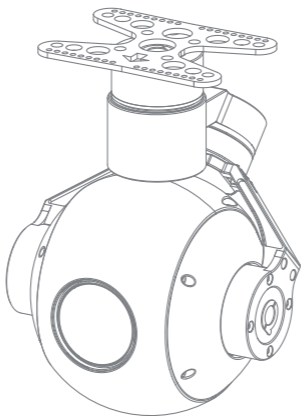




## Seeker-30 TR

30x Optical Zoom Object Tracking Gimbal Camera

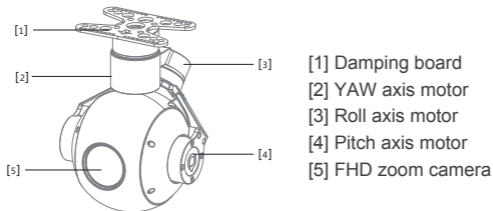


Images are for reference only, please subject to the actual product.

## Seeker-30 TR

Seeker-30 TR features a 30x optical zoom lens. It's powered by SONY 1/2.8" "Exmor R" CMOS module, FHD 1080p video, fast auto-focus speed, designed for UAV aerial photography. A lightweight design combined with 3-axis gimbal makes the gimbal motors ultra-reactive. FOC solution can greatly compensate the vibration of UAV. Yaw axis could realize 360° continuous rotation with default SDI output. At the same time, Seeker-30 TR can achieve target tracking. The image is stable even at 30 times optical zoom. All the parameters have been perfectly set, you just need to install the gimbal camera to UAV, then ready to fly.

## Overview



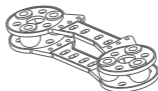
Please make sure that the motor is not stopped by any object during the rotation, if the gimbal is blocked during rotation, please remove the obstruction immediately.

## In the Box

Gimbal camera\*1



Damping board\*2



Copper cylinders\*4



Anti shedding buckle\*4



Button head hexagon screw\*16



5mm\*12



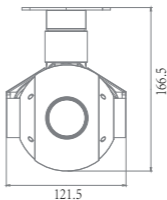
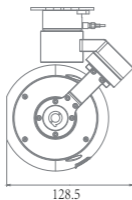
8mm\*4

USB to TTL\*1



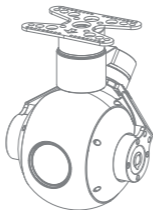
## Gimbal Camera Dimension

Unit: mm



# Installing

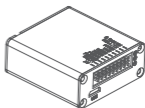
Install the camera holder as shown



## Connection of Control Box and Wiring Instruction

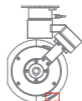


Control Box position



1. Insert SD card

SD card: max 128G , class10  
FAT32 or exFAT format



SD card position

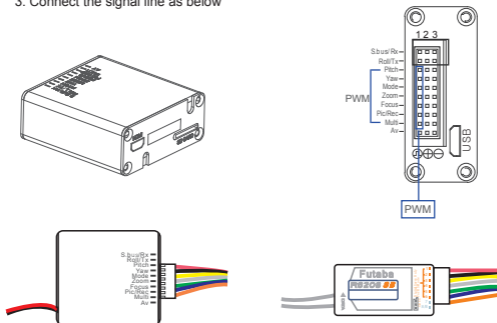
2. Connect SDI to display

SDI output

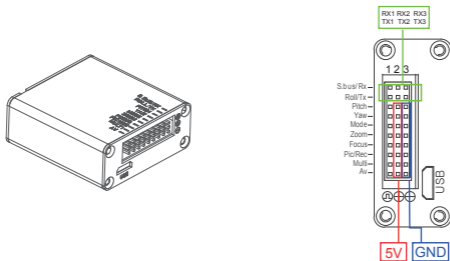


SDI position

3. Connect the signal line as below

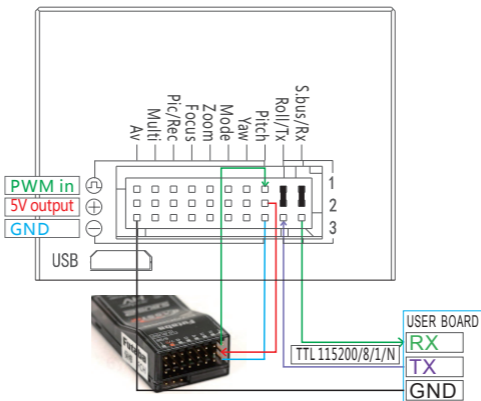


4. Power supply with 12V ~ 16V, red line is positive and black is negative.



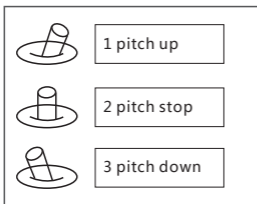
## Function Description

### Signal functions

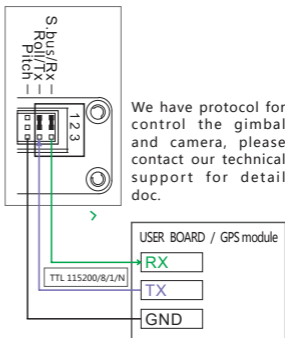
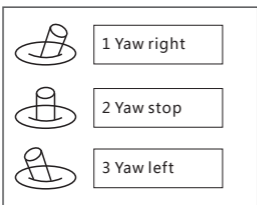


Pitch: PWM in, pitch control

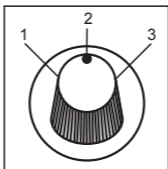
Pitch: PWM in, pitch control



Yaw: PWM in, Yaw control



Mode: Change the speed / home position



Position 1: Lowest speed for pitch and yaw.

Position 2: Middle speed for pitch and yaw.

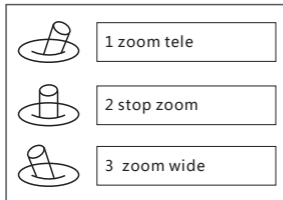
Position 3: Highest speed for pitch and yaw. The speed is continuously quickly from 1 to 3.

One click: Home position.

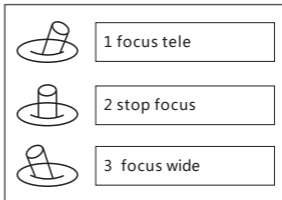
Two click: Look down.

Three click: Yaw not followed by frame.

ZOOM: Zoom the camera

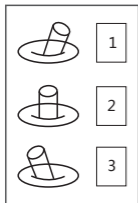


Focus: Focus the camera





## Pic/ Rec picture / Start record, stop record



Switch 2 to 1: Start record / stop record.

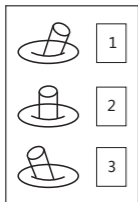
Start record, the OSD display rec hh:mm:ss.

Stop record, the OSD display STBY.

Switch 2 to 3: Take a picture.

OSD display 'REC IMG' a second.

## Multi: Tracking control



1: Position 1 exit the tracking

Switch 1 to 2: display the cross cursor. Adjust the object to the cross cursor.

2: Switch 2 to 3: start tracking. Change the object during tracking.

Switch 3 to 2: Display the cross cursor, use Pitch/ Yaw to adjust the cross cursor.

AV: NO AV output.

Hardware Parameter	
Working voltage	12V ~16V
Input voltage	4S ~ 6S
Output voltage	5V (connect with PWM)
Dynamic current	500mA @ 12V
Idle current	400mA @ 12V
Power consumption	≤ 6W
Working environment temp.	-20℃ ~ +80℃
Output	micro HDMI(HD output 1080P 60fps) / SDI / IP
Local-storage	SD card (Up to 128G, class 10, FAT32 or ex FAT format)
Control method	PWM / TTL / S.BUS

Gimbal spec	
Pitch/Tilt	+45°~-90°
Roll	±45°
Yaw/Pan	360°N
Vibration angle	Pitch/Roll: ±0.02°, Yaw: ±0.03°
One-key to center	√

Camera spec	
Imager Sensor	SONY 1/2.8" "Exmor R" CMOS
Picture quality	Full HD 1080 (1920*1080)
Effective pixel	2.13MP
Lens optical zoom	30x, F#4.3~129mm
Digital zoom	12x (360x with optical zoom)
Min object distance	10mm(wide end) to 1200mm(tele end). Default 300mm 1080p mode: 63.7"(wide end) ~ 2.3"(tele end)
Horizontal viewing angle	720p mode: 63.7"(wide end) ~ 2.3"(tele end) SD: 47.8"(wide end) ~ 1.7"(tele end)
Sync system	Internal
S/N ratio	more than 50dB
Min illumination	Color 0.01lux@F1.6
Exposure control	Auto, Manual, Priority mode(shutter priority & iris priority), Bright, EV compensation, Slow AE
Gain	Auto/Manual 0dB to 50.0dB(0 to 28 steps + 2 setep/ total 15 steps) Max.Gain Limit 10.7 dB to 50.0dB (6 to 28 steps + 2 step/ total 12 steps)
White balance	Auto, ATW, Indoor, Outdoor, Outdoor Auto, Sodium Vapor Lamp (Fix/Auto/Outdoor Auto), One-push, Manual
Shutter speed	1/1s to 1/10,000s, 22 steps
Backlight compensation	Yes
Aperture control	16 steps
Defog	Yes
OSD	Yes

Camera Object Tracking	
Update rate of deviation pixel	50Hz
Output delay of deviation pixel	<10ms
Minimum object contrast	5%
SNR	4
Minimum object size	16*16 pixel
Maximum object size	160*160 pixel
Tracking speed	±32 pixel/frame
Object memory time	100 frames (4s)
The mean square root values of pulse noise in the object position	< 0.5 pixel

Packing Information	
N.W.	876g
Product meas.	128.5*128.5*166.5mm
Accessories	1pc gimbal camera device, 16pcs screws, 4pcs copper cylinders, 12pcs damping balls, 4pcs damping boards / High quality plastic box with foam cushion