

Light Show Formation Drone

深圳市飞雄科技有限公司

Shenzhen AOEXO Technology Co., Ltd.



Product Overview

The Feixiong Light Show Formation Drone features a carbon fiber and aluminum alloy composite structure design. It integrates the **FC-2M dual-redundant high-reliability flight control system**, a high-precision multi-frequency RTK module, dual-redundant data transmission modules, a high-efficiency propulsion system, and a high-brightness full-color lighting module. This compact, long-endurance, highly reliable, and safety-certified quadcopter platform is specifically engineered for formation light shows.

Key Features

- **Compact & Portable:** Small size for easy transportation and rapid deployment.
- **Extensible:** Supports multiple accessories such as smoke sticks, fireworks, and more.
- **High Reliability:** Equipped with the **FC-2M dual-redundant flight control system**, including redundant backups for gyroscopes, accelerometers, and magnetometers.
- **Precision Positioning:** Integrated multi-frequency RTK module with real-time positioning accuracy of **1 cm + 1 ppm CEP**.
- **Fast Performance Speed:** Maximum horizontal flight speed of **10 m/s**.
- **Robust Environmental Adaptability:** Operates in wind speeds ≤ 14 m/s and temperatures from **-20°C to 60°C**.
- **Extended Show Duration:** Up to **21 minutes** of performance flight time.
- **Anti-Interference Design:** Dual-redundant data links with dual-band operation ensure uninterrupted communication (max range: **3 km**).
- **Automation:** Features fully automated status checks with LED indicators and remote wake/sleep control via ground station software.
- **Vivid Lighting:** 24W high-power RGB LED module capable of **millions of color combinations**.

Product Specifications

Aircraft

Parameter	Details
Dimensions (Unfolded)	451×451×180 mm
Dimensions (Folded)	268×268×180 mm
Wheelbase	339.5 mm
Standard Takeoff Weight	640 g
GNSS Support	184-channel: GPS L1C/A L2C, GLO L1OF L2OF, GAL E1B/C E5b, BDS B1I B2I, QZSS L1C/A L1S L2C, SBAS

Parameter	Details
	L1C/A
Positioning Accuracy¹	1 cm + 1 ppm CEP
Max Ascent Speed	6 m/s
Max Descent Speed	6 m/s
Max Horizontal Speed	10 m/s
Max Takeoff Altitude	5000 m
Max Wind Resistance	14 m/s
Max Endurance³	30±1 min
Max Show Flight Time	21 min
Light Module Power	24W
Operating Temperature	-20°C to 60°C
Operating Humidity	≤85% RH (non-condensing)
Storage Temperature	0°C to 40°C
Storage Humidity	65±20% RH
Communication	Dual-redundant data link + Wi-Fi
Max Communication Range²	3 km

Battery

Parameter	Details
Type	LiPo 4S1P
Capacity	2250 mAh
Voltage	15.4 V
Energy	34.65 Wh

Parameter	Details
Weight	188 g
Charge Time	1–1.5 hours
Charge Temperature	0°C to 45°C
Storage Temperature	<3 months: -10°C to 45°C; ≥3 months: 23±5°C
Storage Humidity	65±20% RH

Notes

- Positioning accuracy depends on weather, baseline length, multipath effects, satellite visibility, and location.
- Data transmission range tested under interference-free, unobstructed conditions.
- Endurance tested at 101.325 kPa, 20°C, in static air, cruising at 5 m/s outside ground effect until 3 minutes of remaining flight time.