
- Store a module that will not be used for a longer time switched off, in a dry place at room temperature.

3. Information for the EU and Czech Market

3.1 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.com

3.2 Disposal of electrical equipment and batteries



- 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 product contains a built-in rechargeable battery. Where possible, hand it over together with the device – do not dispose of the battery in mixed waste or in fire.
- 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.

4. 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 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 3.1.
- 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.