

AOEXO SkyEye Series Intelligent 4K Dual-Spectrum Gimbal (XF Platform)

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Key Features

[AOEXO Dual-Spectrum Fusion System]

- Industry-first visible light/thermal imaging intelligent co-processing platform
- AOEXO-Fusion 3.0 multispectral data fusion algorithm: 60% target recognition improvement
- 4K full-color night vision + thermal imaging with dual-channel PIP/POP free switching

[AOEXO Enhanced Features]

[Smart Operation System]

- Self-developed 3rd-gen AI tracking framework (pedestrian/vehicle/thermal signature libraries)
- Dual-spectrum cross-validation technology: 45% tracking stability improvement in complex environments

[Military-Grade Stabilization Platform]

- AOEXO ultra-slim three-axis mechanical stabilization (110g lightweight design)
- Dynamic anti-shock compensation + carrier inertial navigation for $\pm 0.01^\circ$ stabilization
- Industrial-grade wide-voltage smart power system (10–26.4VDC adaptive stabilization)

[AOEXO Intelligent Control Ecosystem]

- Deep integration with Dragonfly Pro Dual-Spectrum Edition
 - Dual-channel protocol direct-connect module (network/HDMI smart switching)
 - Smart media library with thermal/visible light data classification
 - Exclusive mission preset system (multi-gimbal collaboration modes)
- QGC Enterprise Dual-Spectrum Control Suite (custom authorized version)
 - Thermal distribution visualization module
 - Multispectral target comparative analysis tools

[Full-Scenario Deployment System]

- AOEXO quick-release installation kit (10-second upright/inverted deployment)
- GeoPro Geolocation System
 - Dual-spectrum OSD overlay (visible coordinates/thermal temperature scale)
 - Tamper-proof EXIF metadata writing (military-standard encryption compliance)

Technical Specifications

General Parameters

Parameter	Specification
Product Name	AOEXO SkyEye Series Intelligent 4K Dual-Spectrum Gimbal

Parameter	Specification
	(XF Technology Platform)
Dimensions	59 × 48.4 × 85.7 mm
Weight	110 g
Operating Voltage	10 – 26.4 VDC
Power Consumption	6.5 W (avg) / 20 W (stall)
Installation	Upright/Inverted Installation

Gimbal Parameters

Parameter	Specification
Gimbal Type	Non-orthogonal Three-Axis Mechanical Stabilization
Stabilization Accuracy	±0.01°
Controllable Range	Pitch: -135°~+100°, Roll: ±50°, Yaw: ±150°
Max Rotation Speed	200°/s

Visible Light Camera

Parameter	Specification
Image Sensor	1/2.8" CMOS, 8.29MP
Focal Length	6.0 mm (40.6 mm equivalent)
Aperture	f/1.0
Field of View (FOV)	HFOV: 54.7°, VFOV: 30.2°, DFOV: 63.2°
Resolution	3840(H) × 2160(V)
Pixel Size	1.45 μm(H) × 1.45 μm(V)
Digital Zoom	8× Equivalent

Thermal Imaging Camera

Parameter	Specification
Sensor Type	Uncooled Vanadium Oxide (VOx) Microbolometer
Focal Length	10.0 mm (112.7 mm equivalent)
Aperture	f/1.0
Field of View (FOV)	HFOV: 17.5°, VFOV: 13.2°, DFOV: 21.8°
Resolution	256(H) × 192(V)
Pixel Size	12 μm(H) × 12 μm(V)
Spectral Range	8–14 μm
Sensitivity (NETD)	<50mK @25°C

Target Detection Performance

Visible Light (EN62676-4:2015 Johnson's Criteria)

Target Type	Detection	Recognition	Verification
Pedestrian [1]	2,069m	517m	259m
Small Vehicle [2]	6,345m	1,586m	793m
Large Vehicle [3]	13,517m	3,379m	1,690m

Thermal Imaging

Target Type	Detection	Recognition	Verification
Pedestrian	417m	104m	52m
Small Vehicle	1,278m	319m	160m
Large Vehicle	2,722m	681m	340m

Reference Sizes:

[1] Pedestrian: 1.8×0.5m (0.75m critical size)

[2] Small Vehicle: 4.2×1.8m (2.3m critical size)

[3] Large Vehicle: 6.0×4.0m (4.9m critical size)

AI Multi-Target Detection & Tracking

Parameter	Specification
Target Size	16×16 – 128×128 px
Recognition Speed	<40 ms
Tracking Speed	±32 px/Frame
Update Rate	30 Hz
Output Latency	≤5 ms

Photo & Video

Parameter	Specification
Photo Format	JPEG
Max Photo Resolution	3840 × 2160
EXIF Data	Geolocation Coordinates
Video Format	MP4
Max Video Resolution	3840×2160 @30fps (Recording) / 1920×1080 @30fps (Streaming)
Codecs	H.264, H.265
Streaming Protocol	RTSP

Storage

Parameter	Specification
Supported Media	microSD Card (Max 256GB, U3/V30 or higher)

Environmental

Parameter	Specification
Operating Temperature	-20°C to 50°C
Storage Temperature	-40°C to 60°C
Humidity	≤85% RH (Non-condensing)

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