

# LN100

Two-axis gyro-stabilized dual-optical gimbal

Product Usage Instructions



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## Product Overview

It has the function of visible light dual-field imaging

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## Functional features/application scenarios

It features high-precision two-axis stability

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## Technical parameters

It has the functions of character overlay and picture-in-picture

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It has the functions of character overlay and picture-in-picture

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It has the function of recognizing specific targets

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It has the function of multi-target tracking and target locking

## Product overview

The LN100 two-axis gyro-stabilized dual-optical pan-tilt adopts a miniaturized and lightweight industrial design. Built-in 4k fixed-focus visible light camera and long-wave uncooled infrared imaging component. It is also equipped with anti-delay, A-target recognition and multi-target tracking modules. It features high-precision image guidance, low latency and other characteristics. It is mainly applied in the monitoring fields of imaging, detection, tracking and identification of ground targets, meeting the requirements of line guidance and first-person perspective, etc.

### Get to know the LN100



- |                      |                     |                          |
|----------------------|---------------------|--------------------------|
| ① Visible light      | ④ Orientation frame | ⑦ Electronic hatch cover |
| ② Long-wave infrared | ⑤ Electronic cabin  | ⑧ Ear cups               |
| ③ Front cover        | ⑥ Socket            | ⑨ Rear hood              |

- After using the pod, please store the equipment in a dry environment
- Infrared thermal imaging lenses must not be aimed at strong energy sources such as the sun, laser beams, lava, etc., otherwise it will cause irreparable damage to the thermal imaging module
- Be sure to wipe the dirt on the surface of the lens with a soft and dry cleaning cloth
- Do not touch the surface coating of the infrared lens directly with your hands or scratch it with hard objects
- The external pin port of the pod serial port must not be connected to the power supply

## Functional features

- It has the function of visible light dual-field imaging
- It is equipped with high-precision two-axis stability function, fully isolating the azimuth and pitch Angle movement of the carrier
- It features multiple working modes such as manual, tracking, following and collection
- It has the functions of character overlay and picture-in-picture
- It has the function of taking photos and recording videos simultaneously with visible and dual lights, and supports post-event analysis
- It has the functions of anti-template drift and anti-occlusion tracking that integrate deep learning algorithms
- It is equipped with an end-to-end delay resistance function. The target selection targets exactly where it is pointed, and the moving target is precisely locked
- It has a specific target recognition function and can automatically identify four types of targets: people, vehicles, ships and aircraft, and supports adsorption tracking
- It has multi-target tracking function, and the target is locked by keyboard and voice numbering
- It is equipped with real-time status monitoring functions for sensors and products
- It has the function of remote web page upgrade
- Support keyboard control of the pod

## Application scenarios



### Dual-field imaging

Balancing large-scale target capture and detail recognition, it enhances the detection efficiency and target identification accuracy in complex scenarios.



### Automatic tracking function

No parameters need to be input by the user. The target can be directly selected with one click, which is convenient for users to apply in scenarios where quick target selection is required.

## Technical parameters

### Single-target tracking

Target type	General objective
Tracking rate	≥32 pixels per frame
Update frame rate	≥50FPS

### Environmental parameters

Working temperature	-20°C~60°C
Storage temperature	-45°C~ 70°C
Impact	400g

### Servo control

Course range	±150
Pitch range	-90°~ 30°
angular accuracy	≤0.3°
Angular velocity	≥60°/s
Angular acceleration	≥ 150°/S <sup>2</sup>

### Video and Storage

Photo format	JPEG
Video format	MP4, TS
Encoding format	H.264, H.265
Video Protocol	RTSP, UDP, etc
Storage	Maximum 2T

### A wide field of view of visible light

Frequency band	0.4μm~0.9μm
Resolution	3840x2160
Focal length	10.44mm
Perspective field	42.1°x 23.7°
Detection distance	People 0.65km, car 3.9km
Recognition distance	People 0.16km, car 1km

### Interface size

Size	≤Φ64mmx90mm×70mm
Weight	≤260g
Power supply	12~ 28VDC
Power consumption	10w(average) 20w(peak)
Interface	Serial port 100-megabit network
Video interface	100-megabit Network

### Multi-object tracking

Target type	People, vehicles, ships, planes
Recall rate	≥90%
Precision rate	≥80%
Target size	Minimum 32x32 @1080P
The number of tracking targets	≥20
Track the jump rate	≤15%
Update frame rate	≥20FPS

### Thermal imaging

Working band	8μm~14μm
Resolution	640x512
Pixel	12μm
Focal length	19mm/F1.0
Field of view	23°x18.4°
Detection distance	People1.0km, car 2.4km
Recognition distance	People0.25km, car0.61km

## Competitive product comparison

### Linkfly

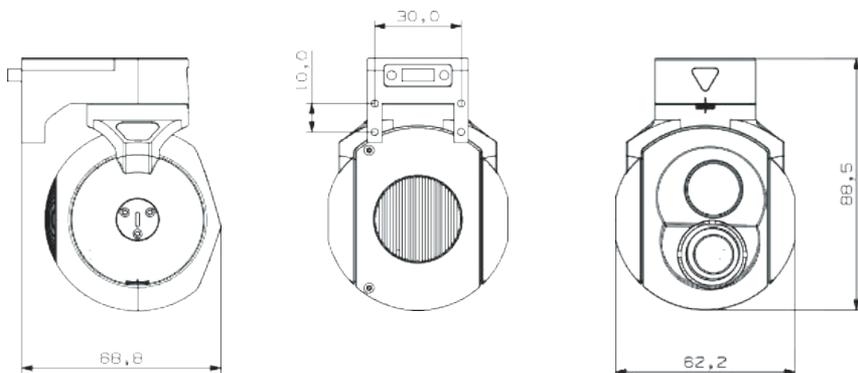
- ✓ **Multi-object tracking**  
Incorporate multiple AI algorithms
- ✓ **The built-in storage is up to 2T**  
Far exceeding the low storage of peers
- ✓ **No need to remove the card**  
It can be browsed  
downloaded and deleted on the web
- ✓ **Strong wind resistance**  
Fear not the fierce wind

VS

### Other brands

- ✓ **Single-target tracking**  
Without the support of AI algorithms
- ✓ **256/512G**  
It fails to meet the users' demands
- ✓ **The card needs to be removed.**  
Please remove the card to preview,  
download and delete
- ✓ **Weak wind resistance**  
Poor performance

## Dimensional structure



## Interface description

Serial number	Signal definition	Wiring instructions	Signal description
1	POWER IN+	Positive power supply	Positive terminal of power input: Input rated voltage 10-28V(typical 24V)
2			
3			
4	POWER IN-	Negative terminal of the power supply	The negative terminal of the power input
5			
6			
7	NET TX+	DB9 female head -1	3.3V TTL communication serial port
8	NET TX-	DB9 female head -2	
9	DGND	DB9 female head -5	
10	NET TX+	RJ45/Crystal Head -1	100-megabit network
11	NET TX-	RJ45/Crystal Head -2	
12	NET RX+	RJ45/Crystal Head -3	
13	NET RX-	RJ45/Crystal Head -6	

THANKS