

SKYDROID 云卓

云卓科技（福建）有限公司



SKYDROID C11

用户手册

V1.1

此说明书不一定为最新版本，最新版本说明书请移步至官网资料下载中心-资料文档获取下载：

<https://www.skydroid.xin/#/downloadCenter>

注意

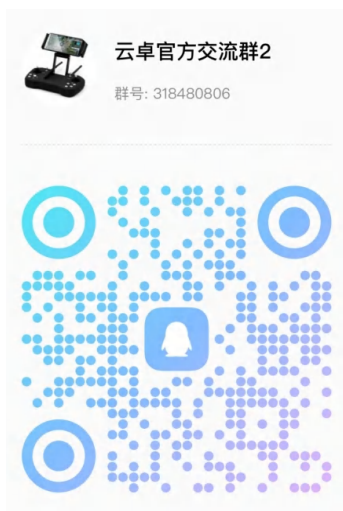
本产品使用以下词条因操作不当可能带来的潜在危险加以分级说明。

注意：如果不遵循说明进行操作，可能会导致财产损失和轻微伤害。

注意：如果不遵循说明进行操作，可能会导致财产损失、重大事故和严重伤害。

警告：通过阅读整个用户手册，熟悉产品的功能之后再进行操作。如果没有正确操作本产品可能会对自身或他人造成严重伤害，或者导致产品损坏和财产损失。本产品较为复杂，需要经过一段时间熟悉后才能安全使用，并且需要具备一些基本常识后才能进行操作，如果没有强烈的安全意识，不恰当的操作可能会导致产品损坏和财产损失，甚至对自身或他人造成严重伤害。本产品不适合儿童使用。切勿使用非云卓提供或建议的部件，必须严格遵守云卓的指引来使用产品。

云卓官方 QQ



云卓官方微信



售后服务条款

- 1.本条款仅适用于云卓科技（福建）有限公司所生产的产品，云卓授权经销商销售的产品亦适用本条款。
- 2.本公司产品自购买之日起，一周内经我司核实为非人为造成的质量问题，由云卓承担返修产品的往返快递费，购买云卓产品一周以上一年以内经我司核实为质量问题，用户和云卓各自承担寄出返修产品的快递费。
- 3.返修时需提供购买凭证和保修卡或网络平台交易记录。
- 4.云卓产品自购买之日起七天内，在正常使用情况下出现非人为造成的质量问题，外观无损坏，凭保修卡及购机凭证在经销商处协商可以免费更换同型号产品；经销商在收

到更换产品时烦请第一时间通知云卓公司予以备案更换。

5.云卓产品将由云卓科技（福建）有限公司提供终身售后服务，属于非人为造成的质量问题，一年内免费保修；对于自购买之日起人为的损坏、改装、拆机及超过一年免费保修期的，用户须支付往返邮费及维修费用。

6.为确保您的权益受到保护，并能及时有效地为您服务，请在购买云卓产品时完整填写好保修卡及索要购机凭证。用户享受本售后服务条款必须提供保修卡及购机凭证。

7.返修产品将于云卓公司收到后的 15 个工作日内寄回给顾客，并附上维修报告。

8.以上售后服务条款仅限于中国大陆销售的云卓产品。

港澳台及海外客户的售后问题发至邮箱 sales01@skydroid.xin，具体售后细则视情况而定。

警告和免责声明

本文所提及的内容关系到您的安全以及合法权益与责任。使用本产品之前，请仔细阅读本文以确保已对产品进行正确的设置，不遵守和不按照本文的说明与警告来操作可能会给您和周围的人带来伤害，损坏本产品或其他周围的物品。本文档及所有相关的文档最终解释权归云卓科技所有。如有更新，恕不另行通知。请访问

<http://www.skydroid.xin> 官方网站以获取最新的产品信息。

C11 吊舱出厂前已根据其所搭载的相机和镜头完成调试，切勿自行调整吊舱或者改变其机械 机构，也不要为吊舱增加其他外接设备。吊舱结构精密，请勿自行对 C11 作任何拆装，否则将会 导致吊舱相机工作异常。

为了您和他人的安全，请确保吊舱调试时，飞行器处于安全的状态，不在易燃易爆及有儿童的环境下通电调试，强烈建议您在调试前取下飞行器的螺旋桨。

A) 环境温度：-10°C ~ 55°C

B) 贮存温度：-25°C ~ 55°C

C) 大气压力：86kPa~106kPa

D) 使用地点不允许有爆炸危险的介质，周围介质中不应含有腐蚀金属和破坏绝缘的气体及导电介质，不允许充满水蒸气及有严重的霉菌存在。

E) 使用地点应具有防御雨、雪、风、沙、灰的设施。

由于我公司无法控制用户的具体使用、安装、改装以及使用不当等情况。由以上所造成的直接、间接损失或损失，我公司将不承担相应的损失及赔偿责任。如使用、安装、组装云卓科技产品，相应的结果由用户承担。因使用本产品而造成的间接或直接损失与伤害，我公司概不负责。

目录

一、 产品简介

二、 产品清单

三、 产品概览

四、 产品参数

五、 安装与调试

1. 螺丝孔位与间距示意图如下：

2. 吊舱工作模式

3. 吊舱线路连接图及说明

4. C11 的使用

5. 参数设置

6. 系统设置

六、 吊舱尺寸，角度标注

七、 注意事项

1

1

2

3

4

4

4

5

5

7

12

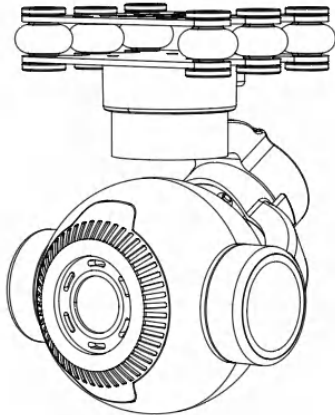
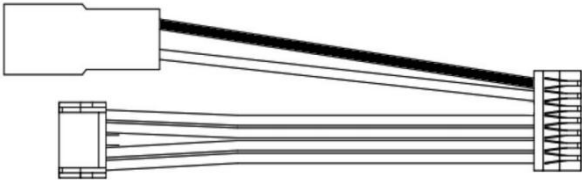
16

16

一、产品简介

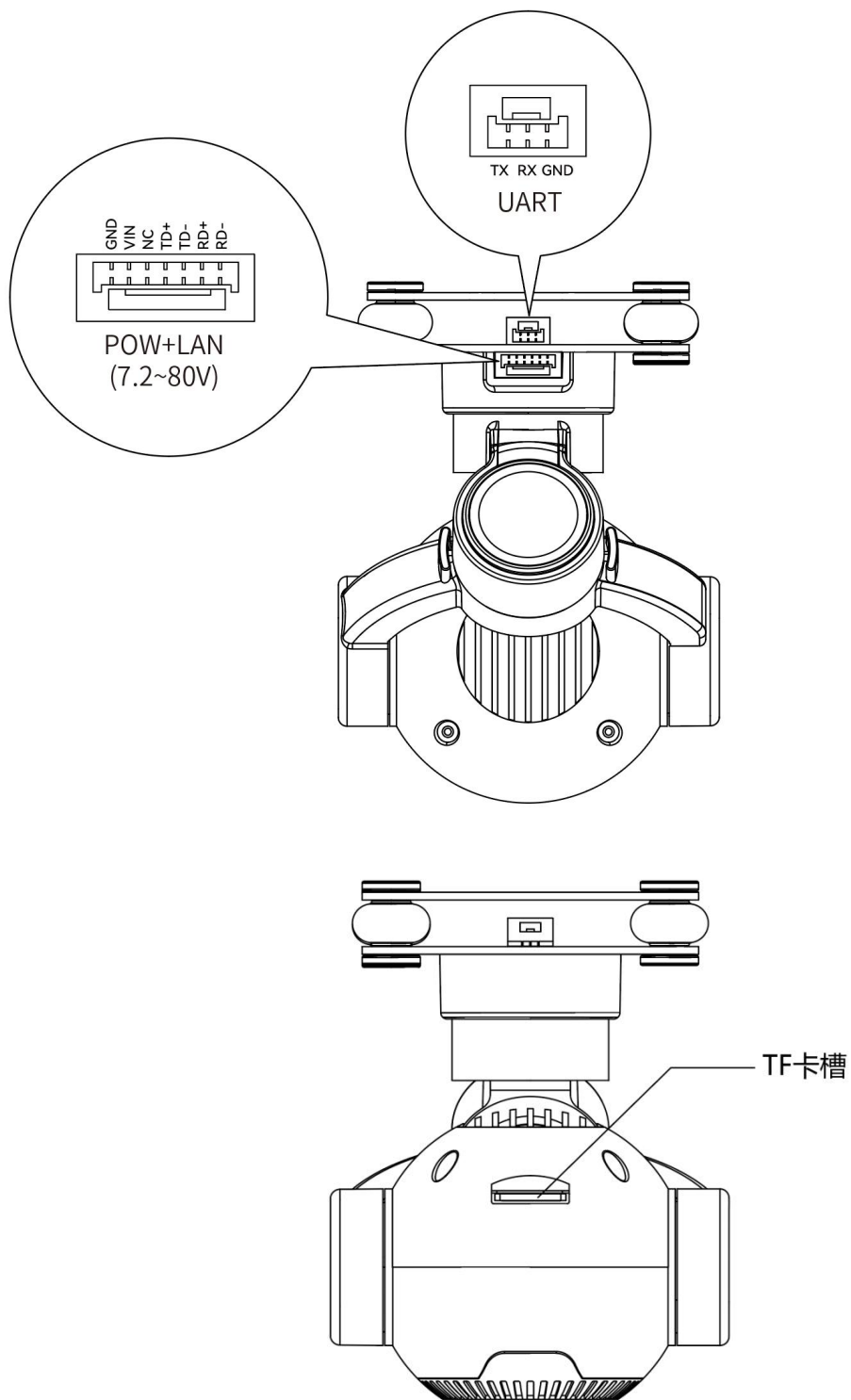
C11 是一款小型高清三轴吊舱，使用新一代影像芯片，搭配高清无畸变摄像头，视野开阔，画面清晰。有效像素达到 800 万，拥有强悍的 4K 视频录制和拍照能力，时刻记录逝去的美景。支持 30 倍电子变倍，让远处美景近在眼前。使用工业级三轴增稳结构，大幅降低画面抖动，使画面始终处于平稳状态。可用于各种规格尺寸的载具。

二、产品清单

C11 主体×1	
吊舱固定螺丝 (M2.5*6)×4	
网口电源线×1	
32G 金士顿内存卡× 1(已安装)	
读卡器×1	
串口线×1	

三、产品概览

接口定义说明

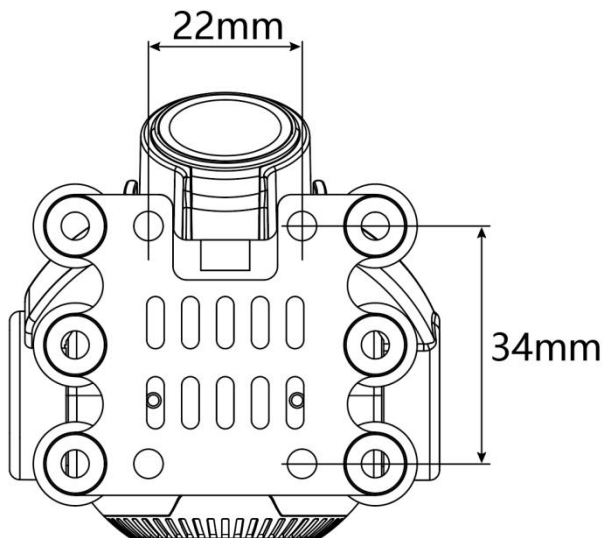


四、产品参数

C11 整体参数	
视频输出信号接口	网口
控制信号输入接口	网口
工作电压	12V~80V
工作电流	12V /245mA
工作环境温度	-10℃~+55℃
重量	106g
外形尺寸	61.6mm(长)*63.8mm(宽)*84.2mm(高)
可控角度范围	-90°~+10°(俯仰轴); -90°~+90°(方向轴)
吊装/倒装模式	支持
全局回中/一键向下/偏航回中	支持
镜头像素	8MP
传感器尺寸/规格	1/2.8 英寸
光圈	F2.0
焦距	3.1mm
HFOV / VFOV/DFOV	105°/58°/122°
输出方式	RTSP 码流 H265
图传分辨率	1280×720
变倍倍数	30 倍
卡录视频分辨率	3840×2160
视频存储格式	TS
拍照分辨率	3840×2160
照片存储格式	JPG
支持存储卡类型	金士顿 32G
支持文件系统	FAT32

五、安装与调试

1. 螺丝孔位与间距示意图如下：



注：用于吊舱的螺丝规格为 M2.5*6，用量 4。

吊舱不使用时请勿悬挂于飞行器上，长期悬挂会加速避震球变形导致避震效果下降出现果冻现象。

吊舱安装时减震板之间必须保持相互间的绝对垂直与平行，不正确的安装将引起避震球变形导致避震效果下降和无法自检。

2. 吊舱工作模式

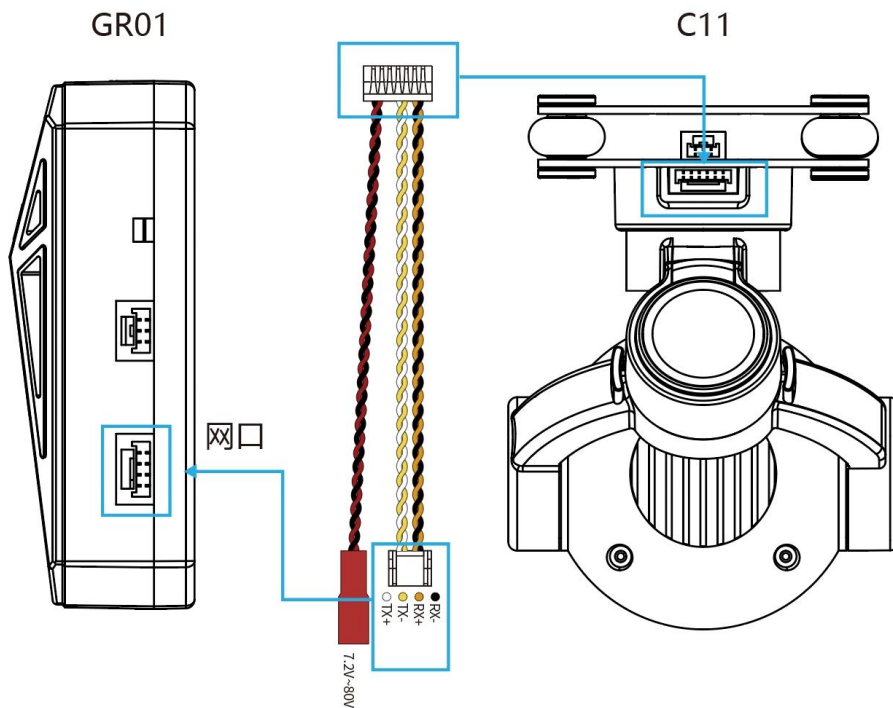


可在云台 FPV 设置吊装模式或者倒装模式

注：出场默认吊装模式，请勿倒装上电；

请根据工作模式将吊舱正确的放置，错误的放置方式将会导致吊舱电机损坏。

3. 吊舱线路连接图及说明



电源	红色 JST-2P 公头, 供电电源:7.2V-80V (直流电源或者锂电池)	
网口线（信号传输）	网络 IP 信号	RX-: 网络 IP 信号 RX+: 网络 IP 信号 TX-: 网络 IP 信号 TX+: 网络 IP 信号
视频传输	视频输出 RTSP 码流 rtsp://192.168.144.108:554/stream=0	

4. C11 的使用

遥控器安装最新版云台 FPV 软件，并打开。

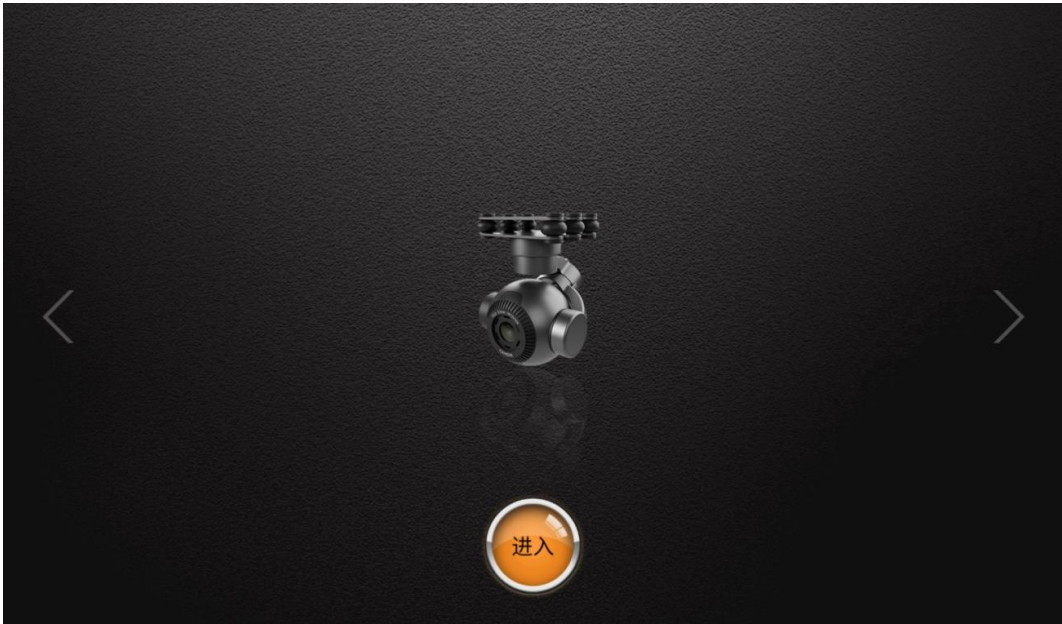
软件地址：<http://file.skydroid.xin/SkydroidCameraFPV.apk>

① 吊舱启动

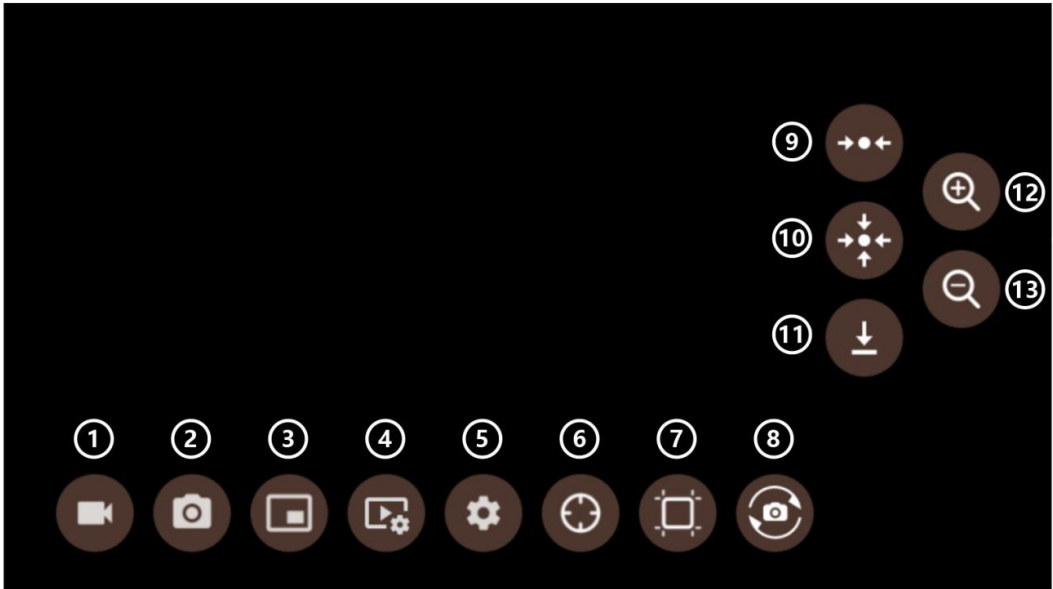
吊舱安装固定好后，供电（7.2-80V），吊舱会启动，请等待启动自检完成。

② 打开云台 FPV，选择 C11 的图标，点击进入。





③ 云台 FPV 主页介绍

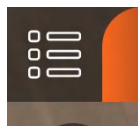


序号	注解	序号	注解
1	录像	8	相机切换
2	拍照	9	偏航回中
3	悬浮窗	10	全局回中
4	参数设置	11	一键向下
5	系统设置	12	数字变倍+
6	十字线	13	数字变倍-
7	倒车线		

④ FLY GCS 画面设置

Skydroid Fly app 下载地址: <https://file.skydroid.xin/SkydroidFly.apk>

APP 首页左上角



->



->左窗口点开, 设置为 C11



5. 参数设置

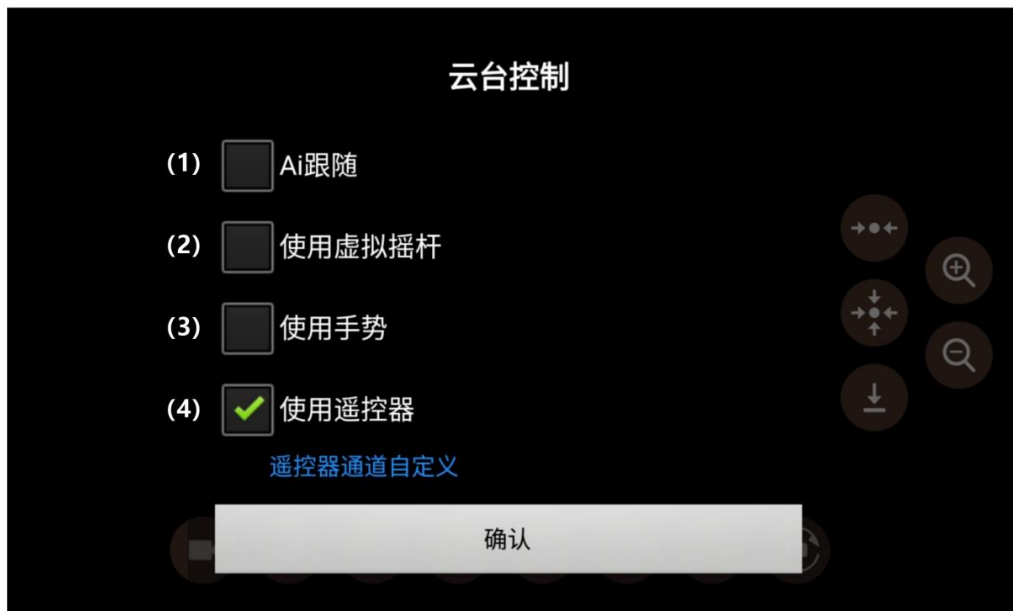


参数设置里可以设置云台控制, 工作模式, 云台速度等功能。

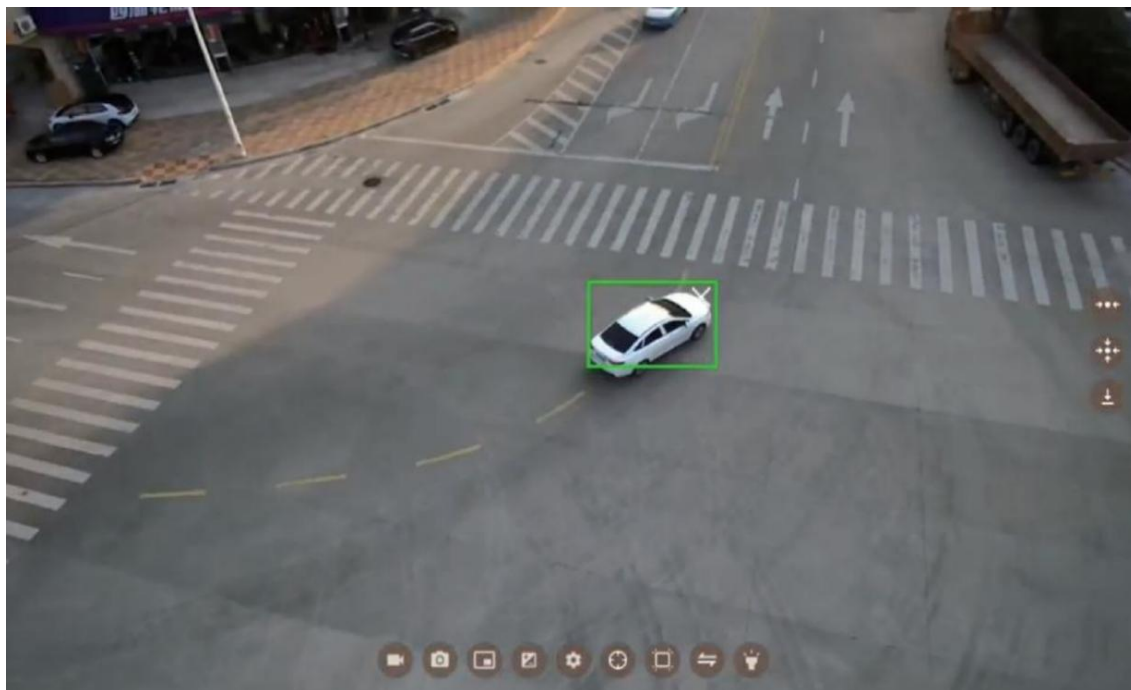
① 云台控制

点击参数设置->云台控制, 有 Ai 跟随和三种控制方式可供选择, 可同时勾选多种方式。

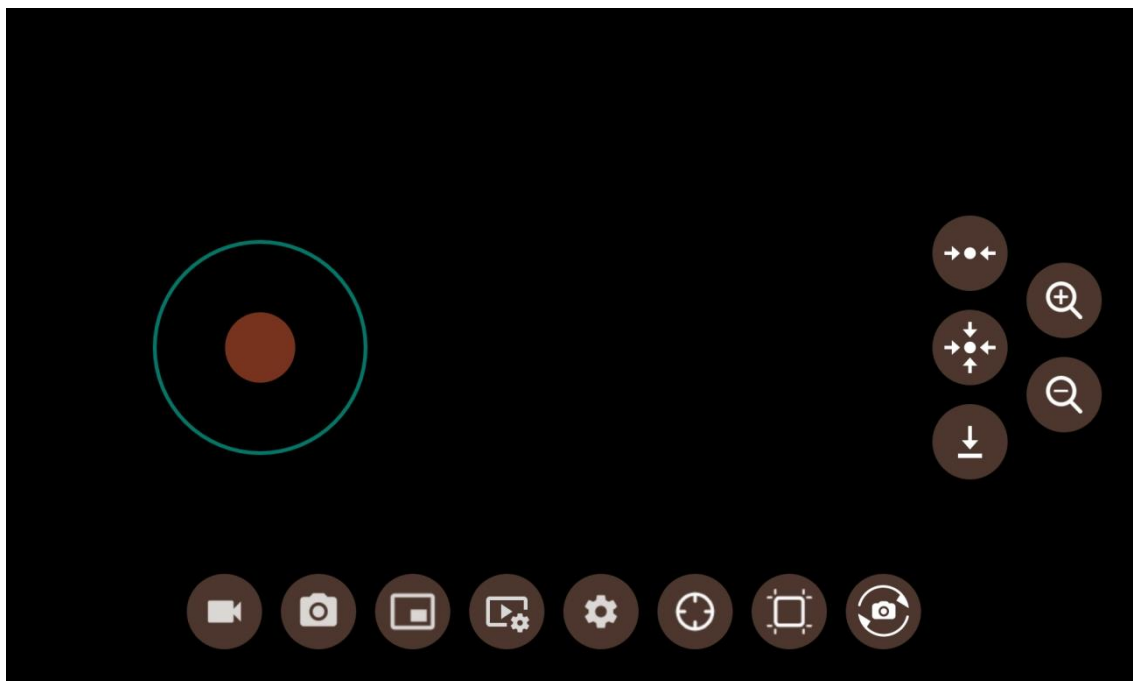
(Ai 跟随不能和手势控制同时使用, 开启 ai 跟随后, 卡录分辨率会自动改为 720p, 不开 ai 跟随卡录是 4k。)



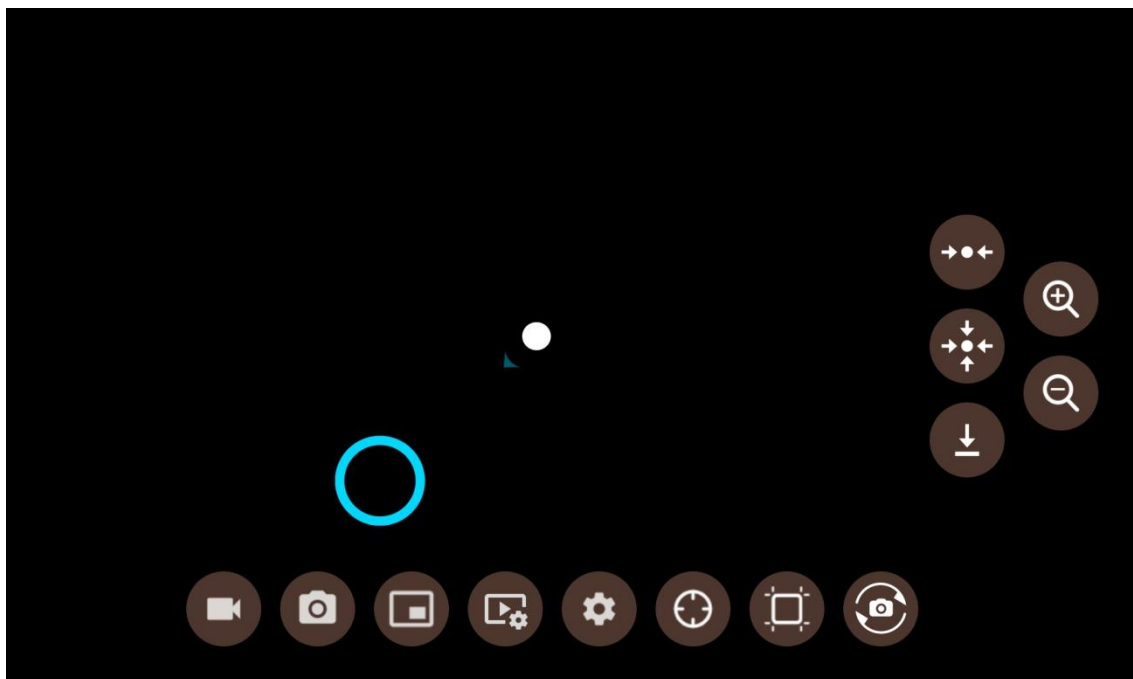
(1) 云台 Ai 跟随, 框选跟随目标后, C11 将自动追踪目标。



(2) 虚拟摇杆控制，可通过虚拟摇杆控制云台转向和俯仰，且支持一键回中等功能。



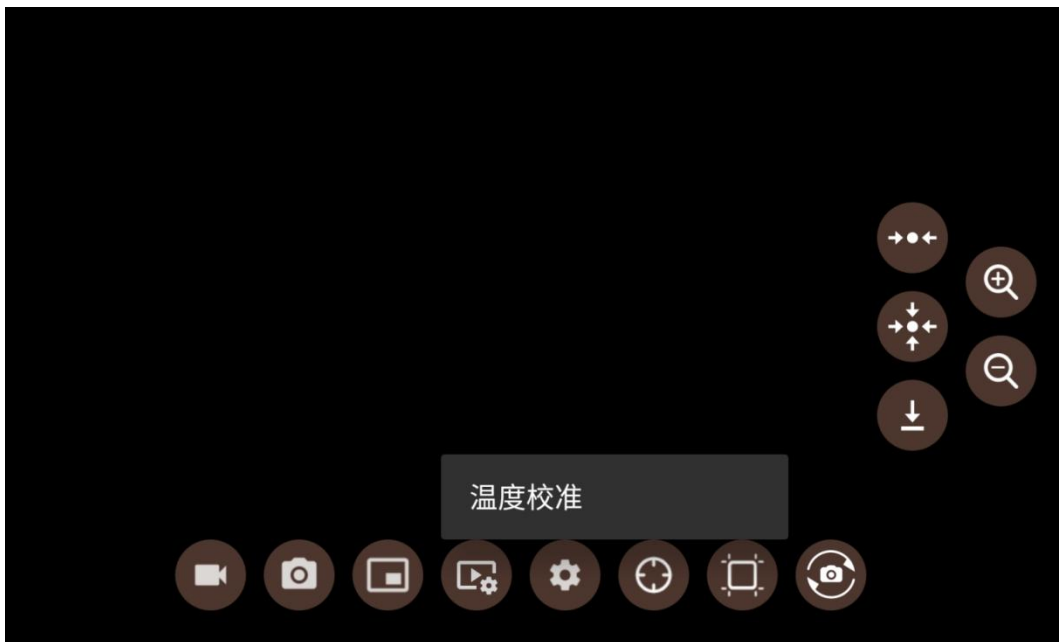
(3) 手势控制，通过滑动屏幕控制云台转向和俯仰。



(4) 遥控器通道控制,通过自定义遥控器通道控制云台转向和俯仰,以及拍照录像等功能。(遥控器通道可通过遥控器助手->舵量查看查询)



② 云台校准



温度校准：校准云台工作时的温度，以免因环境温度与 IMU 工作温度差异过大导致云台无法正常工作。

③ 云台微调

微调云台的水平轴与俯仰轴。

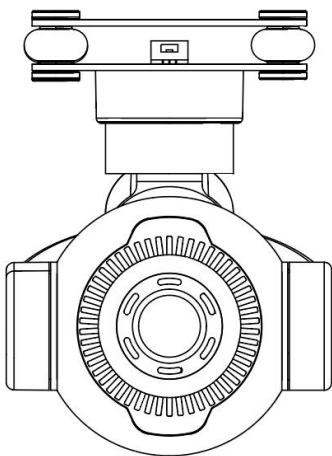
注：出厂已做好云台校准和微调，若无出现云台问题，请勿点击，密码可详询云卓技术。

④ 工作模式

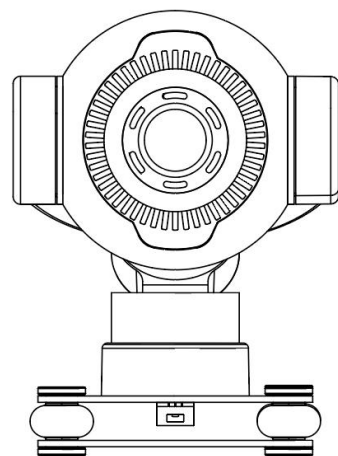


可设置云台为吊装还是倒装。

注：请根据工作模式将云台正确的放置，错误的放置方式将会导致云台电机损坏。



吊装模式（出厂默认）



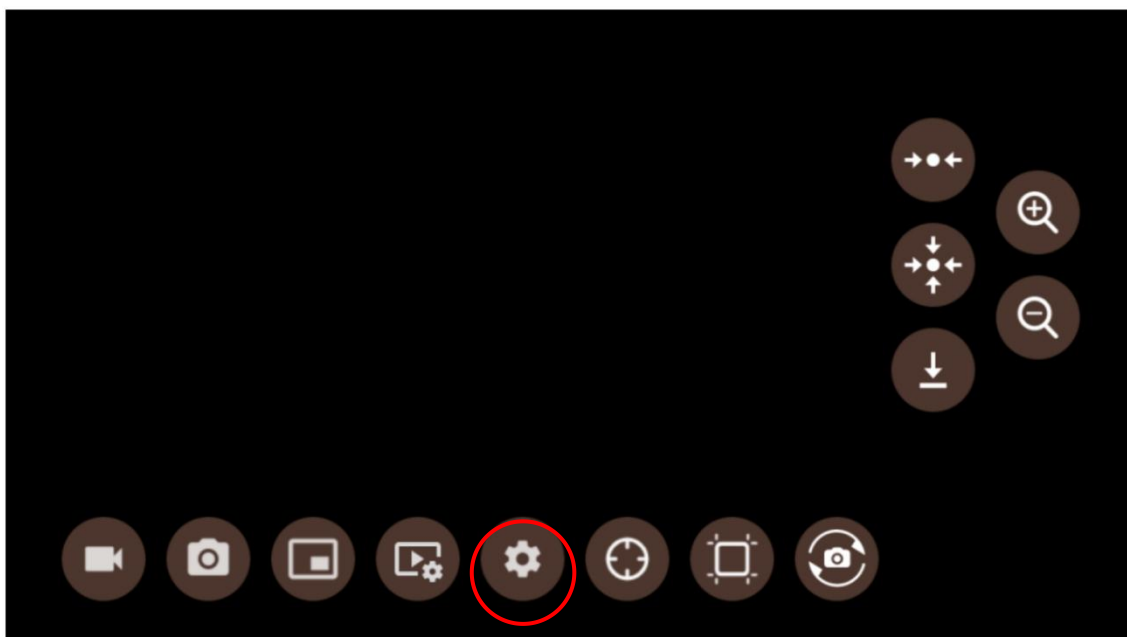
倒装模式
(设置倒装后方可倒装)

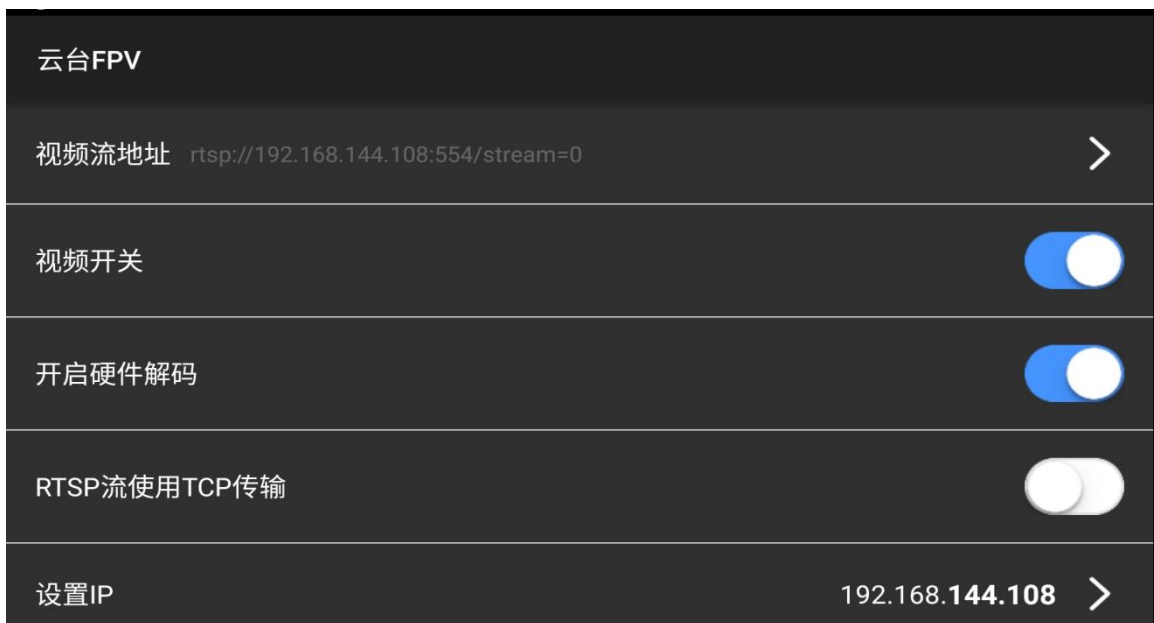
⑤ 云台速度



云台的控制速度有匀速模式和变速模式，可设置云台控制转动速度。

6. 系统设置





① 设置编码模式



可设置画面翻转、查看相机版本号以及 OSD 显示。

② 固件升级



可升级云台固件和相机固件，升级过程中请勿断电或者退出升级界面。（升级相机固件时 C11 必须插 TF 卡）

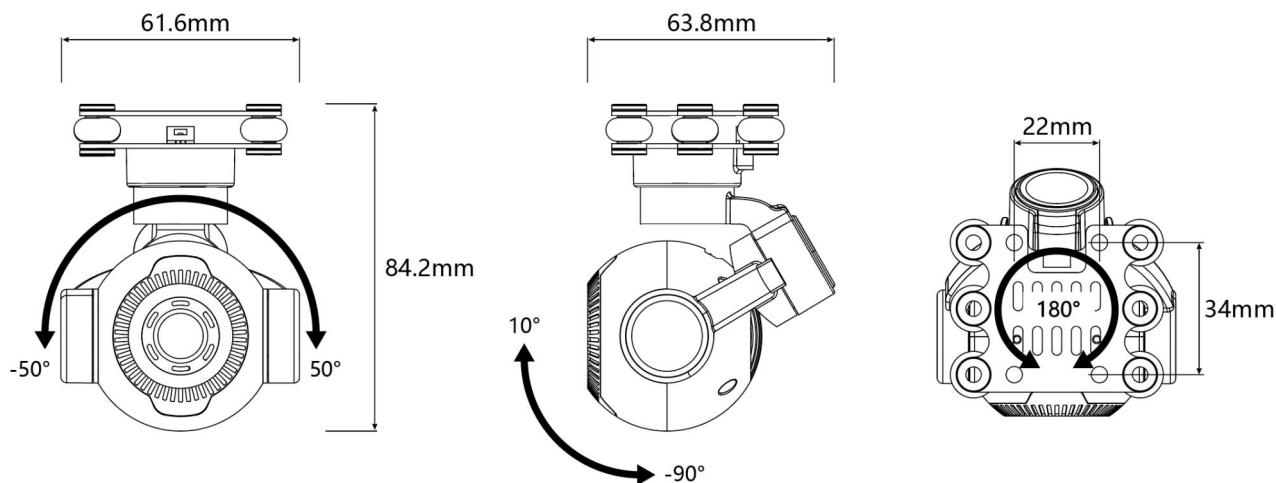
云台固件：



相机固件:



六、吊舱尺寸，角度标注



七、注意事项

为保护您和他人免受伤害或保护您的设备免于损坏，请阅读以下全部信息后再使用您的设备。

1. 请勿将组件直视太阳等高强度辐射热源；
2. 理想使用环境温度为-10℃~55℃；
3. 请勿用湿手触摸设备和线缆；
4. 请勿弯折或损坏各连接线缆；
5. 请勿用稀释剂擦洗您的设备；
6. 请勿在未断开电源的情况下拔插其他电缆；
7. 请勿接错附带的连接线缆，以免损坏设备；
8. 请注意防止静电；
9. 请勿拆卸设备，如有故障请与本公司联系，由专业人员进行维修。

因版本演进及客户需求变更,相应命令及控制会有所变更. 请联系云卓科技有限公司, 来获取最新资讯及技术支持.因产品更新升级, 尺寸重量等参数可能会有变化, 敬请谅解。

说明书如有更新，恕不另行通知，请持续关注官网 www.skydroid.xin

SKYDROID 云卓

SKYDROID TECHNOLOGY (FUJIAN) CO., LTD



SKYDROID C11

User Manual

V1.1

This manual may not be the latest version. For the latest version, please go to the Official Website's Resource Download Center - Resource Documents to download it:
<https://skydroidglobal.com>

Warning

This product classifies and explains the potential hazards that may arise from improper operation in accordance with the following terms.

Caution: Failure to follow the instructions for operation may result in property damage and minor injuries.

Caution: Failure to follow the instructions for operation may result in property damage, major accidents and serious injuries.

Warning: Operate the product only after reading the entire user manual and becoming familiar with its functions. Improper operation of this product may cause serious harm to yourself or others, or lead to product damage and property loss. This product is relatively complex and requires a period of time to become familiar with before it can be used safely; in addition, basic common sense is required to operate it. Without a strong safety awareness, improper operation may cause product damage and property loss, and even serious harm to yourself or others. This product is not suitable for children. Do not use parts that are not provided or recommended by SKYDROID; you must strictly follow SKYDROID's guidelines when using the product.

After sales service terms

1. This clause is only applicable to the products produced by Skydroid, and the products sold by Skydroid authorized dealers are also applicable to this clause.
2. As of the date of purchase, if the product of our company is verified by our technicians as a quality problem caused by non-human factors within one week, Skydroid shall afford the shipping fee for the repaired product. If the Skydroid product is verified as a quality problem by our technicians within one week and one year after purchase, the user and Skydroid shall afford the shipping fee for sending the repaired product respectively.
3. Purchase voucher and warranty card or on-line transaction record shall be provided when repairing.
4. Within 7 days from the date of purchase, Skydroid products have quality problems that are not caused by human activities under normal use, and the appearance is not damaged. With the warranty card and purchase proof, the

users can negotiate to replace products of the same model for free from our local dealers; When receiving the replacement product, the dealer is kindly requested to inform Skydroid of the replacement at the first time.

5. Skydroid will provide lifelong after-sales service for Skydroid products. If the quality problem is caused by non-human factors, it will be guaranteed free of charge within one year; The user shall pay the round-trip shipping and maintenance fees for man-made damage, modification, dismantling and exceeding the one-year free warranty period from the date of purchase.

6. To ensure your rights and interests are protected and that you can be served in a timely and effective manner, please complete the warranty card and ask for the purchase voucher when purchasing Skydroid products. Users shall provide warranty card and purchase certificate to enjoy the after-sales service terms.

7. The repaired products will be sent back to the customer within 15 working days after receiving by Skydroid, and the repair report will be enclosed.

8. The above after-sales service terms are limited to Skydroid products sold in Chinese Mainland.

Send the after-sales problems of Hong Kong, Macao, Taiwan and overseas customers to the email: sales01@skydroid.xin. The specific after-sales rules depend on the situations.

Warnings and Disclaimers

The content mentioned in this article relates to your safety, legal rights and responsibilities. Before using this product, please read this manual carefully to ensure that the product has been correctly set. Failure to observe and operate in accordance with the instructions and warnings in this document may cause harm to you and the people around you, and damage this product or other surrounding objects. The right of final interpretation of this document and all relevant documents belongs to Skydroid. It is subject to update without notice. Please visit: <http://www.skydroid.xin/> Official website to obtain the latest product information.

C11 gimbal has been commissioned according to the camera and lens it carries before deliver out the factory. Do not adjust the gimbal or change its mechanical mechanism, nor add other external equipment to the C11. The structure of the C11 is precise. Do not disassemble the C11 by yourself, or it will cause the gimbal working abnormally.

For the safety of you and others, please ensure that the drone is in a safe state during the gimbal commissioning and is not energized for commissioning in a flammable, explosive and children's environment. It is strongly recommended that you remove the propellers of the drone before commissioning

- A) Working temperature: $-10^{\circ}\text{C}\sim+55^{\circ}\text{C}$
- B) Storage temperature: $-25^{\circ}\text{C}\sim+55^{\circ}\text{C}$
- C) Atmospheric pressure: 86kPa~106kPa
- D) The place of use shall not have explosive media, the surrounding media shall not contain gases and conductive media that corrode metals and damage insulation, and shall not be filled with water vapor or have serious mold.
- E)The place of use shall be equipped with facilities to prevent rain, snow, wind, sand and ash.

Because our company cannot control the specific use, installation, modification and improper use of users. For the direct and indirect loss or damage caused by the above, our company will not bear the corresponding loss and compensation liability. If you use, install, and assemble Skydroid products, the corresponding results will be borne by the user. Our company is not responsible for indirect or direct losses and injuries caused by the use of this product.

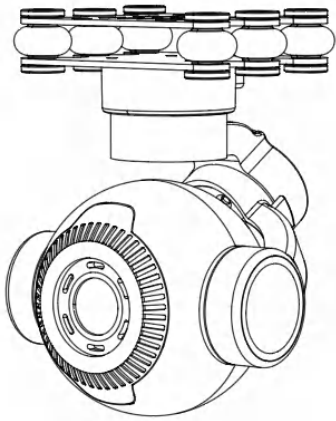
Contents

I . Production introduction	6
II . Product Packing List	6
III. Overview of C11	7
IV. Product specifications	8
V . Installation and debugging	9
1. The schematic diagram of the screw hole position and spacing is as follows:	9
2. Gimbal working mode	10
3. Gimbal cable connection diagram and explanation	10
4. Use of C11	11
5. Parameter settings for C11	13
6. System Settings	18
VI. C11 size, angle annotation	22
VII. Precautions	22

I . Production introduction

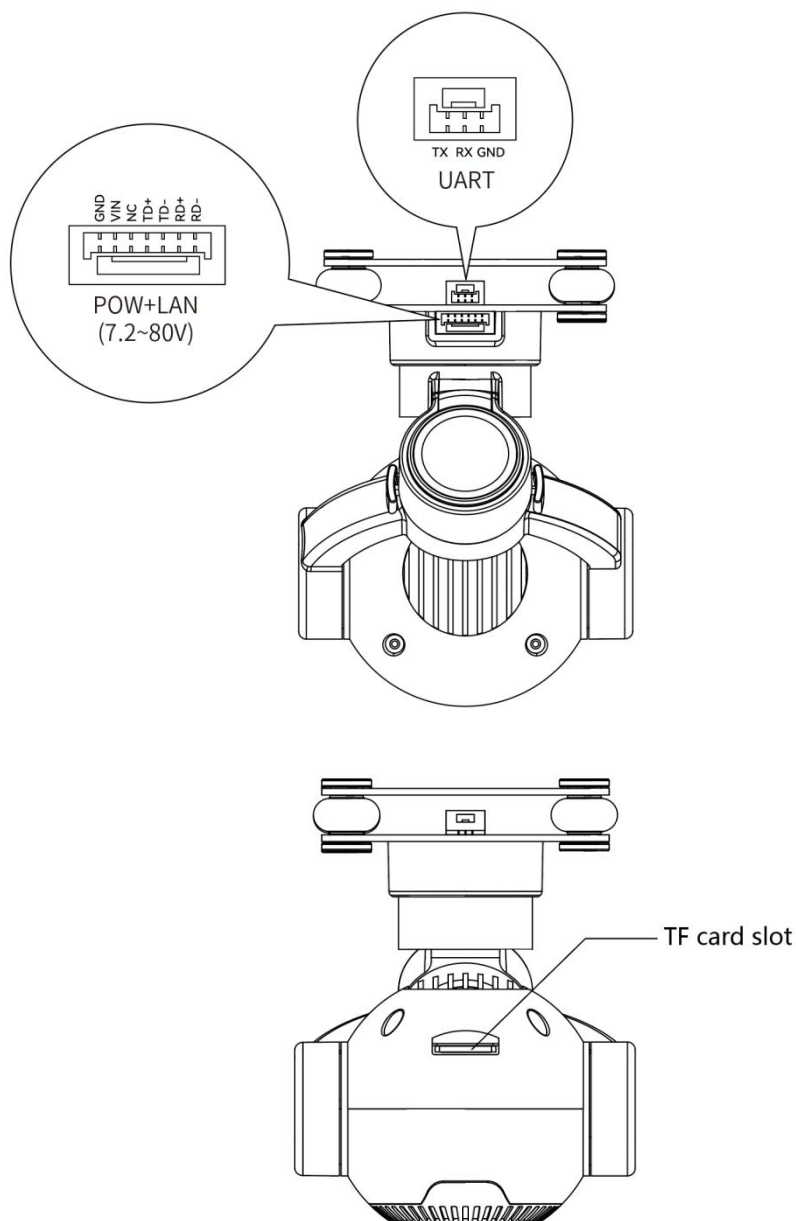
The C11 is a compact high-definition 3-axis gimbal equipped with a next-generation imaging chip and paired with an HD distortion-free camera. It offers a wide field of view and clear image quality, with an effective pixel count of 8 million. Boasting powerful 4K video recording and photography capabilities, it captures beautiful moments as they unfold. Supporting 30x digital zoom, it brings distant scenic views up close. Adopting an industrial-grade 3-axis stabilization structure, it significantly reduces image jitter, ensuring the views remains stable at all times. This gimbal is compatible with vehicles of various specifications and sizes

II . Product Packing List

C11 gimbal*1	
Fixing screw(M2.5*6)×4	
Ethernet power cable*1	
32G Kingston memory card*1	
Card reader*1	
Serial cable*1	

III. Overview of C11

C11 ports introduction

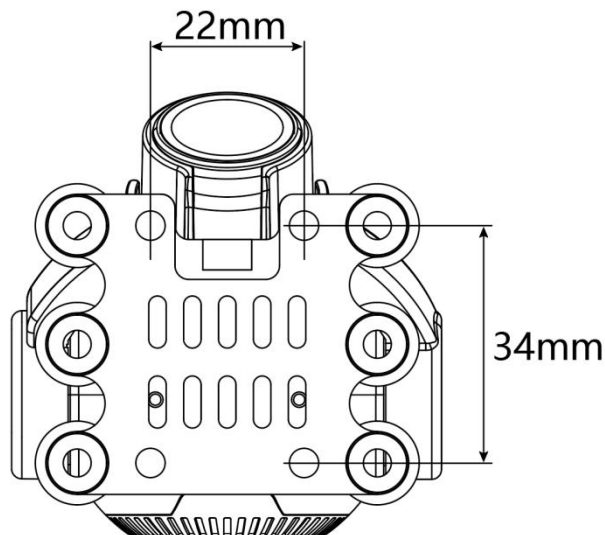


IV. Product specifications

C11 gimbal parameters	
Video output signal interface	LAN port
Control signal input interface	LAN port
Working voltage	12V~80V
Working current	12V /245mA
Working temperature	-10℃~+55℃
Weight (includes quick disassemble shock absorber plate)	106g
Size (includes quick disassemble shock absorber plate)	61.6mm(L)*63.8mm(W)*84.2mm(H)
Controllable angle range	-90°~+10°(Pitch); -90°~+90°(Yaw)
Hoist mode/ Upside down mode	support
One click back/One click down/One click head up	support
Lens resolution	8MP
Gimbal Sensor Size/Specifications	1/2.8 inch
Aperture	F2.0
Focal length	3.1mm
HFOV / VFOV/DFOV	105°/58°/122°
Output Mode	RTSP Stream H265
Image Transmission Resolution	1280×720
Zoom Multiplier	30x
Card-Recorded Video Resolution	3840×2160
Video Storage Format	TS
Photo Resolution	3840×2160
Photo Storage Format	JPG
Supported Memory Card Types	Kingston 32GB
Supported File Systems	FAT32

V. Installation and debugging

1. The schematic diagram of the screw hole position and spacing is as follows:

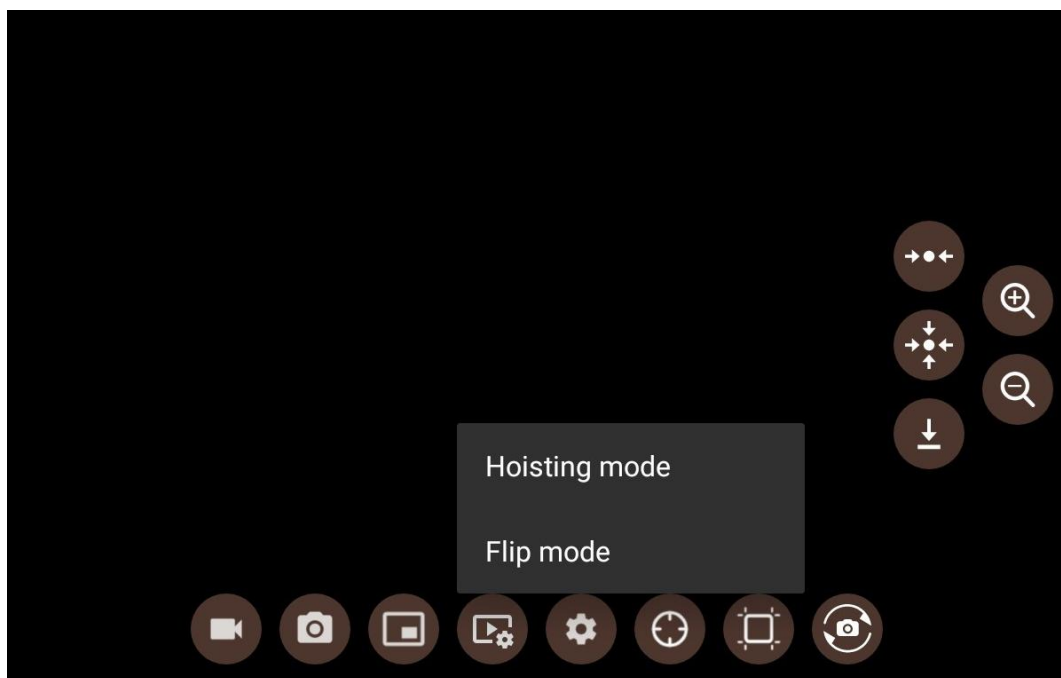


Note: The screw size used to fix the shock absorber plate is M2.5*6, with a quantity of 4 pieces.

When the gimbal is not in use, do not hang it on the drone. Long time suspension will accelerate the deformation of the shock-absorbing ball, leading to a decrease in shock-absorbing effect and jelly phenomenon.

When installing the gimbal, the shock absorption plates shall be kept absolutely perpendicular and parallel to each other. Incorrect installation will cause deformation of the shock absorption ball, resulting in a decrease in shock absorption effect and inability to self check.

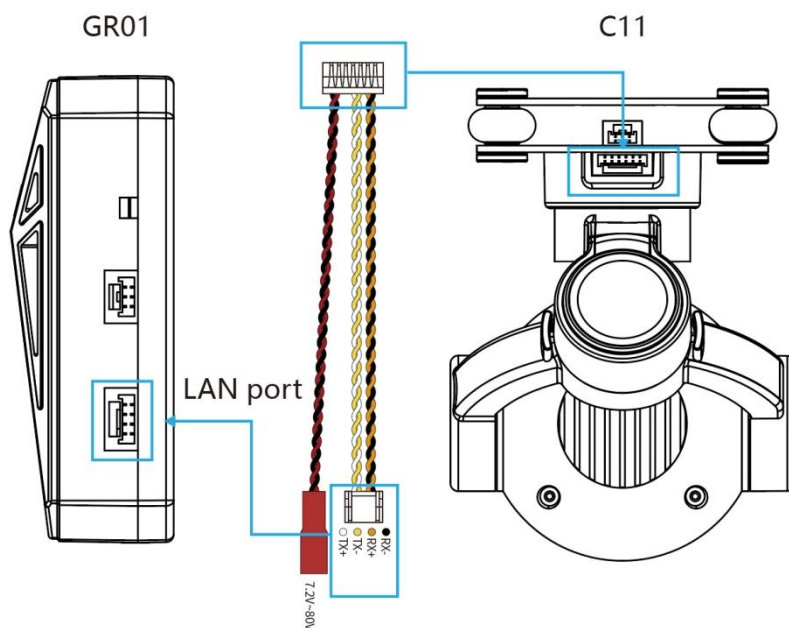
2. Gimbal working mode



The hoist mode or upside down mode can be set on the FPV App

Note: The default hoist mode is set before shipping, please do not invert and power on; Please place the gimbal correctly according to the working mode. Incorrect placement may cause damage to the gimbal motor.

3. Gimbal cable connection diagram and explanation



Power supply	Red JST-2P male port,Power supply: 7.2V-80V (DC power supply or lithium battery)	
Ethernet cable (signal transmission)	Network IP signal	RX-: Network IP signal RX+: Network IP signal TX-: Network IP signal TX+: Network IP signal
Video transmission	Video Output RTSP Stream rtsp://192.168.144.108:554/stream=0	

4. Use of C11

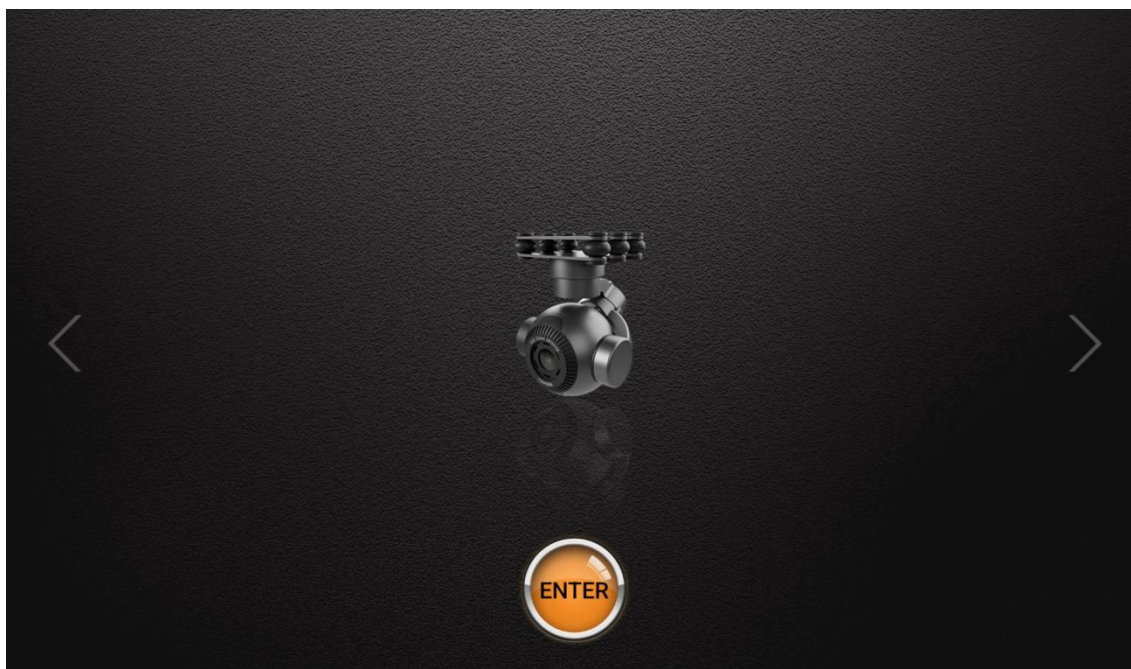
Install the latest version of gimbal FPV software on the remote control and open it.

Software download address: <http://file.skydroid.xin/SkydroidCameraFPV.apk>

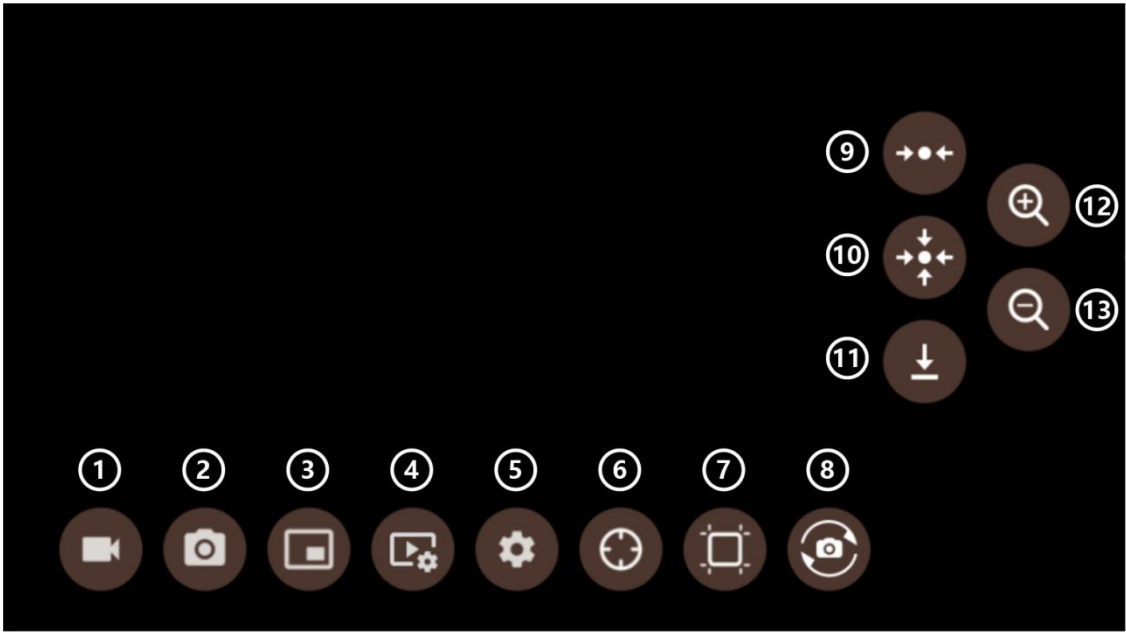
① Power on it

After the installation of the gimbal is fixed, power on it .Please wait for power on to complete.

② Open the gimbal FPV, select the C11 connection, and click to enter.



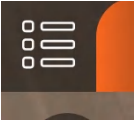
③ Introduction to the homepage of gimbal FPV

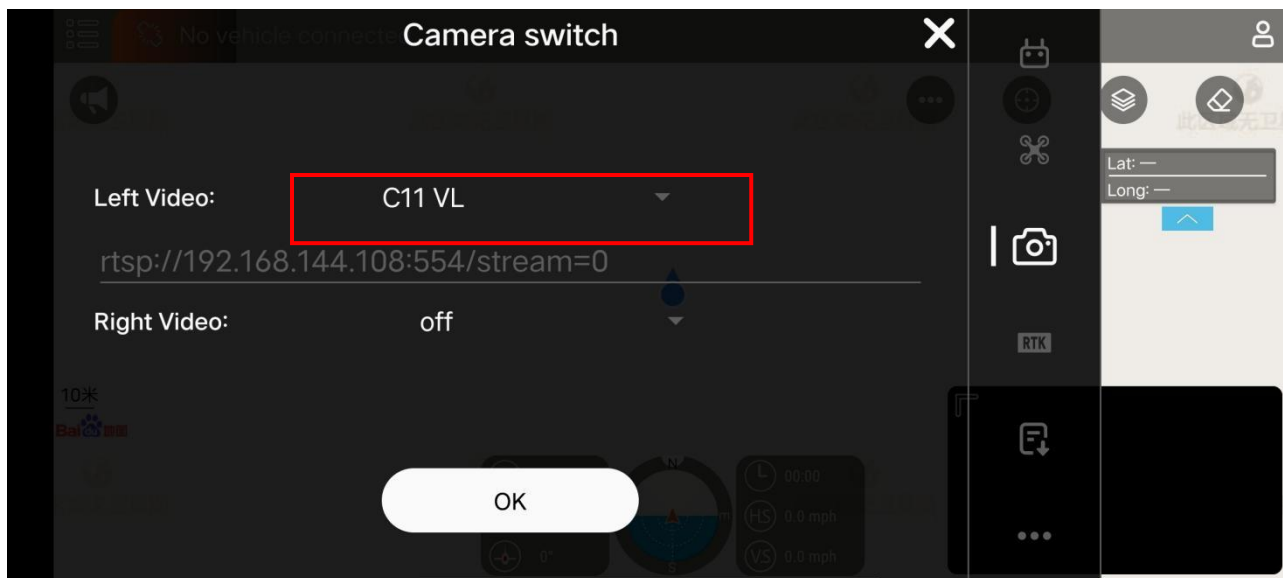


No.	Annotation	No.	Annotation
1	Recording	8	Connection Switch
2	photography	9	Yaw return to center
3	Floating Window	10	Overall return to center
4	Parameter Settings	11	One click down
5	System Settings	12	Electron Magnification+
6	Crosshair	13	Electron Magnification-
7	Reverse Lline		

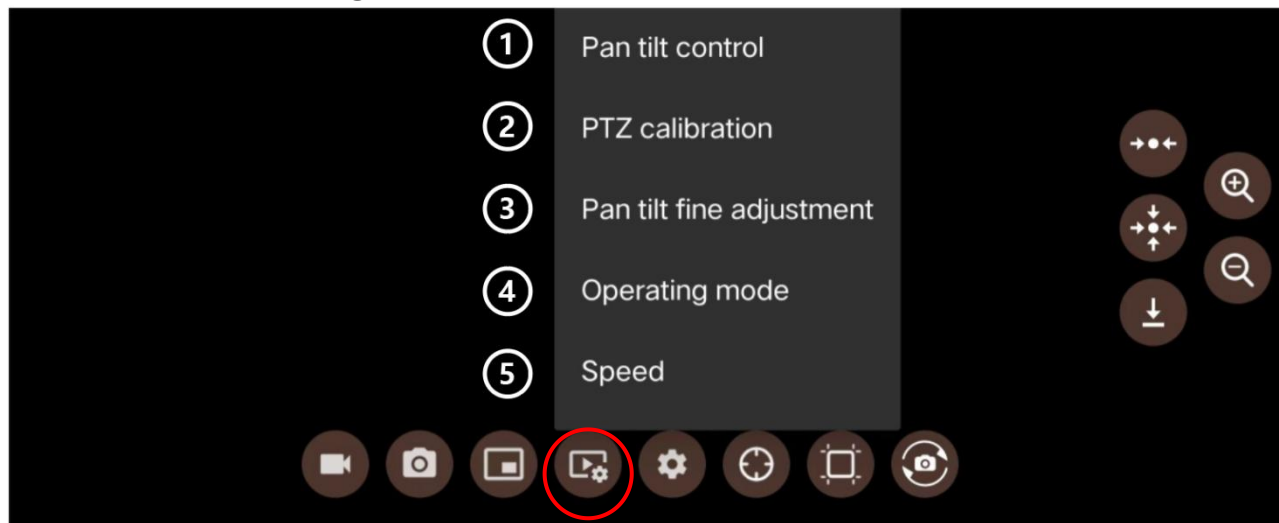
④ FFLY GCS settings

Skydroid Fly App Download Link: <https://file.skydroid.xin/SkydroidFly.apk>

APP homepage top left corner  ->  Common settings -> Open the left window and set it to C11.



5. Parameter settings for C11

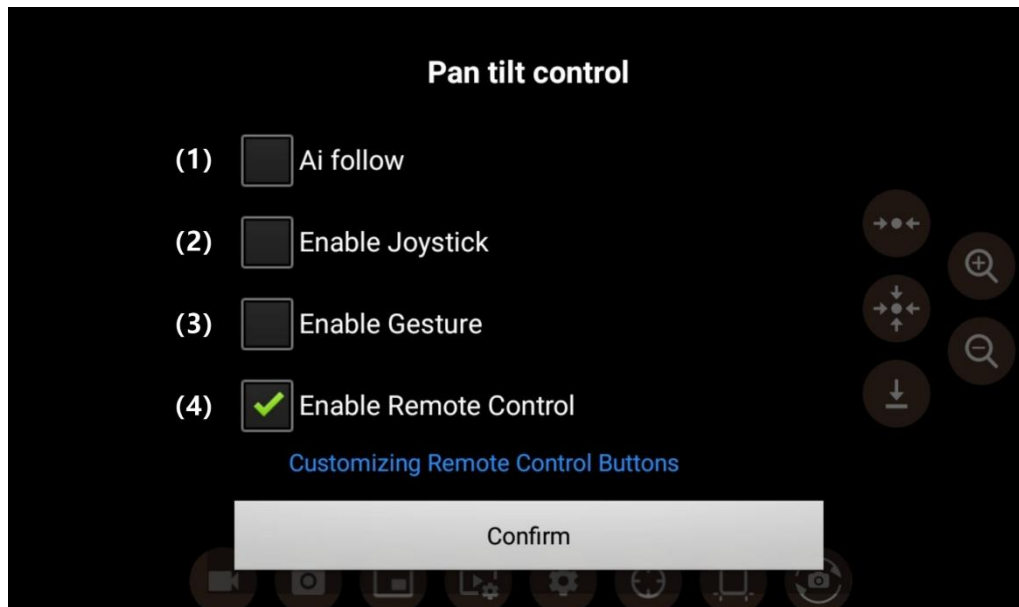


In the parameter settings, camera parameters and functions such as calibrating and upgrading the firmware can be set.

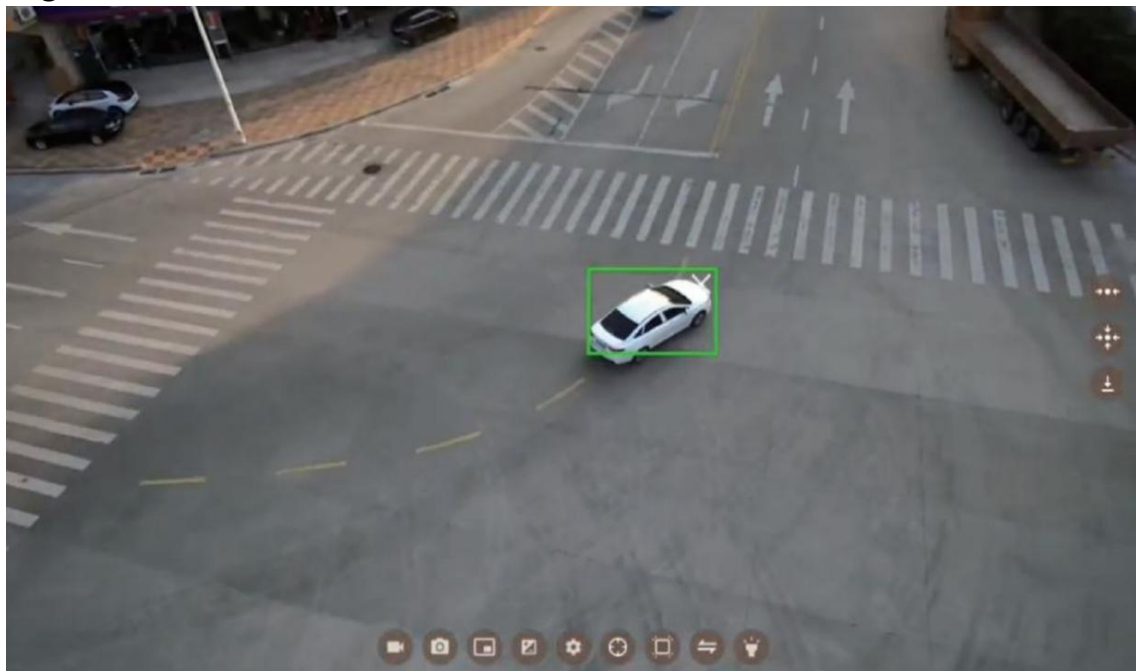
① Pan tilt control

Click on parameter settings -> gimbal control, there are AI follow and other three control ways to choose, which can be chosen simultaneously. (AI follow

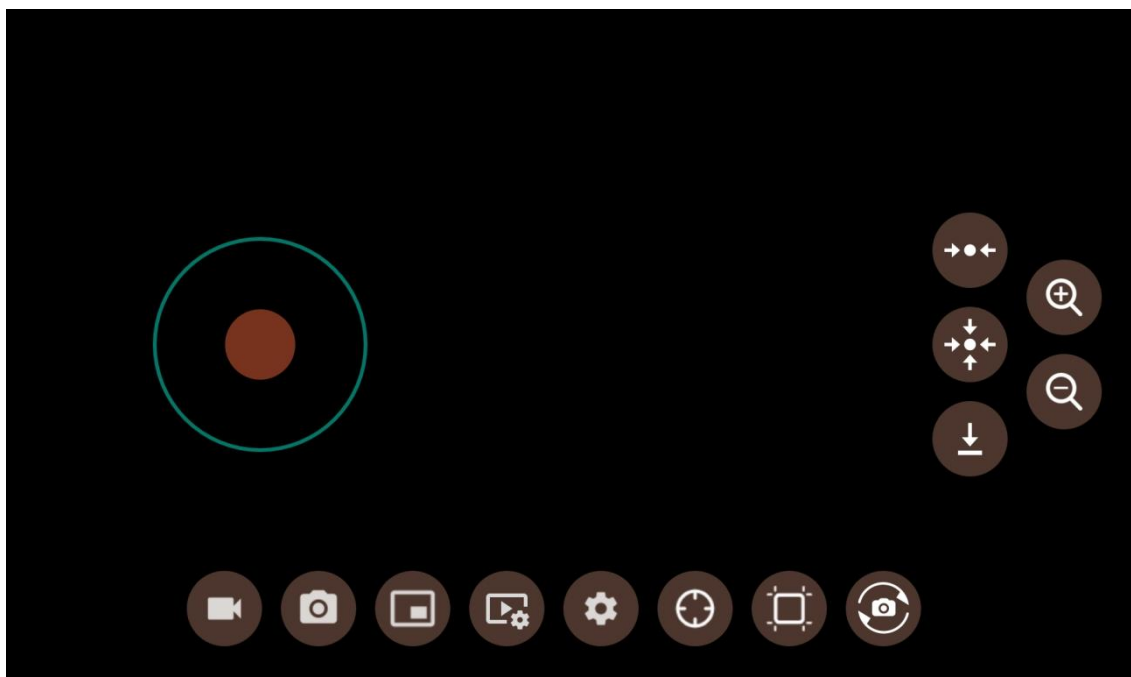
can be used simultaneously with gesture control, When AI Follow is enabled, the card recording resolution will be automatically changed to 720p, while the card recording resolution will be 4K when AI Follow is disabled.)



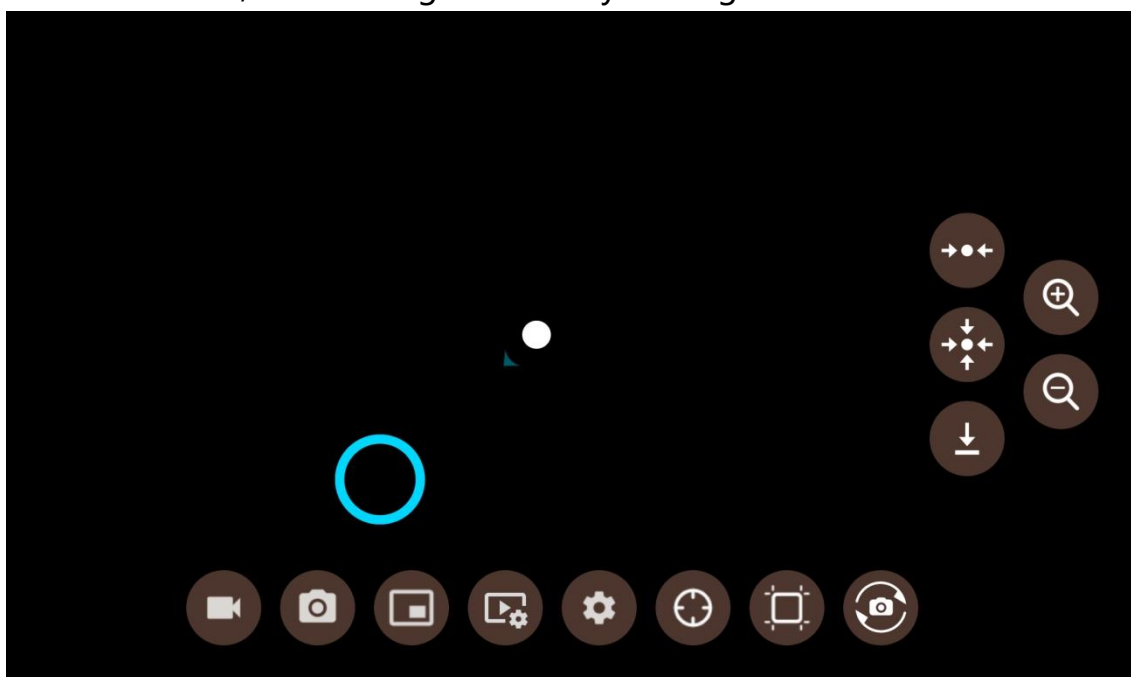
(1) C11' s AI follow, after selecting this function, C11 will automatically track the target.



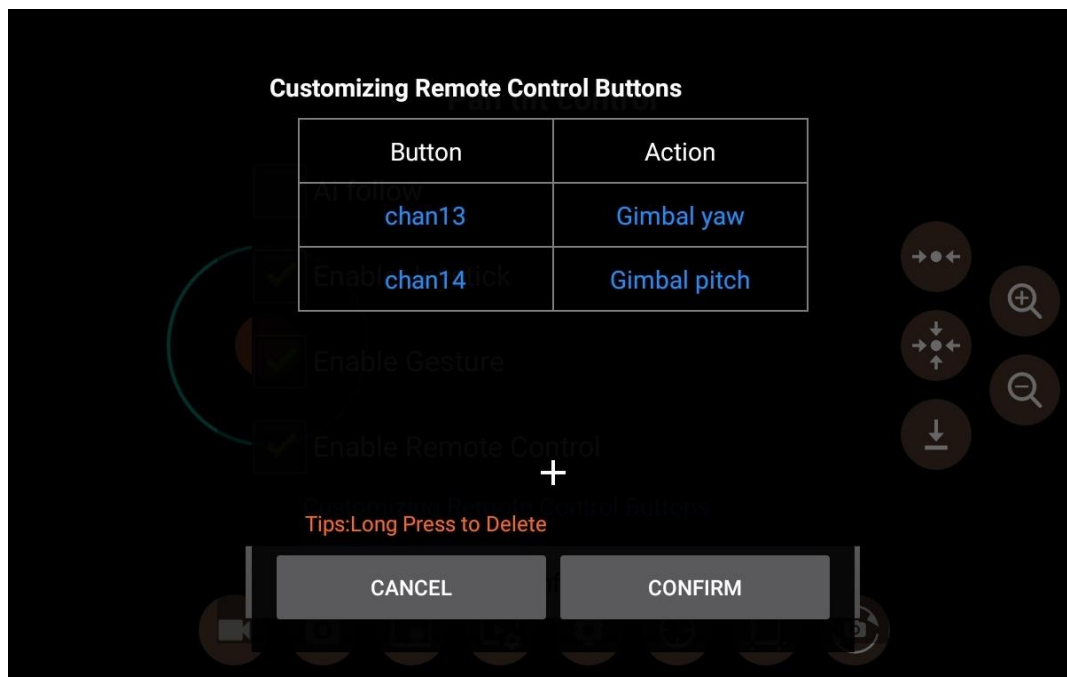
(2) Virtual joystick control, which can control C11 tilt through it, and supports one click return to center function.



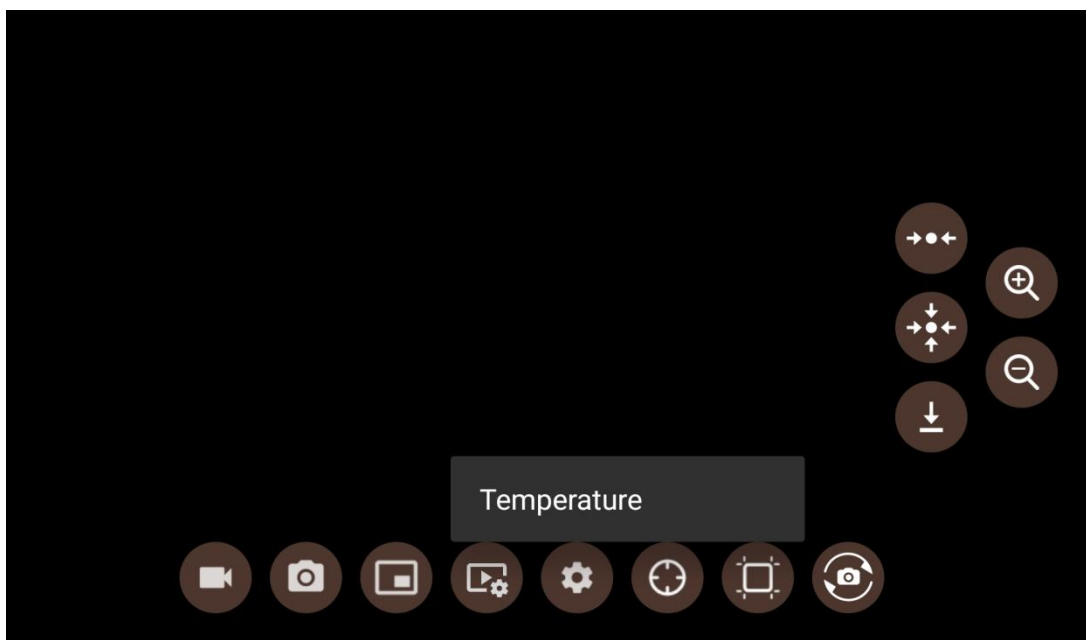
(3) Gesture control, controlling C11 tilt by sliding the screen.



(4) Use remote control channel to control it, using custom remote control channels to control C11, as well as functions such as photography and video recording. (The remote control channel can be viewed and queried through the Remote Control Assistant -> Rudder View)



② PTZ calibration



Temperature :Calibrate the temperature of the gimbal during operation to prevent it from malfunctioning due to excessive temperature difference

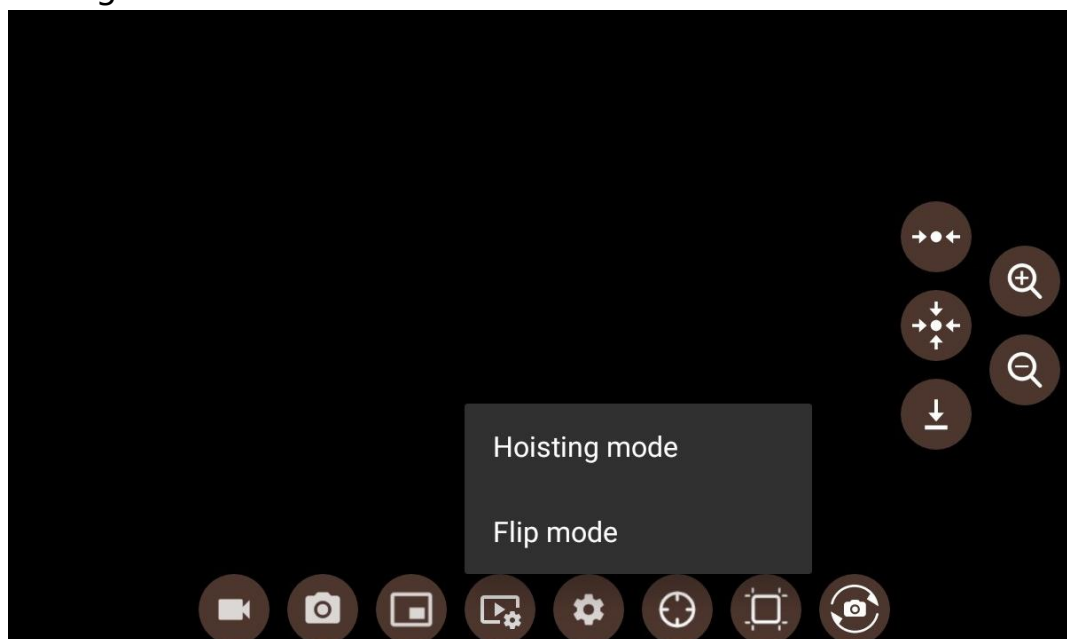
between the ambient environment and the IMU's operating temperature.

③ Pan tilt fine adjustment

Fine-tune the horizontal axis and tilt axis of the gimbal.

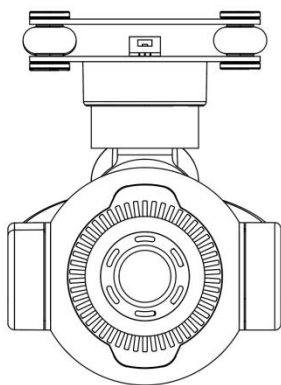
Note: The gimbal calibration has been completed at the factory. Do not click this option unless there is a problem with the gimbal. For the password, please consult SKDROID engineers for details.

④ Operating mode

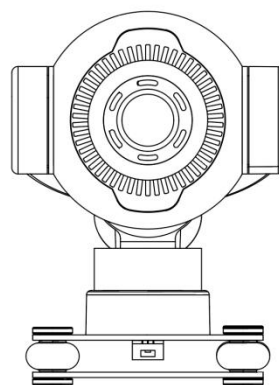


Can set the C11 in hoist mode or upside down mode

Note: Please place the gimbal correctly according to the working mode. Incorrect placement may cause damage to the gimbal motor.

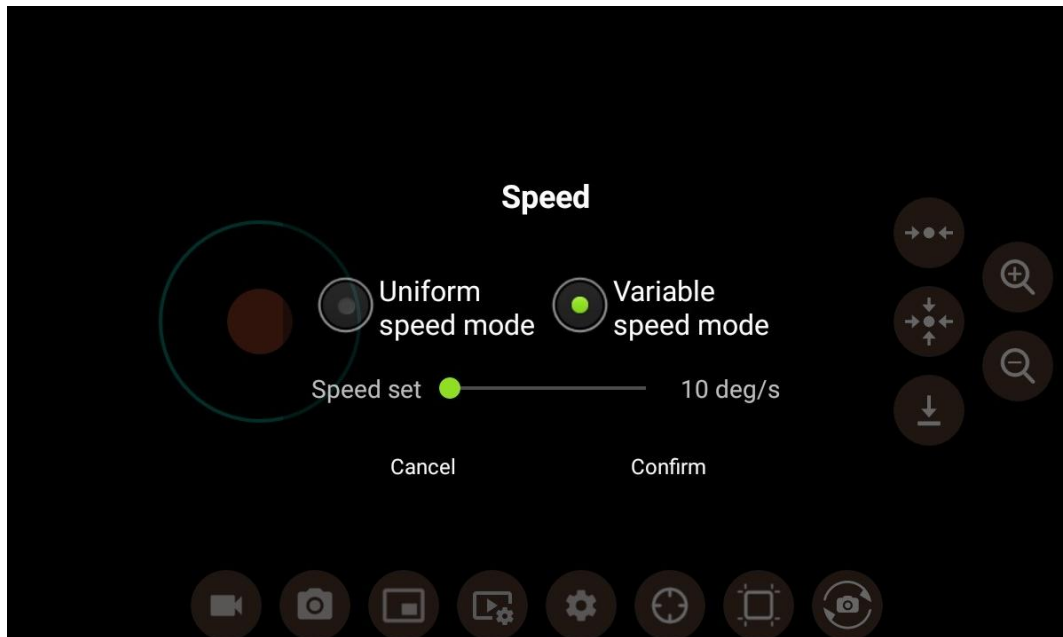


Hoisting mode
(Factory default settings)



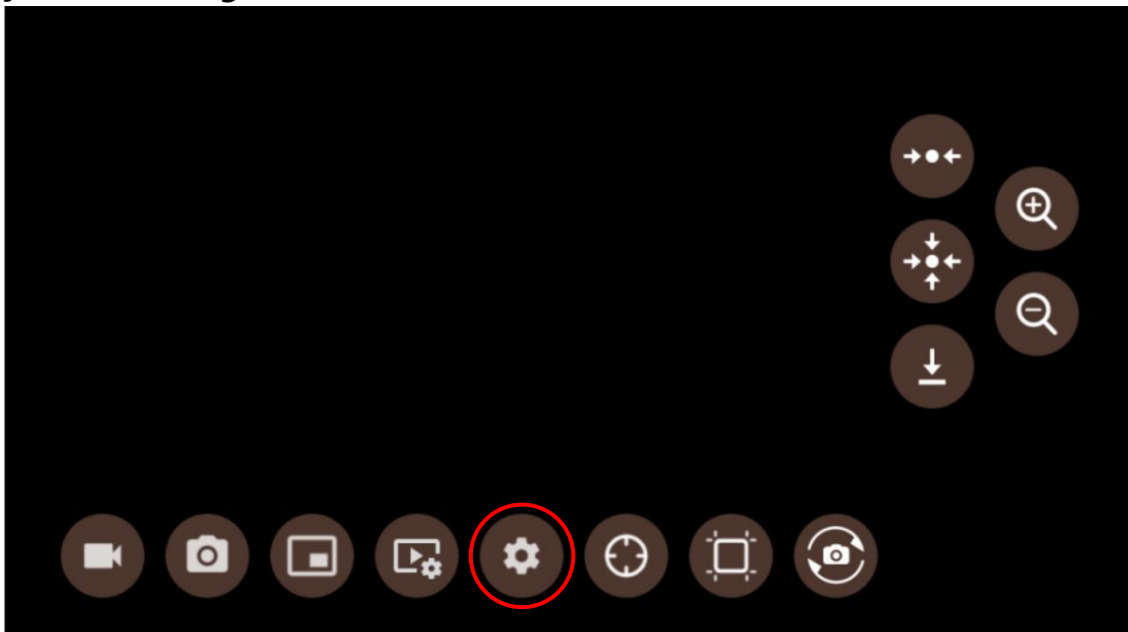
Flip mode
(The device can only be flipped after flip mode is enabled)

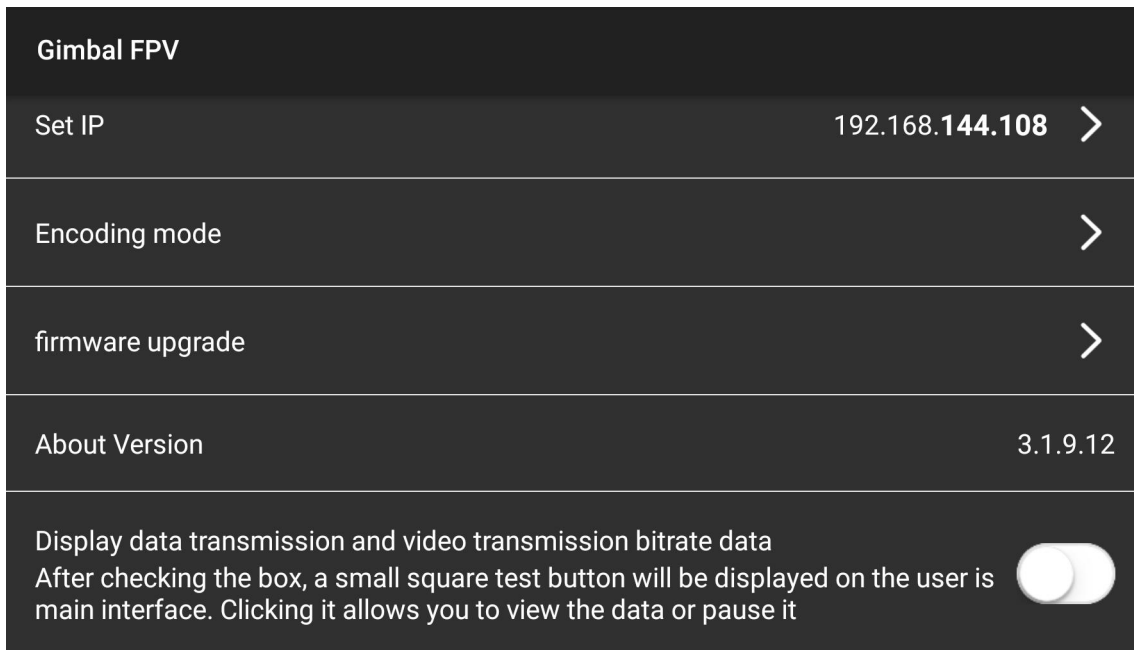
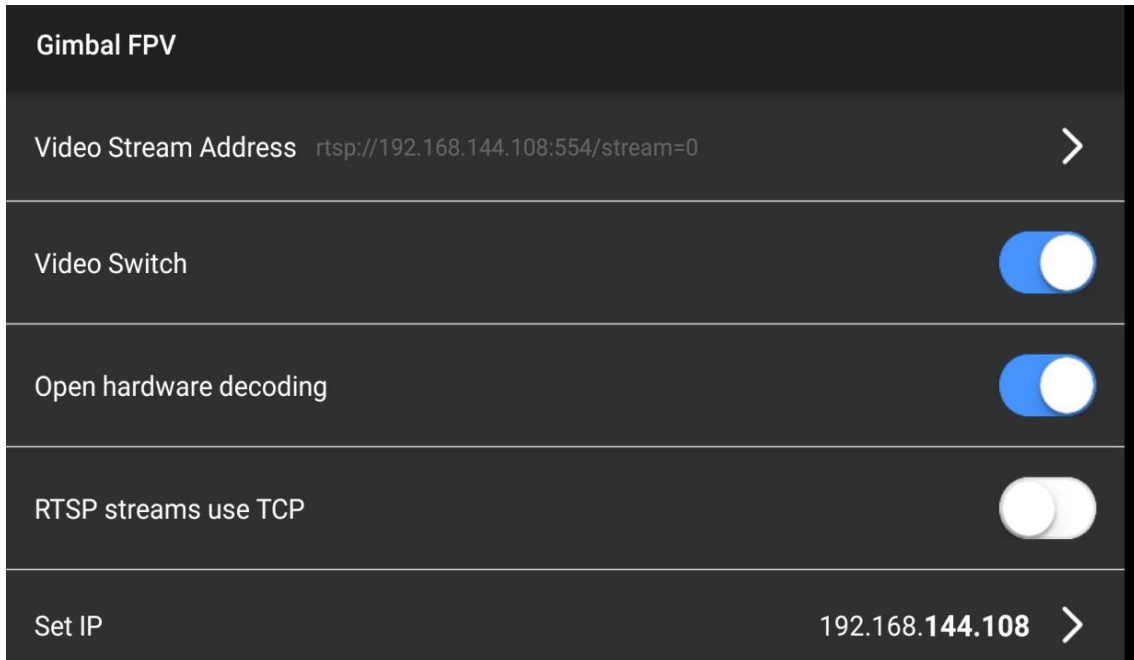
⑤ speed



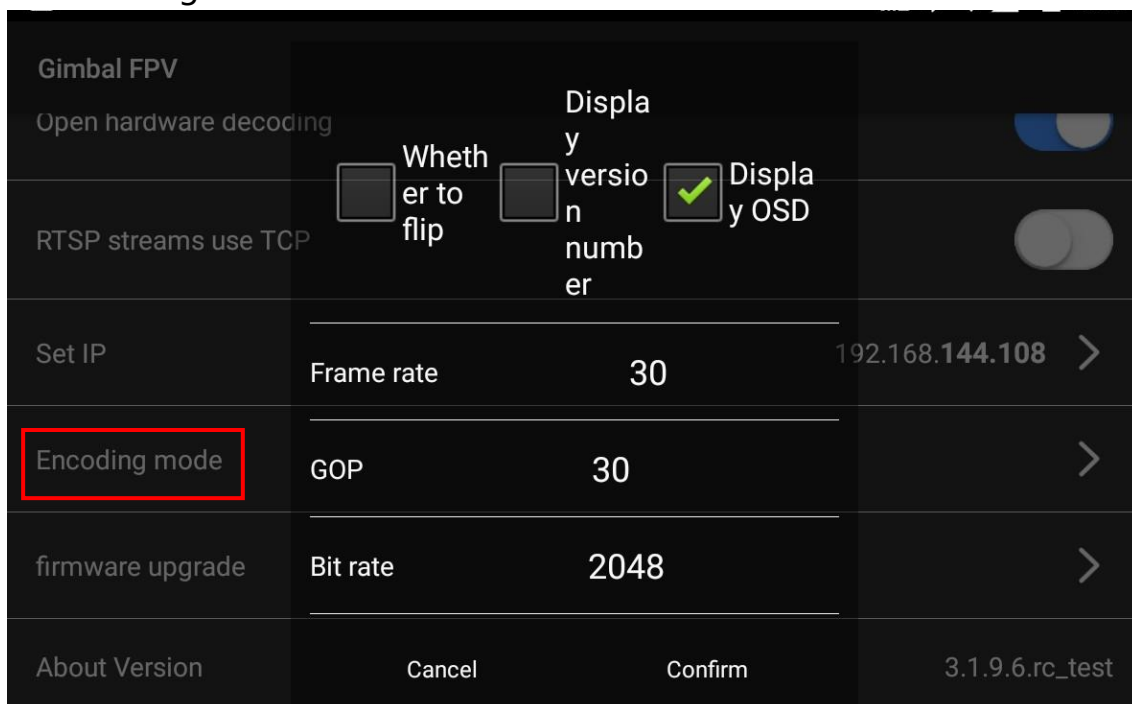
The gimbal's control speed includes uniform speed mode and variable speed mode,
The pan-tilt rotation speed can be adjusted.

6. System Settings



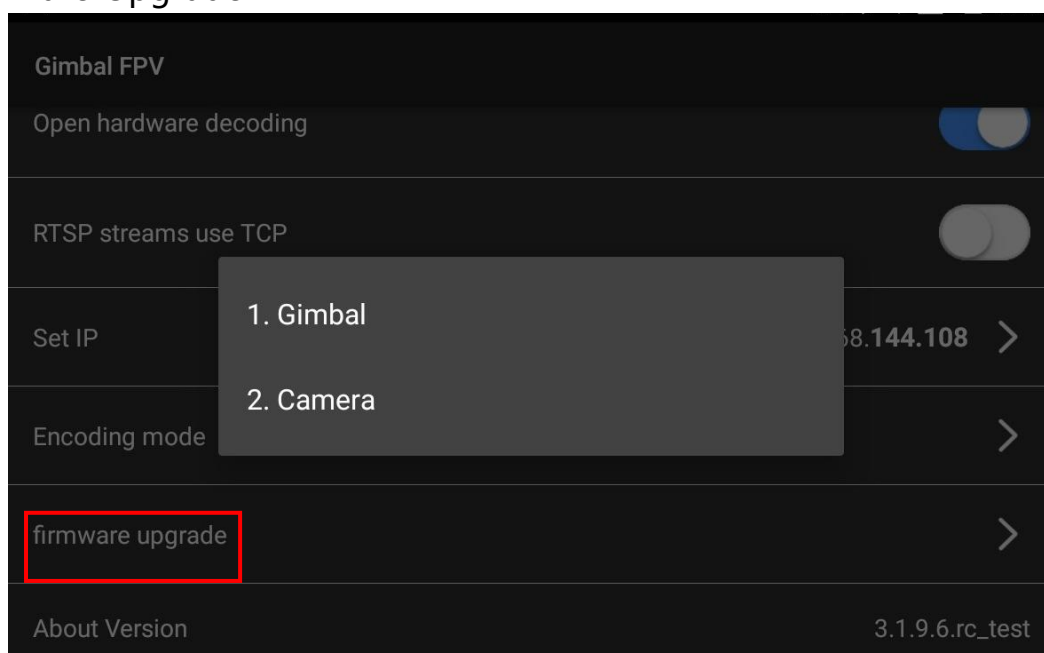


① Set Encoding Mode



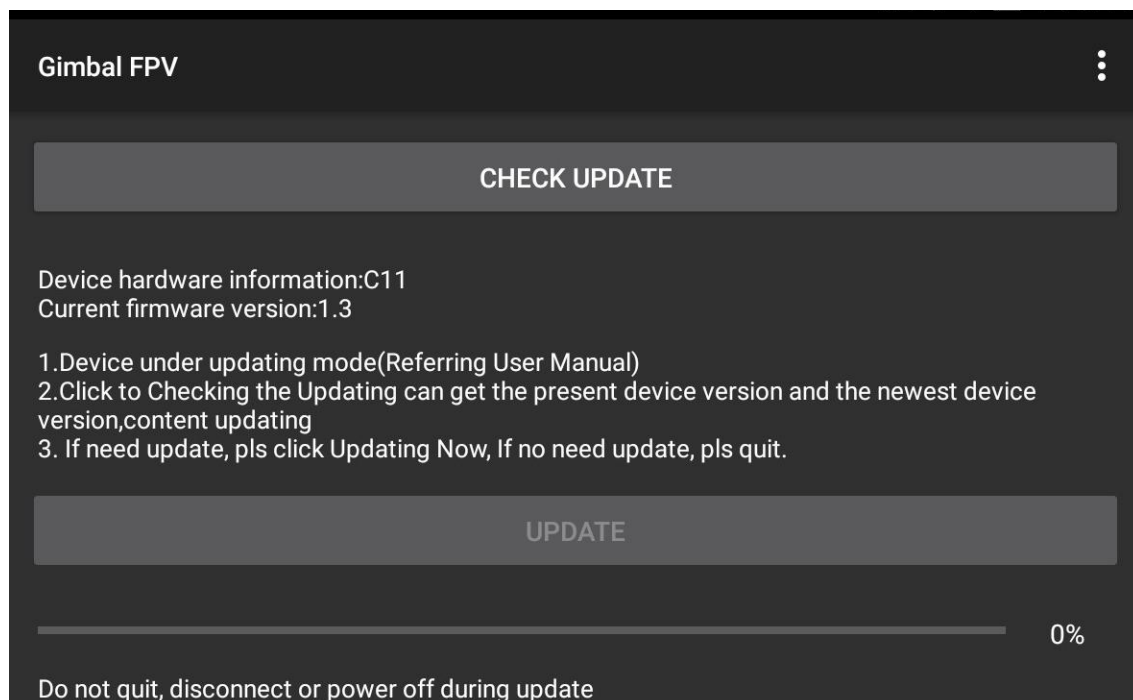
You can set the screen to flip, view the camera firmware version, and display OSD.

② Firmware Upgrade

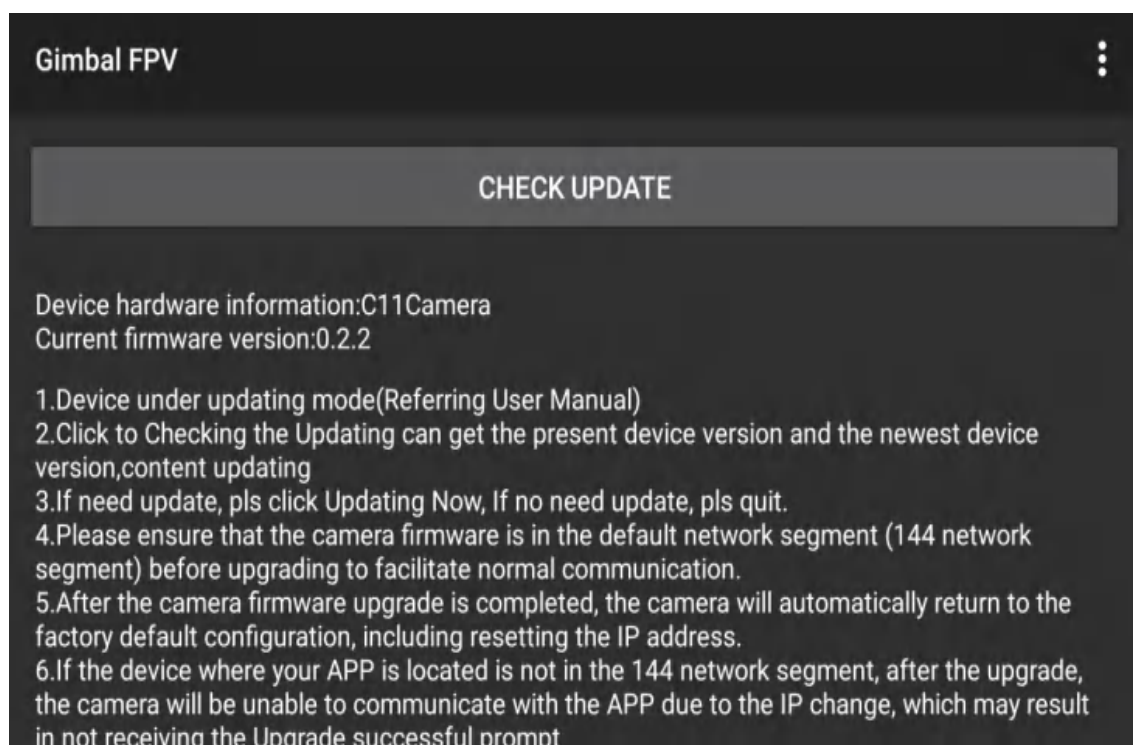


Upgradeable the C11 firmware and camera firmware. Please do not power off or exit the upgrade interface during the upgrade process. (When upgrading camera firmware, C11 shall with a TF card inserted)

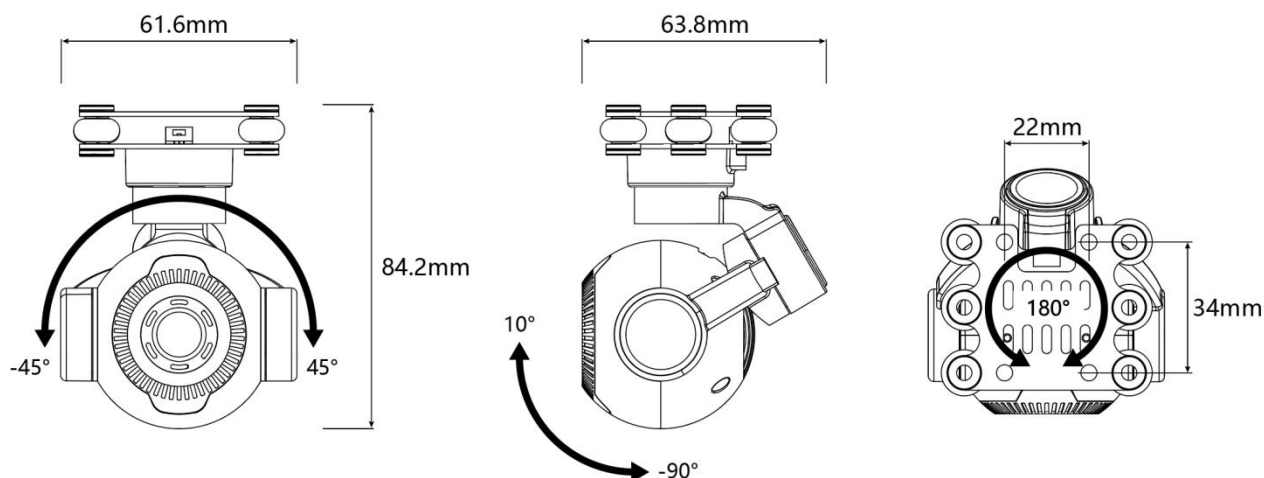
Gimbal firmware:



Camera firmware:



VI. C11 size, angle annotation



VII. Precautions

To prevent you and others from harm or damage or protect your device, please read all the following information before using your device.

1. Do not put the components directly at high-intensity radiation sources such as the sun;
2. The ideal operating environment temperature is -10 °C~55 °C;
3. Do not touch the device and cables with wet hands;
4. Do not bend or damage the connecting cables;
5. Do not use diluents to scrub your equipment;
6. Do not plug or unplug cables without disconnecting the power supply;
7. Do not connect the attached cables incorrectly to avoid damaging the equipment;
8. Please pay attention to preventing static electricity;

9. Please do not disassemble the equipment. If there is a malfunction, please contact our company for professional repair.

Due to version evolution and changes in customer requirements, corresponding commands and controls may change. Please contact Skydroid Co., Ltd. for the latest information and technical support. Due to product updates and upgrades, parameters such as size and weight may change. We apologize for any inconvenience caused by this.

Instruction are subject to change without notice for further improvement, follow the official website for further improvement:
<https://skydroidglobal.com>