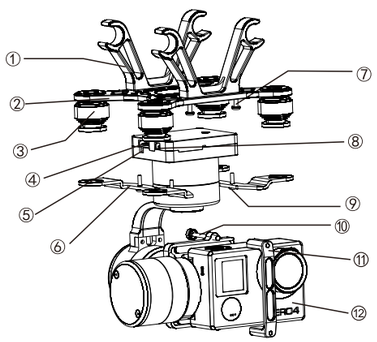
Package Content

item	quantity
Z1-Tiny2 3-axis Servo Gimbal	1
Camera Holder(include hand screw)	1
Universal “V” Shaped Frame	2
Damping Bracket	2
Damper	8
Micro USB Cable	1
Micro USB AV & Charging Cable	1
6 Pin Control Cable	1
2 Pin Control Cable	1
JST Line Power Plug	1
2.5x5MM Black Hex Screw	6
2x8MM Black Hex Screw	6
1.5MM Hex Wrench	1
Safety Buckle	2
User Manual	1
Damping Board	1

Specification

	minimum	standard	maximum
Working Voltage	10.5V	–	26V
Working Current(Motionless)	–	110mA	–
GoPro Charging Voltage	–	4.65V	–
GoPro Charging Current	–	500mA	–
Controled Line Output Voltage	–	4.65V	–
Controled Line Output Current	–	–	200mA
Static Attitude Tracking Error	±0.01°	–	±0.03°
Dynamic Attitude Tracking Error	±0.05°	–	±0.5°
Pitch Axis Mechanical Movement Range	-130°	–	+185°
Roll Axis Mechanical Movement Range	-40°	–	+40°
Heading Axis Mechanical Movement Range	-160°	–	+160°
Pitch Adjustable Angle	-105°	–	+105°
Roll Adjustable Angle	-25°	–	+25°
Heading Adjustable Angle	-140°	–	+140°
Operation Temperature	-10℃	25℃	45℃
Gimbal Weight	–	200g	–
Pitch Axis Following Rate	1 °/S	–	50°/S
Roll Axis Following Rate	1 °/S	–	100°/S
Heading Axis Following Rate	1 °/S	–	80°/S

Product Introduction

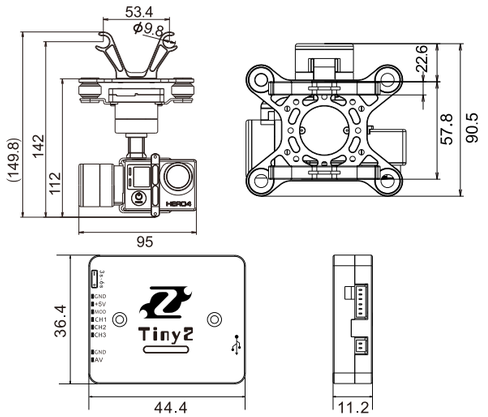


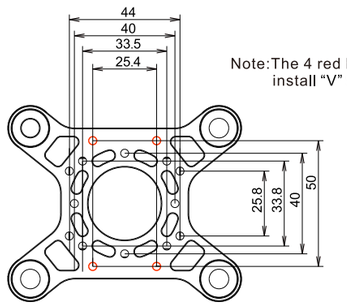
Note:The product contains no camera.

①“V” Shaped frame	⑦M2.5x5mm Black Hex Screw
② Damping board	⑧AV Signal Output Port
③Damper	⑨M2x8mm Black Hex Screw
④Control Cable Port	⑩Hand Screw
⑤Power Port	⑪Camera Securing Bracket
⑥Damping Bracket	⑫Camera

The Size of Product

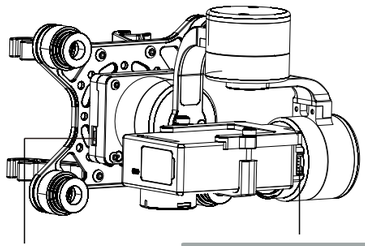
Unit：mm





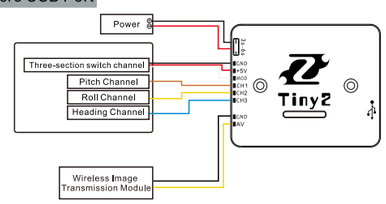
Note:The 4 red holes are used to install “V” Shaped frame.

Introduction of connecting lines and ports



Micro USB Port

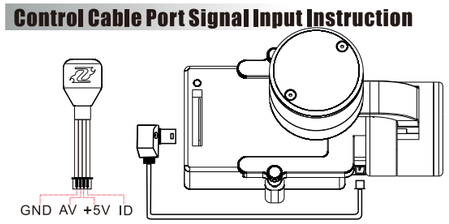
Charging Port/AV Output Port



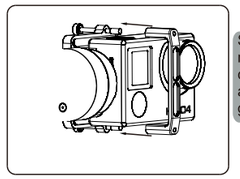
Gimbal Connecting Instruction

	Minimum	Typical	Maximum
PWM Input Pulse Width	1020μs	1520μs	2020μs
PWM Input Frequency	20Hz	–	400Hz

Control Cable Port Signal Input Instruction

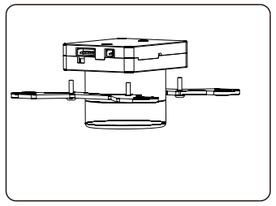


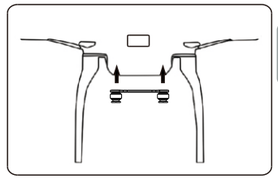
Installation Method



Stuck the camera to the camera mounting plate, and make the camera cling to the motor as close as possible. Fix the camera on the gimbal with screws.

Fix Lower board of damping unit to the gimbal and fasten the screws.

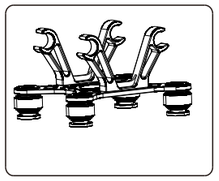


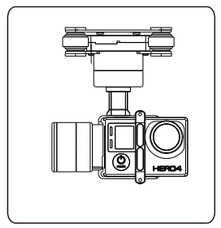


Fix Upper board of damping unit to the drone and tighten the screws.

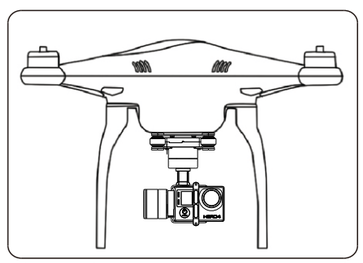
or

Attach rubber dampers to damping unit.then mount on V shaped frame and fasten them.(It is optional to mount on “V” Shaped frame)





Attach Lower board of damping unit to gimbal and Upper board of damping unit.



Note: V shaped frame doesn't mount on the gimbal shown in picture. Users can install by self.

If you have anything that's not clear, please visit our official website or give us a call contact.

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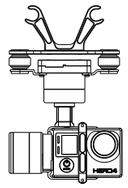
Installation Mode

Hanging-mount:



Assembly Note

- Make sure the cable to be connected correctly and camera to be mounted.
- Please check each axis is rotating normally.
- Connecting power statically, the gimbal will start normally after 5s.

Ports Instruction

3S-6S:

Power supply: the input voltage is 10.5V- 26V. The red cable is power input(+), black cable is input(-).

Control Input Port:

GND(black): Common terminal <Power supply (-)>

+5V (red): The actual voltage is 4.65V, the maximum output current is 200mA, which fits common receiver.

MOD(white): Model Port. 3-section switch is to control different working modes.

1. Heading Following Mode (Default)
2. Locking Mode (3-axis locked)
3. FPV Mode (3-axis free)
4. The function of fast recover to level: used to the gimbal which rapidly return to level state. Heading following mode and locking mode will switch continuously for more than three time.

CH1(brown): Pitch channel control;when disconnected, the gimbal remain horizontal pitch axis state;

Ch2(yellow): Roll channel control; when disconnected, the gimbal remains roll axis level;

Ch3(blue): Heading channel control; when disconnected, the gimbal remain the middle position restoration state;

AV signal output port:

GND (black): Common terminal.

AV (yellow): AV output signal line.

Micro USB port:

For firmware upgrade, parameter adjustment and gimbal calibration. More detail information please refer to official website:

www.zhiyun-tech.com

Website: Facebook:

Gimbal calibration:

The following situations need gyroscope initialization or accelerometer 3D calibration.

① Opening the handheld gimbal with horizontal deviation.

② Not using the handheld gimbal for a long time.

③ The using environmental temperature variation over ranged.

Firmware Upgrade Method

1. Complete the operation according to the calibration method from step 1 to 4.(Please see the next page.)
2. Open the decompressed calibration tool (Zhiyun Gimbal Tools .exe).
3. The software will automatically identify and select port number. (if the software can't automatically select port number, please select the port number that has been identified by the computer in step 4)
4. Click the "Firmware Upgrade" button.
5. Click the "Connect" button.
6. Power on the gimbal within 30 seconds after clicking the "Connect" button, to supply power to the product.
7. After connecting successfully, the "Device Info" of firmware upgrade software will show the firmware information that the product currently used.
8. Click the "Browse" button to select the downloaded firmware upgrade files corresponding to the product from the official website (.ptz files). "File Info" will show the relevant information of upgrade file.
9. Click the "Upgrade" button to start the firmware upgrade.
10. After the upgrade completed, click "Close" button to close serial port, close the upgrade software and unplug the USB cable, and then upgrade finished.

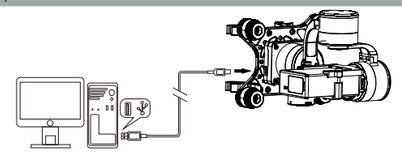
Online calibration

1.For the first time, please enter our official website (www.zhiyun-tech.com) to download the USB driver and install it.

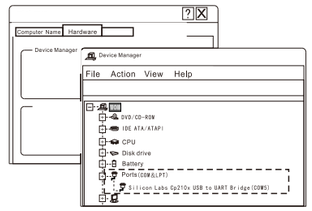
2.Download upgrade tool (Zhiyun_Gimbal_Tools)for gimbal calibration on our website and uncompressing it.

3.Power on the gimbal.

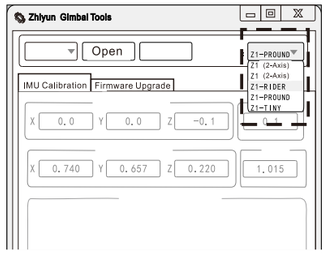
4.Use USB cable to connect the gimbal upgrade port to the computer USB port.



5.Check whether the computer identifies the USB interface chip of the product.



6. Open the decompressed calibration tool (Zhiyun Gimbal Tools . exe).
7. The software will automatically identify and select port number.(if the software can’t automatically select port number, please select the port number that has been identified by the computer in step 5)
8. Select the product type in the "Product" column, and click "Open" button to open serial port. The gyroscope showed in the calibration software will change in value and the "Calibration" button on the side will be highlighted (If not, please reinstall the driver or try again with another computer).



9. Click "Calibration" button when the "Gyroscope" and the "Acceleration" change in value, enter the "Gyroscope" and "Acceleration" calibration procedures. Put the gimbal still as showed in computer for a few seconds, when the picture changes, go on with the calibration for next side. (If the picture remained, please adjust the placement of gimbal. If there shows the "X" on the course of calibration, please repeat the steps above to recalibrate).When six-side calibration finished, the software will tick a correct mark "√". And then unplug USB cable, power off the gimbal and restart, wait for about 10 seconds to check if the camera is horizontal, if not, please do the calibration again. If the problem remains, please contact us. (Tel: 0773-2320856)