

RDD-M Payload Release and Drop Device

User Manual



Before using this product, please carefully read this manual and keep it in a safe place. If you have any questions, please contact our sales representative.

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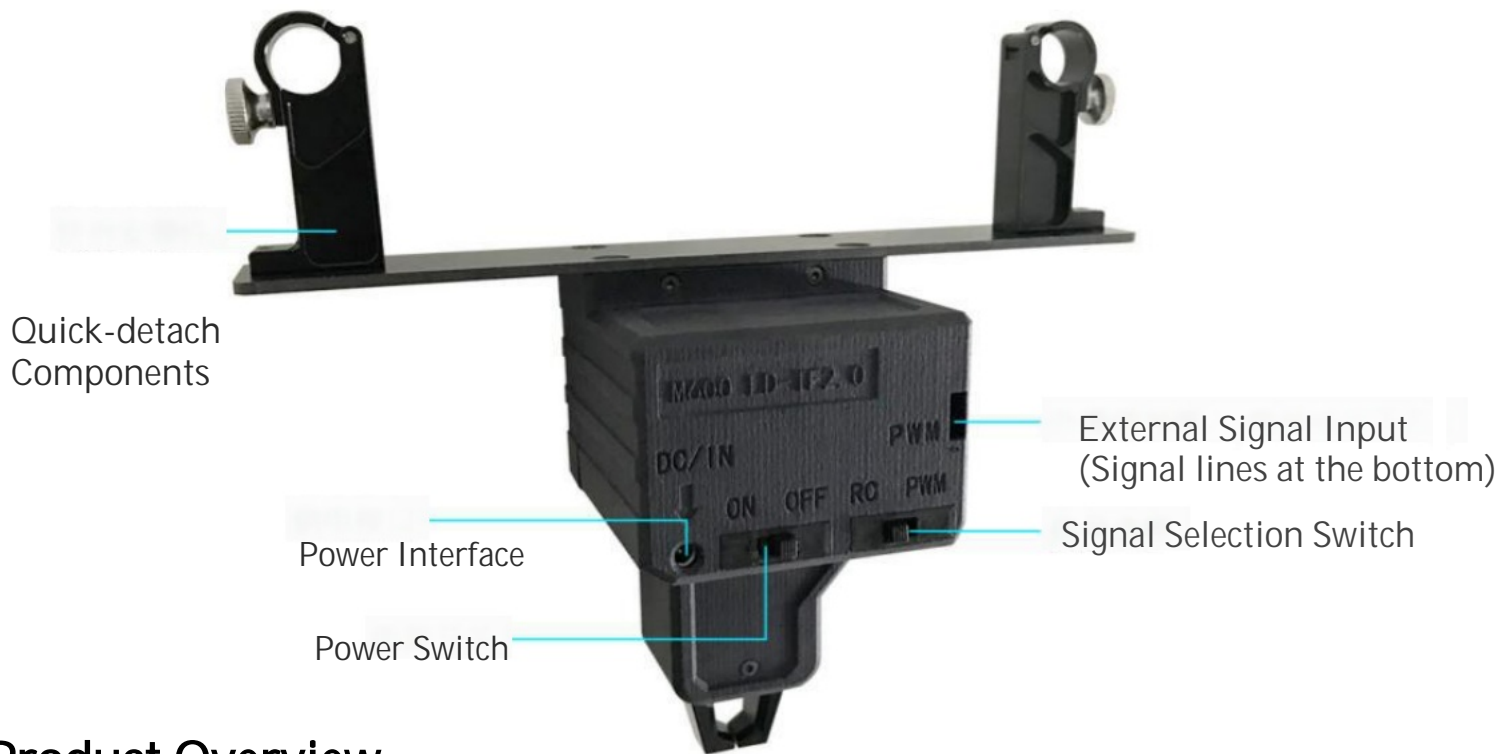
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4. Introduction



Product Overview

This product is a customized module designed for unmanned aerial vehicles (UAVs) to carry and release items or for applications such as power line installation. The product is lightweight, has a high payload capacity, can be quickly loaded, and is easy to assemble and disassemble. It is suitable for various types of drones, meeting the demands of the UAV mounting operations in different industries.

Appearance Features

The overall structure is made of carbon fiber and aerospace aluminum, resulting in a lightweight design. The nylon sintered shell is resistant to high temperatures, exhibits high strength, and has good toughness. The aesthetic design is pleasing, showcasing a high-end and sophisticated appearance. The quick-detach design enhances an industrial feel, allowing for rapid assembly and disassembly in just one minute.

Unique Design

Supporting independent remote control and body signal switching, the internal structure is made of aerospace-grade aluminum for robust durability. Powered by the aircraft body, it ensures extended operating time. Innovative use of unlocking rail plate technology ensures smoother opening of the release hook and a more secure locking mechanism. Effortlessly capable of mounting a 5-kilogram payload.

Applicable Scenarios

The product is widely applicable in various scenarios, including the deployment of fire suppression projectiles by firefighting drones, transportation of supplies to stranded or isolated areas, emergency rescue operations, law enforcement applications, and power line installations, among other industries.

II. Product Details



Safety Box

X1个

RDD-M Payload Release and Drop Device

X1个

Remote Controller

X1个

III. Installation Instructions

1. Start by taking out the device. Loosen the quick-detach component by turning the screw counterclockwise manually. Remove the upper cover of the quick-detach component and install it onto the mounting rod of the UAV. Cover the quick-detach component and tighten the screw clockwise. Take out the power cable and insert the DC end of the power cable into the DC interface of the device. Connect the other end of the power cable with the XT30 connector in series with the connection head of the M600 landing gear and the drone's power supply. Refer to Fig. 1, 2, and 3.



Fig. 1



Fig. 2



Fig. 3

IV. User Guidelines

1: Remove the rear battery cover of the remote controller and insert four No. 5 AA batteries, paying attention to the correct polarity (as shown in Figure 4). Then, push the battery cover tightly. Press and hold the power button on the front of the remote controller with two fingers for 2 seconds to turn on the remote controller (as shown in Figure 5). Similarly, hold the button for 2 seconds to power off the remote controller.



Fig.4



Fig.5

2: Turn on the power switch on the back of the aerial release system and set the switch to ON. The red power indicator light below will stay on continuously. (When using the remote controller, ensure the right switch is in the RC position; when using external signal line control, the circular dot below the PWM interface indicates the signal line direction. Set the right switch to PWM for external signal control, as shown in Figure 6.) Once the aerial release system and the remote controller signal are successfully connected, the RX battery level on the remote controller display screen will be full (as shown in Figure 7).



Fig.6



Fig.7

3: Pick up the remote controller, move down the control switch in the upper-left corner to activate the release hook. To deactivate the release hook, push the switch upward (as shown in Figures 8 and 9).



Fig.8



Fig.9

Caution

The remote controller has been pre-configured with data and should not be initialized or have its internal settings altered without authorization. Doing so may result in the aerial release system becoming uncontrollable or damaged. Any damage caused by unauthorized alterations to the data will incur repair charges.

When using external signal control, the signal line used does not need to provide power. Start tuning the signal travel setting from positive or negative 20%, gradually increasing to avoid damaging the aerial release system.

If using the DJI expansion module, connect the signal line to the Flight Controller (FC) channel output ports F2 to F8. Then, connect the drone to a computer and modify parameters in the computer tuning interface. It is recommended to start experimenting with the travel range from 1400 to 1600.

At the end of use, please promptly turn off the power switch on the aerial release system, and then turn off the remote controller.

V. Specifications

RDD-M Payload Release and Drop Device

Dimensions	155*73*179 mm
Packaging Box	370 mm*268 mm*186 mm
Weight	311 g
Installation Method	Quick-detach
Signal Mode	PWM Signal Aircraft Body Output Pulse Width Signal
Power Supply Mode	Aircraft Body Power Supply (Supports Voltage: 24V)
Control Mode	Independent Remote Control
Expansion Channel	Supports M600 Expansion Channel function (please contact sales if you need this feature)
Control Distance	800 m (unobstructed)
Payload Capacity	5KG
Compatible Platforms	M600 and aircraft with a payload capacity of 5-10KG or more. Standard configuration for M600 model; custom adapter board required for other models.

Remote Controller

Dimensions	180*82*161 mm
Weight	392 g
Input Power	6V 1.5AA*4
Data Output	PS2 Interface PPM
Frequency Range	2.4055 - 2.475GHZ
Bandwidth	500KHZ
Transmitter Power	≤20dBm
Low Voltage Alarm	When < 4.2V
Charging Port	None
Antenna Length	26mm2 (Dual Antennas)
Display Mode	STN Semi-Transparent Positive Display, 128x64 Dot Matrix, VA7339mm, LED White Backlight

VI. Important Notes

1. Before use, please confirm whether the UAV platform is capable of mounting this product.
2. Follow the installation instructions for safe operation, correctly connect the power, and tighten the mounting screws securely.
3. During storage, transportation, and use, pay attention to moisture-proof, waterproof, dust-proof, high-temperature resistance, fire prevention, and collision prevention.
4. When using, adhere to the rated power and ensure voltage compatibility to avoid damage to this product or your UAV equipment.
5. This product is a high-tech electronic device. In case of quality issues, please do not dismantle it privately to avoid damaging your warranty eligibility.

VII. Warranty Services

To obtain better maintenance and warranty services, when you require warranty service, the purchaser needs to return the original product or damaged parts. Please pack them carefully and provide proof of the purchase time and location.

Shipping costs are initially borne by the buyer, and the company will provide after-sales support after inspection. If the return shipping cost is not due to a product quality issue, the buyer will be responsible for it. The company does not accept unauthorized freight collect shipments. Thank you for your cooperation.

The warranty service is not applicable in the following cases:

- 1.Any unauthorized modification, alteration, or repair by entities other than our company or its authorized agents.
- 2.Damages caused by human factors, such as dropping, collision, crushing, and other similar incidents.
- 3.Damages caused by failure to operate according to product instructions under overload voltage conditions.
- 4.Device damage resulting from reverse polarity connection of the power supply.
- 5.Damages caused by force majeure.
- 6.Damages caused by corrosive liquids.
- 7.Warranty expiration.
- 8.Inability to provide valid purchase proof (invoice or transaction information)."

Note: Please carefully read the above information after purchasing the product. If you have any questions, please contact the sales representatives or technical personnel of the company

※ The company reserves the right of final interpretation.