AOEXO 10-inch FPV Racing Drone Specifications

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Product Overview

The AOEXO 10-inch FPV Racing Drone is designed for high-speed racing, aerial photography, and industrial applications. Featuring a lightweight yet durable T300 carbon fiber frame, it weighs only **1055g (without payload)** and supports a **max payload of 3.5kg** and a **max takeoff weight of 6kg**. Powered by 900KV motors and 60A ESCs, it achieves a **top speed of 165km/h**, withstands Level 6 winds, and operates in temperatures from **-10°C to 40°C**.

Equipped with a **5.8GHz video transmitter** (3W power, 10km+ range) and a low-light camera with **Super WDR** and **0.00001Lux sensitivity**, it delivers clear imaging day or night. Optional GPS enables **±1m precision return-to-home**, while modular ELRS/915MHz customization ensures mission flexibility. Paired with 6S batteries, it offers **8-minute hover time under full load**, making it ideal for racing, filming, and industrial inspections.

Key Features

Lightweight Design: Weighs only 1055g (without payload), with a T300 carbon fiber frame for strength and agility.

Heavy-Duty Payload: Rated 3kg payload, 6kg max takeoff weight for versatile tasks.

Blazing Speed: 165km/h horizontal speed, 670°/s tri-axis angular velocity for racing agility.

Extended Flight Time: 8-minute hover (full load) and 11-minute endurance (light load) at sea level.

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

Long-Range FPV: Adjustable 5.8GHz VTX (3W peak) with 10km+ interference-free transmission.

High-Efficiency Powertrain: 900KV 14-pole motors + 60A ESCs, 1930W peak power for rapid response.

Pro Imaging: 1500TVL low-light camera with Super WDR and 0.00001Lux sensitivity.

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

Military-Grade Build: T300 carbon frame + 12.9-grade alloy steel screws for impact resistance.

Technical Specifications

Aircraft Parameters

Parameter	Value
Weight (without payload)	1055g
Rated Payload	3kg
Max Payload	3.5kg
Max Takeoff Weight	6kg
Control Range	10km+

Parameter	Value
Hover Time (0m altitude, <L2 wind)	11min (rated) / 8min (full load)
Max Tilt Angle	360°
Max Horizontal Speed	165km/h
Max Ascent/Descent Speed	15m/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–3W (default: 3W)
VTX Antenna VSWR	<1.5
VTX Antenna Gain	2dB
Dimensions (L×W×H)	363×334×40mm
Wheelbase	438mm
Frame Material	T300 Carbon Fiber
Operating Temperature	-10°C to 40°C

GPS (Optional)

Parameter	Value
Hover Accuracy (Vertical)	±0.5m
Hover Accuracy (Horizontal)	±1m
Return-to-Home Accuracy	±1m

Motor & Propeller

Parameter	Value
Motor KV	900KV
Poles	14
Max Power	1930W
Max Current	72.27A
Stator Size	Φ32×14mm
Motor Mount Size	M3 19×19mm
Motor Weight (Single)	115g
Propeller Size	10×5inch (3-blade)
Prop Material	Composite (Black)

Parameter	Value
Prop Weight (Single)	26g
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
ESC Model	EFM8BB21F16G
ESC Continuous Current	60A
ESC Peak Current	70A (10S)
ESC Firmware	AM32_AT32DEV_F421_1.99

Camera & VTX System

Parameter	Value

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	4990–5945MHz (48CH)
VTX Antenna	RHCP SMA (5dB gain)

Battery (Recommended)

Parameter	Value
Capacity	10000mAh
Voltage	22.2V (6S)
Discharge Rate	75C
Weight	1360g (per pack)

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