

MYK- 2A/3LG-IR 640 X 512 /30X EO 1920 X 1080/Ta-Tr LRF

Two-axis Three-light Gimbal Camera (High Precision Positioning)

1. Product Introduction

The **MYK- 2A/3LG-IR 640 X 512 /30X EO 1920 X 1080/Ta-Tr LRF** gimbal camera consists of an uncooled infrared thermal imager, 30x continuous zoom visible light camera, a laser ranging machine, an inertial guidance, a two-axis servo-stabilized platform and image processing components. It features high precision and low latency. It can be integrated to the small unmanned aerial vehicles to finish 24-hours security and surveillance tasks in the target area.

The gimbal camera can detect, identify, and track the ground targets for 24 hours both in daytime and nighttime. It also supports for infrared and visible light videos streaming in real time.

The gimbal camera has been adapted to a number of mainstream domestic flight control platforms, docked seamless with the flight control. It can be accessed to the unit's ViewControlStudio display and control software platform that can assist the overall unit in quickly completing the development of the unmanned aircraft system.

The application includes security and surveillance, search and rescue, and forest fire prevention .

2. Physical Picture



3. Product Functions

- a) Identify and track typical targets.
- b) Self-check and fault report.
- c) Visible light 30x optical zoom.
- d) Output infrared and visible light images.
- e) Optical zoom, autofocus, manual focus and low illumination.
- f) Infrared 1~4x electronic zoom, 6 kinds of color palette switching.
- g) Laser ranging.
- h) Freely rotate in azimuth and pitch angle.
- i) Manual search/servo/attitude stabilization/tracking.
- j) Receive instructions from the control station and complete the operations accordingly.
- k) Isolate the disturbances of the carrier, stabilize the line of sight

- l) Lock/unlock the target, output the image with a tracking frame after the target is locked.
- m) Auto track the target and resist interference.
- n) Memory tracking with rapid target reacquisition.
- o) Adjust size of the wave gate.
- p) p) Switch tracking point.
- q) Calculate target coordinates through laser ranging and UAV information.
- r) Outputs system working status, camera working status and optical axis position through RS232/100Mbps Ethernet with the control station.
- s) HD-SDI/Hundred Gigabit Network Multiple Video Output Interface.
- t) Photo taking and video recording.
- u) High Precision Positioning

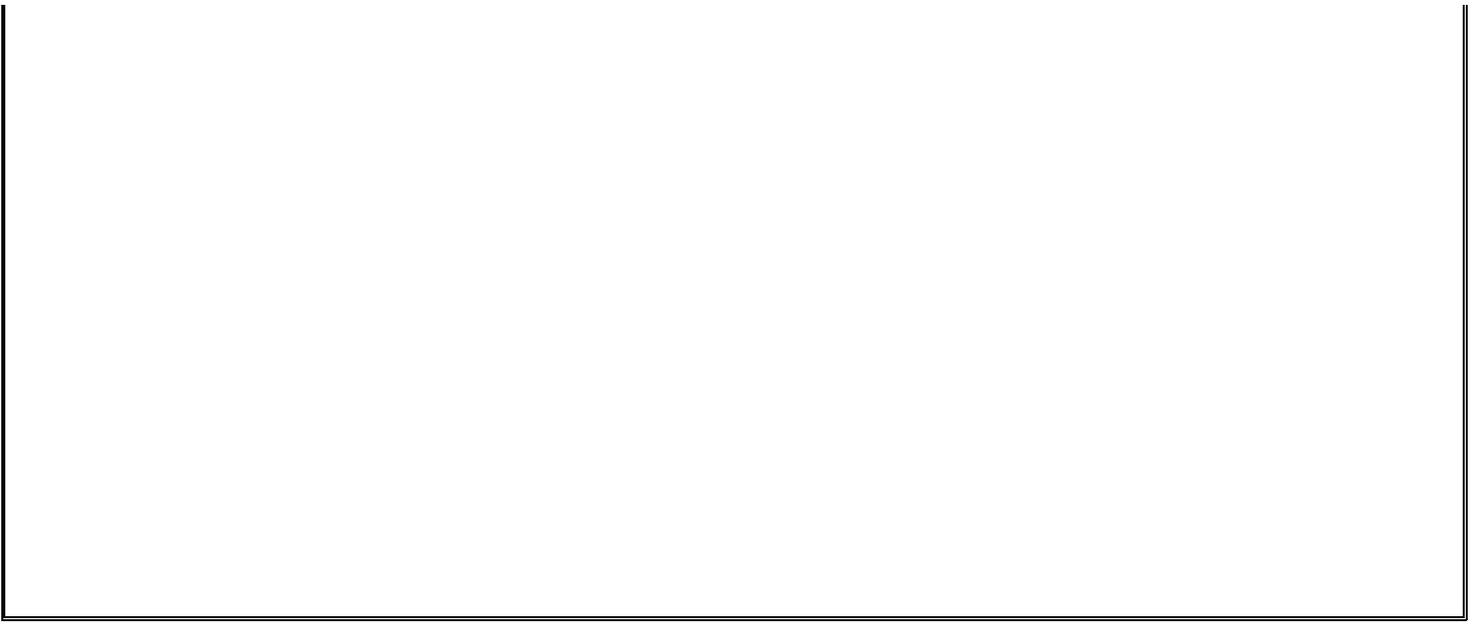
4. Mounting Platforms

Dropped fixed-wing drones, rotary-wing drones, tethered drones, etc.

5. Main Technical Parameters

Model	MYK- 2A/3LG-IR 640 X 512 /30X EO 1920 X 1080/Ta-Tr LRF
Infrared Thermal Imager	
Detector Type	Uncooled Focal Plane Detector
Working Waveband	8 μ m - 14 μ m
Detector Resolution	640 \times 512
Pixel Size	12 μ m
Lens Focal Length	45mm
Field of View	9.7 \times 7.8 $^{\circ}$ (\pm 5%)
Palette	6
Electronic zoom	1 \sim 4X
Noise Equivalent Temperature Difference	NETD \leq 50mK
Minimum Resolvable Temperature Difference	MRTD \leq 500mK
Visible Light Camera	
Resolution	1920 \times 1080
Response band	0.4 μ m \sim 0.9 μ m
Pixel Size	2.8 μ m
Optical Zoom	30 times
Hybrid Zoom	60 times
Focal Length	4.3mm \sim 129mm
Field of View Angle	63.7 $^{\circ}$ \times 35.8 $^{\circ}$ \sim 2.3 $^{\circ}$ \times 1.3 $^{\circ}$ (\pm 5%)
Zoom	Auto focus, manual focus
Minimum Illumination	0.01Lux(Black and white)
Laser Ranging Machine	
Maximum Ranging Distance	\geq 3km (under the condition of visibility \geq 15Km)

Minimum Ranging Distance	≤20m
Ranging Accuracy	≤2m
Ranging Frequency	1 ~5 Hz
Servo Platform	
pan angle	360°×n (360° continuous rotation)
tilt angle	-120° ~ +90° (positive upward)
Angular Position Accuracy	≤0.2° (1σ)
Stabilization Accuracy	≤0.1mrad (1σ)
Maximum Angular Velocity	Azimuth≥60°/s, Pitch≥60°/s
Maximum Tracking Angular Velocity	Azimuth≥50°/s, Pitch≥50°/s
System parameters	
Image Tracking	Automatically track selected targets
AI Recognition	Automatically detect and recognize typical targets
Rated Working Voltage	24VDC
Voltage	20- 32VDC
Consumption	Stable Power Consumption: ≤30W (power-up peak current ≥5A)
Weight	≤2Kg
dimensions	≤165mm×206.5mm×159mm
Interface	
Control Interface	RS422/100 Mbit
Video Interface	100 Mbit (HD-SDI optional)
Storage Interface	≤128G Memory Card (Micro SD Card)
Picture Format	jpg Format
Video Format	avi Format
Environmental Adaptability	
Working Temperature	-20°C~ +60
Storage Temperature	-55°C~ +70°C
Vibration Condition	Acceleration of 2g; 30 minutes in each of the vertical, lateral and longitudinal directions.
Impact Condition	Peak acceleration of 20g, duration of 11ms
Protection Level	IP64



6. Mechanical Dimensions and Installation Interfaces

