

SYK-30L TIRM Triple-Sensor

3-Axis Gimbal Camera

V1.0

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FOXTECH

Description

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Product Profile

Introduction

SYK-30L TIRM equipping a 30X optical camera, a thermal sensor, an 1800 m rangefinder, and a laser night vision sensor, is a powerful and cost-effective gimbal camera for fire fighting, forestry safety, search & rescue, etc.

The SYK-30L TIRM equips a 2.07 MP 1/2.8" CMOS sensor, and produces videos with 1080P@30fps quality.

Professional 3-axis stabilization technology provides $\pm 0.01^\circ$ stabilizing accuracy, helping produce clear and stable images even in wind conditions.

SYK-30L TIRM supports $-20^\circ\text{C} \sim 150^\circ\text{C}$ temperature measurement including the highest temp, lowest temp, FOV center temp, area temp, and temperature bar display with a $\pm 2^\circ\text{C}$ accuracy.

Dual-sensor object tracking function can track static or moving targets easily.

SYK-30L TIRM also equips an 1800 m rangefinder, helping locate the object with its latitude, longitude height, etc.

Starlight sensor coupled with a laser night vision sensor can provide clear images even in a dark environment, and with a thermal sensor, SYK-30L TIRM can capture the subject in no time and largely improve the working efficiency.

Specifications

Optical Camera	
Sensor	1/2.8" CMOS
Total Pixels	2.07 MP
Video Resolution	1080P@30 fps
Image Resolution	1920*1080
Optical Zoom	30X f:4.3~129 mm
Digital Zoom	12X
FOV	Horizontal: $63.7^\circ \sim 2.3^\circ$ Vertical: $40^\circ \sim 1.4^\circ$ Diagonal: $52.1^\circ \sim 2.8^\circ$
Detect Distance	Human: 1947.1 m; Car: 2559.1 m
Recognize Distance	Human: 389.4 m; Car: 511.8 m
Verify Distance	Human: 194.7 m; Car: 255.9 m
Min Illumination	Color: 0.01 Lux/F 1.6 B&W: 0.0015 Lux/F 1.6

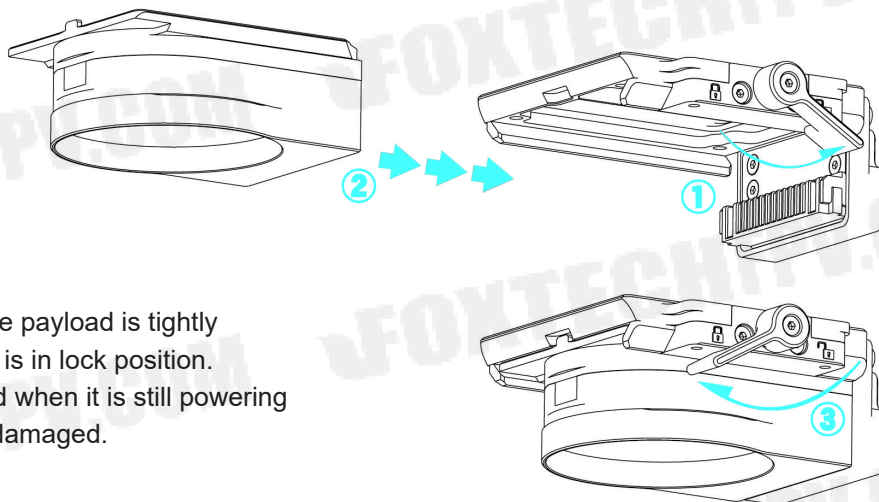
Thermal Sensor	
Sensor	Amorphous silicon infrared microthermal radiometer
Pixel Size	17 μm
NETD	<50 mk(@25°C)
Pseudo Color	White thermal, black thermal, etc.
Resolution	640*480
Video Resolution	640*480@25 fps
Focal Length	25 mm
FOV	Horizontal: 24.6° Vertical: 18.5° Diagonal: 30.4°
Detect Distance	Human: 735.3 m;Car: 2254.9 m
Recognize Distance	Human: 183.8 m;Car: 563.7 m
Verify Distance	Human: 91.9 m;Car: 281.9 m
Operating Band	8 μm ~14 μm
Measure Range	-20~150°C
Point Measurement Area	4*4 Area in the center
Measure Mode	Temp bar, highest temp, lowest temp, FOV center temp, area temp
Measurement Accuracy	$\pm 2^\circ\text{C}$
Full Image Highest&Lowest Temp Tracking	Support
Object Tracking	
Update Rate	50 Hz
Min Object Contrast	5%
Object Memory Tracking	Support (100f/4s)
Object Size	16*16~128*128 Pixel
Rangefinder	
Band	905 nm
Distance	5~1800 m (Vertical reflector with 12m diameter, 20% reflection)
Measure Accuracy	$\pm 0.3\text{ m}$ (<300 m)/ $\pm 1\text{ m}$ (>300 m)
Launch Angle	2.5 mrad
Measure Method	Pulse
Power	<1 mW (Safe to eye)

Laser Night Vision	
Band	850±10 nm
Effective Distance	≤500 m
Laser Angle	8°+30°
Protect Level	3FDA, IEC-3B
Video	
Single Ethernet Output	Support
Video Switch	Support
Video Compression	H.264/H.265
Storage	TF Card(128 G Max)
Internet Protocol	RTSP,UDP
Gimbal	
Stability	±0.01°
Max Control Speed	Yaw: ±200°/s Pitch: ±200°/s
Control Range	Yaw: ±360°(Unlimited) Pitch: -120°~+60°
Working Temperature	-20℃~+60℃
Storage Temperature	-20℃~+60℃
Working Humidity	≤85%RH(Non-Condensing)
Protect Level	IP43
Weight	1110 g(Camera With Gimbal)/85 g(Gimbal)
Power Consumption	21.4 W(Average)/50.4 W(Max)
Power	DC 21~53 V
Control Method	Ethernet/Serial Port/SBus
Video Resolution	Mode 1: 720P@30fps(Storage to TF Card)/1080P@30fps(Output) Mode 2: 1080P@30fps(Storage to TF Card)/720P@30fps(Output)

Quick-Mount Structure

Mount

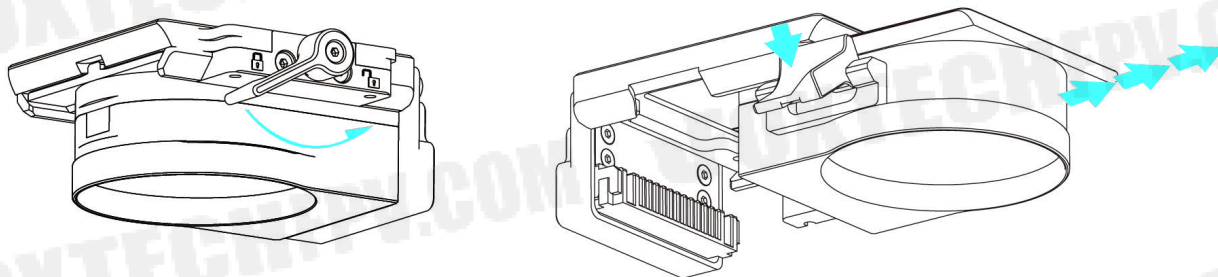
Flip the lock hook to the unlock position and push the payload into position along the rail until there is a slight Clicking sound, which indicates that it is securely in place, then flip the lock hook to lock the payload.



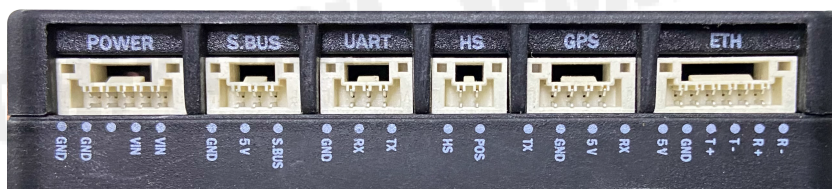
Please make sure that the payload is tightly locked and the lock hook is in lock position. Do not detach the payload when it is still powering on, or the device will be damaged.

Detach

Flip the lock hook to the unlock position, press down the lock on the other side and take down the payload.



Interface



Software

Interface Introduce



- ① Pseudo color switch
- ② Laser night vision mode on/off
- ③ Laser rangefinder on/off (displayed on the menu bar above the display area)
- ④ Pic-in-pic display mode switch
- ⑤ Switch from Follow Mode to Free Mode

Software Configuration

IP Address: rtsp://192.168.1.108

Subnet Mask: rtsp://192.168.1.108:554/stream1

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<https://www.foxtechfpv.com/syk-30l-tirm-four-sensor-3-axis-gimbal-camera.html>

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