

DIY10S90

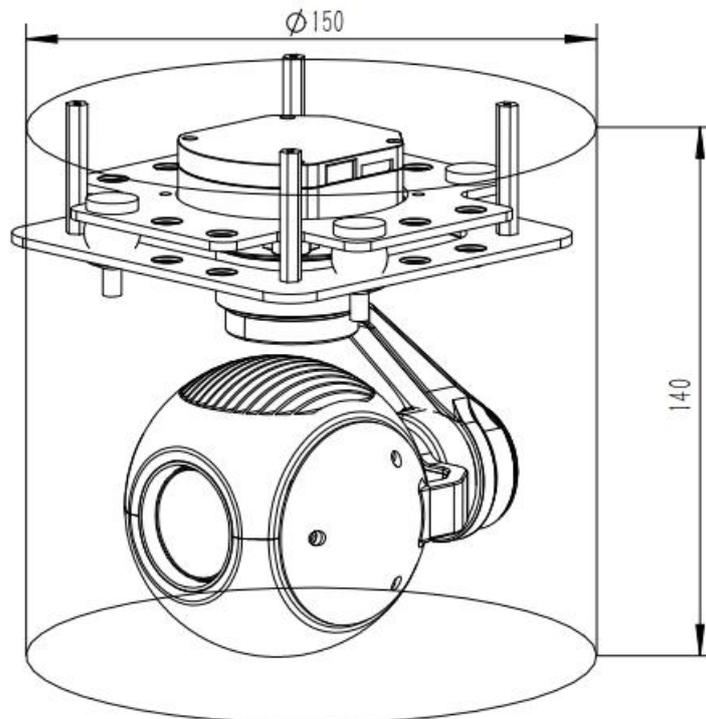
10x Optical zoom IRCUT 3-Axis Gimbal, IP output

DIY10S90 is a drone gimbal system integrated 90x mixed zoom^①, 3-axis stabilized PTZ. It adopts IP output. The PTZ adopts high-precision encoder FOC control scheme, which has the characteristics of high stability, small volume, light weight and low power consumption. The camera adopts COMS SENSOR with 2 mega effective pixels; Supports 1080P network RTSP code stream output. Both UART and IP can control the camera and PTZ, and support local TF storage.

Functional Features

- 90x Hybrid zoom^①
- IRCUT Day night mode
- Network, SBUS, UART control
- AI Target Detection and Tracking
- Ground station display & control
- Light weight gimbal, 425g

Device Structure



NOTE^①:90x Hybrid zoom:10x optical zoom+9x digital zoom

DIY10S90 10x IRCUT IP output single EO gimbal



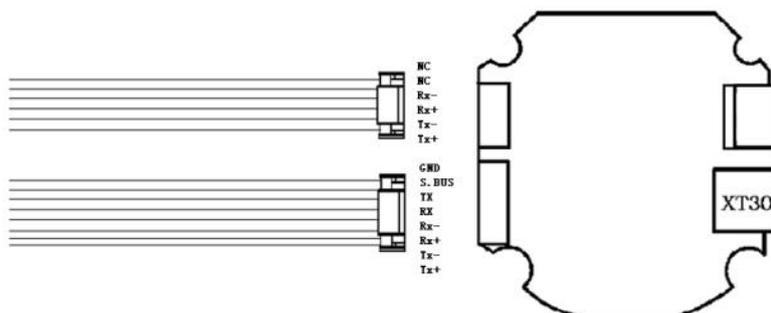
Voltage		DC12V-26.2V
Power Supply		Dynamic 5W
Working Status	Roll Angle	-45° ~ +45°
	Pitch Angle	-45° ~ +120°
	Yaw Angle	-285° ~ +285°
	Pitch and Roll Jitter Angle	±0.02°
	Horizontal Jitter Angle	±0.03°
	One-Click Restore	One-click restore to the initial position
	Adjustable Gimbal Speed	Low speed at big zoom status and fast speed control at small zoom status. Adaptively speed control based on zooming of daylight sensor.
Visible light Camera	SENSOR	1/2.8 inch 2 mega pixels wide dynamic CMOS SENSOR
	Optical Zoom	10x HD optical zoom lens, f=5.15 ± 5%~47.38 ± 5%mm
	AF Time	Real time fast focusing, focusing time < 1s
	Video Output	RTSP stream IP network output, 1080P video stream local TF card storage
	Local Record	Local TF record, H.264/H265, 1080P video stream
	Field Angle (FOV)	D : WIDE 69.5° ± 5% TELE 7.95° ± 5% H : WIDE 61.5° ± 5% TELE 7.00° ± 5% V : WIDE 35.0° ± 5% TELE 3.97° ± 5%
	Support Mode	1080P 30fps
Target recognition and tracking	Min tracking target size	16×16 pixels
	Max tracking target size	256×256 pixels
	Target Memory Time	2 seconds
	Tracking speed	50 Pixel/Frame max
	Simultaneous detection qty	100 targets max
	Recognized categories	Human and Vehicle
	Min detection target size	16×16 pixels
Device Size		φ : 150mm H: 140mm
Work Condition		-10℃ to +50℃ / 20% to 80% RH
Storage Condition		-20℃ to +60℃ / 20% to 95% RH
Mainly usage		for UAV aerial photography

Weight (Not including dampers)

425±10g

Connection application diagram

Electrical interface



No.	Name	Interface Type	Interface definition	Function
1	6PIN	communication interface	485+	485 Interface
2		communication interface	485-	485 Interface
3		communication interface	Rx-	Network interface
4		communication interface	Rx+	Network interface
5		communication interface	Tx-	Network interface
6		communication interface	Tx+	Network interface

No.	Name	Interface Type	Interface definition	Function
1	8PIN	communication interface	GND	GND
2		communication interface	SBUS	SBUS input
3		communication interface	TXD3	Serial port sending
4		communication interface	RXD3	Serial port receiving
5		communication interface	Rx-	Network interface
6		communication interface	Rx+	Network interface
7		communication interface	Tx-	Network interface
8		communication interface	Tx+	Network interface

Model	Interface Type	Function	Remark
TF card interface	Reserved port	Storage and upgrade	TF card interface is on the sphere

*Due to the product upgrade, the appearance / size / weight / power consumption may change slightly. Please contact the sales department for the latest data. Thank you for your understanding.