

Mini L10TR

Intelligent Photoelectric Pod

Product Usage Instructions



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Product Overview

Visible light and infrared videos are stored synchronously

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Functional features/application scenarios

Support setting of storage format and duration

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Technical parameters

Support real-time locking and tracking of moving targets

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It has an anti-occlusion tracking function

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Interface description

Support numbering tags for up to 20 typical targets

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Shipment list

Support keyboard control of the pod

Product overview

The Mini L10TR is a three-axis gyro-stabilized four-optical gimbal, featuring an integrated industrial design. It is equipped with a 48-megapixel 10x hybrid zoom visible light camera, an infrared camera, and a laser rangefinder. It can be widely adapted to various micro and small rotary-wing unmanned aerial vehicles, mainly applied in the fields of ground target imaging, detection, tracking and identification, meeting the needs of line inspection, accident investigation, emergency rescue, law enforcement evidence collection, anti-terrorism and anti-violence, etc.

Get to know Mini L10TR



- | | | |
|--------------|---------------------|---------------------------|
| ① Wide-angle | ④ Long focal length | ⑦ Front cover |
| ② Laser | ⑤ Orientation frame | ⑧ Remove the ring quickly |
| ③ Infrared | ⑥ Shock absorber | 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

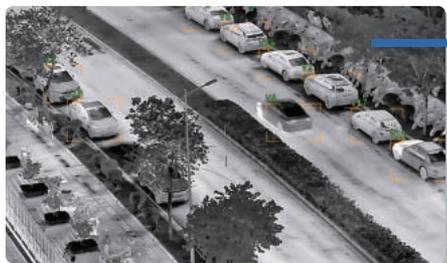
- It has the dual-light imaging function of visible light and long-wave infrared
- It is equipped with mechanical stability for three-axis gyroscopes and electronic image stabilization functions
- It features multiple working modes such as manual tracking, image tracking, geographic tracking, scanning, follow-up, collection, and linear motion compensation
- It features PIP picture-in-picture and dual-spectrum on-screen comparison functions
- It is equipped with laser ranging and combines GNSS/IMU to achieve geographic coordinate calculation
- Visible light and infrared videos are stored synchronously, with support for setting storage formats and durations
- Based on trajectory prediction, it supports real-time locking and tracking of moving targets
- It supports the recognition of typical targets such as people and vehicles and can automatically track and identify targets within a certain range
- Supports the numbering marking of up to 20 typical targets and supports numbered target locking
- Real-time monitoring and display of the working status of sensor components
- Support web-based parameter configuration and firmware upgrade
- Support keyboard control of the pod

Application scenarios



500m to view license plates

License plates can be clearly identified at a distance of 500 meters. Long-distance detection avoids disturbing at close range, quickly locks onto the target, and improves the efficiency and practicality of evidence collection in scenarios such as traffic law enforcement and security monitoring.



Thermal imaging

Infrared color plates are abundant and can be applied in forest fire fighting, river sewage discharge, photovoltaic inspection, emergency rescue, military and police reconnaissance, wildlife protection, etc.

Technical parameters

Fixed-focus visible light

Working band	0.4μm~0.9μm
Resolution	8000×6000
Focal length	4.64mm
Equivalent focal length	24mm
Field of view	69.2°×51.9°

Zoom visible light

Working band	0.4μm~0.9μm
Resolution	8000×6000
Focal length	15.3mm~50.3mm
Equivalent focal length	80mm~262mm
Field of view	23.6°×7.3°

Long-wave infrared

Working band	8μm~14μm
Resolution	640×512
Focal length	19mm/F1.0
Field of view	23°×18.4°

Laser ranging

Working wavelength	905nm
Ranging range	5~1500m
Ranging accuracy	±2m
Ranging frequency	1Hz

Single-target tracking

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

Multi-target tracking

Target type	People, cars, ships, planes
Recall rate	≥90%
Precision rate	≥80%
Minimum target size	32x32 @1080P
Tracking quantity	≥20
Track the jump rate	≤15%
Update frame rate	≥25FPS

Video and Storage

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

Environmental parameters

Working temperature	-20°C~55°C
Storage temperature	-45°C~70°C

Interface size

Size	≤95mm×97mm×147mm
Weight	≤400g
Power supply	11~ 28VDC
Power consumption	15w(average) 30w(peak)
Interface	Serial port 100-megabit network, SBUS
Video interface	100-megabit Network

System performance

Course range	±170°
Pitch range	-120°~ 45°
Roll range	±45°
Stable accuracy	≤100urad
Angular velocity	≥60°/s
Angular acceleration	≥90°/s ²

Competitive product comparison

Mini L10TR

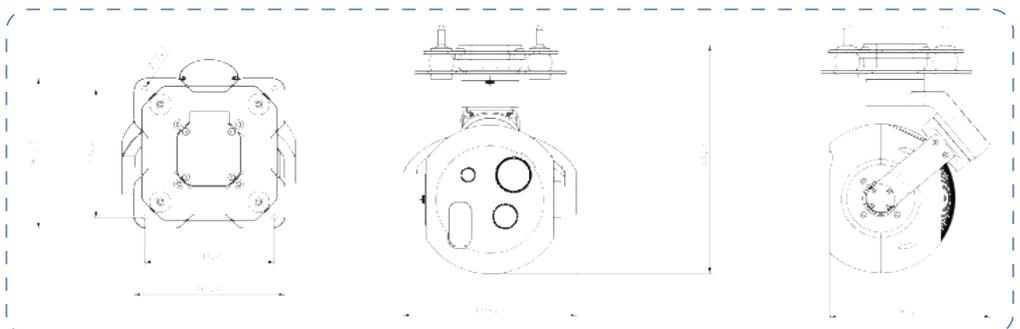
- ✓ **Multi-object tracking**
Incorporate multiple AI algorithms
- ✓ **The built-in storage is up to 2T**
Far exceeding the low storage of peers
- ✓ **No need to remove the card**
It can be browsed
downloaded and deleted on the web
- ✓ **Strong wind resistance**
Fear not the fierce wind

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
1	+12/24V	The banana head is red
2		
3	DGND	Banana head black
4		
5	RS422RXP	DB9 female head -1
6	RS422RXP	DB9 female head -2
7	RS422_TXP	DB9 female head -3
8	RS422_TXN	DB9 female head -4
9	DGND	DB9 female head -5
10	SBUS IN	RJ45-1
11	DGND	RJ45-2
12	NX GBE PO	RJ45/ Crystal Head-3
13	NX GBE NO	RJ45/ Crystal Head-6
14	NX GBE P1	RJ45-3
15	NX GBE N1	RJ45-6

THANKS