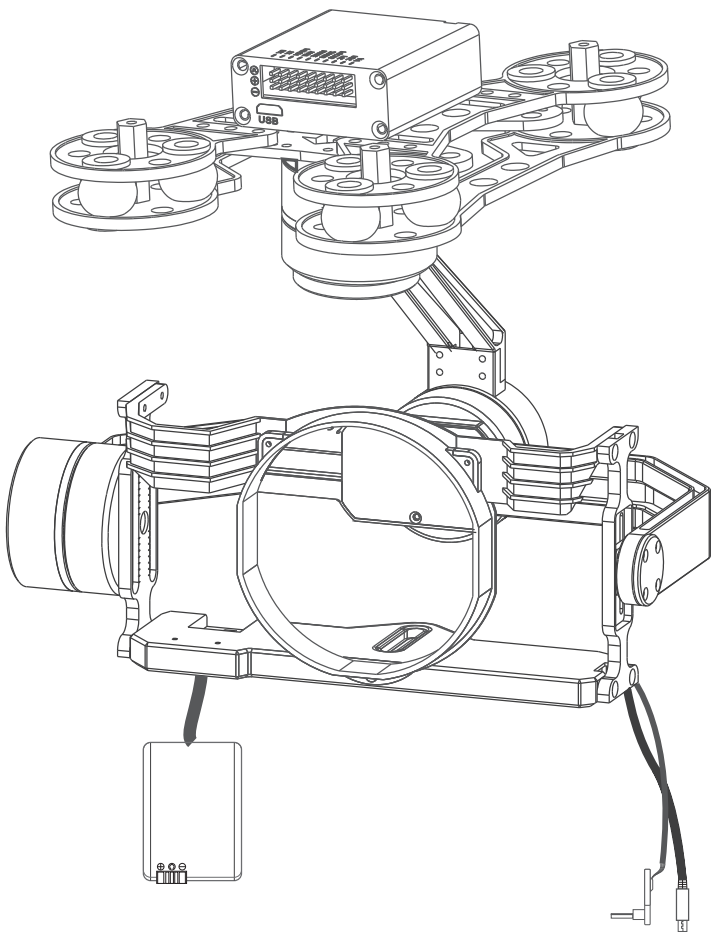
Viewpro

User manual

Z -6KA7

Z-6KA7 Optical Zoom Camera Gimbal



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

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Z-6KA7 Pinpoint-precision Gimbal

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Gimbal Introduction

Z-6KA7 is a pinpoint-precision professional 3-axis gimbal which features high stability, small size, light weight and low power consumption. The 3-axis gimbal based on FOC motor control technology, adopts pinpoint-precision encoder in each motor.

The speed of Z-6KA7 gimbal is adjustable, LOW speed mode is used for large zoom range, the control will be more accurate; Fast speed mode is used for small zooming range, which makes the gimbal control sensitive and quick. Also the one-key to center function will allow the gimbal return to initial position automatically and rapidly.

Z-6KA7 supports both PWM control and serial command control, suitable for close range remote control or remote data command control.

Object Tracking Function

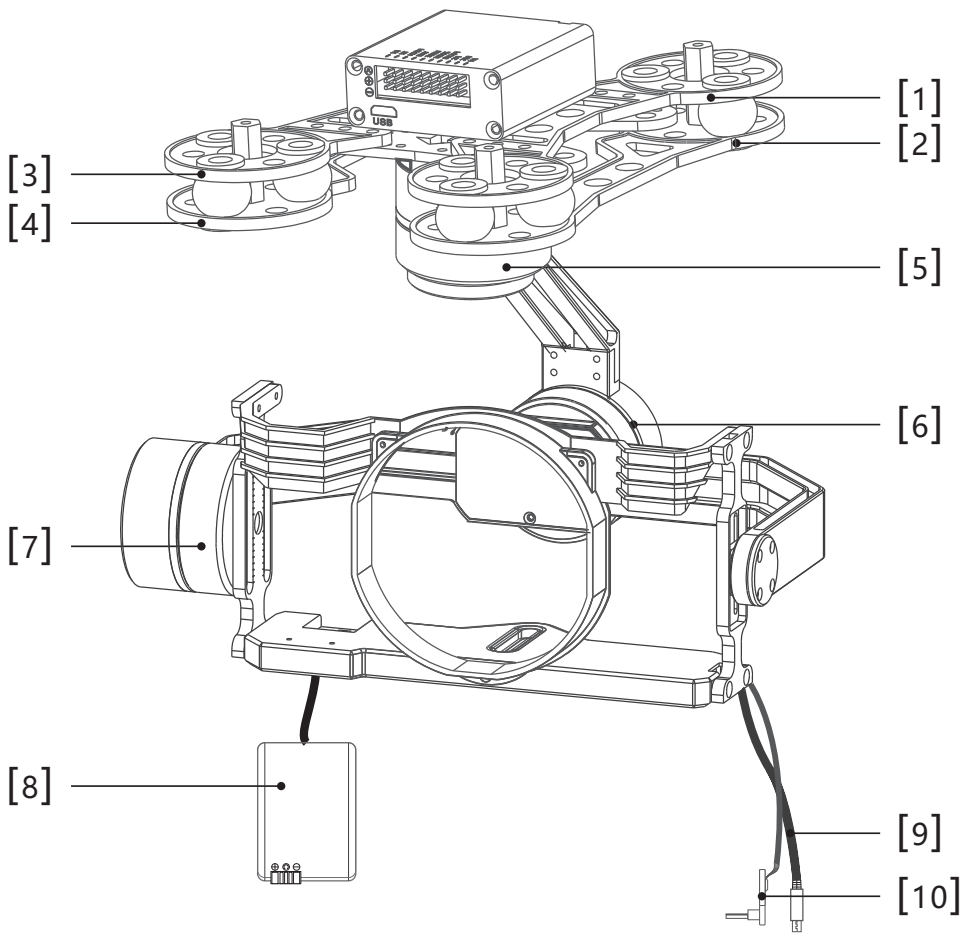
1. Function description

BBuild-in normalization, cross-correlation and tracking algorithm, combining with object missing recapture algorithm, achieve stable track of the target.
Support custom characters of user OSD, adaptive gate, cross cursor, tracking information display.

2. Tracking Performance

1)Update rate of deviation pixel 50Hz
2)Output delay of deviation pixel <15ms
3)Minimum object contrast 5%
4)The minimal signal-to-noise ratio (SNR) 4
5)Minimum object size 16*16 pixel
6)Maximum object size 160*160 pixel
7)Tracking speed 32 pixel/frame
8) The mean square root values of pulse noise in the object position<0.5 pixel

Gimbal Description

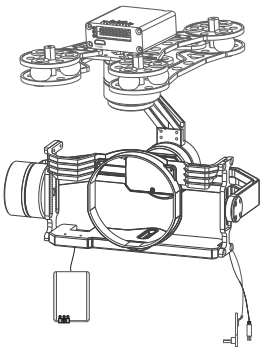


[1] Gimbal fixed copper cylinder
[2] Damping balls
[3] Upper damping board
[4] Lower damping board
[5] YAW axis motor
[6] Roll axis motor
[7] Pitch axis motor
[8] Fake batteries
[9] Shutter control line
[10] HDMI line

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.

Gimal Dimenstion

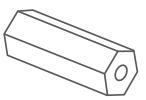
Gimbal*1



Screw pack*1

M3*5mm button head
hexagon screw*12

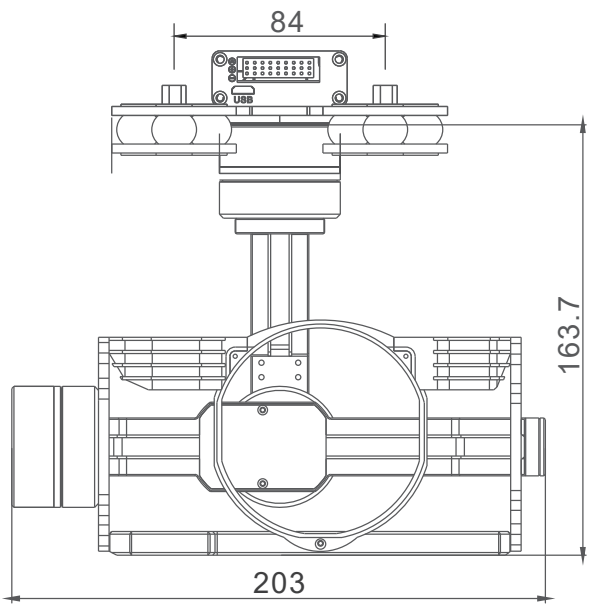
Copper cylinders*4

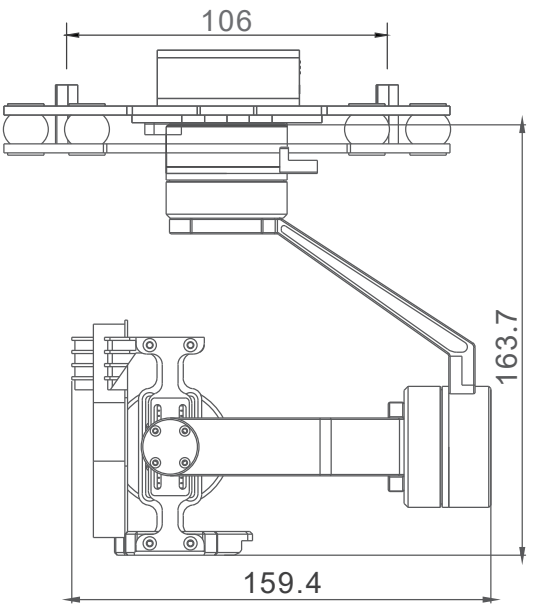


Damping balls*12

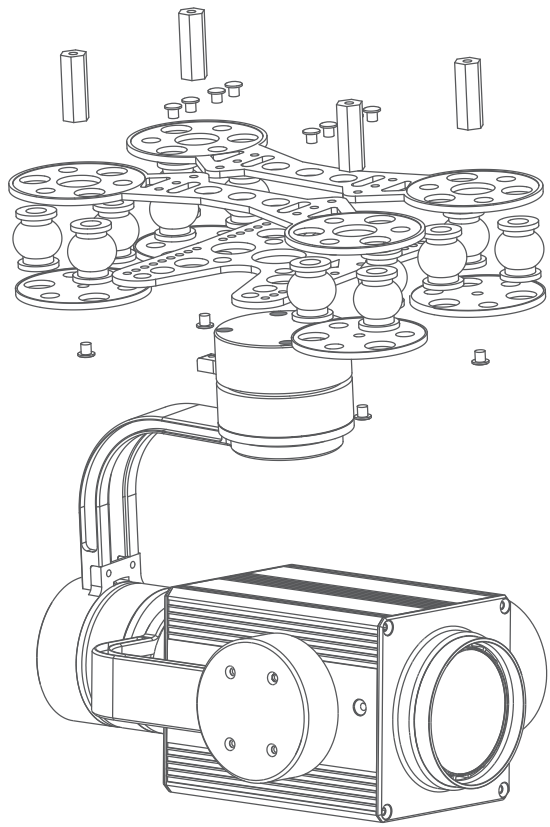
Installing

Uint: mm





Installing



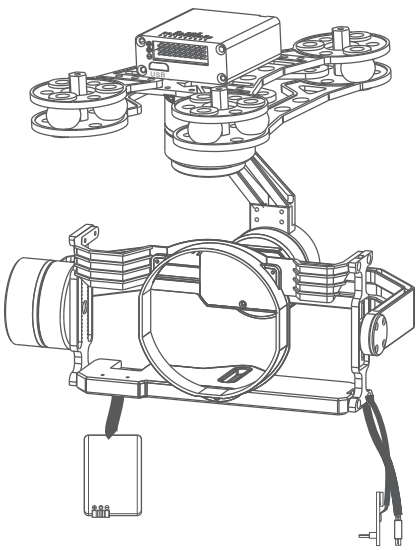
Mechanics@Electronic Characteristics

Input voltage	3S~4S	Idle current	330mA@12V
Dynamic current	450mA@12V	Working environment temp	-10°℃~+50°℃
Size	L144*W103*H134mm	Weight	695g

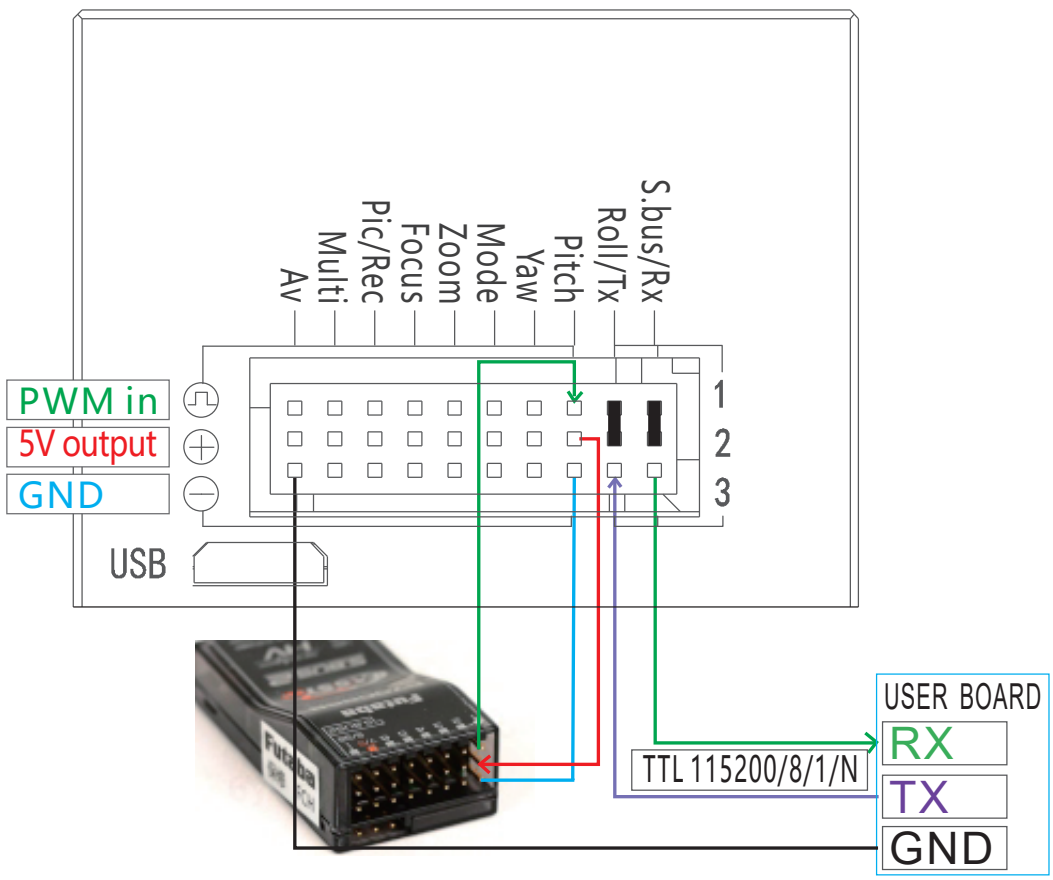
Working Characteristics

Pitch angle range of action: ±90°
Roll angle range of action: ±85°
Yaw/Pan: Yaw angle range of action : ±150°
Vibration angle: Pitch/Roll: ±0.02°, Yaw： ±0.03°

Connection of Control Box and Wiring Instruction



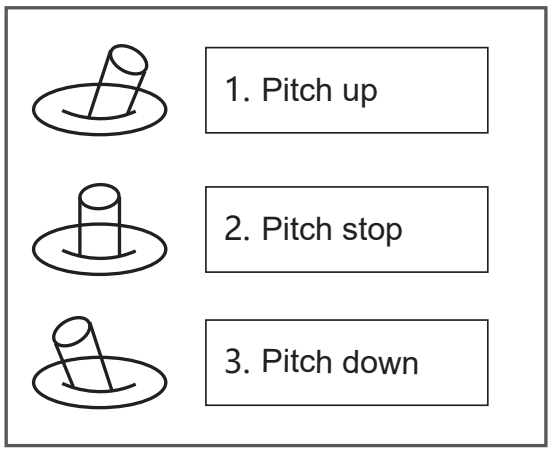
HDMI version: connect micro HDMI of camera to the upside of gimbal, the wire go through the arm of gimbal .
Av version: we convert the HDMI signal to AV, you can connect the AV signal upside the gimbal.

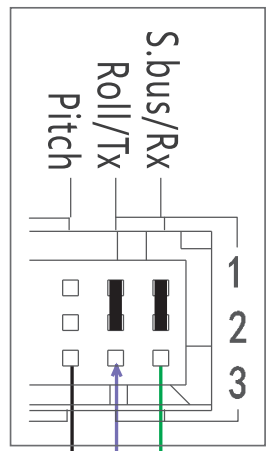


S.bus/Rx: connect to Rx2 for track function.

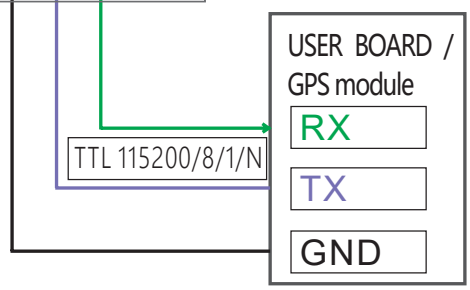
Roll/ Tx: connect to Tx2 for track function.

Pitch: PWM in, pitch control



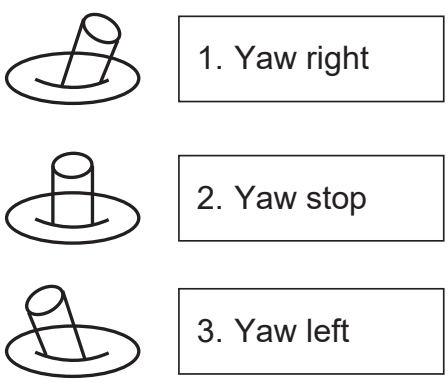


We have protocol for control the gimbal and camera, please contact our technical support for detail doc.

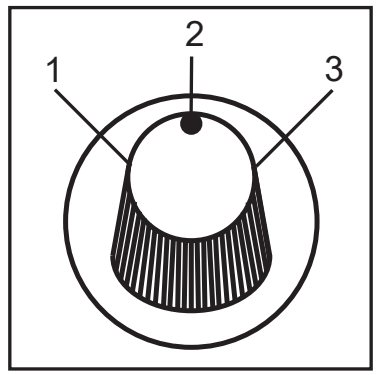


HEX cmd list
Zoom_wide FF 01 00 40 00 00 41
Zoom_tele FF 01 00 20 00 00 21
Stop_zoom FF 01 00 00 00 00 01
Picture ff 01 00 07 00 66 6E
Start record/ stop record FF 01 00 0700 55 5D
ALL the other gimbal control cmd, please contact our technical support.

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.
Four click: Yaw followed by frame.
Five click: Restore the factory settings.
(Click = from 2 to 3 and back to 2 quickly)

ZOOM: Zoom the camera


1. Zoom tele


2. Stop zoom


3. Zoom wide

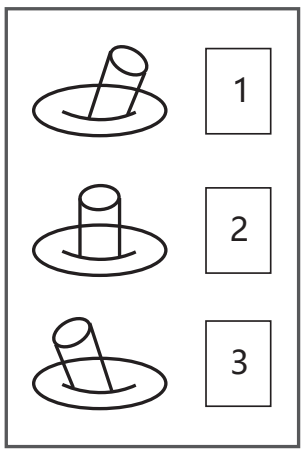
Focus: Focus the camera


1 From 2 to 1, take a picture.


2


3

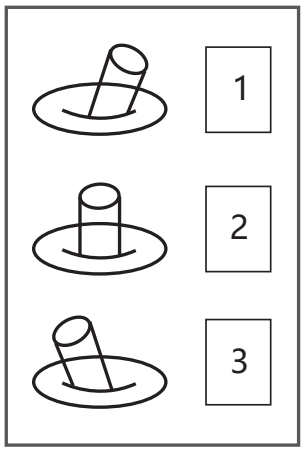
Pic /Rec picture / Start record, stop record



Switch 2 to 1: take a picture

Switch 2 to 3: Start record / stop record

Multi: Backup PWM channel for customize



AV: AV output when select AV version.