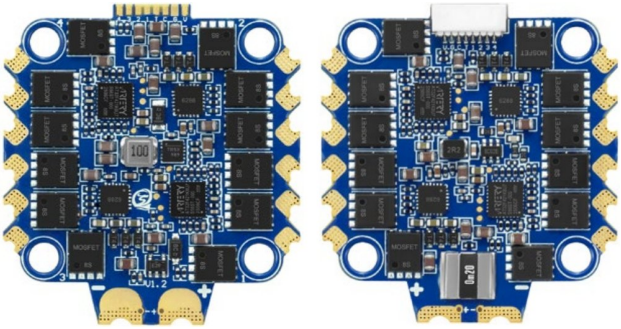
Blueson A2

SEQURE · 4-in-1 ESC 70 A, 2–8S, AM32
User Manual



Please read this manual carefully before use. Installation requires basic knowledge of electronics and good soldering skills. Incorrect use may cause personal injury or equipment damage.

Rotorama, s.r.o. · www.rotorama.com

Contents

1. Safety Precautions

2. Product Description

2.1 Features

2.2 Package Contents

2.3 Board Layout

3. Specifications

3.1 Size and Weight

4. Wiring

4.1 Wiring Diagram

4.2 Flight Controller (FC) Connector

4.3 Installation

5. ESC Setup (AM32)

6. First Power-Up and Pre-Flight Check

6.1 Battery

6.2 Pre-Flight Check

7. Maintenance and Troubleshooting

7.1 Maintenance

7.2 Troubleshooting

8. Information for the EU and Czech Market

8.1 Importer and responsible person in the EU

8.2 Product conformity

8.3 Disposal of electrical equipment

9. Warranty and rights arising from defective performance

9.1 Rights of the buyer under Czech law

9.2 Manufacturer's warranty terms

1. Safety Precautions

Thank you for buying the SEQURE Blueson A2 ESC. Please read these instructions carefully before use and strictly follow the specified operating instructions. Installation requires basic knowledge of electronics and good soldering skills. Incorrect use may cause personal injury or equipment damage. The product is intended for persons aged 14 and over.

- Do not flash unofficial firmware to the ESC – it may damage it.
- Do not use the ESC beyond its operating voltage and current range (chapter 3).
- Always check that the positive and negative polarity (+ / −) is correct before powering on. Reverse polarity will destroy the ESC.
- Use the product in compliance with local regulations and in a way that ensures safety.
- Use accessories that meet safety standards and store them out of reach of children.
- **Remove the propellers** from the motors during setup, first power-up and bench tests.
- When connecting the battery for the first time, we recommend using a current limiter (smoke stopper).
- Solder in a well-ventilated area and after soldering check that there are no short circuits between the pads and no solder balls left on the board.
- The ESC heats up during operation. Do not touch its components immediately after a flight and provide it with airflow.
- Do not continue to use a damaged ESC (burnt or cracked components, torn-off pads, traces of a short circuit).
- Never leave a Li-Po or LiHV battery connected unattended, and disconnect it after the flight.

The manufacturer is not liable for damage caused by improper use of the product or by unauthorised modifications to it. This does not affect the statutory rights of the buyer (chapter 9).

2. Product Description

SEQURE Blueson A2 is a four-channel 4-in-1 electronic speed controller (ESC) for multicopters. This manual covers the **8S 70A AM32** version – 2–8S input, AT32F421 processor and AM32 firmware. Manufacturer: **SEQURE**, www.sequremall.com, info@sequremall.com.

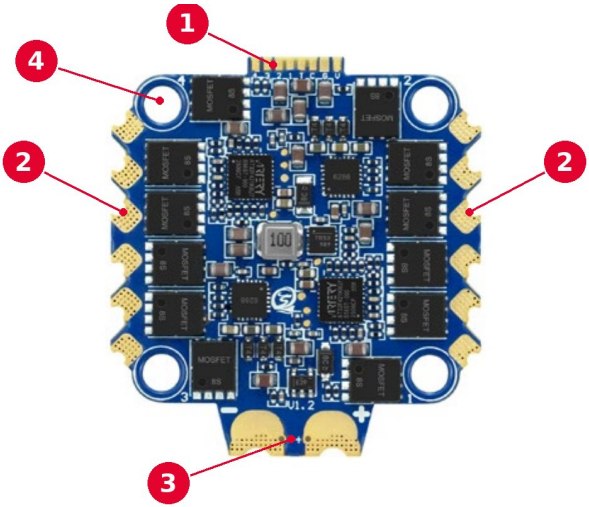
2.1 Features

- AT32F421 high-performance processor with AM32 firmware, 2–8S wide voltage input, single-channel continuous current 70 A, peak current up to 150 A.
- Built-in current sensor and telemetry support – motor speed, temperature, current and other data are updated in real time.
- High-quality high-power MOSFETs with ultra-high conversion efficiency – reduced losses and longer flight time.
- Multi-layer PCB with high copper thickness – increased over-current capability and efficient heat dissipation.
- Precise switching interval control – faster ESC response, smooth control and delicate feel.
- PWM frequency 8–128 kHz; the circuit design solves the problem of loss of synchronisation (desync).
- Oblique soldering pads – neater and safer motor wire layout and easier soldering.
- 30.5 × 30.5 mm mounting hole spacing and compact design – easy installation in various types of frames.

2.2 Package Contents

Qty	Item
1	SEQURE Blueson A2 4-in-1 ESC
1	SH1.0-8P connection cable, 40 mm, 30AWG, plugs on both ends with reversed pin order
1	SH1.0-8P connection cable, 60 mm, 30AWG, plug on one end
2	12AWG power cable, 100 mm (black and red)
1	XT60H-M connector (male, black)
1	Capacitor 35 V / 680 µF
5	M3 × 8 mm shock-absorbing washer (black)

2.3 Board Layout



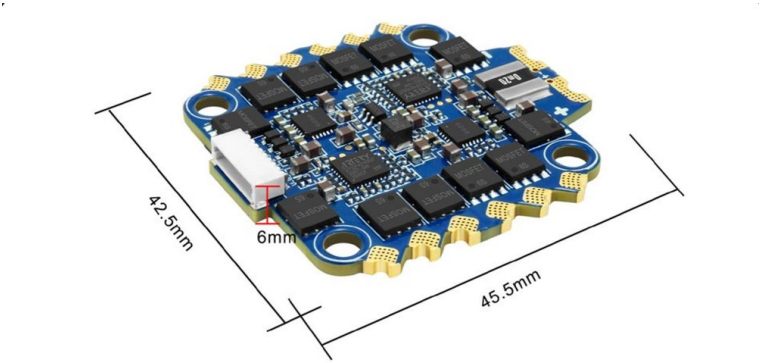
Top side of the ESC

No.	Description
①	Connector for the flight controller (FC) – SH1.0, 8 pins (pin assignment see chapter 4.2)
②	Motor soldering pads – three pads for each motor; the motor number (1–4) is printed near the corners of the board
③	Power pads − and + for connecting the battery and the capacitor
④	Mounting holes – 30.5 × 30.5 mm spacing, 4 mm diameter for M3 screws

3. Specifications

Parameter	Value
Model	Blueson A2 (8S 70A AM32 version)
Processor	AT32F421
Firmware	AM32
PWM frequency	8–128 kHz
Working voltage	2–8S Li-Po / LiHV
Continuous current	70 A
Peak current	150 A
Supported protocols	DShot600 / DShot300 / DShot150, Oneshot, Multishot, PWM
Telemetry	yes
Current sensor	yes
BEC	no
Mounting hole spacing	30.5 × 30.5 mm, holes Φ 4 mm / M3
Dimensions (L × W × H)	45.5 × 42.5 × 6 mm
Weight	17 g

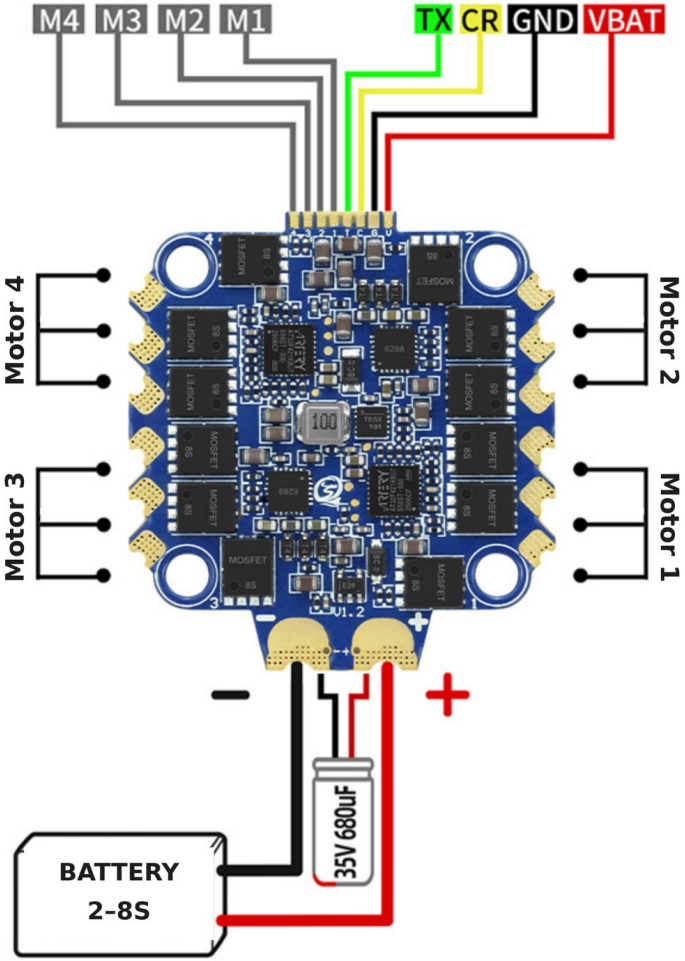
3.1 Size and Weight



Dimensions 45.5 × 42.5 × 6 mm, weight 17 g

4. Wiring

4.1 Wiring Diagram



ESC wiring diagram

4.2 Flight Controller (FC) Connector

The pins are listed in the diagram from left to right in the order in which they are brought out on the ESC connector (board marking: 4 3 2 1 T C G V).

Pin	Function
M4	signal for motor 4
M3	signal for motor 3
M2	signal for motor 2
M1	signal for motor 1
TX	ESC telemetry (output to FC)
CR	current sensor output
GND	ground (−)
VBAT	battery voltage (for voltage measurement in the FC)

The VBAT pin carries the full battery voltage. Make sure your flight controller (FC) can handle the voltage of the battery used – a fully charged 8S LiHV has 34.8 V.

4.3 Installation

① Mount the ESC in the frame using the 30.5 × 30.5 mm mounting holes; use the shock-absorbing washers from the package. Choose the orientation so that the motor pads face the corresponding frame arms.

② Solder the motor wires to the three pads of the respective motor. The order of the three motor wires does not matter – the direction of rotation is set in software (chapter 5).

③ Solder the 12AWG power cables to the power pads and fit the XT60H-M connector to their end. Observe the polarity: red wire to +, black wire to −.

④ Solder the 35 V / 680 µF capacitor from the package to the power pads as close to the ESC as possible and observe its polarity (the negative lead is marked on the case). The capacitor suppresses voltage spikes in the power supply.

⑤ Connect the ESC to the flight controller (FC) with one of the supplied SH1.0-8P cables. The pin order on FC connectors differs between manufacturers – always compare the pin assignment of the ESC (chapter 4.2) and the FC before connecting. The 60 mm cable with a plug on one end allows the wires to be soldered directly to the FC pads.

⑥ Check all joints, make sure there are no short circuits and that the polarity is correct. Only then connect the battery – the first time through a current limiter.

Reducing interference: keep the motor and power wires as short as possible, route the signal wires separately from the power wires and place the receiver, VTX and GPS antennas as far from the ESC as possible.

5. ESC Setup (AM32)

The ESC is supplied with **AM32** firmware. Its parameters are set in the AM32 configurator (am32.ca), usually via the flight controller (FC) in passthrough mode: the FC is connected to the computer by USB and a battery must be connected to the ESC at the same time.



AM32 configurator – visual parameter adjustment interface (website: am32.ca)

Most frequently adjusted settings:

- *Reversed* – reverses the direction of motor rotation, set separately for each of the four channels.
- *3D mode* – bidirectional motor mode; leave it off for normal flying.
- *Motor KV* and *Motor poles* – enter according to the parameters of the motor used.
- *PWM Frequency* – switching frequency of the ESC.
- *Temperature limit*, *Current limit* and *Low voltage cut off* – protective limits of the ESC.
- *Startup power* and *Beeper volume* – motor start-up power and beep volume.

Only flash official AM32 firmware intended for this ESC. Keep the propellers removed from the motors while working in the configurator.

6. First Power-Up and Pre-Flight Check

6.1 Battery

Power the ESC from a Li-Po or LiHV battery with **2 to 8 cells**. A fully charged 8S Li-Po has 33.6 V (4.20 V/cell), a fully charged 8S LiHV 34.8 V (4.35 V/cell). Always insert a **fully charged** battery before the flight. End the flight at the latest when the voltage drops to 3.5 V/cell (28.0 V for 8S). For storage, keep the battery at 3.8 V/cell (30.4 V for 8S).

6.2 Pre-Flight Check

- Remove the propellers and use a current limiter (smoke stopper) when connecting the battery for the first time.
- Check the power polarity, the capacitor connection and that the ESC is firmly mounted in the frame.
- In the flight controller configurator (e.g. Betaflight, *Motors* tab), check that each motor spins up, that the motor order matches the FC diagram and that the motors rotate in the correct direction.
- If you use the current sensor, set its scale in the FC configuration and check that the current and consumption values match reality.
- Insert a **fully charged** battery before the flight.
- Arm (switching on the motors) only after the propellers have been fitted and checked, at a safe distance from people and animals.
- After the first short flight, check the temperature of the ESC and the motors.

7. Maintenance and Troubleshooting

7.1 Maintenance

- Protect the ESC from moisture, dust and conductive debris (metal and carbon chips from a carbon frame).
- After crashes and falls, check the solder joints, motor wires and power cables.
- Regularly check that the mounting screws are tight and the condition of the shock-absorbing washers.
- Store the ESC in a dry place at room temperature, disconnected from the battery.

7.2 Troubleshooting

Problem	Possible cause	Solution
Motors do not spin, ESC does not beep	no power, faulty joint, wrong connection to the FC	check the power supply, solder joints and connector pin assignment
Motor spins in the wrong direction	reversed direction of rotation	change *Reversed* in the AM32 configurator
Motor stutters or stops	cold joint, damaged motor, unsuitable settings	check the joints and the motor, adjust the ESC settings
Configurator does not find the ESC	ESC not powered from the battery, wrong connection to the FC	connect the battery and check the cable between the FC and the ESC
Incorrect current values	current sensor scale not set in the FC	set and verify the current sensor scale in the FC configuration
ESC overheats	insufficient cooling, overload, unsuitable motor and propeller combination	provide airflow and check the load on the ESC

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.com

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 (Blueson A2) is given in this manual and on the product packaging; the PCB revision is printed directly on the board.

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

9.1 Rights of the buyer under Czech law

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's warranty terms set out below (Chapter 9.2) **do not in any way limit** the buyer's rights arising from these regulations.

- 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.

9.2 Manufacturer's warranty terms

❊ The following text is the manufacturer's original warranty statement.

For performance faults caused by non-human factors within **3 months** from the date of purchase, the manufacturer provides repair and maintenance service free of charge. After 3 months, no labour fee is charged for repairs; if parts need to be replaced, the customer pays for them.

The manufacturer's warranty does not cover:

- all man-made damage,
- faults caused by self-disassembly and improper use,
- all consumables (e.g. soldering tips).