OPTOSKY Spectroscopy Solutions

Datasheet

UAV Gimbal

ATH0001

Features

- High-precision 3-axis gimbal
- Wide 3-axis rotation range
- Adjustable 3-axis rotation speed
- Plug-and-play installation
- Lightweight, high-strength design
- Independent gimbal controller
- DJI flight system integration
- Compact and lightweight
- High payload capacity

Application

- Public Security
- Power (Electricity)
- Water Quality
- Agriculture
- Zoom Aerial Photography
- Remote Sensing

Description

The Optosky ATH0001 is a high-stability 3-axis gimbal, renowned for its exceptional stability and precise control. Equipped with an advanced control system and precise mechanical structure, it ensures stable performance during flight. The 3-axis stabilization effectively compensates for vibrations and tilts, keeping the gimbal in the ideal position and angle.

Featuring state-of-the-art attitude detection sensors and control algorithms, the ATH0001 can detect the camera's current orientation in real time. Through precise control with brushless DC motors, the camera remains stable regardless of the UAV's movement, ensuring clarity and stability in footage.

This gimbal also offers high customization and expandability, allowing users to adjust settings to optimize shooting results. It supports rapid 90° downward orthographic shooting and stabilizes in roll, pitch, and yaw directions. Its integrated shock absorption significantly reduces mechanical vibrations, making it ideal for applications in public security, power utilities, water quality monitoring, agriculture, and zoom aerial photography.

Figure 1: High-Stability Gimbal for UAVs

1503 Bld. A04, 3rd Software Park, Jimei, Xiamen, 361005, China
Tel: +86-592-6102588

1. Parameter

S/N	Specifications:	ATH0001	ATH0001-1	ATH0001-2	ATH0001-3
1	Maximum Load Capacity	1kg	1kg	2kg	3kg
2	Operating Voltage	12V			
3	Static Operating Current	250mA	250mA	500mA	800mA
4	Operating Temperature	-20-60℃			
5	Angular Vibration	±0.02°			
6	Controlled Rotation Range	Yaw Angle: ±290° Roll Angle: ±90° Pitch Angle: -40° to 90°			
7	Structural Design Rotation Range	Yaw Angle: ±290° Roll Angle: ±90° Pitch Angle: -40° to 90°			
8	Maximum Control Speed	Yaw Rate: 300°/s Roll Rate: 300°/s Pitch Rate: 300°/s			
9	Weight	700g	850g	1.5kg	2kg
10	Dimensions	145*130*220 mm	220*130*145 mm	316*176*205 mm	271*240*206mm

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2. Physical Image of High-Stability Gimbal for UAVs

Figure 2: Physical Image of High-Stability Gimbal for UAVs

Figure 3: Physical Image of the High-Stability Gimbal for Drones

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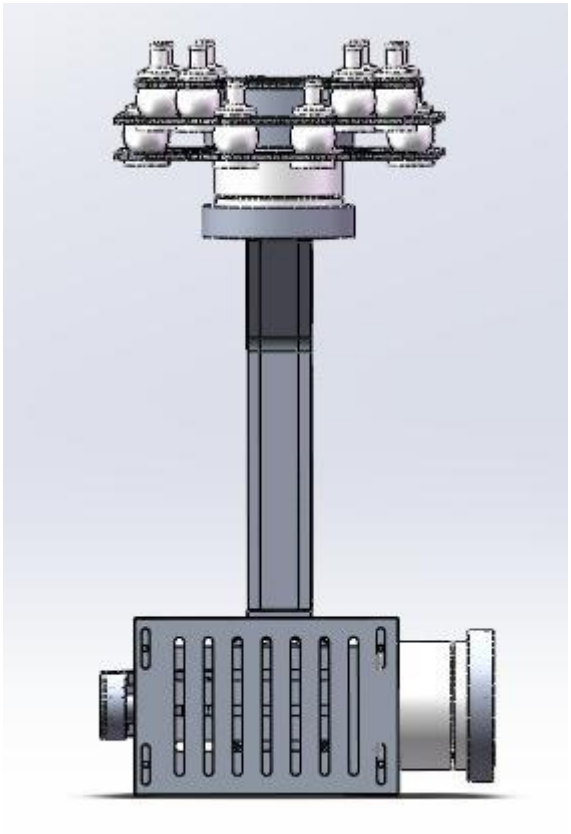

Figure 4: High-Stability Gimbal for UAVs

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3. Example of Hyperspectral Applications with High-Stability Gimbal Mounted on UAV

Figure 5: UAV Mounting Experiment

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