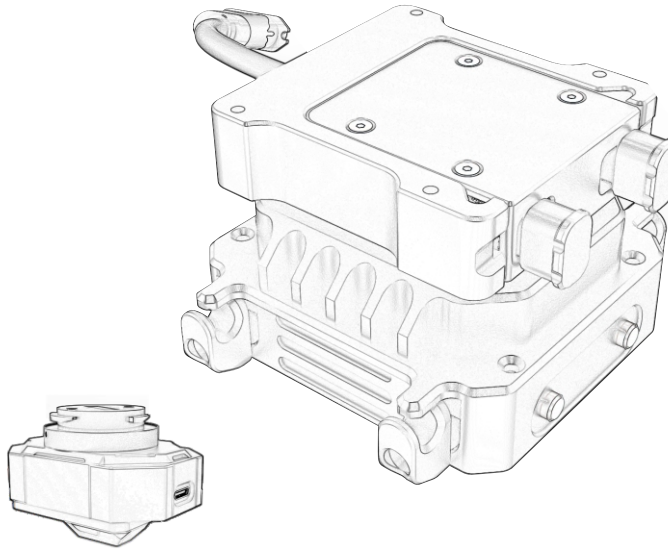
RDD-25A

4-Channel Visual Payload Release and Drop Device
User Manual

2024



Product Overview

The RDD-25A device is a modular visual payload release system, consisting of one video capture module and one 4-channel payload release module. The video capture module is mounted to the gimbal interface, transmitting downward video to the remote controller. The payload release module is mounted under the drone body and connected to the video module via a Type-C cable, sharing the drone ' s PSDK interface. Each release unit can carry up to 2.5 kg of payload. The four units can be released sequentially or simultaneously.

Thank you for purchasing our product.

If you encounter any problems during use, please contact your sales representative in time.

Disclaimer

Due to product version upgrades or other reasons, the content of this manual may be updated periodically.

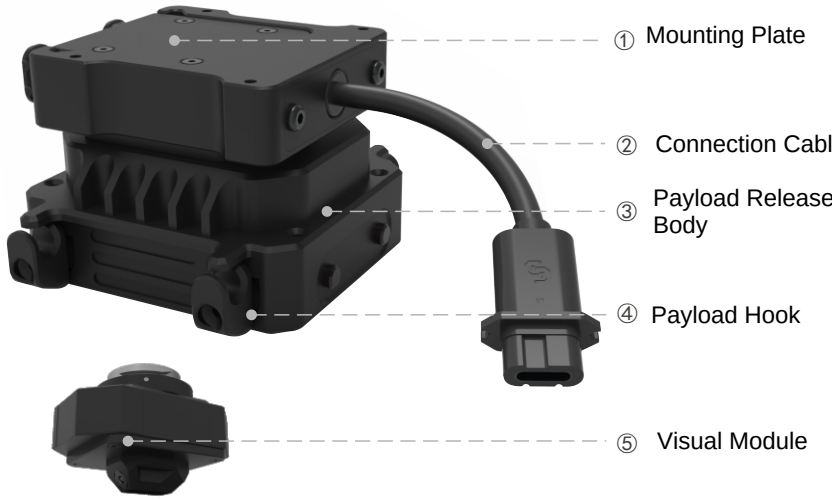
This manual is for user guidance only. All statements, information, and recommendations in this manual do not constitute any express or implied warranty.

DIRECTORY

Package Contents

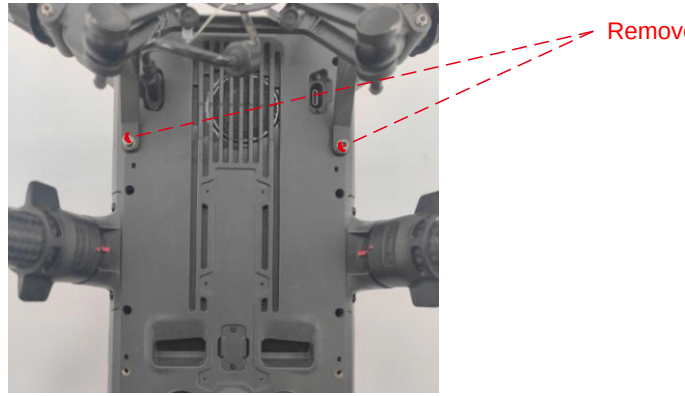
Name	Quantity	Unit
RDD–25A	1	Set
Visual Module	1	Set
Packaging Box	1	Set
Payload Release Hook Rings	12	Pieces
Certificate of Conformity	1	Piece

Understanding the 4-Channel Visual Payload Release and Drop Device

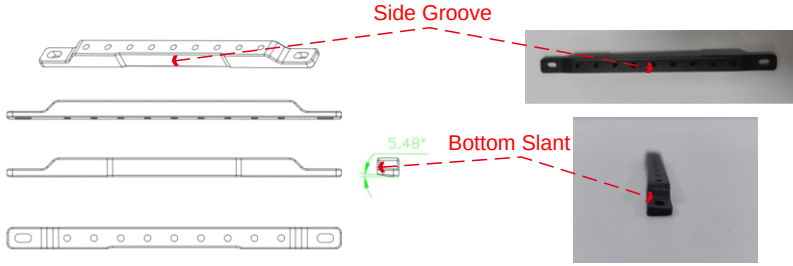


Device Installation

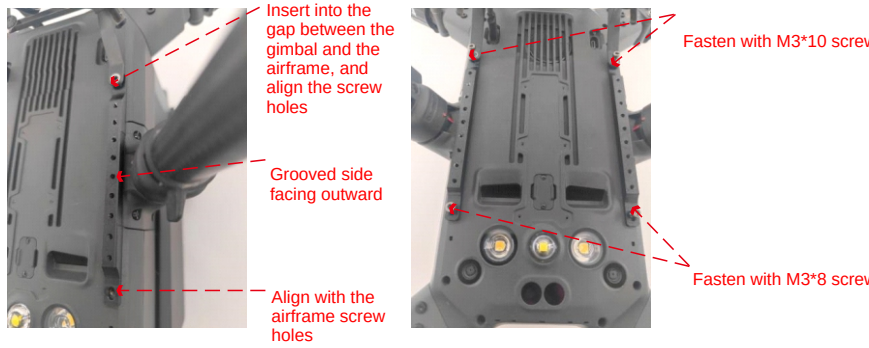
Step 1: Turn the drone upside down and remove the two screws at the bottom of the gimbal.



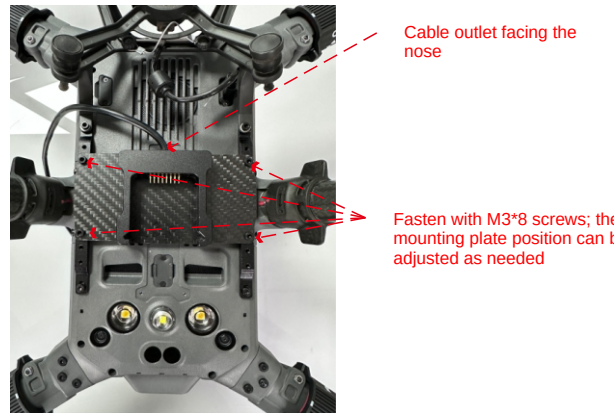
Step 2: Confirm the connection position between the alloy bracket and the drone. To better fit the drone body, the bottom of the alloy bracket is slanted and one side has a groove. During installation, align the bottom of the alloy bracket with the drone body, with the grooved side facing outward.



Step 3: Insert one end of the alloy bracket into the middle of the connection point between the gimbal and the airframe, align the screw holes at both ends of the alloy bracket with the corresponding holes on the airframe, fasten the alloy bracket to the airframe at the gimbal-connection side using the supplied M3*10 screws, and fasten the other end using the supplied M3*8 screws.

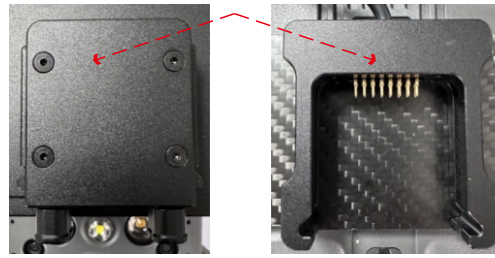


Step 4: Connect the mounting plate to the alloy bracket, with the cable outlet facing the nose of the aircraft; adjust the exact mounting position of the plate as needed for actual use, and fasten the mounting plate to the alloy bracket using the supplied M3*8 screws.



Step 5: Connect the device’ s power pickup to the mounting plate’ s power port. Make sure the groove on the power pickup is aligned with the power port. After insertion, confirm that the quick-release latches on both sides have fully popped out before normal use (depending on the purchased version, connect the mounting plate interface to the HUB or to the aircraft’ s E-PORT).

The mounting plate power port must be inserted aligning with the groove on the device power pickup



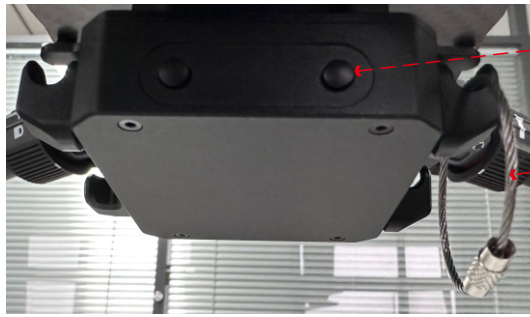
Device power pickup　　Mounting plate power port

Step 6: Insert the connector of the payload release and drop device into the corresponding interface on the visual module.

As shown below:

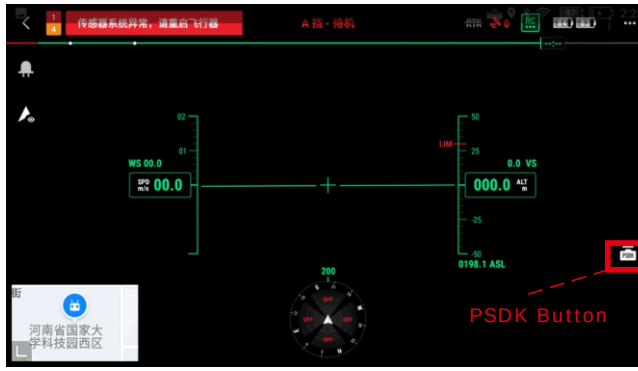
Location of the visual module interface on the drone

Step 7: As shown in the figure, manually press the hook control button to set the hook into standby release mode. After connecting the matching metal ring to the payload, hang it on the hook.

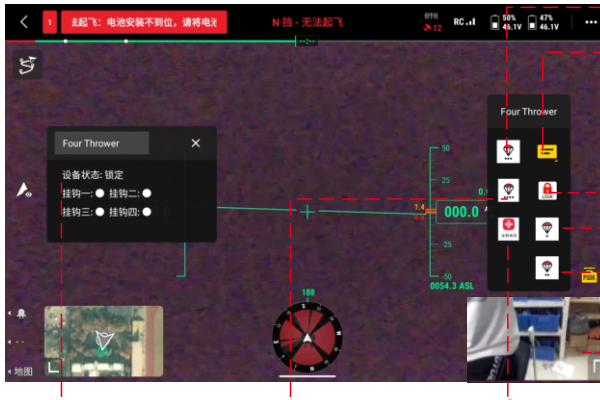


Device Operation

PSDK Button: Single click to open/close the 4-Channel Payload Release and Drop Device operation menu



Operation Button Description



⑤ Hook 3 Switch: Single click to release

① 4-Channel Device Status Menu Switch: Open/close the status menu

② Unlock/Lock: Single click to unlock/lock; after unlocking the device can operate normally

③ Hook 1 Switch: Single click to release

④ Hook 2 Switch: Single click to release

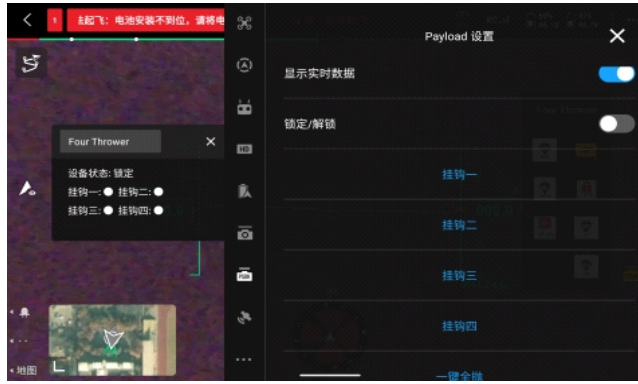
⑨ Visual Camera Feed Display

⑧ Hook Status Menu: Displays the current load status of each hook

⑥ Hook 4 Switch: Single click to release

⑦ One-Key All Release Switch: Single click to release all

Payload Control



Open the Payload settings; you can also operate the 4-Channel Payload Release and Drop Device through this menu (tap the menu icon in the upper-right corner of the remote controller ••• to enter Payload settings). PSDK

Display real-time data switch: Show/Hide the working status and detailed information of the 4-Channel Payload Release and Drop Device

Single click to unlock/lock; after unlocking, the device can operate normally
Hook 1: Single click to release
Hook 2: Single click to release
Hook 3: Single click to release
Hook 4: Single click to release
One-key all-release switch: Single click to release

Troubleshooting

1	No PSDK control icon	1. Check whether the wiring is correct. For the M350 version, plug into the top E-PORT of the aircraft and pay attention to the connector orientation. For the M300 version, connect to the supplied adapter ring and plug into the gimbal. For the visual version, connect the Type-C cable to the visual module and install the visual module on the gimbal. 2. Check the drone and remote controller firmware; they must be updated to the latest version.
2	Incomplete PSDK icon display	1. Close the Pilot2 flight app in the background and re-enter, or restart. 2. Check the drone and remote controller firmware; they must be updated to the latest version.

Device External Interfaces

----Hardware Interfaces: None for third-party hardware

----Software Protocol Interfaces: None

Technical Specifications

Product Dimensions	125 × 117 × 60 mm
Product Weight	430 g
Interface Type	SKYPORT V2
Control Method	PSDK
System Power	20 W
Operating Temperature	−20°C to 60°C
Number of Channels	4
Control Mode	Independent channel control; select any release index or one-key all release
Control Range	Same as the aircraft communication range
Status Feedback	Real-time feedback for each channel
Mounting Method	Gimbal and belly mounting
P HUB	Supported
Payload Capacity	2.5 kg per channel
Video Resolution	1080P @ 30 fps