

# AOEXO Tech 5-inch FPV Airdrop Racing Drone

深圳市飞雄科技有限公司

Shenzhen AOEXO Technology Co., Ltd.

## 5-inch Carbon Fiber Long-Range Airdrop FPV Racing Drone

(Monthly production capacity: 50,000+ units, customizable configurations available)



## Product Overview

The AOEXO 5-inch FPV Airdrop Drone is designed for emergency rescue, material delivery, and special operations. Featuring a world-first remote

airdrop system with 5km BVLOS precision delivery. Built with a monocoque 5-inch carbon fiber frame, 2207 high-torque motors, and 40A 4-in-1 ESCs, it achieves speeds up to 120km/h with 6-13min flight time. Optional thermal/night vision cameras enable all-weather operation, making it revolutionary for firefighting, military/police, and wilderness rescue applications.

## Key Features

**Patented Airdrop System:** One-click remote release, 5km mmWave control, 500g payload capacity

**Military-Grade Durability:** IP54 dust/water resistance, operational from -20°C to 60°C

**Modular Design:** Customizable frame size/camera/power systems

**Smart Safety Link:** Dual-band redundant comms, auto-RTH on signal loss

## Technical Specifications

### Airdrop System

Parameter	Specification
Release Mechanism	Electromagnetic latch remote release (patented)
Control Range	5km (interference-free)

Parameter	Specification
Max Payload	500g (optional)
Drop Accuracy	$\pm 0.5\text{m}$ (hover height $\leq 50\text{m}$ )
Response Delay	$\leq 0.3\text{s}$
Attachment	Reinforced anti-slip nylon straps (200kg tensile)
Safety Lock	Dual locking + low-power auto-lock
Material	7075 aluminum alloy + carbon fiber bracket
Power Consumption	0.5W (standby)/10W (trigger)
Compatible Payloads	First-aid kits, sensors, comm relays, etc.

## Drone Configuration

### Frame Parameters

Parameter	Specification
Frame Type	5" monocoque carbon fiber (3K T300)
Wheelbase	250mm (customizable 200-280mm)
Dry Weight	400g (incl. airdrop base)

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Parameter	Specification
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Max Takeoff Weight 1200g (customizable)

Folded Size	180×120×60mm (transport mode)
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### Power System

Component	Specification
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Motors AOEXO-2207 Pro (optional)

KV Rating	1750KV (2450KV racing version optional)
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Max Thrust 1600g/motor (6S)

Cooling	Dual ball bearings + turbo airflow
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ESC AOEXO 40A 4-in-1 (optional)

Firmware	BLHeli_S 16.9 (DSHOT1200)
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Propellers Gemfan 9045 tri-blade (fiber-reinforced, optional)

Prop Weight	9.2g/prop (optional)
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Balance Factory-calibrated ( $\leq 0.05$ g error)

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## Electronics

Component	Specification
Flight Controller	F411 HD (dual gyro redundancy, optional)
Gyros	ICM42688-P (primary) + BMI270 (backup)
Blackbox	8MB Flash (1000Hz max sampling)
Video Transmitter	5.8GHz 800mW (upgradable to 1.6W, optional)
Channels	48CH (5660-5945MHz, optional)
Camera	1500TVL PNP (1/3" CMOS, optional)
Night Vision	Starlight 0.0001Lux (optional)
Lens	2.1mm (170° FOV, optional)

## Power System

Parameter	Specification
Battery Type	6S 22.2V LiPo (optional)
Capacity	1500-2500mAh (optional)
Discharge Rate	100C continuous (150C burst)

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Parameter	Specification
Charge Cycles	≥500 cycles (80% capacity retention)
Flight Time	6min (2500mAh full load)/13min (1500mAh light load)

### Performance Metrics

Parameter	Specification
Max Horizontal Speed	120km/h (dive mode)
Max Ascent Speed	15m/s (optional)
Wind Resistance	Level 6 (12m/s)
Control Range	5km (ELRS 915MHz)
Video Transmission	3km (800mW unobstructed)
Operating Temp	-20°C ~ +60°C
IP Rating	IP54 (dust/water splash resistant)

## **Applications**

**Emergency Rescue:** Deliver medical supplies (e.g., 10 epinephrine pens per drop)

**Military Ops:** Covert deployment of recon/EW modules

**Agriculture:** Precision release of beneficial insects/sensors (waterproof pod optional)

**Power Inspection:** Insulated tool delivery for line maintenance

**Racing Events:** Logo flag/smoke device deployment

Note: Performance data based on standard conditions (25°C, sea level).

Airdrop accuracy affected by wind/altitude. Custom configurations priced separately.