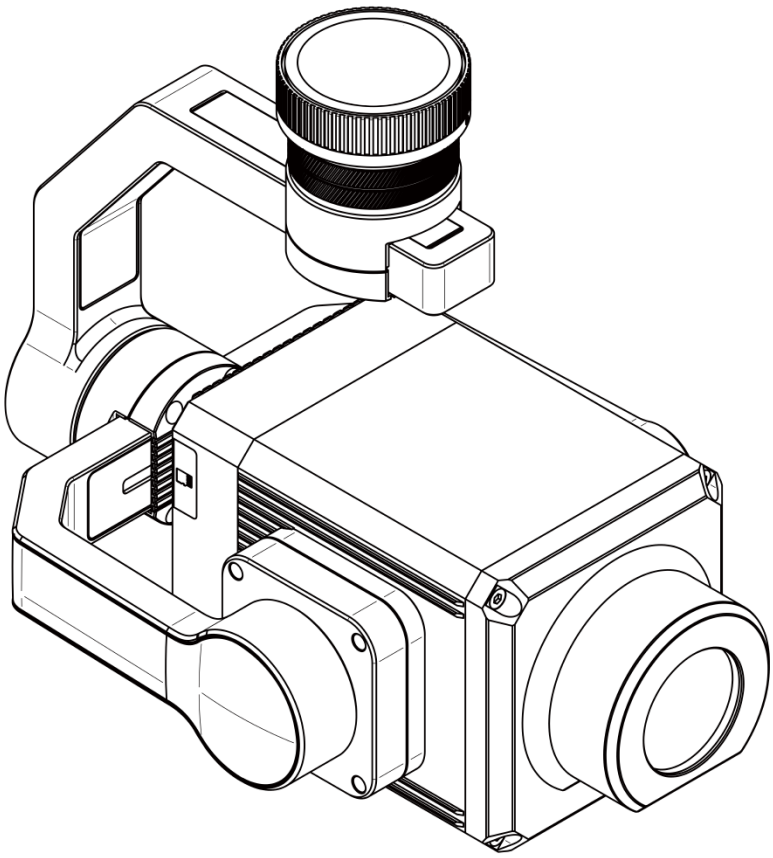
IR10红外激光变焦云台灯说明书

IR10 Infrared Laser Zoom Spotlight User Manual

用户说明书 V2.0

2024.06.05



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阅读提示

符号说明

禁止

警告

产品注意事项

1、请在使用完毕后，将设备放入IR10的安全箱，并及时更换干燥剂，避免环境湿度过大导致镜头起雾。若镜头起雾，通常情况下开机一段时间后水汽即可消散。推荐存储环境的相对湿度小于40%，温度为 20±5°C。

2、IR10属于4类非可见光激光器，在激光灯开启的状态下，严禁用眼直视或者使用光学仪器观察激光光束。

3、在正常使用的情况下，镜头前方100cm内严禁有易燃物体遮挡，以防发生火灾。

4、清洁出光镜头时，请务必使用柔软干燥的清洁布擦拭镜头表面，切勿使用碱性清洁剂进行清洁。

一、免责声明与警告

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⚠ 警告事项

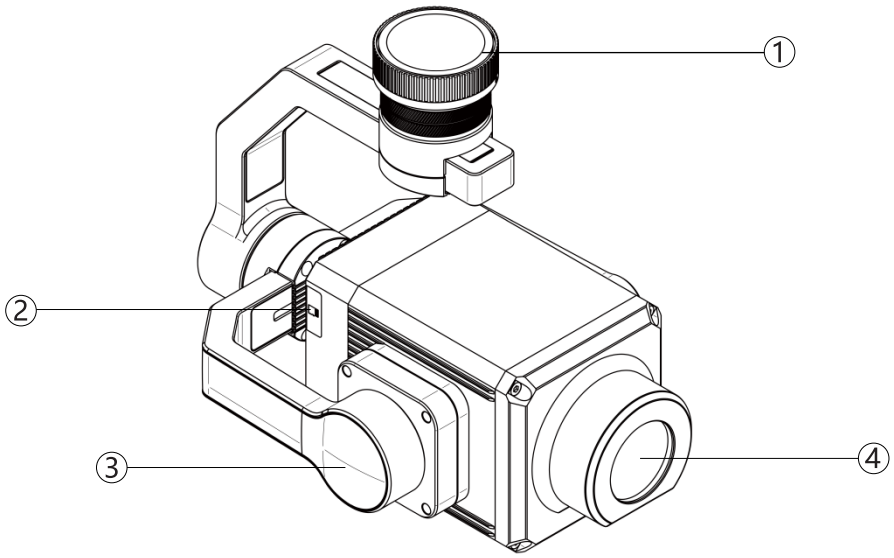
1、IR10属于4类非可见光激光器，在激光灯开启的状态下，严禁用眼直视或者使用光学仪器观察激光光束。
2、在正常使用的情况下，镜头前方100cm内严禁有易燃物体遮挡，以防发生火灾。
3、如遇硬件问题，请返厂维护，请勿擅自拆卸，否则由此造成对激光的不良影响，后果需自行承担。

注意事项

1、IR10红外激光变焦云台灯的安装方式与大疆其它载荷相同，请确认转接环是否正确安装。
2、IR10红外激光变焦云台灯在无人机起飞前，功率和变焦角度会限制在50%以下；起飞后，功率和变焦角度可达100%。
3、IR10 红外激光变焦云台灯在双云台搭配 DJI H30 系列使用时，推荐先安装IR10，等 IR10 云台自检完毕后再安装 DJI H30 系列，以避免云台自检过程中发生碰撞。

二、IR10介绍

成至 IR10 红外激光变焦云台灯，采用光纤匀化激光器，出光功率高达 12W。可在 0.56-45 度之间平滑调节照射光角，聚光、泛光灵活调度，最大红外补光距离大于 1000 米。配合具备夜景模式（IR 模式）的 DJI H20 系列或 DJI H30 系列等云台相机，可全程清晰补光，画质通透，具有优秀的透烟雨雾霾效果。且红外灯光人眼不可察觉，可实现超视距外的夜间侦查。通过 DJI SkyPort V2.0 接口，可直接挂载在大疆经纬 M300 RTK、M350 RTK 等系列无人机上使用，为夜间补光需求的用户提供超越视觉的黑夜洞察力。使用 czi Assistant APP 悬浮窗 +DJI Pilot APP 即可一键打开 DJI H20 系列的夜景模式，控制开关、调节变焦倍数，亮度以及 IR10 微调等模式，且能自动跟随云台相机的转动。IR10 无风扇的机身实现全密封设计，具备优异的防水防尘性能，能在恶劣气候条件下可靠工作，是 DJI M300 RTK、M350 RTK 行业无人机的最佳搭档。



1.云台保护盖　2.内存卡插槽　　3.DJIxport 云台　4.出光口

三、技术参数

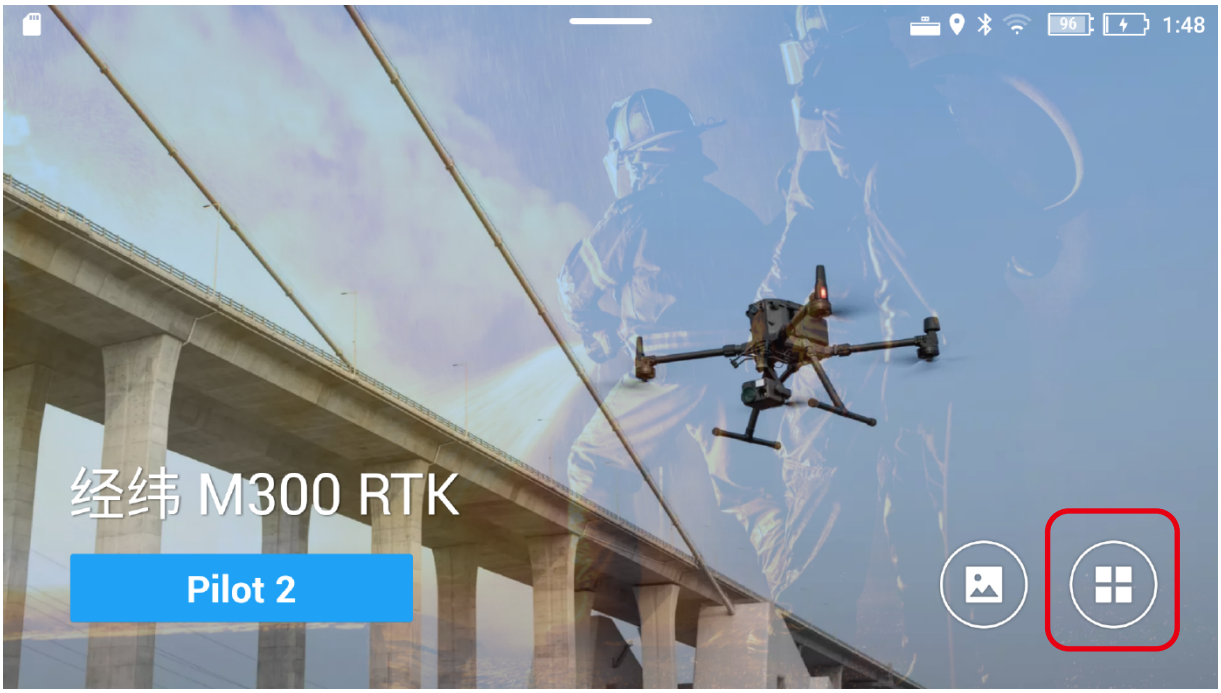
型号	IR10
规格	186*128 *158mm
重量	800ｇ±5g
有效距离	≥1000m
激光器类型	光纤匀化激光器
发光波长	808nm/940nm
出光功率	12W±0.5W
照明角度	0.56°～45°
工作温度	-20°C～+50°C

四、软件使用教程

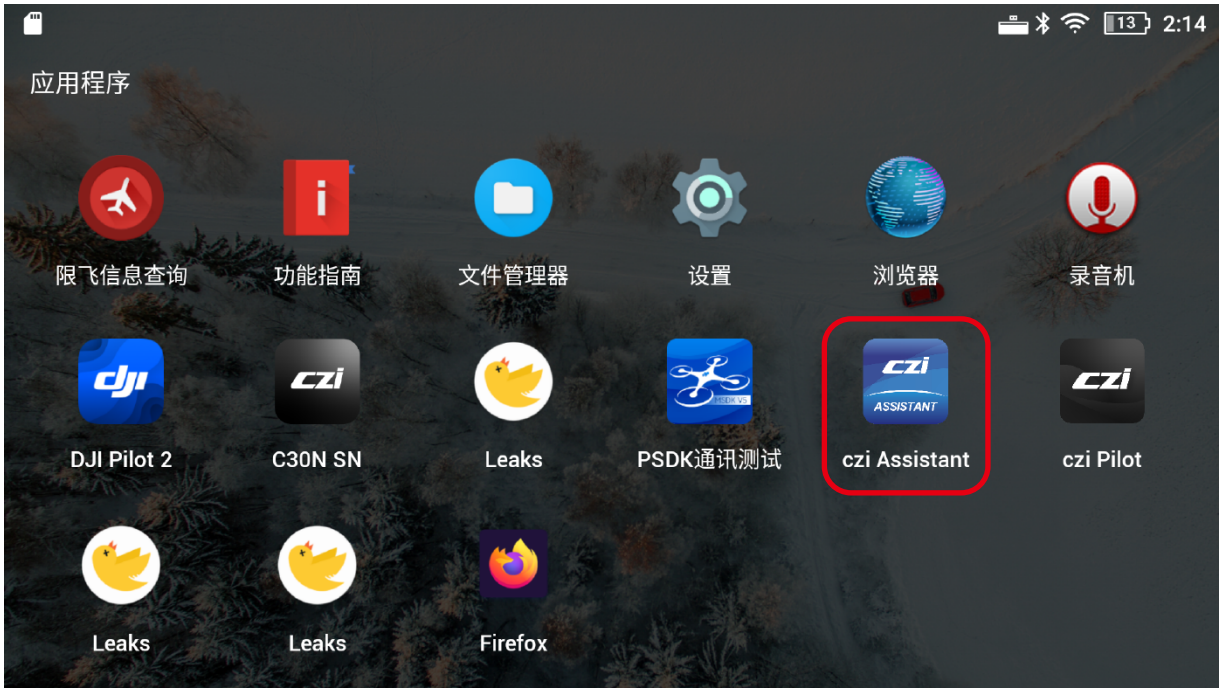
(一) czi Assistant

1、点击软件主页

仅支持经纬 Matrice 300系列DJI带屏遥控器行业版。



2、点击 czi Assistant APP。(APP在成至智能官方网站 www.czi.com.cn下载)

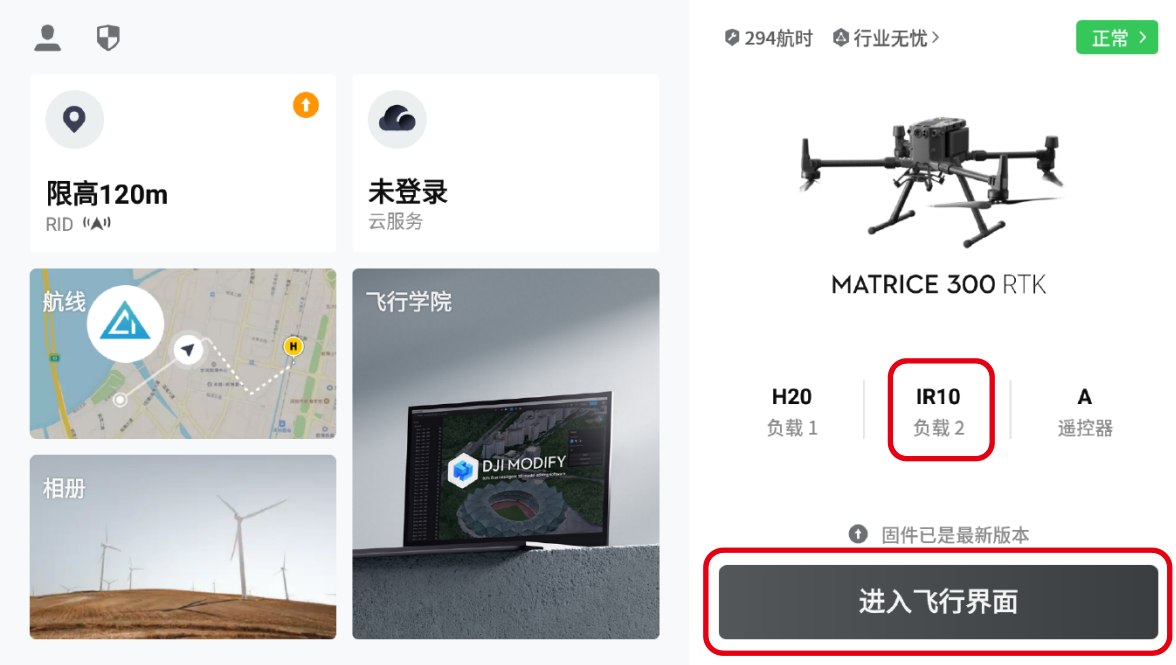


3、进入czi Assistant主界面，点击开启悬浮窗。

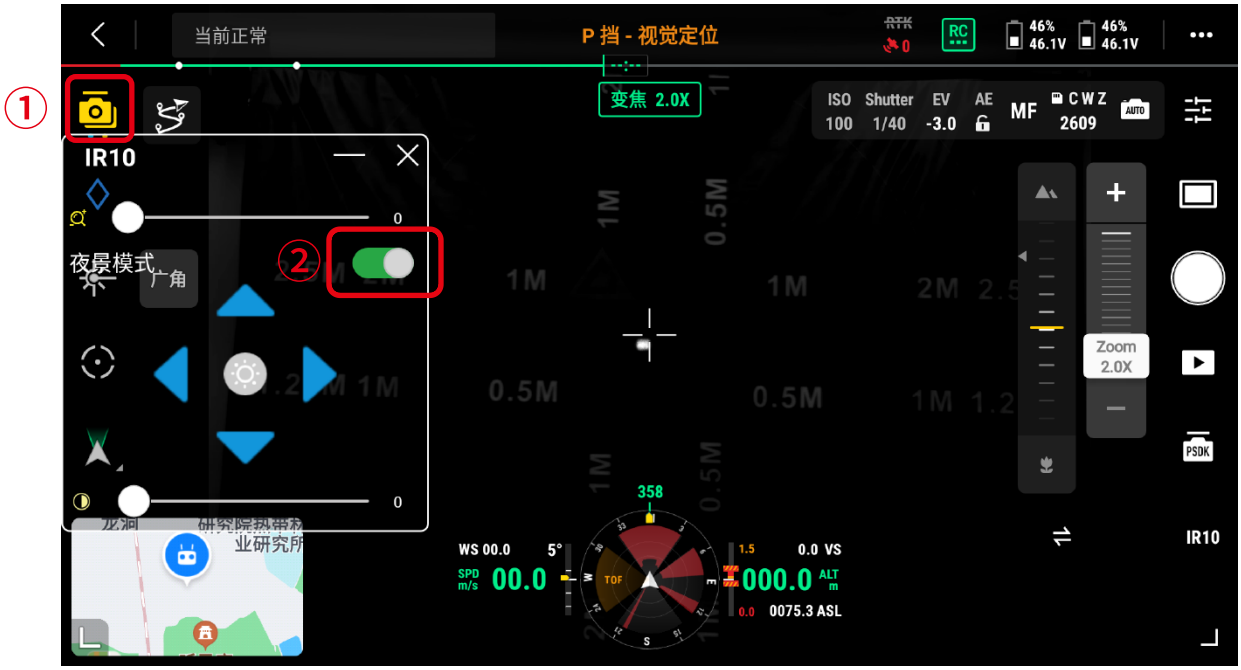
4、点击czi Assistant弹出提示框上的确认按钮。

5、点击允许出现在其他应用上，返回即可使用。(只有第一次使用需要操作本步骤)

6、进入主界面，显示出IR10字样，IR10红外云台变焦灯负载识别成功，点击进入飞行界面。

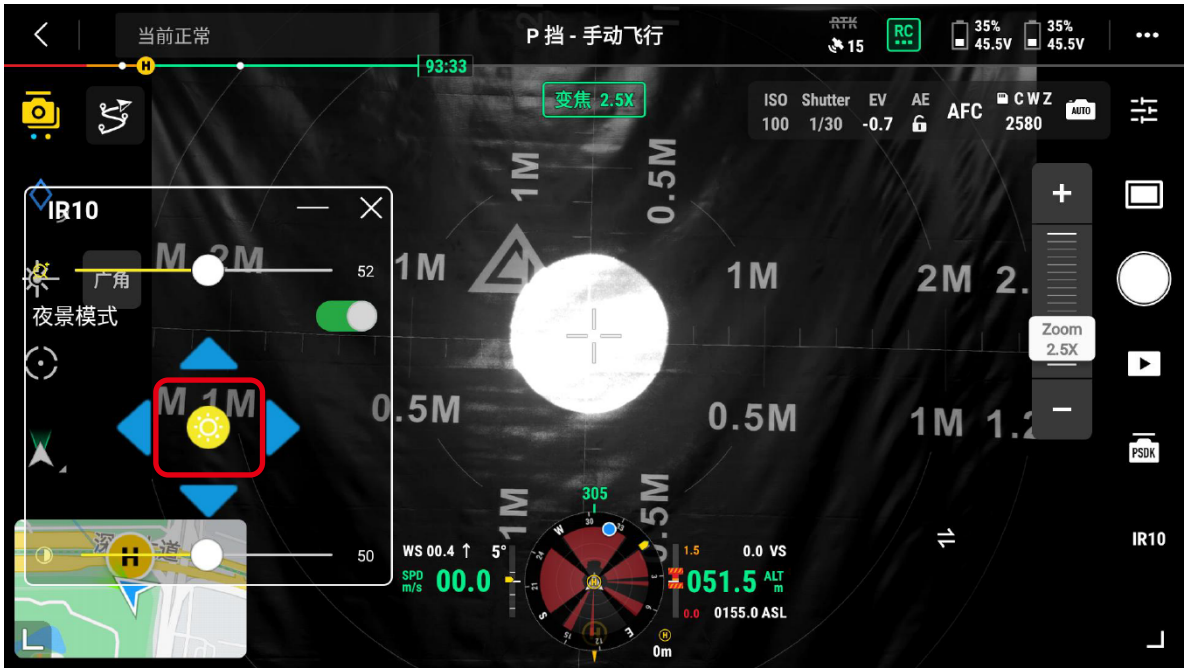


7、进入飞行主页面，打开云台联动开关，打开夜景模式按钮，挂载的DJI H20系列会一键开启夜景模式，并与IR10云台同步。

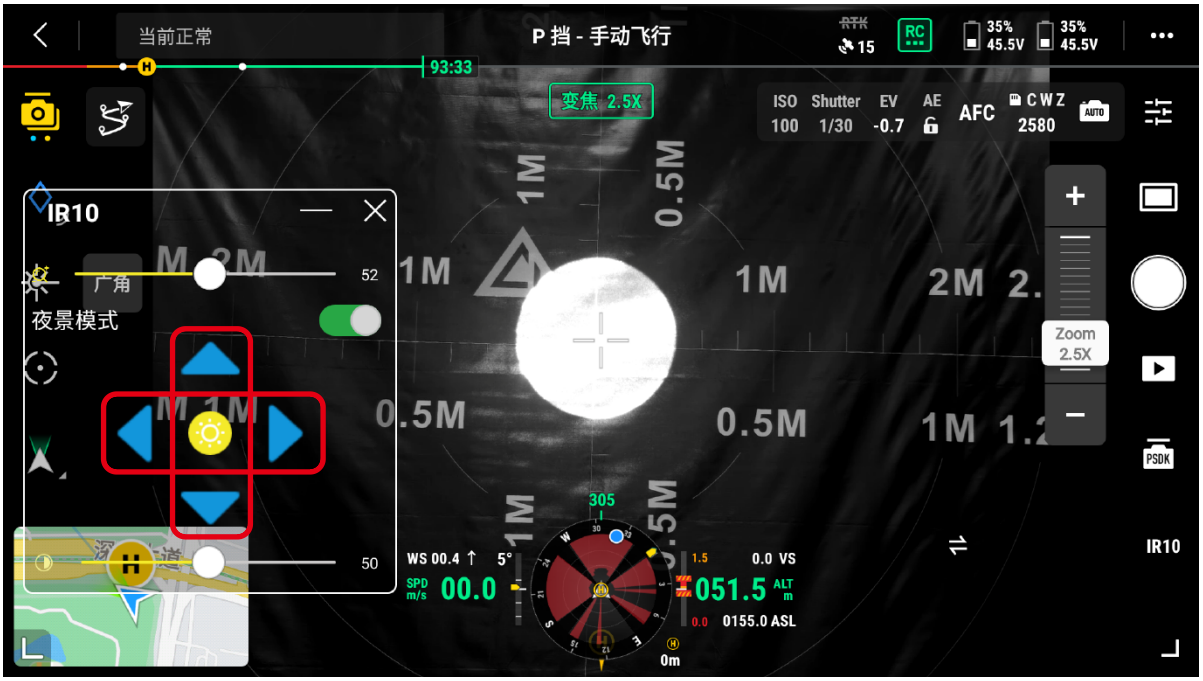


8、点击悬浮窗开灯按钮，可对变焦倍数以及亮度调节。

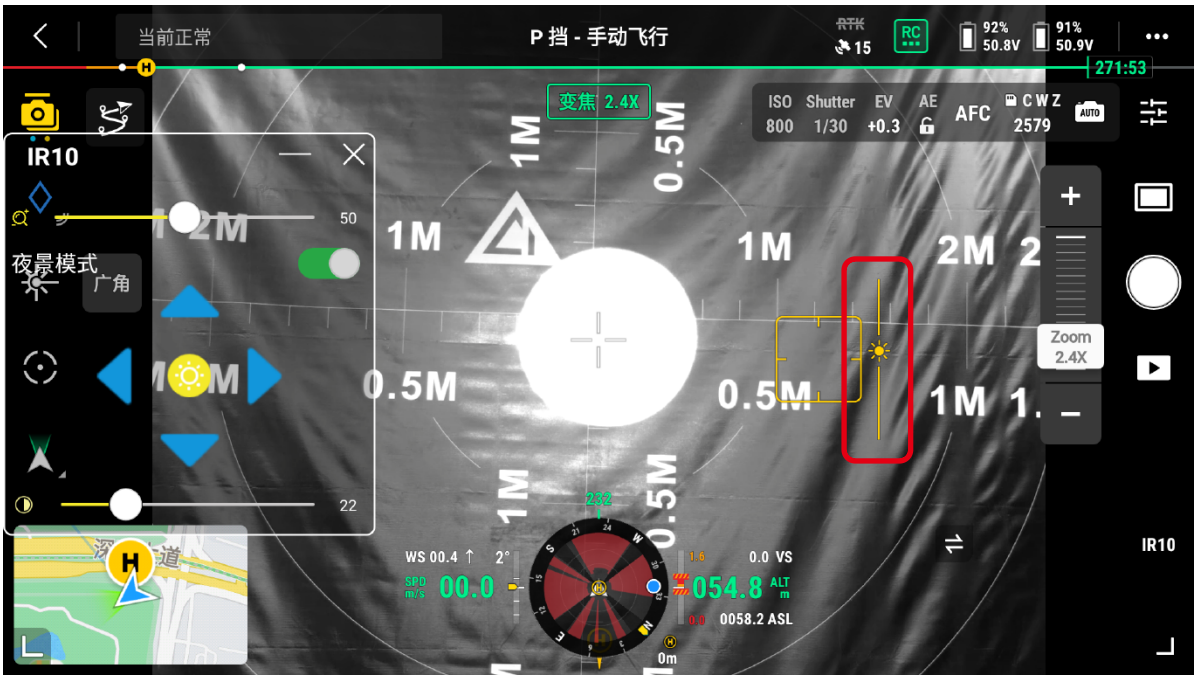
在激光灯开启的状态下，严禁用眼直视或者使用光学仪器观察激光光束。



9、将光斑调节到合适大小，通过航向微调或俯仰微调按钮，使IR10光斑中心与DJI H20系列 中心点重合，每次最大微调±10°。

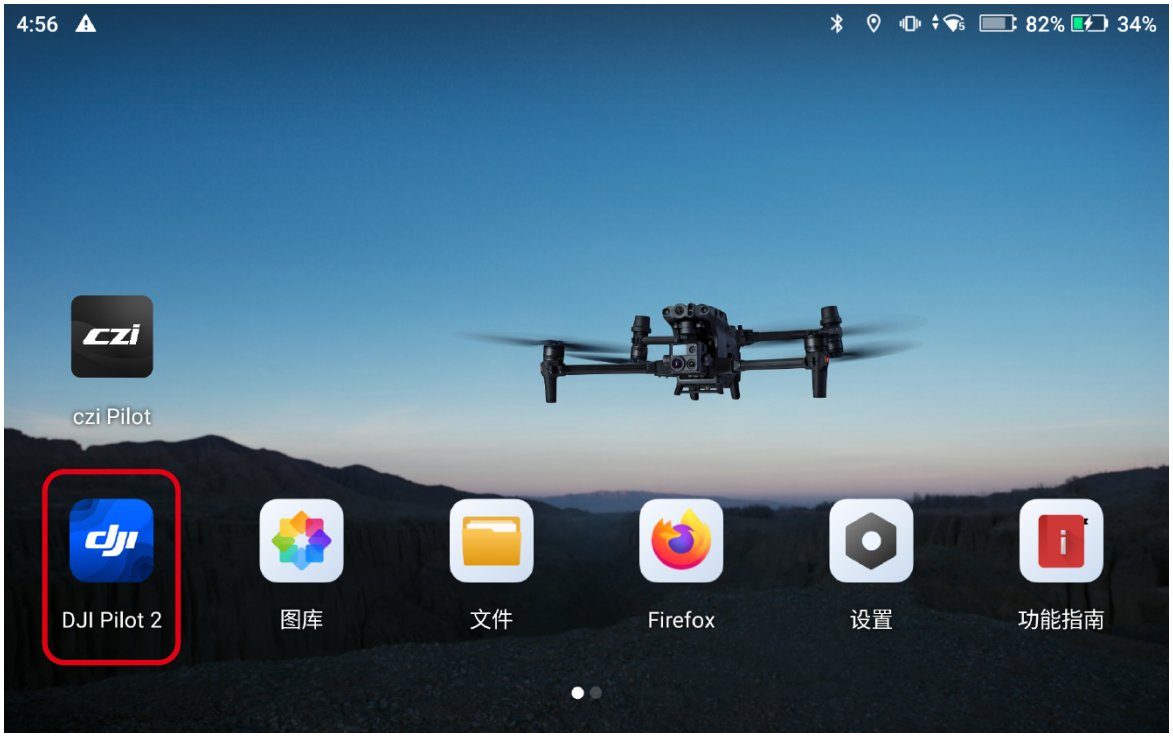


10、对目标进行观测时，如遇相机曝光过曝情况，可滑动画面上的曝光按钮进行调节。

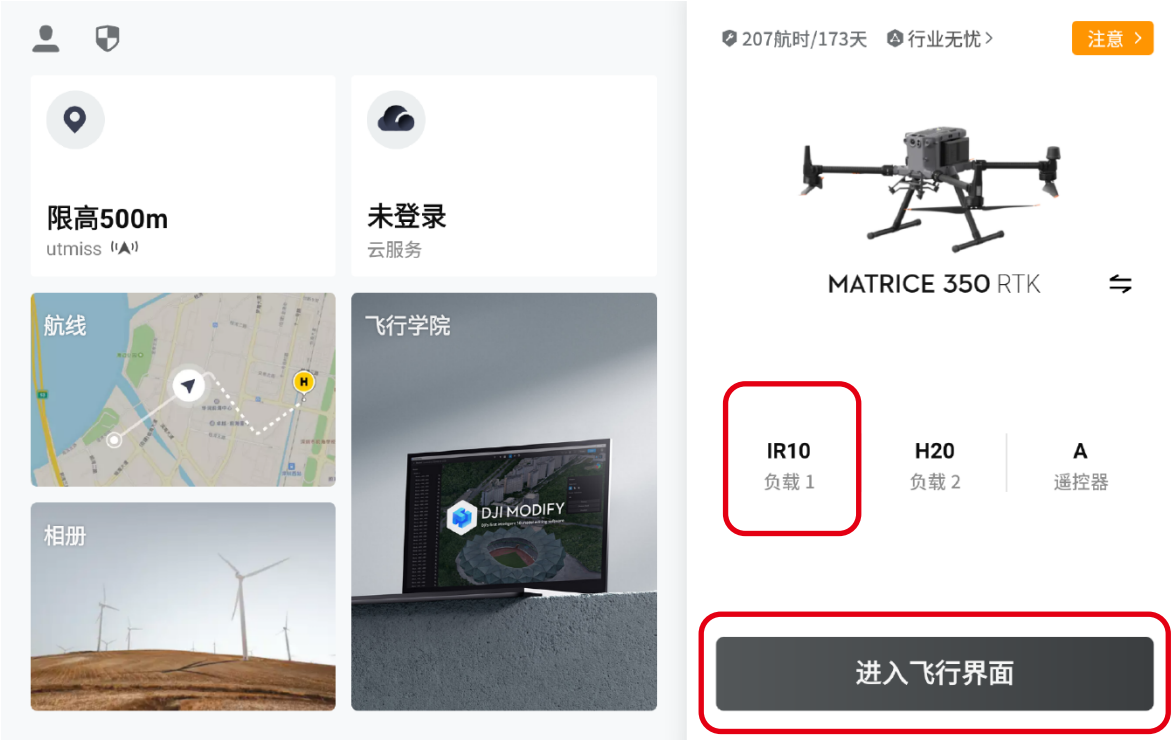


(二) DJI Pilot2 APP

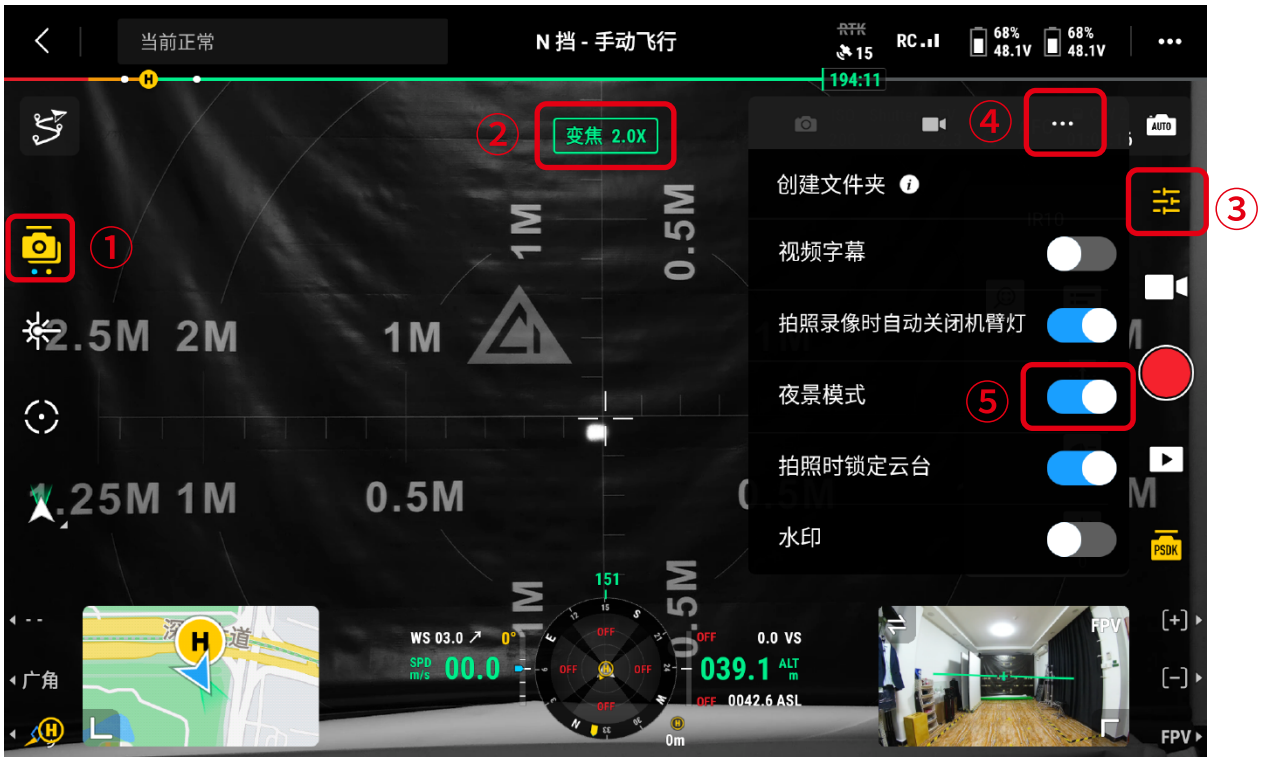
1、点击DJI Pilot2 APP进入软件主界面。



2、进入到主界面，左下角显示出IR10字样，IR10红外云台变焦灯负载识别成功，点击进入飞行界面。



3.1、使用DJI H20系列时，打开云台联动开关，将DJI H20系列切换为变焦模式，点击相机设置菜单，点击内部设置，点击夜景模式。



（DJI H20 系列界面）

3.2、使用DJI H30系列时，打开云台联动开关，将DJI H30系列切换为变焦模式，点击快捷开关，点击夜景模式，点击红外增强。

（DJI H30 系列界面）

4、点击PSDK负载控制界面，点击开灯按钮后，选择亮度开关与变焦开关，滑动进度条即可调节亮度以及变焦倍数，点开悬浮窗可以查看驱动温度、灯芯温度、亮度、变焦等设备信息。

在激光灯开启的状态下，严禁用眼直视或者使用光学仪器观察激光光束。

5、点击微调图标，展开微调界面，即可对光斑位置进行调节。

6、对目标进行观测时，如遇相机曝光过曝情况，可滑动画面上的曝光按钮进行调节。

五、固件升级

使用microSD卡升级

升级前请务必确保IR10已安装于飞行器上且飞行器电源已关闭，microSD卡有足够的存储空间且飞行器智能飞行电池电量充足。

1、请通过官方渠道获取固件升级包；

2、将固件升级包复制到microSD卡的根目录下；

3、将microSD卡插入IR10云台灯的microSD卡槽；

4、开启飞行器电源，此时云台相机将启动自检，自动开始升级固件；

5、升级完成后，程序将再次启动，请观察悬浮窗版本号检查是否更新成功。

了解IR10红外激光变焦云台灯固件更新情况或下载最新版本固件，请关注成至智能官网：www.czi.com.cn 。

如遇到无人机固件更新导致红外激光变焦云台灯无法正常工作情况，请及时联系当地代理商或厂家

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Made in China

Reading Prompts

Symbol Descriptions

Prohibited

Warning

Precautions

1. After using the device, please put it into the safety box of IR10, and replace the desiccant in time to avoid lens fogging due to excessive environmental humidity. If the lens is fogged, the water vapor can usually dissipate after the device is turned on for a period of time. It is recommended that the relative humidity of the storage environment is less than 40% and the temperature is 20 ± 5°C.
2. IR10 belongs to a kind of Class 4 non-visible light laser. When the laser light is turned on, it is strictly prohibited to look directly at the laser beam or observe the laser beam with optical instruments.
3. In normal use, flammable objects are strictly prohibited within 100cm in front of the lens to prevent the occurrence of a fire.
4. When cleaning the light-emitting lens, be sure to use a soft and dry cleaning cloth to wipe the surface of the lens, and never use alkaline cleaning agents for cleaning.

I. Disclaimer and Warning

Thank you for purchasing czi products. The contents mentioned herein are related to your safety, legal rights and responsibilities. Before using this product, please read this document carefully to ensure that you have set up the product properly. Failure to follow and comply with the instructions and warnings in this document may result in injury to you and others, damage to the product or other surrounding items. This document and all related documents are subject to the final interpretation of czi. Updates are subject to change without notice. Please visit the official website at www.czi.com.cn for the latest product information.

Warnings

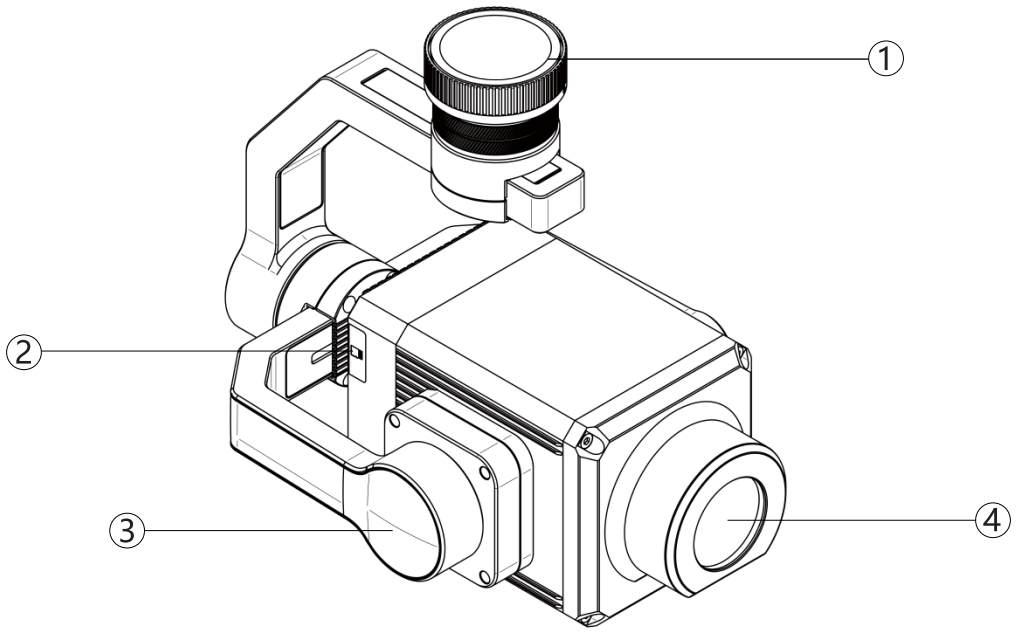
1. IR10 belongs to a kind of Class 4 non-visible light laser. When the laser light is turned on, it is strictly prohibited to look directly at the laser beam or observe the laser beam with optical instruments.
2. In normal use, flammable objects are strictly prohibited within 100cm in front of the lens to prevent the occurrence of a fire.
3. In case of hardware problems, please return to the factory for maintenance. Do not disassemble it without authorization, otherwise the adverse effects on the laser would be caused thereby, and the consequences need to be borne by yourself.

Precautions

1. The installation method of the IR10 Infrared Zoom Spotlight is the same as that of other loads of DJI. Please confirm whether the adapter ring is installed correctly.
2. Before the takeoff of the drone, the power and zoom angle of the IR10 Infrared Zoom Spotlight will be limited to less than 50%; after takeoff, the power and zoom angle can reach 100%.
3. When the IR10 Infrared Zoom Spotlight is used with the DJI H30 series in a dual-gimbal configuration, it is recommended to install the IR10 first, and then install the DJI H30 series after the IR10 gimbal self-tests are completed to avoid collisions during the gimbal self-test process.

II. Introduction of IR10

The czi IR10 Infrared Zoom Spotlight adopts a fiber optic homogenized laser, with an output power of up to 12W. The light Angle can be smoothly adjusted between 0.56-45°, the spotlight and floodlight can be flexibly scheduled and the maximum infrared light filling distance is more than 1000m. Combined with gimbal cameras such as the DJI H20 series or DJI H30 series with a night scene mode (IR mode), it can fill the light clearly throughout the process, with great picture quality and excellent effects of penetrating rain, smoke and fog. And the infrared light is not perceptible to the human eye, which can realize the night detection beyond the visual range. Through the DJI SkyPort V2.0 interface, it can be directly mounted on DJI Matrice 300 RTK, Matrice 350 RTK and other series of drones for use, providing users with nighttime insight beyond vision. Using the czi Assistant APP hovering dialogue window and DJI Pilot APP, you can easily turn on the night scene mode of the DJI H20 series, control the switch, adjust the zoom multiple, brightness and IR10 fine-tuning and other modes, and can automatically follow the rotation of the gimbal camera. The IR10 fan-less fuselage is a kind of fully sealed design with excellent waterproof and dustproof performance, and can work reliably under harsh weather conditions, making it the best partner of DJI M300 RTK and M350 RTK enterprise drones.



① Protection Cover of Gimbal

② Memory Card Slot

③ DJIxport Gimbal

④ Light Outlet

III. Technical Parameter

Model	IR10
Specification	186*128*158mm
Weight	800g ± 5g
Effective Distance	⩾ 1000m
Type of Laser	Optical Fiber Homogenized Laser
Luminous Wavelength	808nm / 940nm
Light Output Power	12W ± 0.5W
Illumination Angle	0.56° ~ 45°
Operating Temperature	-20°C ~ +50°C

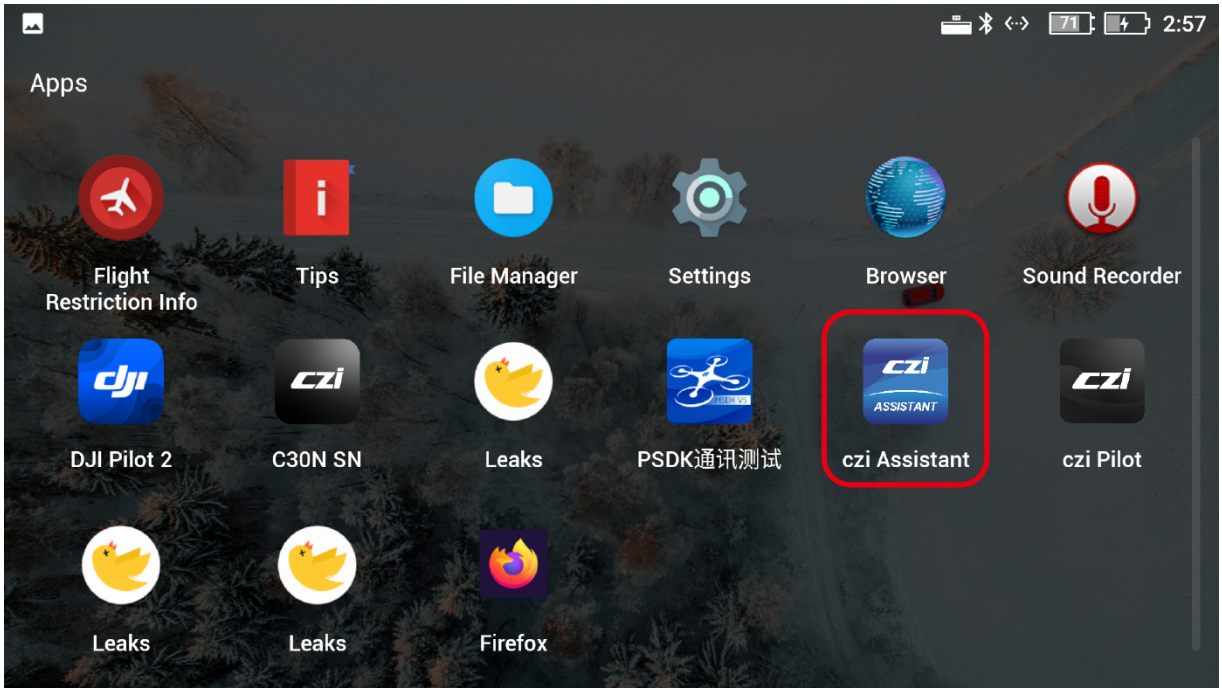
IV. Software Use Tutorial

(I) czi Assistant

1. Click the software home page

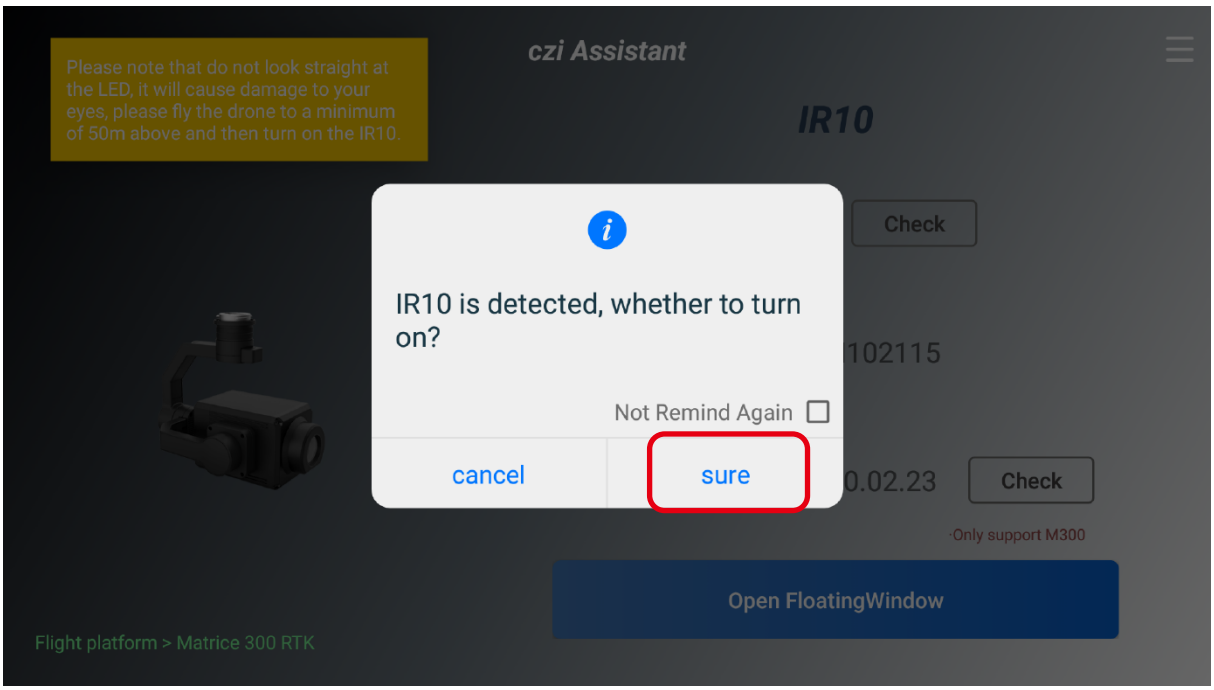
⚠ Only supports the DJI enterprise drone screen-equipped remote controller of the DJI Matrice 300 series.

2. Click czi Assistant APP. (APP can be downloaded from the official website of czi: www.czi.com.cn)

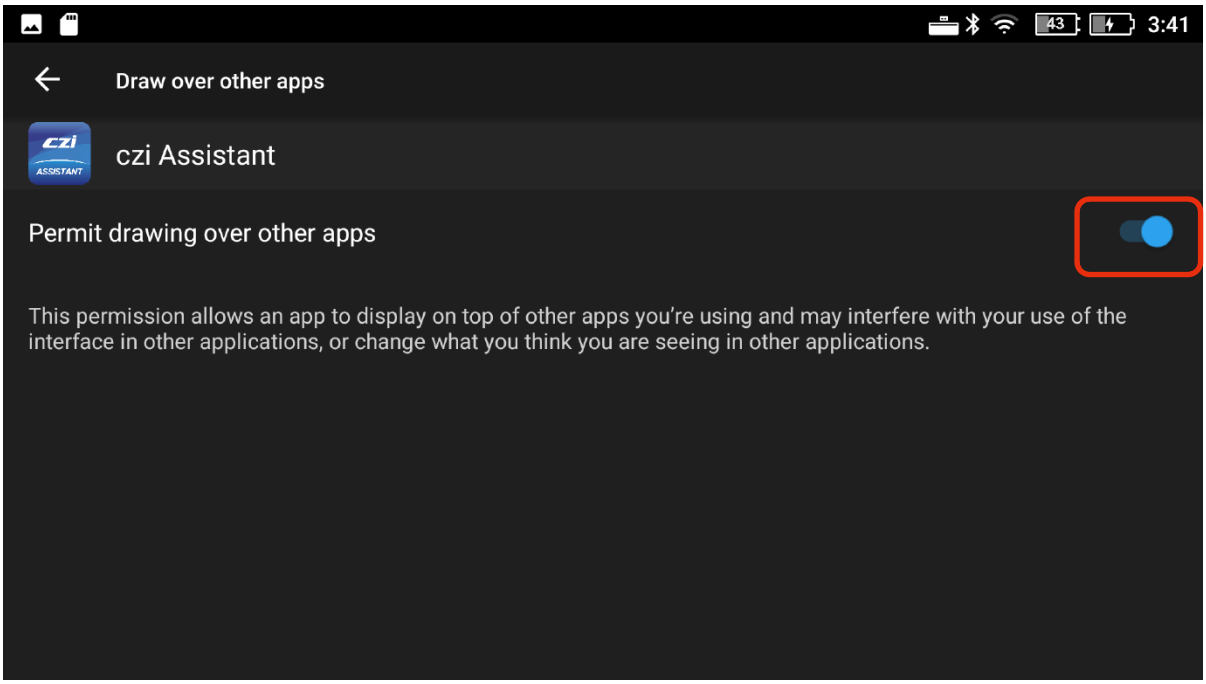


3. the main interface of czi Assistant and click to open the hovering dialogue window.

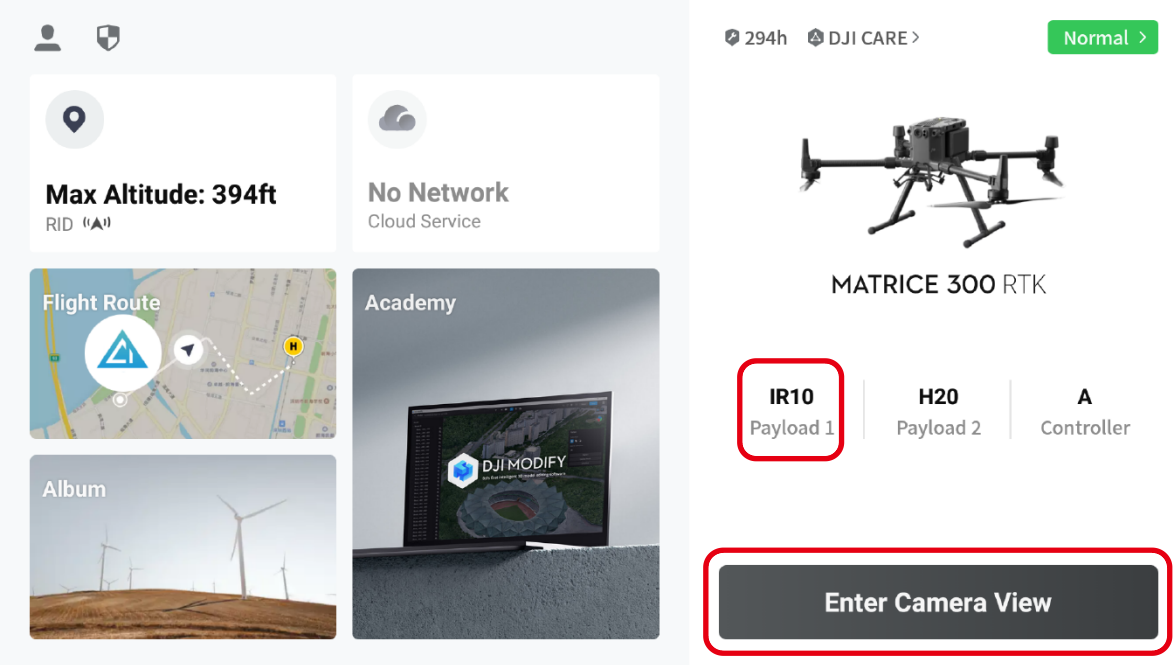
4. Click the Confirm button on the czi Assistant prompt dialogue box.



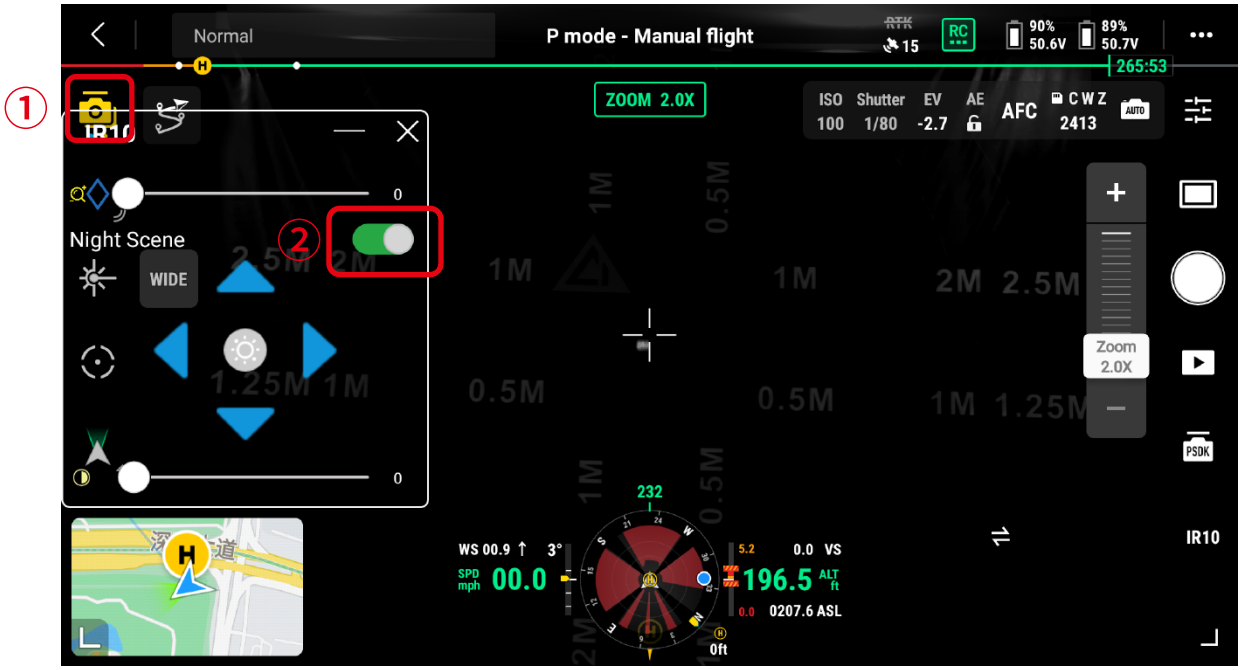
5. Click Allow to appear on other APPs and return to use. (This step is only required for first use)



6. Enter the main interface, the words “IR10” are displayed, the IR10 Infrared Zoom Spotlight load is successfully recognized, and click to enter the flight interface.

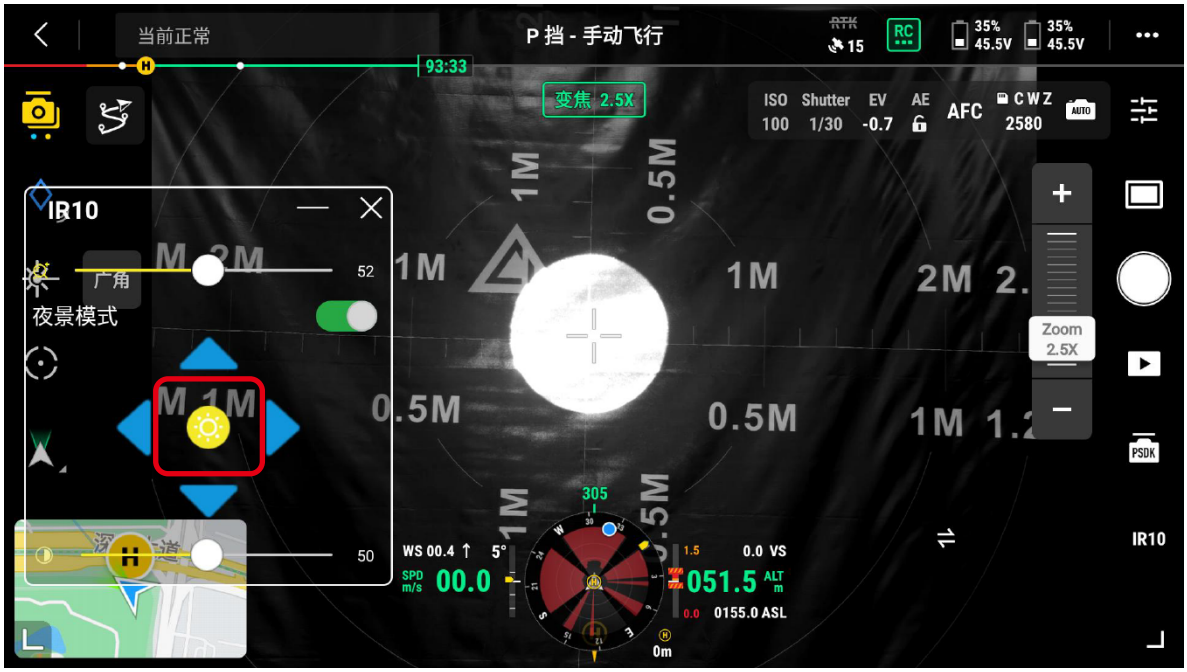


7. Enter the main flight screen, turn on the gimbal linkage switch, turn on the night scene mode button, the mounted DJI H20 series will turn on the night scene mode with one click and synchronize with the IR10 gimbal.

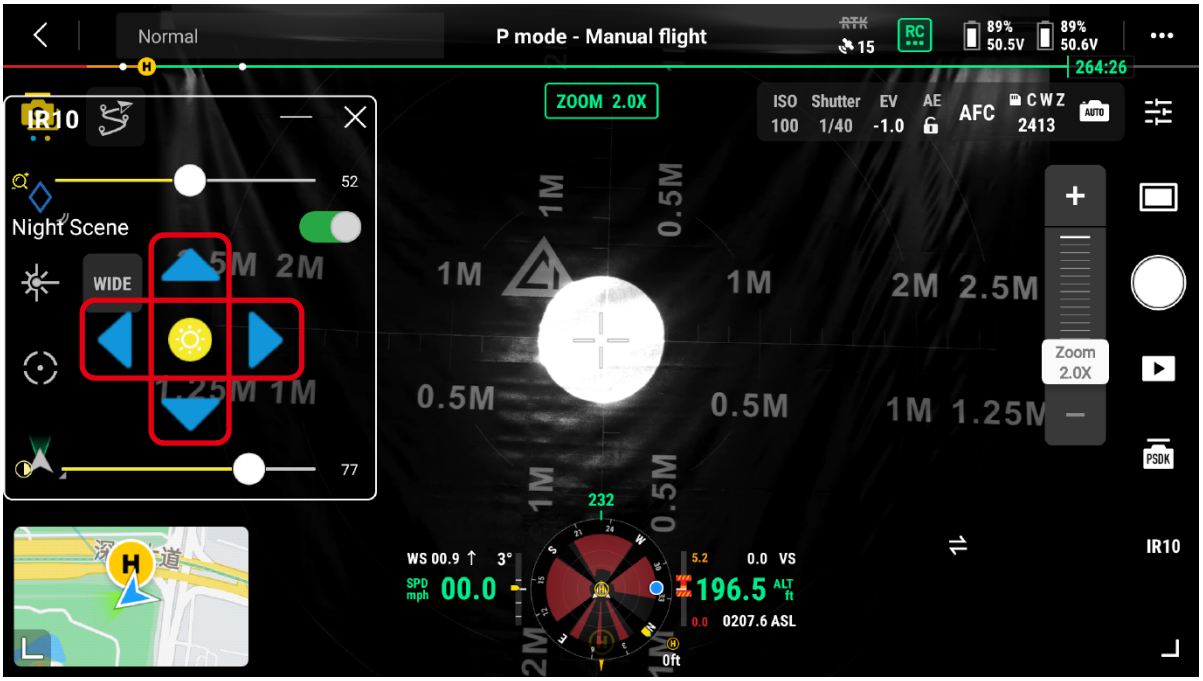


8. Click the light-on button in the hovering dialogue window to adjust the zoom multiple and brightness.

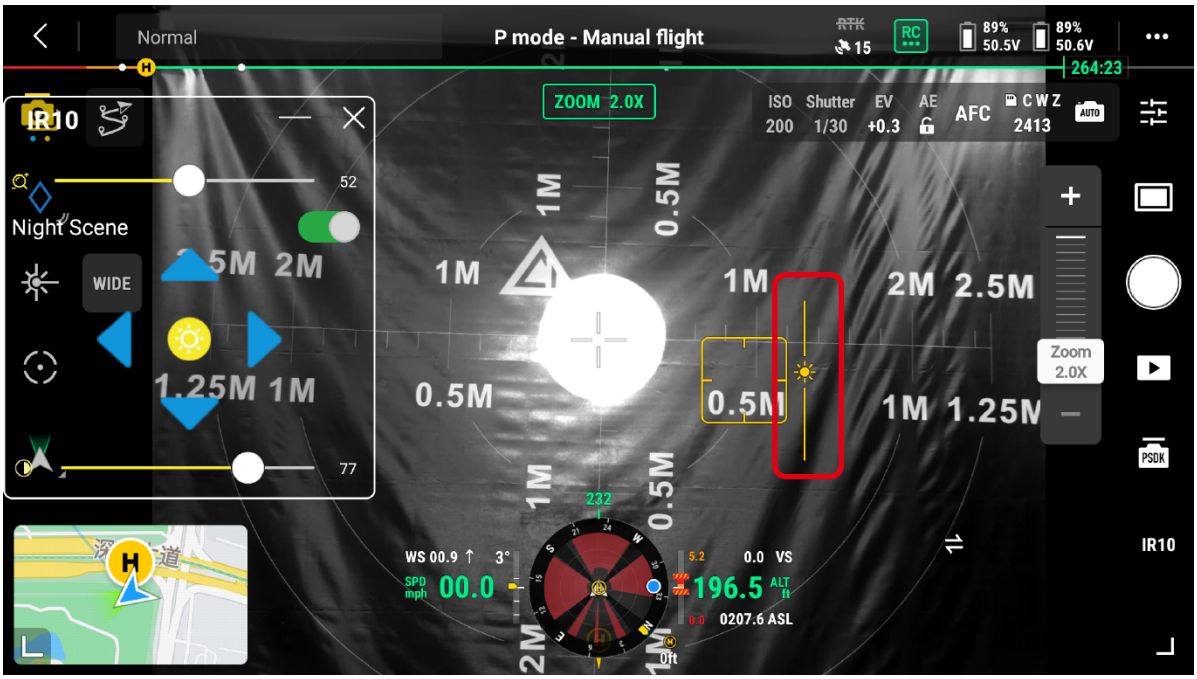
⚠When the laser light is turned on, it is strictly prohibited to look directly at the laser beam or observe the laser beam with optical instruments.



9. Adjust the light spot to an appropriate size, and through the heading fine-tuning or pitch fine-tuning button, make the center of the IR10 light spot coincide with the center point of the DJI H20 series, with a maximum fine-tuning of ± 10° each time.

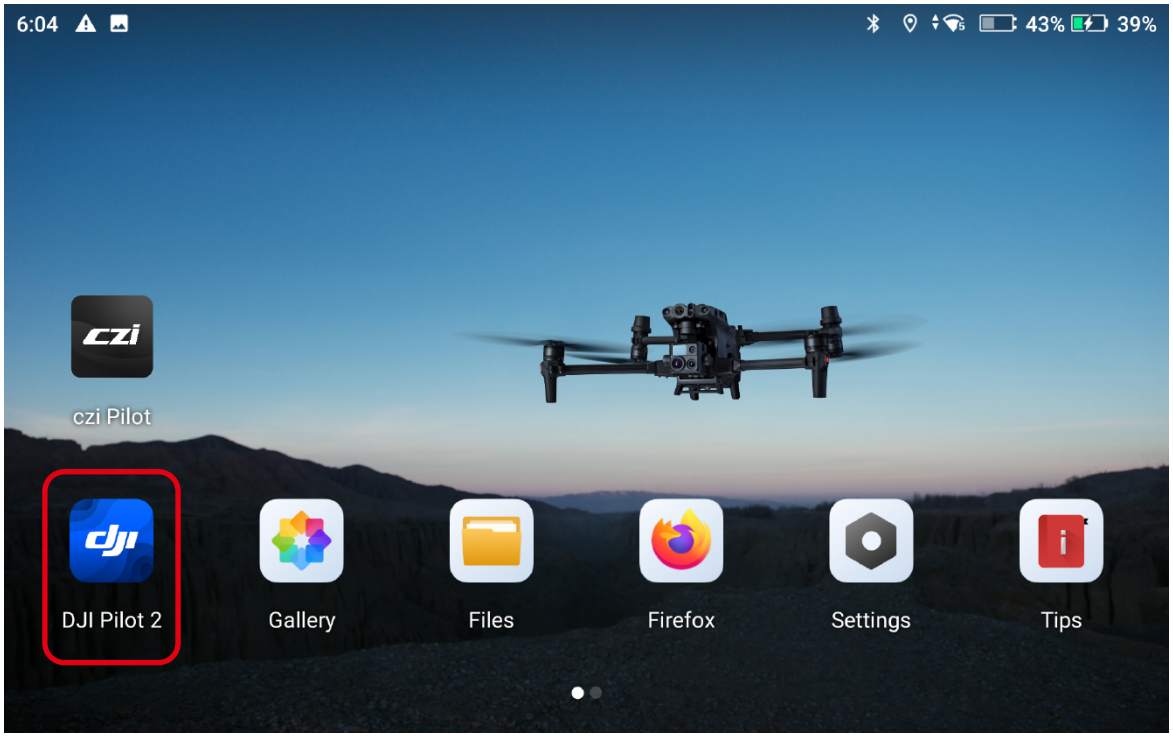


10. When observing the target, if the camera is overexposed, the exposure button on the screen can be slid to adjust.

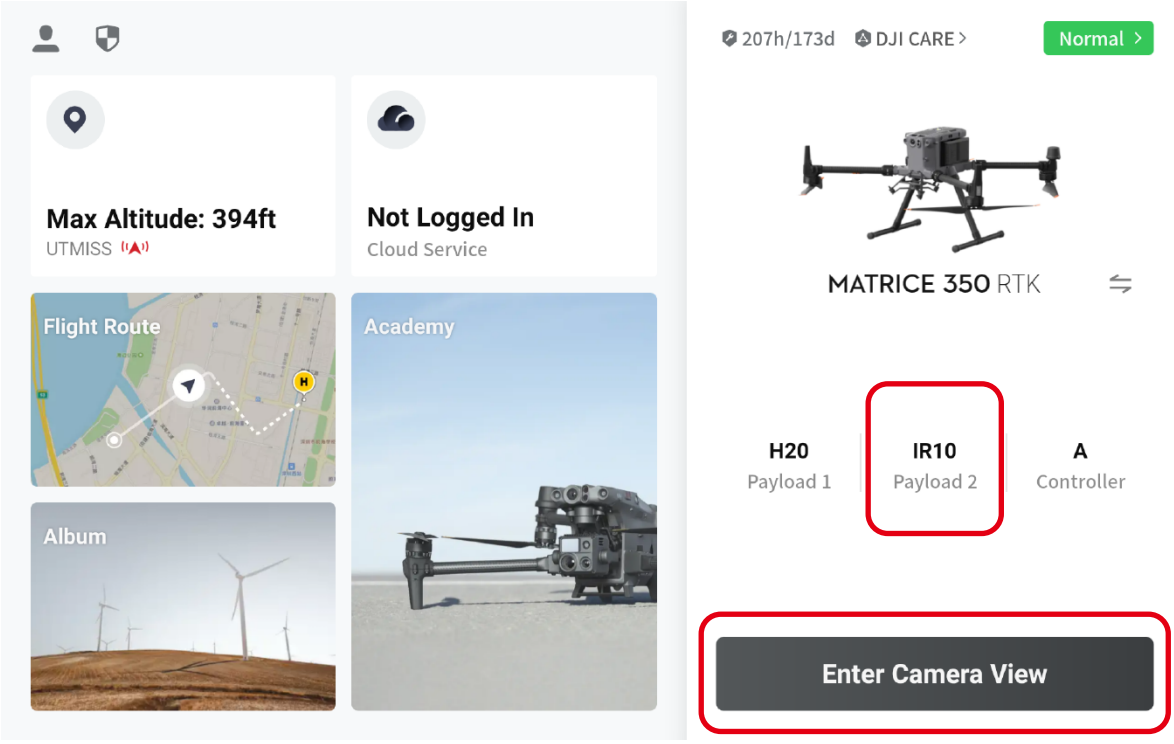


(II) DJl Pilot2 APP

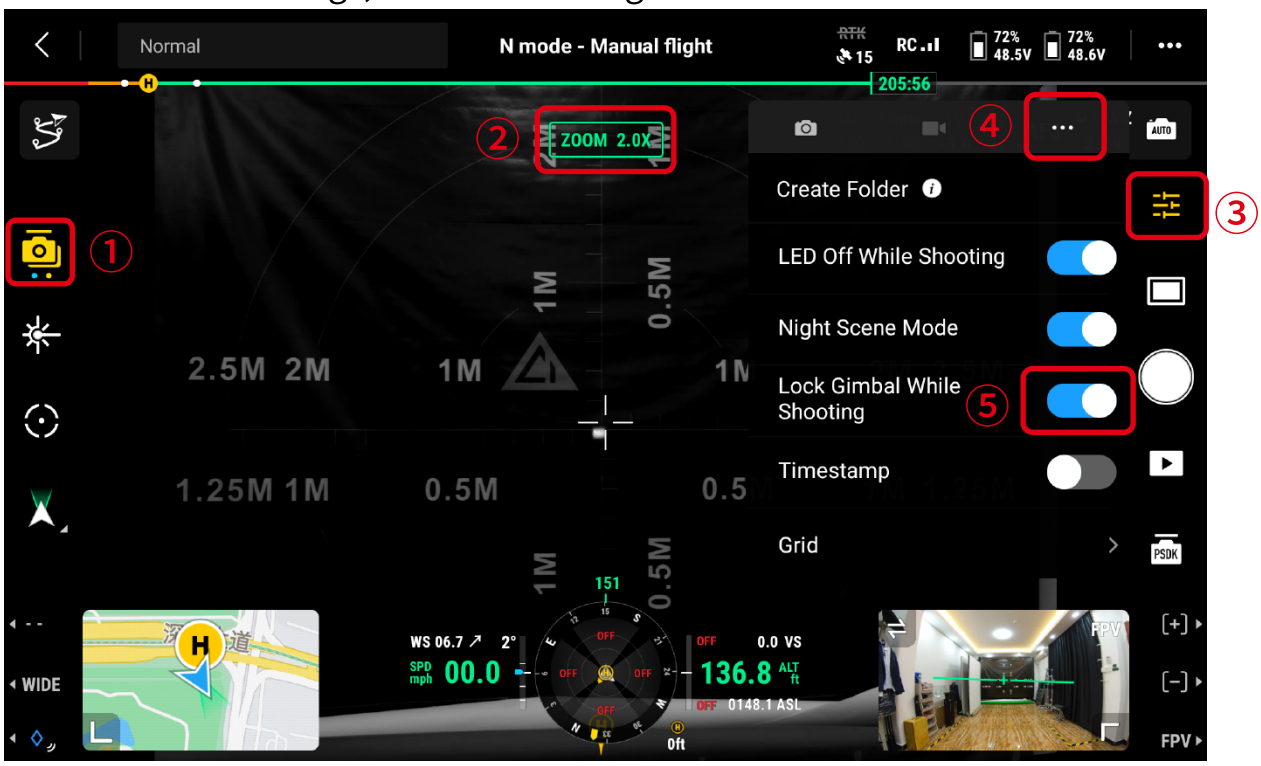
1. Click DJl Pilot2 APP to enter the main interface of the software.



2. . Enter the main interface, and the words “IR10” are displayed in the lower left corner. The IR10 Infrared Zoom Spotlight load is successfully recognized, and click to enter the flight interface.



3.1. When using the DJI H20 series, turn on the gimbal linkage switch, switch the DJI H20 series to the zoom mode, click the camera settings menu, click the internal settings, and click the night scene mode.



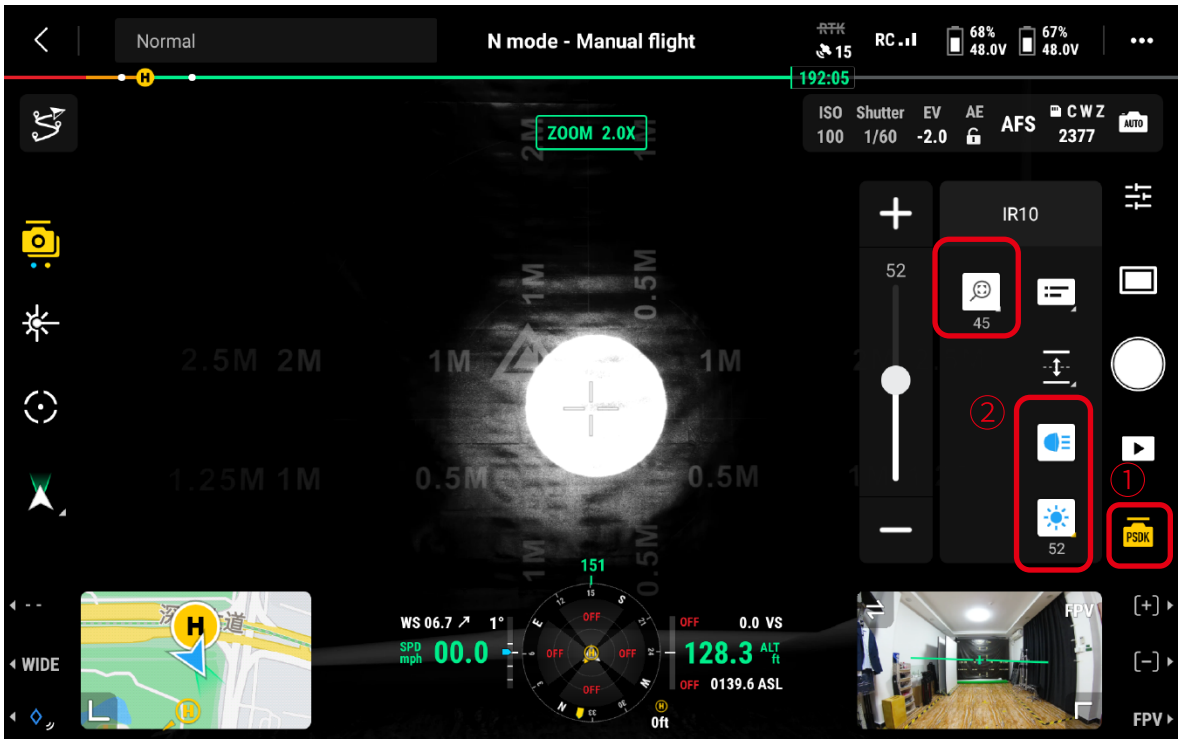
(Interface of DJI H20 series)

3.2. When using the DJI H30 series, turn on the gimbal linkage switch, switch the DJI H30 series to the zoom mode, click the quick switch, click the night scene mode, and click the infrared enhancement.

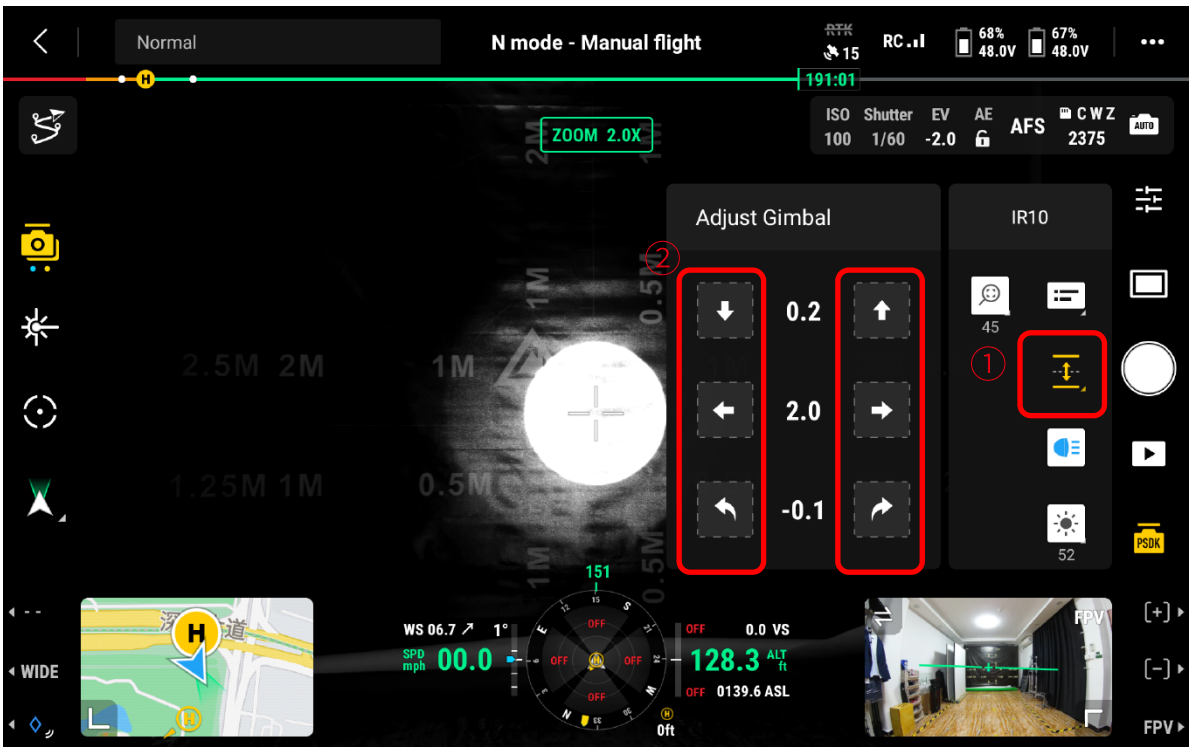
(Interface of DJI H30 series)

4. Click the PSDK load control interface, after clicking the light-on button, select the brightness switch and the zoom switch, and slide the progress bar to adjust the brightness and the zoom multiple. Click the hovering dialogue window to view device information such as the drive temperature, the light core temperature, the brightness, the zoom, etc.

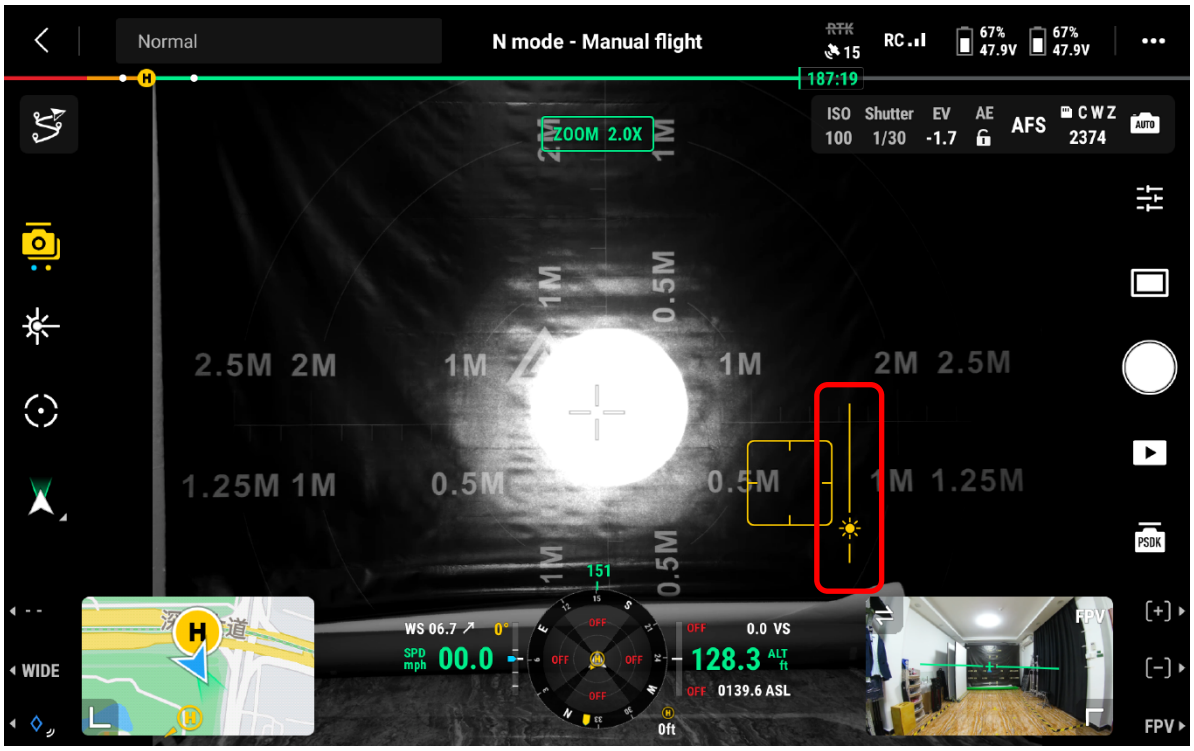
⚠ When the laser light is turned on, it is strictly prohibited to look directly at the laser beam or observe the laser beam with optical instruments.



5. Click the fine-tuning icon to expand the fine-tuning interface, and then the position of the light spot can be adjusted.



6. When observing the target, if the camera is overexposed, the exposure button on the screen can be slid to adjust.



V. Firmware Upgrade

Using microSD card for upgrade

Before upgrading, please make sure that the IR10 has been installed on the aircraft and the aircraft power has been turned off, the microSD card has sufficient storage space and the aircraft's intelligent flight battery has been fully charged.

1. Please obtain the firmware upgrade package through the official channels;
2. Copy the firmware upgrade package to the root directory of the microSD card;
3. Insert the microSD card into the microSD card slot of the IR10 Gimbal Searchlight;
4. Turn on the power of the aircraft. At this time, the gimbal camera will start the self-test and automatically start to upgrade the firmware;
5. After the upgrade is completed, the program will start again. Please check whether the update is successful by observing the version number of the hovering dialogue window. To know about the firmware update status of the IR10 Infrared Zoom Spotlight or download the latest version of the firmware, please pay attention to the official website of czi: www.czi.com.cn.

In case of the situation that the Infrared Zoom Spotlight can’ t work properly due to the drone firmware update, please contact the local agent or manufacturer in time.

ChengZhi Technical Support
www.czi.com.cn
If you have any questions or suggestions
regarding the manual, please contact us at:
czzn@czi.com.cn

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