AOEXO 13-inch FPV Racing Drone Specifications

深圳市飞雄科技有限公司

Shenzhen AOEXO Technology Co., Ltd.

13 inch FPV drone, 7KG payload, 130KM/h range
(We supply 50,000+ drones per month, and can customize the configuration according to your needs)

Product Overview

The AOEXO 13-inch FPV Drone is engineered for high-performance applications, combining a lightweight yet ultra-durable T300 carbon fiber frame with industrial-grade components. Designed to handle **7kg max payload** and **11kg max takeoff weight**, it features a 440KV motor system and 80A ESCs to achieve **130km/h top speed** while resisting Level 6 winds and operating in extreme temperatures (-10°C to 40°C). Equipped with a **5.8GHz video transmitter** (3W power, 10km+ range), a low-light camera with **Super WDR**, and **0.00001Lux night vision**, it delivers crystal-clear imaging day or night. Optional GPS enables **±1m precision**

return-to-home, while modular ELRS/915MHz customization ensures mission flexibility. Paired with dual 8S batteries, it offers **10-minute full-load hover time**, making it ideal for professional racing, aerial cinematography, and industrial inspections.

Key Features

Heavy-Duty Payload: 6kg rated / 7kg max payload, 11kg max takeoff weight.

Extreme Speed & Agility: 130km/h horizontal speed, 670°/s tri-axis angular velocity.

Extended Flight Time: 11min hover (rated load) / 10min (full load) at sea level.

All-Weather Resilience: Operates at -10°C to 40°C, 5000m max altitude, Level 6 wind resistance.

Long-Range FPV System: 5.8GHz adjustable VTX (25mW–3W), 10km+ interference-free transmission.

Industrial Power System: 440KV 14-pole motors + 80A ESCs, 1569W peak power.

Professional Imaging: 1500TVL low-light camera, Super WDR, 0.00001Lux sensitivity.

Modular Design: GPS optional, multi-frequency customization, Betaflight/INAV compatibility.

Military-Grade Durability: T300 carbon frame, 12.9-grade alloy steel screws.

High-Efficiency Battery: 8S 7500mAh LiPo (75C discharge) for sustained power.

Technical Parameters

Aircraft Specifications

Parameter	Value
Rated Payload	6kg
Max Payload	7kg
Max Takeoff Weight	11kg
Control Range	10km+
Hover Time (0m altitude, <L2 wind)	11min (rated) / 10min (full load)
Max Tilt Angle	360°
Max Horizontal Speed	130km/h
Max Ascent/Descent Speed	12m/s / 20m/s
Max Wind Resistance	Level 6
Angular Velocity (Pitch/Roll/Yaw)	670°/s (per axis)
Receiver Frequency	ELRS 915MHz (customizable)
VTX Frequency	5.8GHz (customizable)
VTX Power Range	25mW/1.6W/2W/2.5W/3W (default: 3W)

Parameter	Value
VTX Antenna VSWR	<1.5
VTX Antenna Gain	2dB
Dimensions (L×W×H)	440×440×62mm
Wheelbase	536mm
Frame Material	T300 Carbon Fiber
Operating Temperature	-10°C to 40°C

Motor & Propeller

Parameter	Value
Motor KV	440KV
Poles	14
Max Power	1569.62W
Max Current	49.55A
Stator Size	Φ42×14mm
Motor Mount Size	M4 30×30mm

Parameter	Value
Motor Weight (Single)	246g
Propeller Size	13×9inch (3-blade)
Prop Material	Composite (Black)
Prop Weight (Single)	45.5g
Total Props	CW×2 + CCW×2

Flight Controller & ESCs

Component	Specification
Flight Controller	STM32F405, Betaflight/INAV compatible
Gyro	ICM42688-P
FC Dimensions	37×37mm
FC Weight	7g
Barometer	Bosch BMP280
BEC Output	5V/3A, 10V/2A

Component	Specification
ESC Model	AT32F421K8U7
ESC Continuous Current	80A
ESC Peak Current	85A (10S)
ESC Firmware	AM32_AT32DEV_F421_1.99
PDB Model	PDB100AM
PDC Current	100A continuous / 105A peak

Camera & VTX System

Parameter	Value
Camera Sensor	1/27" Blackinght Sensor
Resolution	1500TVL
Low-Light Sensitivity	0.00001Lux
Lens FOV	H100° / V70°
VTX Power	25mW–3W (default: 5.8GHz/3W)
VTX Frequency Range	5362–5945MHz (48CH)

Parameter	Value
VTX Antenna	RHCP SMA (3dB gain)
VTX Input Voltage	DC7–28V (2–6S)

Battery & Optional GPS

Parameter	Value
Recommended Battery	8S 7500mAh LiPo (75C)
Battery Voltage	29.6V
Battery Weight	2466g (per pack)
GPS (Optional)	
Hover Accuracy (Vertical)	±0.5m
Return-to-Home Accuracy	±1m

For detailed wiring diagrams, force efficiency tables, and advanced configurations, refer to the technical appendix.