

Engineered for the next generation of 1S performance, the Air65 II redefines the balance of power and resilience. At its core, a specialized propulsion system offers three distinct configurations—Champion, Racing, and Freestyle—each tuned with specific motor and propeller combinations for optimized thrust, response, and control. This precision-tuned power is matched by a rugged, purpose-built design, featuring the durable Matrix 5IN1 II Flight Controller with a high-output 12A ESC and a reinforced frame & canopy crafted to withstand repeated impacts. Built to deliver relentless performance in every flying style, the Air65 II is the ultralight whoop designed to dominate.

Note: Due to the shortage of IMU chip ICM42688, BETAFPV team has found new IMU chips including ICM42622, BMI270, and LSM6DSK320X, and built compatible firmwares. Extensive testing confirms they all meet our strict quality standards.

Betaflight has not yet released official firmwares compatible with some of the IMU chips, so please do not flash the official Betaflight firmware and pay attention to future support updates.



Bullet Points

- Three Performance-Tuned Versions: Choose the setup that fits your style.
 - Champion: Max-power 0702 36000KV motors, GF 1207 3-B Props & ultra-light 2.20g frame for pro racing.
 - Racing: 0702 30000KV motors & GF 1207 3-B Props for razor-sharp throttle response on technical courses.
 - Freestyle: 0702 25000KV motors & GF 1219S 3-B Props for smooth, efficient, and cinematic flying.

- 0702 Brushless Motors (2026): Feature a revolutionary 0.1mm stator core, specific magnetic and winding designs for Champion, Racing and Freestyle versions.
- Matrix 5IN1 II FC: Features a robust 12A continuous ESC, 3-point mounting, and a 1.0mm thickened PCB for superior power and resilience.
- Air II Canopy: Features upgraded materials, strategic reinforcements and a redesigned curve with a 15° to 45° adjustable camera angle.
- Air65 II/Champion Frame: Its optimized ducts, connecting braces, and PP blend ensure stable, reliable flights.
- Lightweight & Thrust: An ultra-lightweight design achieves an outstanding 6.3:1 thrust-to-weight ratio in the Champion version for explosive acceleration and agile handling.

	Champion	Racing	Freestyle
Weight	16.6g	17.7g	17.8g
Frame	<u>Air65 Champion</u>	Air65 II	
Antenna	Whip	Copper pipe	
Wheelbase	65mm		
Canopy	Air II Canopy		
FC	<u>Matrix 1S 5IN1 II</u>		
ESC	1S 12A		
VTX	Onboard 5.8G 25mw~400mw		
RX	Onboard Serial ELRS 2.4G		
Camera	C03		
Motors	Champion 0702 (36000KV) - dual-ball bearings	Racing 0702 (30000KV) - brass bushings	Freestyle 0702 (25000KV) - brass bushings

Motor Connection	Soldering	JST1.25 3Pin connector	JST1.25 3Pin connector
Props	GF 1207 3-B	GF 1207 3-B	GF 1219S 3-B
Flight Time (with LAVA II 1S 320mAh Batt)	4:40	4:30	5:00
Battery Connector	<u>BT2.0 U Cable Pigtail</u>		
Recommended Battery	LAVA II 1S 280mAh/320mAh		

Three Propulsion Systems

Engineered for next-gen performance, the Air65 II is offered in three distinct versions: Champion, Racing, and Freestyle. Each is defined by purpose-built 0702 brushless motors, featuring a revolutionary 0.1mm stator core and a specific magnetic/winding design. To power these demanding setups, all versions are equipped with the Matrix 1S 5IN1 II Flight Controller, featuring a robust 12A continuous (18A peak) ESC to meet high surge currents.

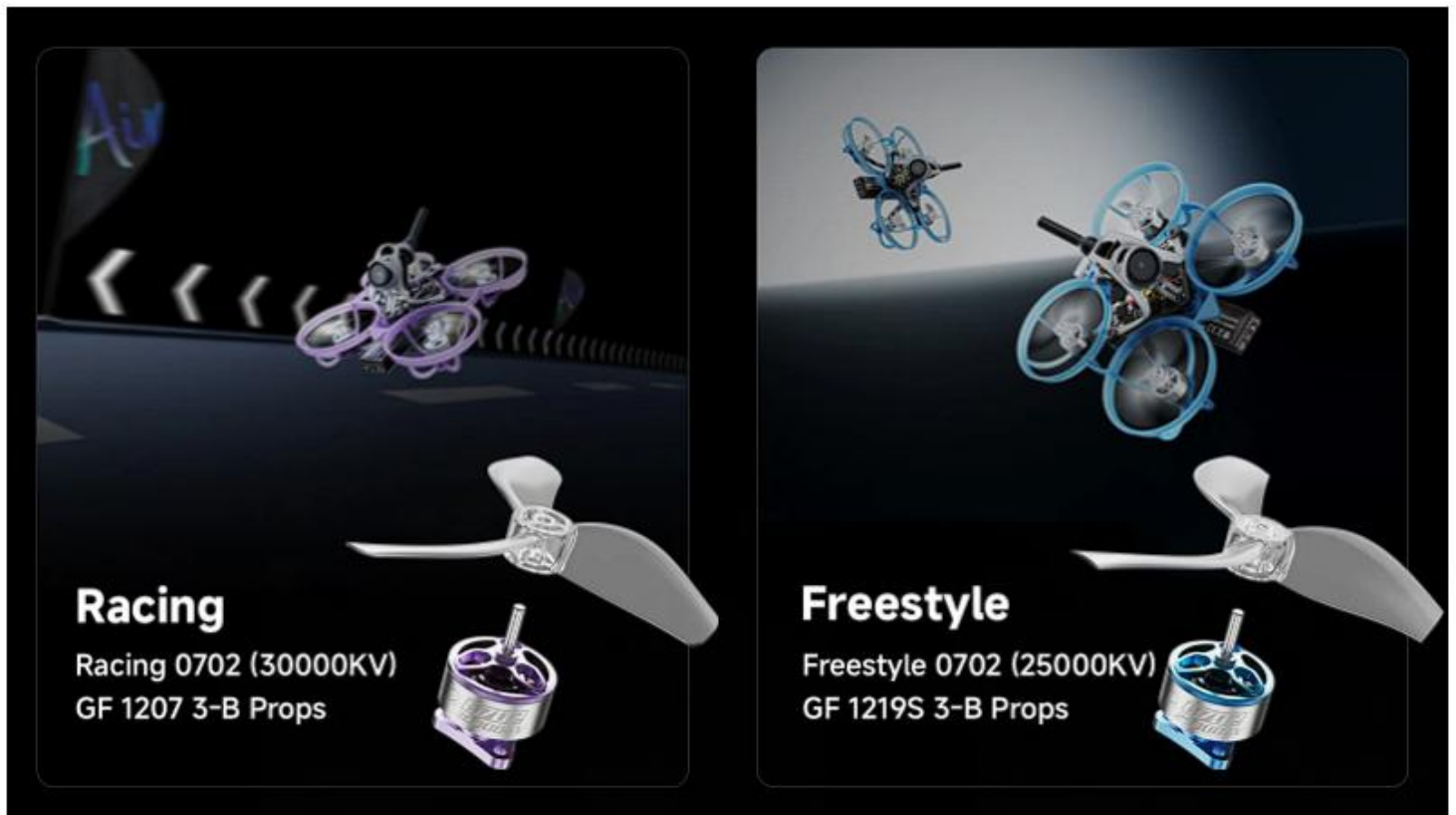
Champion

The Champion version returns as the flagship model, built for pure, professional-grade racing. Weighing only 16.6g, it features the exclusive 2.20g Air65 Champion Frame and the unsoldered Matrix 5IN1 II FC. Equipped with dual-ball bearing Champion 0702 Motors (36000KV) and lightweight GF 1207 3-Blade Props, it achieves an impressive 6.3:1 thrust-to-weight ratio for maximum acceleration and track dominance.



Racing & Freestyle

The Racing version features Racing 0702 Motors (30000KV) paired with GF 1207 3-Blade Props. This combination delivers higher RPMs and razor-sharp throttle response for agility on technical race courses. The Freestyle version is equipped with Freestyle 0702 Motors (25000KV) and GF 1219S 3-Blade Props. Optimized for smooth control and superior low-throttle torque, it enables fluid, cinematic flying.



Durability

Flight Controller

The Matrix 1S 5IN1 II FC employs a 3-point mounting system that creates cushioning space during impacts, reducing stress on core components and lowering the damage rate by up to 80%. Its 1.0mm thickened PCB and optimized layout further enhance crash resilience.

new Canopy & Frame

All versions feature the crash-resistant Air II Canopy with upgraded materials and strategic reinforcements. The Racing and Freestyle models use the durable Air65 II Frame, while the Champion employs the ultra-light Air65 Champion Frame, both designed with optimized ducts and impact-absorbing PP material to withstand brutal crashes.

Community Feedback

In direct response to valuable discussions within the FPV community regarding the durability of Air 5IN1 FC, we conducted a poll across the Tiny Whoop and BETA FPV Facebook groups. The results were clear: over 50% of pilots prioritized improved crash resilience in the Air Series. This feedback became our central design goal for the Air65 II.

