

## BETAFPV Air65

# BETAFPV ELRS V3 Air65 Brushless Whoop Quadcopter Instruction Manual

Model: Air65

## 1. INTRODUCTION

This manual provides essential information for the safe and effective operation of your BETAFPV ELRS V3 Air65 Brushless Whoop Quadcopter. Please read it thoroughly before first use and retain it for future reference.



Image 1: The BETA FPV ELRS V3 Air65 Brushless Whoop Quadcopter, an ultralight 1S 65mm micro FPV drone.

## 2. WHAT'S INCLUDED

The package contains the following items:

- 1 \* Air65 Brushless Whoop Quadcopter
- 1 \* Air Canopy
- 4 \* HQ 31mm Ultralight 3-Blade Propellers
- 1 \* 4Pin Adapter Cable
- 1 \* USB Type-C Adapter Board
- 1 \* Pack of Screws



Image 2: Contents of the Air65 package, including the quadcopter, spare propellers, and accessories.

### 3. KEY FEATURES

- **Ultralight Design:** Weighs approximately 17.3g, featuring an Air canopy and Air65 brushless whoop frame for enhanced freestyle flying.
- **Advanced Flight Controller:** Equipped with a new 5IN1 Air brushless flight controller utilizing a G473 processor and ICM42688P gyroscope, offering a thrust-to-weight ratio of 5.26:1 and 13% increased propulsion efficiency. It integrates FC, ESC, OSD, RX, and Onboard 5.8 25~400 VTX, weighing only 3.6g.
- **High-Performance Motors:** Features 0702SE II 23000KV brushless motors and HQ 31mm Ultralight 3-blade propellers for responsive and precise control.
- **ELRS V3 Protocol:** Comes with ELRS V3 firmware for reliable binding with compatible controllers.
- **C03 FPV Micro Camera:** Includes a lightweight 1.45g C03 FPV Micro camera with an onboard VTX adjustable from 25-400mW.

# Air Brushless Flight Controller

Weightless Marvel,  
Unrivalled Performance

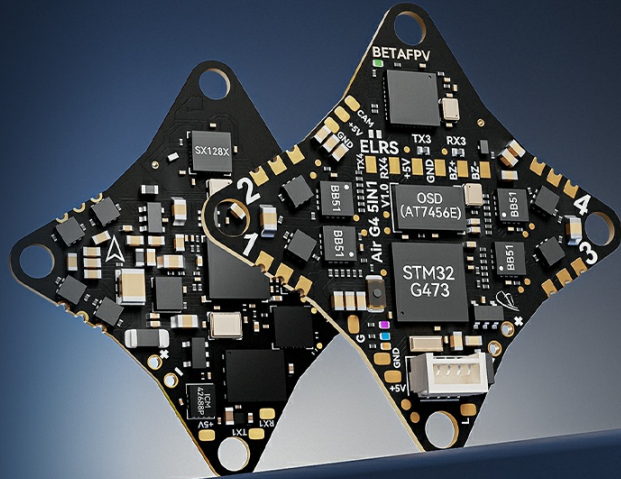


Image 3: Close-up of the Air Brushless Flight Controller, highlighting its integrated components.

Powerful MCU:  
**STM32G473CEU6**

STM32  
G473

Image 4: Detail of the 0702SE II 23000KV motors and HQ 31mm Ultralight propellers.

ESC:  
**BB51 Bluejay 96K**

ESC

ESC

ESC

Image 5: The C03 FPV Micro Camera and the durable Air Canopy.

## 4. SETUP

### 4.1. Battery Installation



The Air65 requires a 1S LiPo battery (not included). Carefully insert the battery into the designated slot on the quadcopter. Ensure the connector is securely attached.



Image 6: Illustration of how to properly install the 1S LiPo battery into the Air65 quadcopter.

## 4.2. Binding with Controller

The Air65 drone uses the ELRS protocol with V3 firmware. To bind the drone with your controller or TX module, ensure both devices are running the same protocol and firmware version. Refer to your controller's manual for specific binding procedures. If binding issues occur, recalibrate the drone and attempt to re-bind.

# 5. OPERATING INSTRUCTIONS

## 5.1. Pre-Flight Check

- Ensure the battery is fully charged and securely connected.
- Verify propellers are correctly installed and free from damage.
- Confirm successful binding with your remote controller.
- Check the flight area for any obstacles or hazards.

## 5.2. Flight Environment

The Air65 is designed for both indoor and outdoor freestyle flying. For outdoor use, it is recommended to fly in conditions with minimal wind to maintain optimal control and performance.

## 5.3. VTX Power Adjustment

The onboard VTX allows power adjustment from 25mW to 400mW. Higher VTX power consumes more energy and generates more heat, which can reduce flight time. For daily indoor flight, it is recommended to use 25mW to 100mW to achieve better flight duration.

# 6. MAINTENANCE

## 6.1. Propeller Care

Regularly inspect propellers for any signs of damage (cracks, bends, chips). Damaged propellers can affect flight performance and stability. Replace them with new HQ 31mm Ultralight 3-blade propellers as needed.

## 6.2. Motor Inspection

If you experience issues with a motor or it stops working, first attempt to recalibrate the drone. If the problem persists, inspect the motor for any visible damage or debris. Consult BETAFPV support for further assistance if necessary.

## 6.3. General Cleaning

Keep the drone clean from dust, dirt, and debris. Use a soft, dry cloth to wipe down the frame and components. Avoid using liquids directly on the electronics.

# 7. TROUBLESHOOTING

## 7.1. Binding Issues

If the drone fails to bind with your controller, ensure both devices have the correct ELRS protocol and V3 firmware version. Try recalibrating the drone and then re-attempt the binding process.

## 7.2. Motor Malfunction

For any motor issues or if a motor is not working, recalibrate the drone first. If the problem persists, check for any physical obstructions or loose connections to the motor. Contact customer support if the issue cannot be resolved.

## 7.3. Short Flight Time

If you experience shorter than expected flight times, consider reducing the VTX power setting. Higher VTX power consumes more battery. Ensure your battery is fully charged and in good condition.

# 8. SPECIFICATIONS

Feature	Specification
Brand	BETAFPV
Model Name	Air65

Color	White
Item Weight	4.2 ounces (approx. 119g, though product description states 17.3g for drone only)
Product Dimensions	4.5"L x 4.5"W x 2.2"H
Flight Controller	5IN1 Air Brushless Flight Controller (G473 processor, ICM42688P gyroscope, integrated FC, ESC, OSD, RX, Onboard 5.8 25~400 VTX)
Motors	0702SE II 23000KV Brushless Motors
Propellers	HQ 31mm Ultralight 3-Blade Propellers
Camera	C03 FPV Micro Camera (1.45g)
Video Capture Resolution	720p
Connectivity Technology	Radio Frequency (ELRS V3)
Battery Capacity	260 Milliamp Hours (typical for compatible batteries, not included)
Control Type	Remote Control
Material	Plastic

## 9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please visit the official BETAFPV website or contact their customer service directly. Keep your purchase receipt as proof of purchase.  
You can visit the BETAFPV Store for more products and support:[BETAFPV Store](#)