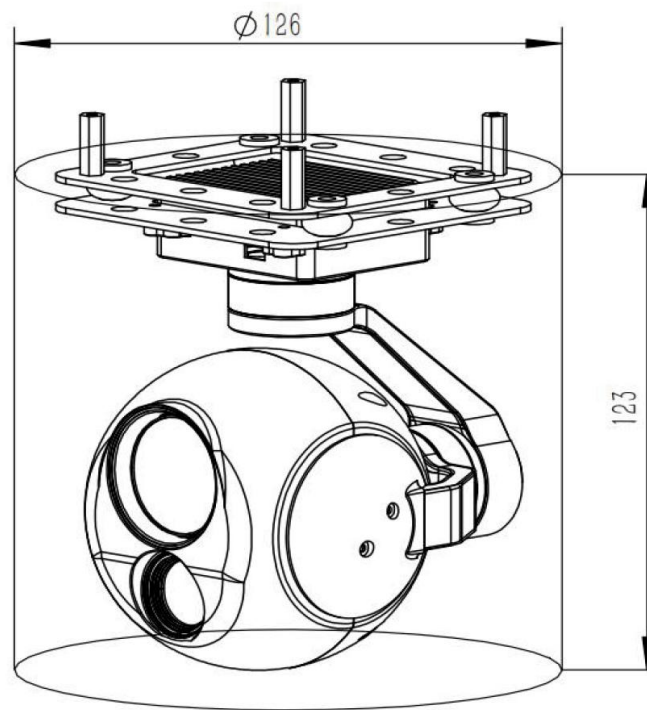## Functional characteristics

- 70x hybrid zoom
- 4 picture-in-picture modes
- 10 thermal imaging pseudo-color modes
- 640*512 thermal imaging
- AI Target Detection and Tracking
- Micro-sd card dual-channel record, remote access to Micro-sd card

Whole structure

Note①: "serial port" refers to: 3.3V, LVTTL UART.

	Voltage	DC 12V-26V
	power	Dynamic 6.5W
Operating characteristic	Roll Angle action range	-45~+45°
	Pitch action range	-45~+100°
	Yaw angle action range	-140°～ +140°
	The amount of angular jitter in pitch and roll direction	±0.02°
	The amount of horizontal Angle jitter	±0.03°
	One-key return function	One-click automatic quick return to the initial position
	The speed of the gimbal control is adjustable	The speed adaption is carried out based on the current speed mode and the multiple of the visible light camera.
	Control mode	Support network IP control, SBUS control, serial port control (optional PWM control)
White light camera parameters	CMOS Size	1/2.8 inch 8 megapixel CMOS SENSOR
	Optical zoom	10x 4K optical zoom lens, f=5.15±5%～47.38±5%mm
	Digital Zoom	7x digital zoom
	focusing time	Real-time fast focusing function, focusing time <1S
	Video output	Ethernet RTSP output 1080P, storage in micro-sd card 4k
	Field angle（FOV）	D : WIDE 69.5º±5% TELE 7.95º±5% H : WIDE 61.5º±5% TELE 7.00º±5% V : WIDE 35.0º±5% TELE 3.97º±5%
	Support mode	4K 30 fps
Thermal imagery	Resolution ratio	640×512 pixel
	Space between pixels	12μm
	Type	Uncooled vanadium oxide
	Wavelength Range	8～14μm
	Thermal sensitivity(NETD)	≤50mk@25℃@F1.0
	Digital Zoom	9x digital zoom
	Field angle	13mm camera lens, FOV：32.9x26.6
	Measurement function (optional)	Central point, the highest temperature and lowest temperature display temperature function; Supports global temperature measurement

Target recognition and tracking	Minimum tracking target size:	16×16 pixels
	Maximum tracking target size:	256×256 pixels
	Maximum occlusion time:	2 seconds
	Maximum speed supported:	50 pixels/frame
	Maximum number of recognitions:	100
	Recognized categories:	people and cars
	Minimum recognized size:	32×32 pixels
Dimensions		φ:126mm H:123mm
Oerating Environment		-10℃ to +55℃ / 20% to 80% RH
Storage Conditions		-20℃ to +60℃ / 20% to 95% RH
Main application		UAV/Drone Photography
Weight		340±10g

Pseudo color switch

Visible light

Visible light +Thermal infrared

Thermal infrared

Thermal infrared + Visible light

Tx+
Tx-
Rx+
Rx-
S.BUS
GND
RX
TX
GND
VCC

MICRO-SD
CARD
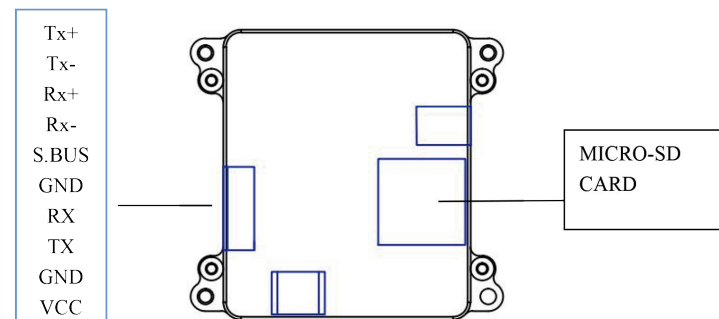
Serial number	Model	Interface type	Interface definition	Functionality
1	10PIN socket	Communication port	Tx+	Network interface
2		Communication interface	Tx-	Network interface
3		Communication interface	Rx+	Network interface
4		Communication interface	Rx-	Network interface
5		Communication interface	S.BUS	S.BUS input
6		Signal Ground	GND	GND
7		Communication interface	RX	Serial receiver
8		Communication interface	TX	Serial send
9		Power ground	GND	GND
10		Power port	VCC	DC 12V-26.2V

Model	Interface Type	Function	Note
Memory card interface	MICRO-SD CARD	Upgrade, storage data	

* Due to product upgrade, appearance/size /Weight/ power consumption may be slightly changed, please contact sales for the latest data, please understand.

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