

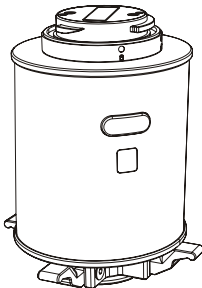
TH4 四段抛投器说明书(V2环)

Four-stage thrower instruction manual

用户说明书 V2.1

User Manual

2024.06



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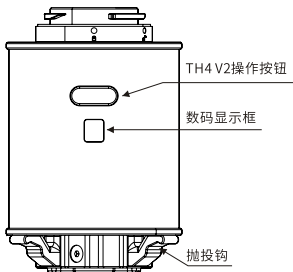
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一、TH4 V2 四段抛投器介绍

成至TH4V2 4段抛投器PSDK版, 结构紧凑高效, 自重320克, 2.3kg 超高抛投载重, 单次飞行可完成四次抛投任务, 通过DJI SkyPort V2.0 接口可直接挂载在大疆经纬M210 V2、M300 RTK、M350RTK无人机上使用, 应用于应急救援, 物资投放等工作。



二、技术参数

型号	TH4 V2
尺寸	最大高度97mm（含转接环盖），最大直径78mm
重量	310g±5g
功能	1、可同时挂载4个抛投物并依次进行抛投 2、数码显像管显示上料位置 3、单抛投钩最大负载 2.3KG。 (实际负载重量以无人机及云台载重能力为准)
工作温度	-20—40℃
挂载接口	DJI SkyPort V2转接环
控制方式	大疆pilot、czi Assistant悬浮窗 (cziAssistant悬浮窗仅支持M350无人机使用)
控制距离	与无人机控制距离一致

三、注意事项

- 1、挂载物品时请确保抛投钩已完全处于挂载状态下再按下操作按钮。
- 2、操作抛投钩时谨防夹手。
- 3、挂载物品的重量应根据无人机及云台载重能力为准。

使用单云台固定,此时TH4 V2的最大抛投重量受限于云台载重能力:

M300RTK:不超过620g

M350RTK:不超过650g

为增加云台负载能力,建议用扎带把云台的顶面架子和底面架子绑定在一起,此时TH4 V2的最大抛投重量受限于无人机的载重能力:

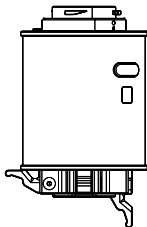
M300RTK:不超过2270g

M350RTK:不超过2300g

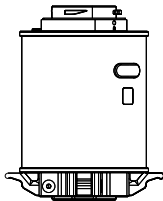
四、抛投器挂载和软件教程

状态提示符号以及对应含义：

1. 指示屏闪烁且显示三条横线：上一次使用时出现异常，需要长按按键进行初始化。
2. 指示屏常亮且显示数字“0”：4个挂钩均无法活动。
3. 指示屏常亮且显示数字“1” “2” “3” “4”：对应挂钩可挂载物品。
4. 指示屏闪烁且显示“E”：系统错误或机械传动卡死。



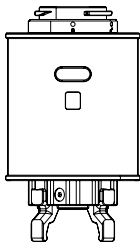
待挂载状态



挂载状态

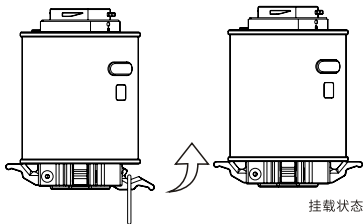
挂载操作

1、复位：四段抛投器通电且指示屏有显示后，长按按键2秒，指示屏显示常亮“0”，完成初始化，挂钩状态如下图：



初始化后的状态

2、挂载：按下操作按钮指示屏显示数字1到4时，对应数字的挂钩可挂载物品。物品通过金属环或者“绳”“丝”“带”环，挂载到挂钩凹槽内，并用手托住该挂钩处于挂载状态(注意夹手)。如下图：



3、按下操作按钮进行锁定，当屏幕数字跳转后，即可松手进行下一个挂载操作，最多可挂载4个挂载物。

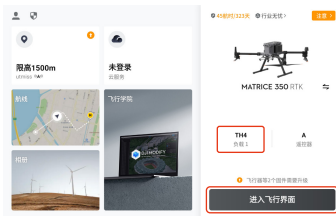
注意：

对于需要快速挂载的场景，可无需复位，上电后，当指示屏显示数字1到4时可直接进行对应挂钩的物品挂载并锁定。

对于需要提前挂载的场景，可在上一次上电使用时提前挂载物品，待需要飞机执行抛投任务时直接安装抛投器起飞，抛投器启动完成后即可进行抛投。

Pilot软件操作

1、点击DJI Pilot 2进入主界面，右下角显示出TH4字样，说明TH4负载识别成功，点击进入飞行界面。

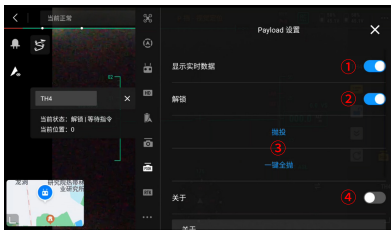


2、进入主界面后点击右下角PSDK控件。





点击右上角三个点的设置图标,再点击中间栏中的PSDK图标



- ① 打开/关闭pilot TH4负载信息悬浮窗
- ② 解锁
- ③ 抛投/一键全抛
- ④ 在pilot TH4负载信息悬浮窗显示负载固件、SN码信息

3、点击“解锁”按钮解锁后，点击“抛投”按钮即可进行抛投，如不抛投应及时锁定防止误触抛投。

czi Assistant悬浮窗操作

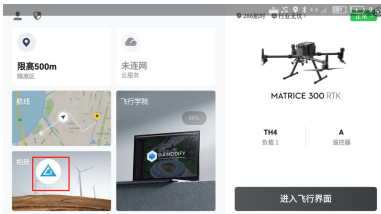
- 1、打开czi Assistant软件，点击开启悬浮窗。

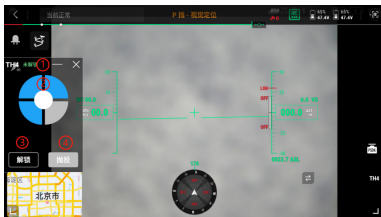


2、允许悬浮在pilot上。



3、点击悬浮窗图标弹出悬浮窗界面，可通过悬浮窗进行缩小关闭，点击进入飞行界面即可操作。





- ① 解锁/锁定状态提示
- ② 四个抛投钩状态提示
- ③ 解锁
- ④ 抛投

4、点击“解锁”按钮解锁后，点击“抛投”按钮即可进行抛投，如不抛投应及时锁定防止误触抛投。

五、固件升级

在线固件升级 (仅支持大疆Matrice 300 RTK配合DJI带屏遥控器使用,升级前请确保设备内没有TF卡)。

1、将TH4挂载在大疆M300飞机, 上电后, 确保DJI带屏遥控器已经连接WiFi或热点。在DJI带屏遥控器中打开czi Assistant软件, 显示注册成功, 可以看到TH4界面的版本信息, 点击检查版本。



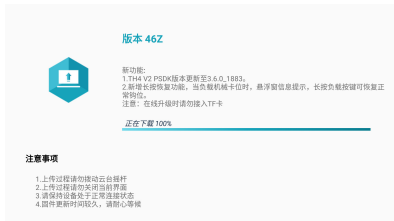
2、如不是最新固件，将提示有新版本和更新内容介绍，点击立即更新。



3、点击立即更新。



4、等待下载上传固件。

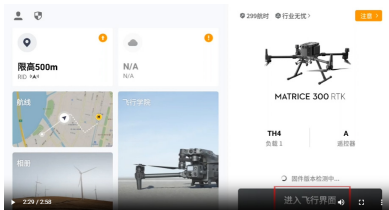


5、系统提示上传固件成功, 点击确认, 重启后即即为最新固件版本。



TF卡固件升级

1. 打开成至官网，在其它负载设备系列，找到TH4 V2四段抛投器，点击查看详情，点击软件下载。TH4 V2 PSDK产品，请下载TH4 V2 更新固件(PSDK)；TH4 V2 OSDK产品，请下载TH4 V2 更新固件(OSDK)。
2. 准备一张4~32G的TF内存卡和读卡器。将TF卡插入读卡器，再将读卡器插入电脑USB口。TF卡文件系统格式应为FAT32。
3. 先将更新固件的压缩包放到TF卡根目录，然后直接解压到当前文件夹，将文件夹TH4_BL放在TF卡根目录即可，该文件夹包含了需升级的固件。
4. 弹出TF卡，拔出读卡器，拔出TF卡。将TF卡插入TH4 V2四段抛投器的TF卡卡槽内。
5. 将TH4 V2四段抛投器挂上无人机，开启无人机，等待30秒左右，程序升级完成后，TH4 V2四段抛投器自动启动。
6. 检查升级是否成功，打开DJI PILOT 2 APP，点击进入飞行界面。



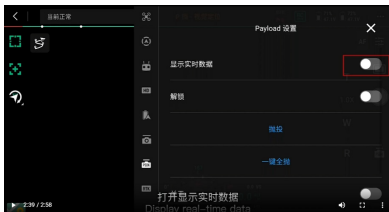
点击右上角三个点的设置图标。



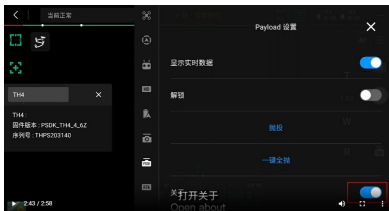
再点击PSDK图标。



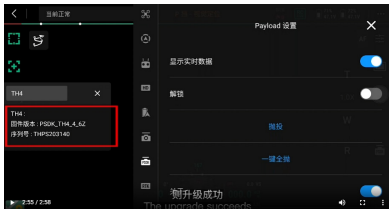
进入Payload设置,打开“显示实时数据”。



打开“关于”。

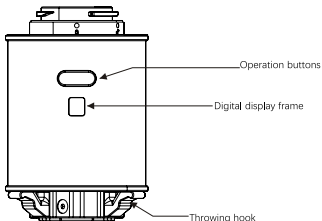


可以在左侧悬浮窗内看到新的固件版本,则升级成功。



1. Introduction of TH4 V2

The TH4 V2 throwing hook has a compact and efficient structure , with the weight of 320g and an ultra-high throwing load of 2.3kg.It can complete four throwing tasks in a single flight. It can be directly mounted on DJI Matrice series through the DJI SkyPort V2.0 interface. It can be used on M210 V2、M300 RTK and M350 RTK drones, in emergency rescue, material delivery and other works.



2. Technical parameters

Model	TH4 V2
Size	Maximum height 97mm (including adapter ring cover) Maximum diameter 78mm

Weight	310g±5g
Function	1. 4 throws can be mounted at the same time or throwing in sequence 2. The digital picture tube displays the feeding position 3. The maximum load for a single throw hook is 3KG. (The actual load weight is subject to the UAV's and gimbal frame's load capacity)
Operating temperature	-20—40 °C
Mount interface	DJI SkyPort V2 Adapter Ring
Way to control	DJI pilot czi Assistant hovering dialogue window
Control distance	Consistent with aircraft control distance

3. Matters needing attention

1. When loading items, please make sure that the throwing hook is fully loaded before pressing the operation button.
2. Be careful not to pinch your hands when operating the casting hook.

3.The weight of the payload should be based on the carrying capacity of the UAV and gimbal frame.

With a single head fixed, the maximum throwing weight of TH4 V2 is limited by the load capacity of the gimbal frame:

M300RTK: not exceeding 620g

M350RTK: not exceeding 650g

In order to increase the load capacity of the gimbal frame, it is recommended to bind the top shelf of the gimbal frame with the bottom shelf together with a cable tie. At this time, the maximum throwing weight of TH4 V2 is limited by the carrying capacity of the UAV:

M300RTK: not exceeding 2270g

M350RTK: not exceeding 2300g

4. Thrower mounting and software tutorial

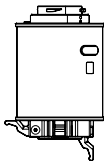
Status symbols and corresponding meanings :

1. The indicator screen flashes and three horizontal lines are displayed: There was an abnormality during the last use, and you need to press and hold the button to initialize.

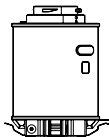
2. The indicator screen is always on and the number "0" is displayed: None of the 4 hooks are active.

3. The indicator screen is always on and the numbers "1" "2" "3" "4" are displayed: items that can be mounted on the corresponding hook.

4. The indicator screen flashes and displays "E": system error or mechanical transmission stuck.



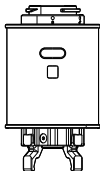
To be mounted



Mounted

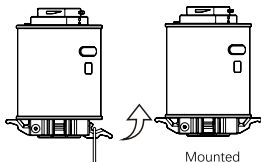
Mount operation :

1. Reset: After TH4 is powered on and the indicator screen is displayed , press and hold the button for 2 seconds, the indicator screen displays "0" , and the initialization is completed . The status is as follows :



Initialized state

2. Mounting : When the number 1 to 4 is displayed on the indicator screen by pressing the operation button , items can be mounted on the hooks corresponding to the numbers. The item is mounted into the hook groove through the metal ring or the "rope", "wire" and "belt" ring, and the hook is supported by hand to be in the mounted state (pay attention to the safety of hands). As shown in the figure below :



3. Press the operation button to lock, when the number on the screen jumps, you can let go to the next mount operation, and up to 4 mounts can be mounted.

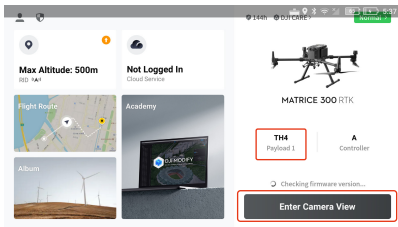
Note: For the scene that needs to be mounted quickly, there is no need to reset. After power-on, when the number 1 to 4 is displayed on the indicator screen , you can directly mount and lock the items corresponding to the hook .

For scenarios that need to be mounted in advance, you can mount items

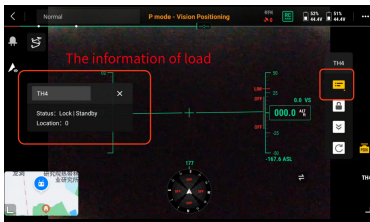
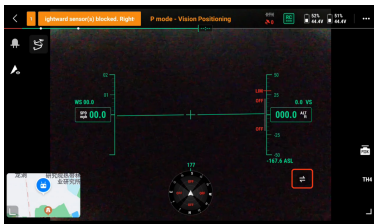
in advance before the aircraft is powered on and use it in advance. When the aircraft needs to perform a throwing task, directly install the TH4 to take off. After the thrower is started, the throwing can be performed.

Operation of Pilot Software

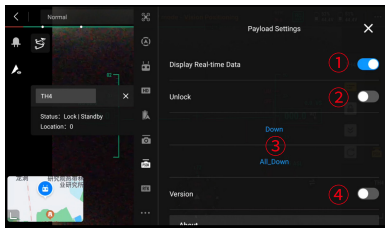
1. Click DJI Pilot 2 to enter the main interface, the lower right corner shows the word TH4, indicating that the TH4 load recognition success, click on "Enter Camera View".



2. After entering the main interface, click the TH4 area in the lower right corner to switch to the TH4 load interface.



Click on the settings icon with three dots in the upper right corner, then click on the PSDK icon in the center column.



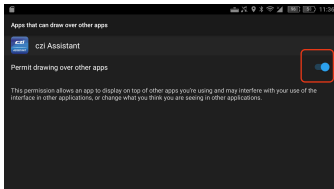
- ① On / Off the pilot TH4 load information hovering dialogue window
 - ② Unlock
 - ③ Down / All_Down
 - ④ Display the information of load firmware and SN code in the pilot TH4 load information hovering dialogue window.
3. After unlocking by clicking the “Unlock” button, click the “Down” button to perform the throwing. If not throwing, it should be locked in time to prevent accidental throwing.

Operation of czi Assistant hovering dialogue window

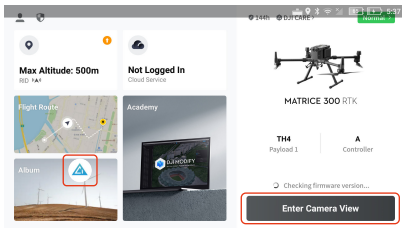
1. Open the czi Assistant software, click on "Open Floating Window".



2. Allow to hover on the pilot.



3. Click the hovering dialogue window icon to pop up the hovering dialogue window interface, and it can be minimized and closed through the hovering dialogue window. Click “Enter Camera View” to operate.





- ① Unlock / Lock status prompt
- ② Four throwing hook status prompts.
- ③ UNLOCK
- ④ THROW

4. After unlocking by clicking the “Unlock” button, click the “THROW” button to perform the throwing. If not throwing, it should be locked in time to prevent accidental throwing.

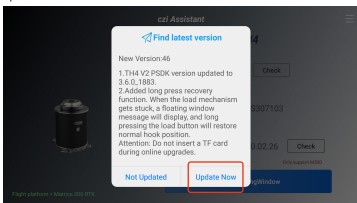
5. Firmware upgrade

1、Online Firmware Upgrade (This function is exclusively available for the DJI Matrice 300 RTK when used in conjunction with the DJI Smart Controller. Prior to the upgrade, please verify the absence of any TF cards within the device).

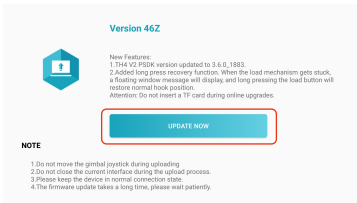
2、Affix the TH4 to the DJI M300 drone and power it on, ensure the DJI Smart Controller is connected to WiFi or a hotspot. Proceed to activate the czi Assistant software on the DJI Smart Controller, whereupon registration successful will be displayed, and the version details for the TH4 interface will be accessible, click “Check”.



3. If it's not the latest firmware version, you will be prompted with information about a new version and its update details. Click "Update Now" for download the latest version.



4. Click "UPDATE Now".



5. Wait for download and upload the firmware.

Version 46Z



New Features:
1. TH4 V2 PSDK version updated to 3.6.0_1883.
2. Added long press recovery function. When the load mechanism gets stuck, a floating window message will display, and long pressing the load button will restore normal hook position.
Attention: Do not insert a TF card during online upgrades.

Downloading 62%

NOTE

1. Do not move the gimbal joystick during uploading
2. Do not close the current interface during the upload process.
3. Please keep the device in normal connection state.
4. The firmware update takes a long time, please wait patiently.

6. The system prompts Firmware uploaded successfully, click “sure”, and after restarting, it will be the latest firmware version.

Version 46Z



New Features:
1. TH4 V2 PSDK version updated to 3.6.0_1883.
2. Added long press recovery function. When the load mechanism gets stuck, a floating window message will display, and long pressing the load button will restore normal hook position.
Attention: Do not insert a TF card during online upgrades.

Upload successful!About to restart the device.

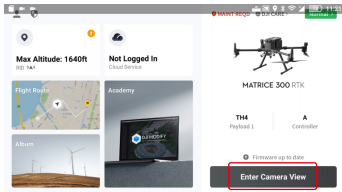
sure

NOTE

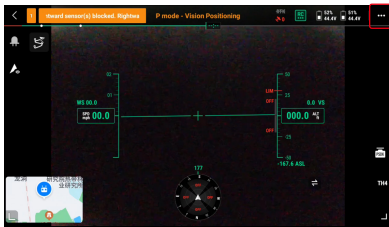
1. Do not move the gimbal joystick during uploading
2. Do not close the current interface during the upload process.
3. Please keep the device in normal connection state.
4. The firmware update takes a long time, please wait patiently.

TF Card Firmware Upgrade

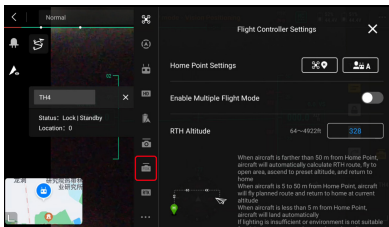
1. Open the official website of czi. In the series of other payload devices, find the TH4 V2 four-stage dropping system, click to view details. Then click on Software Download. For the TH4 V2 PSDK product, please download the TH4 V2 updated firmware (PSDK); for the TH4 V2 OSDK product, please download the TH4 V2 updated firmware (OSDK).
2. Prepare a TF memory card with a capacity ranging from 4G to 32G and a card reader. Insert the TF card into the card reader. Then insert the card reader into the USB port of the computer. The file system format of the TF card should be FAT32.
3. Firstly, place the compressed package of the updated firmware in the root directory of the TF card. Then directly extract it to the current folder. Place the folder named TH4_BL in the root directory of the TF card. This folder contains the firmware that needs to be upgraded.
4. Eject the TF card, unplug the card reader. Then remove the TF card. Insert the TF card into the TF card slot of the TH4 V2 four-stage dropping system.
5. Mount the TH4 V2 four-stage dropping system on the drone. Turn on the drone. Then wait for about 30 seconds. After the program upgrade is completed, the TH4 V2 four-stage dropping system will start automatically.
6. Check whether the upgrade is successful. Open the DJI PILOT 2 APP and click to enter the flight interface.



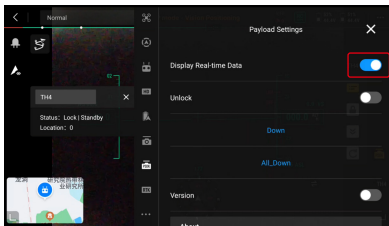
Click on the settings icon with three dots in the upper right corner.



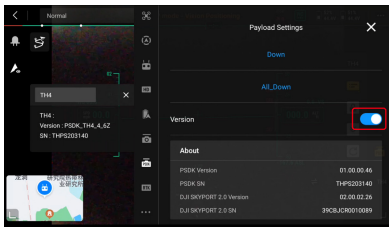
Then click on the PSDK icon.



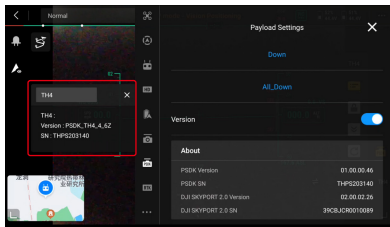
Enter the Payload settings and turn on “Display Real-time Data”.



Open “About”.



If you can see the new firmware version in the hovering dialogue window on the left side, the upgrade succeeds.



成至技术支持

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如您对说明书有任何疑问或者建议

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If you have any questions or suggestions
regarding the manual, please contact us at:

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