

User Manual for the product

Revision Log

edition	date	Amended content
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catalogue

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Reading Tips

■ 1. Symbols

 · AND-NOT operation

 · Important notes

 · Operation and usage tips

 · Vocabulary explanation and reference information

■ 2. Services and Support

The following information is provided to drone users:

1. 《 user's manual 》
2. Product Quick Start Guide

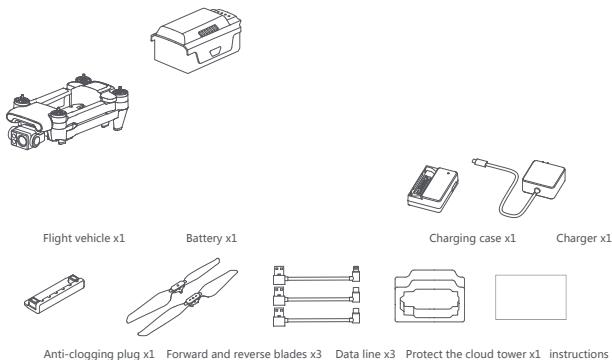
It is recommended that users carefully read the Quick Start Guide to understand the use process before using the product. For more information about the product, please refer to the User Manual.

Product Overview

This foldable portable quadcopter integrates cutting-edge technologies including aerodynamics, 30倍混合变焦, 4K video recording, thermal imaging cameras, expansion ports, wireless communication, HD digital video transmission, and infrared sensing systems. It delivers advanced features such as long-distance remote control, real-time video streaming, intelligent flight management, precision landing, and obstacle detection. The aircraft's integrated three-axis mechanical stabilization gimbal camera ensures stable 4K HD video recording, while a professional-grade ISP guarantees image quality. The remote control incorporates a retractable device clamp design, with detachable joystick for easy storage.

Users of aircraft in Chinese mainland areas are required to complete real-name registration in accordance with the relevant regulations of the Civil Aviation Administration of China. Please register through the UAV real-name registration system of the Civil Aviation Administration of China. For more information, please visit: <https://uom.caac.gov.cn>

1. Products and Accessories



⚡ · This is the standard version of the product display, please refer to the actual purchase of the package products.

2. Function overview · PTZ camera performance

The system features a wide-angle telephoto thermal imaging camera. The wide-angle camera utilizes Sony's 1/2-inch sensor, supporting 4K video recording and working in tandem with the telephoto camera to achieve 30x hybrid zoom, delivering both expansive views and detailed distant imagery. The AI Super Night Vision module employs next-generation AI ISP technology

with ultra-sensitivity noise reduction, boosting signal-to-noise ratio by fourfold. When activated at night, it produces crystal-clear images. The thermal imaging camera delivers 640×480 resolution paired with a 19mm telephoto lens for rapid target locking and operational decision support. Multiple display modes including split-screen, picture-in-picture, linked zoom, and pseudo-color display cater to diverse scenarios such as security surveillance, industrial inspection, building inspection, and outdoor exploration.

· Picture transmission performance

Using RokLink 5.0 HD digital video transmission technology, it can achieve a maximum communication distance of 20 km and a real-time HD video transmission rate of up to 720 frames per second in an interference-free and unobstructed environment. The latest RokLink 5.0 video transmission technology utilizes advanced encoding and decoding techniques to reduce video transmission latency to as low as 120 milliseconds.

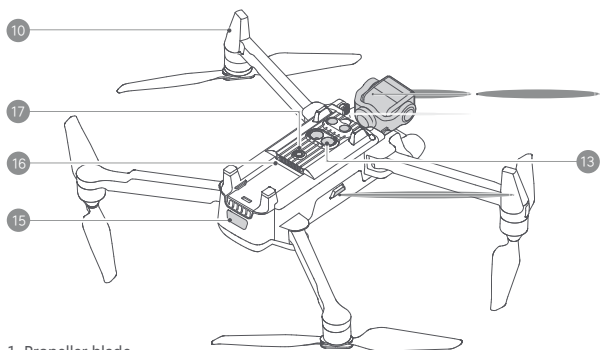
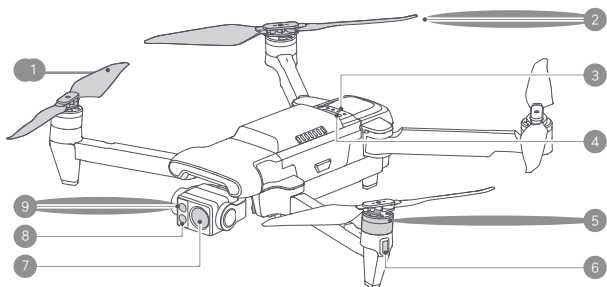
· Intelligent flight function

The new process SoC, with built-in super computing power, can recognize up to 30 kinds of targets such as people, cars, ships and animals, and track the targets stably. Intelligent flight functions such as focus following, time-lapse photography, flight point flying and cruise control help you easily take pictures.



- The maximum flight speed of the aircraft is measured in a windless environment near sea level.
- The maximum flight time is measured when the windless environment is flying at a constant speed of 28.8 km/h (8 m/s), stopping the recording and the power is 0%.
- Fly in an open, unobstructed environment without electromagnetic interference, and at a minimum altitude of about 119 m. Under FCC and standard, the remote control can achieve the maximum communication distance (one-way without return).

■ 3. Name of Aircraft Component

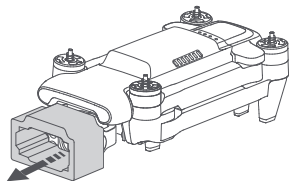


- | | | |
|-------------------------------|-----------------------------|--------------------------------|
| 1. Propeller blade | 7. Thermal imaging camera | 13. Fill light |
| 2. Anti-leaf | 8. Wide-angle camera | 14. Battery unlock button |
| 3. power light | 9. Telephoto camera | 15. Tail lights |
| 4. Turn on/off the machine | 10. Stilts | 16. Module interfaces |
| 5. brushless electric machine | 11. Integrated PTZ camera | 17. The inferior visual system |
| 6. A heading indicator | 12. Infrared sensing system | |

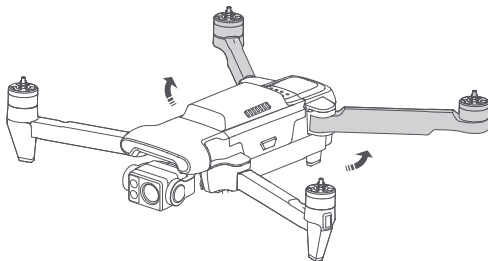
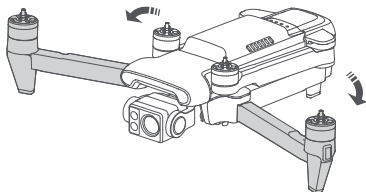
The aircraft is stored when it leaves the factory. Please unfold the aircraft according to the following steps.

■ 1. Prepare the Aircraft

- Remove the foam protective bubble from the platform



- Deploy the aircraft. First deploy the front arm, then the rear arm, and all the blades



⚠ · Before starting the power supply of the aircraft, ensure that the pan-tilt cover is removed and the front and rear arms are unfolded to avoid affecting the self-test of the aircraft.

· It is recommended to install bubble foam for pan-tilt protection when no aircraft is in use.

Aerobat

The aircraft is mainly composed of flight control system, communication system, vision system, power system and intelligent flight battery.



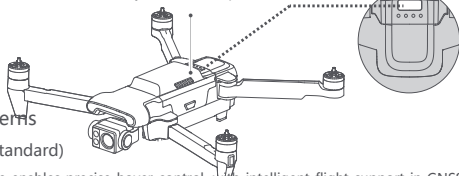
Vocabulary explanation

IMU	Inertial measurement unit, the most important core sensor of the aircraft
TOF(Time of Flight)	It refers to judging the distance of a target by detecting the time from emission to reception of infrared signal
Lower visual system	A sensing system consisting of a camera on the bottom of the aircraft and a TOP module
Visual positioning	Refers to the high precision positioning function realized by the visual system
compass	A geomagnetic sensor, which the aircraft uses to identify its direction
barometer	Barometric pressure sensor, the aircraft determines its altitude by atmospheric pressure
GNSS	Global Navigation Satellite System

1. Turn On/off the Aircraft

- Short press + long press for 2 seconds to switch off
- Press the power switch button briefly to check the power

Turn on/off the machine



2. Flight Patterns

- GPS mode (standard)

The GNSS module enables precise hover control, with intelligent flight support in GNSS mode. Users can activate either Sport Mode or Beginner Mode through the App. In Beginner Mode, the flight controller restricts speed, distance, altitude, and return altitude. Sport Mode allows a maximum flight speed of 18m/s, a maximum ascent rate of 5m/s, and a maximum descent rate of 3.5m/s



- VPU mode (optical flow)

The system employs a optical flow module for precise hover control, with VPU mode not supporting intelligent flight capabilities. The aircraft has a maximum flight speed of 10m/s, a maximum ascent speed of 3m/s, and a maximum descent speed of 2m/s. The device automatically switches to VPU mode when operating indoors, and activates this mode when GPS signals are weak outdoors with clear ground textures.



·ATTI mode (posture)

When operating in ATTI mode with weak GPS or optical flow signals, the drone will maintain a maximum speed of 18m/s, with a maximum ascent rate of 5m/s and descent rate of 3.5m/s. This mode causes horizontal drift and disables intelligent flight capabilities. To prevent accidents, users should select open areas with strong GPS signals for operations. If ATTI mode is activated, immediately land at a safe location.



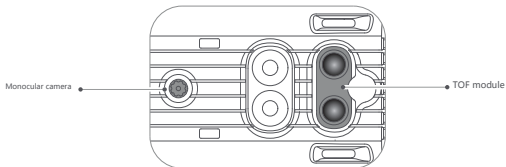
3. Downward Vision Perception System

The product features an integrated downward vision sensing system at its base, consisting of a monocular camera and a Time-of-Flight (TOF) module. The TOF module comprises both transmission and reception components, which calculate the aircraft's precise altitude relative to the ground by measuring the time it takes for infrared signals to reflect from the transmitter to receiver. When combined with the monocular camera, this system enables accurate low-altitude positioning of the aircraft, achieving high-precision navigation.

· Range of perception

The lower vision perception system can work at a height of 0.3-15m with an effective detection range and a precise ranging range of 0.3-5m. It will be automatically activated when visual positioning conditions are met. · Application scenarios

The positioning function of the downward vision system is suitable for automatic activation in the environment without GNSS signal or poor GNSS signal. In order to ensure positioning accuracy and flight safety when using vision positioning flight, the aircraft will actively limit the flight speed.



· Users should pay attention to the surrounding environment and APP related warnings during the flight, keep control of the aircraft and be responsible for the operation behavior.

- In the case of no GNSS, when using the visual system in an open flat field, the optimal working height range of the visual positioning system is 0.5-15 m. When flying beyond this range, the positioning performance may be reduced. Please fly carefully.
- The visual system cannot recognize surfaces without texture features and cannot work properly in environments with insufficient or excessive light intensity.
- Vision perception system cannot work properly under the following scenarios:
 - a. Pure color surface (e.g., pure black, pure white, pure green).
 - b. A surface with strong reflection or reflection.
 - e. A scene with rapid and drastic changes in light.
 - f. The surface of an object that is particularly dark (less than 10 lux) or particularly bright (more than

40,000 lux).

g. A surface of a material that strongly absorbs or reflects infrared (e.g., a mirror).

i. Surfaces with high texture repetition (e.g., small checker bricks of the same color).

Do not block the downward camera and infrared sensor in any way. If there is dirt, clean it up in time; if there is damage, contact the after-sales service for repair.

■ 4. Flight Position

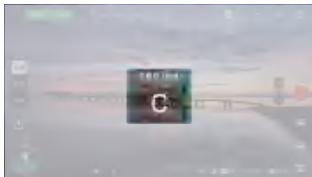
The aircraft supports the following flight gears, which can be quickly pressed through the APP



Switch.

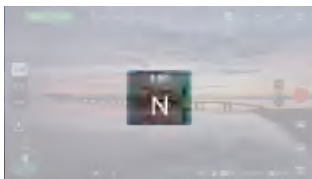
· Stability (Cine)

The steady gear restricts the maximum flight speed, rise and fall speed on the basis of the normal gear, so that the aircraft is more stable during the shooting process.



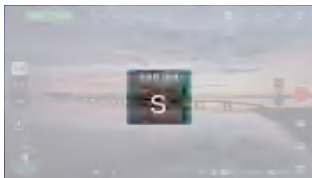
· Normal

When you are proficient in flying, you can manually switch to the normal gear, which is the most commonly used gear. When the obstacle avoidance function is turned on and the light and other environmental conditions meet the requirements of the visual system, the maximum flight attitude Angle is 30° and the maximum horizontal flight speed is 16 m/s.



Sport

In the case of a good GNSS, the maximum horizontal flight speed will be increased to 18 m/s for a better flight experience.



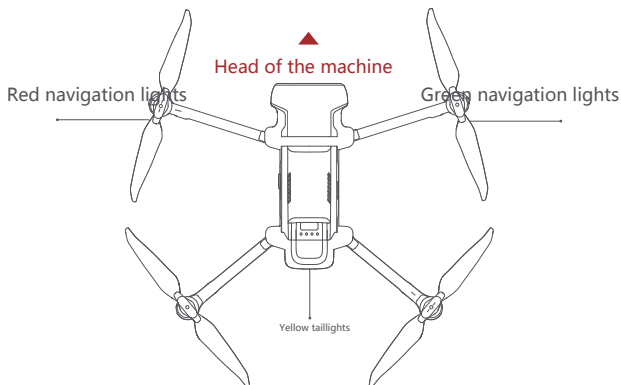
· Above 2400 meters above sea level, the motion mode will be disabled.

· The factory setting is set to the default ordinary gear.



- When using the motion brake, the flight speed of the aircraft will be greatly increased compared with the normal brake, so the braking distance will also increase significantly. Please fly carefully and ensure safety.
- When using the motion guard flight, the attitude control sensitivity of the aircraft will be greatly improved compared with ordinary guard, which is manifested as the small operation of the remote control lever will cause the aircraft to produce a large flight action.
- In case of strong wind environment, the restriction will be removed to improve the wind resistance performance of the aircraft. In this case, the pan-tilt vibration may appear in the picture.
- Videos taken under moving barriers may be slightly shaky.

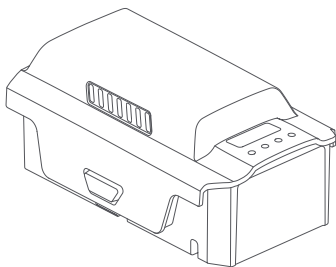
■ 5. Description of the Aircraft Status Indicator Light



	Indicating status	Flight status
1	Red, green and yellow lights breathe	Self-inspection in progress
2	Red, green and yellow lights are always on	The aircraft is on the ground: Self-test failed
		The aircraft is in the air: Internal fault
3	The red/green heading indicator is fixed and flashing	Can take off/normal flight
4	Red, green and yellow lights flash	Low battery warning
5	Red, green and yellow lights flashing	The power is extremely low during the flight and it needs to land as soon as possible
6	Flash the traffic lights	The firmware upgrade is in progress
7	The red and green lights are always on, and the yellow light is flashing	Not connected to the remote control
8	Fill light	Auxiliary downward infrared system, can be automatically/manually opened

Smart Flying Battery

The long-endurance intelligent flight battery (DC04A3) has a capacity of 5000 mAh and a rated voltage of 14.4V. It is equipped with charge and discharge management function, independent charging, TYPE-C charging interface, high-energy cell and advanced battery management system.



■ 1. Smart flight battery function

- Power display: The battery has a built-in power indicator light, which can display the current battery power.
- Battery storage self-discharge protection: after being fully charged, the battery will automatically discharge and start after 24 hours without any operation. The battery will discharge to 65% of the power to protect the battery.
- Balance protection: automatically balance the internal cell voltage of the battery to protect the battery.
- Overcharge protection: Overcharge will seriously damage the battery, and the charging will stop automatically when the battery is fully charged.
- Charging temperature protection: Charging at a battery temperature below 5°C or above 40°C will damage the battery, and charging will stop outside the temperature range.
- Overcurrent protection: Charging with large current will seriously damage the battery. When the charging current is detected to be too high, the battery will stop charging.
- Overdischarge protection: Overdischarge can cause damage to the battery. When the battery is not in use, it will cut off output when the voltage is discharged to a certain level. The battery will not enable overdischarge protection during flight.
- Short circuit protection: The output will be cut off when the battery detects a short circuit to protect the battery.
- Cell damage detection: When the battery detects cell damage or serious imbalance, the APP prompts that the battery voltage difference is too large or the cell has been

damaged.

- Communication: The aircraft can obtain real-time battery information, such as voltage, power, current, etc., through the communication interface on the battery.



· It is recommended to fully charge the smart flight battery for the first time.

■ 2. Intelligent Flight Battery Usage

· Check the power supply

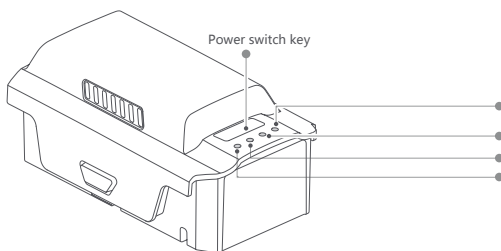
Press the power button briefly to check the current charge.

The power indicator light can be used to display the power of the intelligent flight battery during charging and discharging. The indicator light is defined as follows:

 Indicates that the LED light is always on  Indicates that the LED lights are flashing regularly

 Indicates that the LED is off  Press LED to make the light flash quickly

LED 1
LED 2
LED 3
LED 4



quantity of electricity	LED 1	LED 2	LED 3	LED 4
100%				
75%-99%				
50%-74%				
25%-49%				
0%-24%				

· Precautions for low temperature use

- If the battery is used in low temperature environment (-5°C to 10°C), please make sure that the battery is fully charged. The discharge capacity of the battery will be reduced when it works in low temperature environment. Turn on the aircraft first to heat the battery, and take

- off after full preheating (as indicated by the App).
- The battery cannot be used to fly in the environment below -5°C.
- In low temperature environment, it is recommended to preheat the battery to more than 10°C before flight, and better to preheat it to more than 20°C.
- In low temperature environment, due to the limitation of battery output power, the wind resistance of the aircraft will be reduced. Please operate carefully.
- Flying in low altitude plateau environment requires extra caution.

· charge

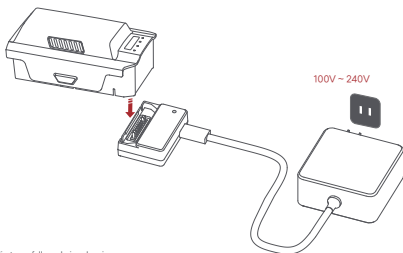
Use the 45W portable charger to charge · Connect the portable charger to an AC power supply (100-240 V, 50/60 Hz; use a power conversion plug if needed).

· Connect the charger and charging case together. The white indicator light of the charging case is on to indicate that charging can be carried out.

· Insert the battery into the charging case. When charging, the intelligent flight battery power indicator light will flash in turn according to the current power and indicate the current power,

For example, when the battery is charged to the third compartment, the first and second indicators are always on and the third indicator is flashing; all the battery indicators are on to indicate that it is nearly full.

· When the battery level indicator light is completely off, the intelligent flight battery is fully charged. Please disconnect the aircraft and charger to complete the charging.



The power indicator light indicates as follows during charging:

quantity of electricity	LED 1	LED 2	LED 3	LED 4
0%-24%				
25%-49%				
50%-74%				
75%-99%				
be filled with				

Charge/discharge protection indication information:

The battery LED light can display information related to battery protection triggered by abnormal charging:

Conservation projects	Show the definition	LED 1	LED 2	LED 3	LED 4

Overprotection	LED 1,2 and LED3,4 alternate				
Other protections	fast blink				

Instructions for the indicator light of the intelligent charging box:

Flash mode	Flash description
Chang Liang	The charging case is powered normally
twinkle	Charging
extinct	charge complete



· For safety reasons, smart batteries need to be kept low (below 50%) during long or long hauls.



· The battery can be allowed to charge at a temperature range of 5°C-40°C. If the cell collects a temperature outside this range, the battery will not be able to charge

- After troubleshooting (overcurrent charging, short circuit, overcharge causing battery voltage spikes, or charger overheating), the battery box indicator will turn off. Once abnormalities are resolved, unplug and replug the charger to resume charging. If abnormal charging temperatures occur, wait for the temperature to normalize. The battery will automatically resume charging without requiring a new charger.
- After the flight, the temperature of the intelligent flight battery is high. The intelligent flight battery must be cooled to room temperature before charging.
- The intelligent flight battery allows a charging temperature range of 5°C to 40°C, and if the battery temperature is not within this range, the battery management system will prohibit charging. Optimal charging
The temperature range is $25 \pm 3^\circ\text{C}$, and charging within this temperature range can extend the battery life.
- Recharge the battery every 3 months or so to maintain its activity. The battery is not covered by warranty if it has not been maintained (charged and discharged) for more than 3 months.
- Smart flight batteries must be charged with an official charger. We will not be responsible for any consequences caused by using an unofficial charger.
- The temperature will rise during the charging process of the charging case. It is recommended to leave it for more than 15 minutes after charging before continuing to charge the next battery.
- Official standard PD charger is recommended for power supply.
- Charging case is only suitable for official series batteries. Do not use the charging case to charge other models of batteries.
- When using, please place the charging case smoothly and pay attention to insulation and fire prevention.

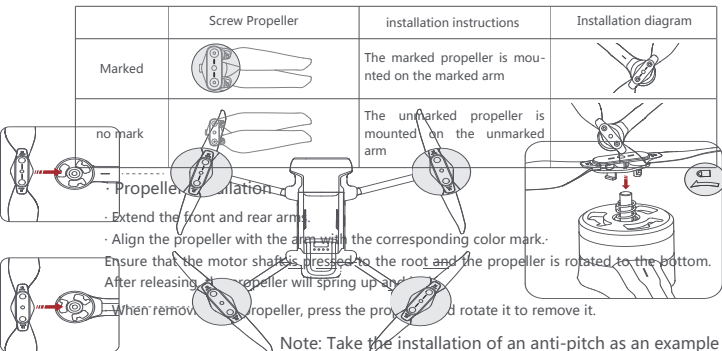
Do not touch the metal terminals with your hands or other objects.

· If foreign matter is attached to the metal terminal, wipe it clean with a dry cloth.

Installation and Disassembly

1. Propeller

The propeller on the aircraft motor is a forward and reverse propeller, and the marked and unmarked propellers indicate different rotation directions. The different propellers should be installed in the corresponding positions strictly according to the instructions.



Do not get close to the rotating propeller and motor to avoid injury.

Do not block the motor ventilation slot.

Do not approach the propeller of a flying aircraft to avoid injury.

Do not use a screwdriver or other sharp objects to insert into the motor ventilation hole, otherwise it may seriously damage the power motor.

Do not block the motor ventilation hole and the ventilation hole on the aircraft housing.

Do not modify the physical structure of the motor by yourself.



Please use the propeller provided by the manufacturer. Do not mix different types of propellers.

Check that the propeller is properly installed and fastened before each flight.

If the propeller is damaged, please replace it with a new one to ensure flight safety and efficiency.

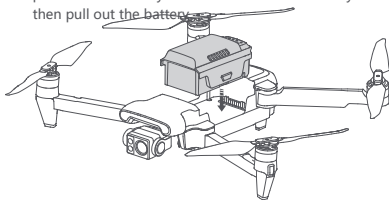
Before each flight, please check that the motor is installed firmly, there is no foreign matter in the motor and can rotate freely.

After the motor stops turning, do not touch the motor directly with your hands immediately, otherwise it may cause burns.

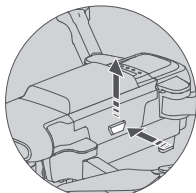
Ensure that the power supply of the aircraft is turned on and the electric adjustment has a prompt sound.

- The propeller is a consumable item. Please purchase it separately if necessary.
- If the flight vibration, slow speed and short endurance occur, please check the blade situation in time. If there is damage or deformation, replace it in time.
- Please ensure that there is no foreign matter inside the motor, can rotate freely and without abnormal sound. If there is abnormal sound in the motor, please replace it in time.

- 2. Smart battery installation · Push the battery hard according to the arrow. There will be a "click" when the battery is in place · When removing the battery, press the unlock keys on both sides of the battery and then pull out the battery.



Install the battery



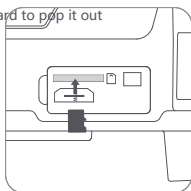
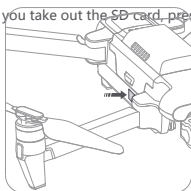
Remove the battery



· Make sure the battery is in place, otherwise there will be a safety hazard during flight.

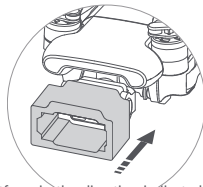
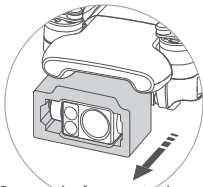
■ 3. Installation of SD Card for Aircraft

- When installing the SD card of the aircraft, unfold the right front arm of the aircraft and open the interface cover
- Insert the SD card face up into the aircraft slot
- When you take out the SD card, press the SD card to pop it out



■ 4. Remove and Install the Cloud Platform Protective Cover

- Follow the arrow to remove and install the foam protective bubble of the pan



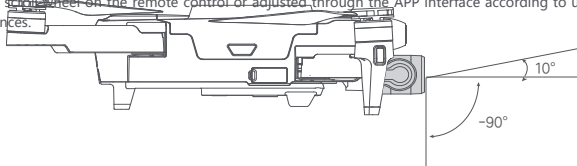
Remove the foam protective cover of the platform in the direction indicated by the arrow
Install the bubble foam for the pan head in the direction indicated by the arrow



· Be sure to remove the protective foam before powering on the product.

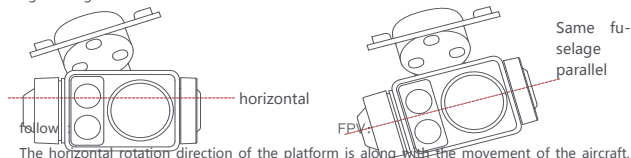
Yuntai Camera

The newly designed all-in-one PTZ camera features a three-axis mechanical stabilization system paired with next-generation LOS stabilization algorithms, providing a reliable and stable shooting platform. It supports pitch axis adjustment within the 10° to -90° range, which can be controlled via the left scroll wheel on the remote control or adjusted through the APP interface according to user preferences.



1. PTZ Follow Mode

The PT-1 can operate in follow mode and FPV mode to adapt to different shooting needs. You can select fixed wing mode from FIMI Navi 3.0's image transmission interface-> Intelligent Flight-> Flight Mode



The horizontal rotation direction of the platform is along with the movement of the aircraft, and the roll direction The yaw motion of the turboprop automatically follows the yaw motion of the aircraft

Keep it level. It's good for taking stable shots.

Changes in direction to suit first-person perspective flight.

· Before takeoff, make sure there is no foreign matter on the gimbal. Place the aircraft on a flat and open ground. Do not collide with the gimbal after the power is turned on.

⚠ · The PTZ contains precision parts. If the PTZ is hit or damaged, the precision parts will be damaged and the performance of the PTZ may be reduced. Please take care to protect the PTZ from physical damage.

· Keep the PTL clean and avoid contact with foreign objects such as sand and stones, otherwise the PTL may be blocked and its performance may be affected.

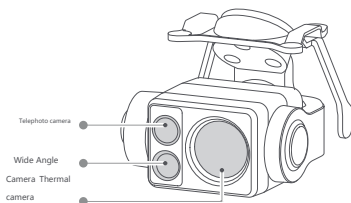
Do not apply external force to the PTZ after startup.

Do not add any objects to the camera pan-tilt, otherwise it may affect the performance of the pan-tilt and even burn out the motor.

· Remove the PTZ cover before turning on the machine. Reinstall the PTZ cover during storage or transportation to protect the PTZ.

2. Camera Overview

The multi-camera system integrates a 48-megapixel wide-angle camera, a 5x optical telephoto camera, and a 640-pixel thermal imaging camera. The wide-angle camera features a Sony 1/2-inch sensor that supports 4K/30fps video recording, while working with the telephoto camera to achieve 30x hybrid zoom. This dual-lens configuration delivers both expansive field of view and detailed capture of distant subjects. The thermal imaging camera, with a 640×480 resolution and a 19mm telephoto lens, enables rapid target locking and assists in operational decision-making.



 AI Super Night scene uses the image sensor to identify the ambient light and prompt whether to turn it on or manually turn it on.

Do not place the camera lens in an environment with laser beams (e.g., laser shows) to avoid damage to the camera sensor.

- Please use and store the camera within the nominal temperature and humidity range to maintain good performance of the camera lens.
- Clean the dirt or dust on the lens surface. Please use professional lens cleaning tools to clean the lens, so as not to affect the shooting picture quality.

Do not point the thermal camera lens at a strong energy source, such as the sun, lava, laser beam, lit cigarette butt, or bright flashlight, otherwise it may burn the camera sensor and cause irreparable damage.

3. Image Storage and Export Mode

- memory

The aircraft is equipped with a MicroSD card slot for storage expansion. To ensure high-quality video and photo recording, the storage device must support fast writing capabilities. We recommend using MicroSD cards with UHS-I Speed Grade 3 or higher specifications to guarantee optimal performance. For detailed specifications and recommended card lists, please refer to the technical parameters section. Note: The device cannot capture photos or videos without a MicroSD card inserted.

- leading-out

After removing the microSD card from the aircraft, install it in the card reader and export the image data in the microSD card through the card reader. You can also download the original photos and video files through the APP and media library

- Micro SD card instructions

- File format: FAT32, exFAT

- capacity : 8G-512G

- Speed requirements: It is recommended to use SD cards with U3 (UHS Speed Class 3) or higher



- The video files downloaded from the media library will have a different resolution than the original video. For higher quality video, please use a computer or other device to read the MicroSD card.



- Using a MicroSD card with U1/C10 specifications from some brands may indicate a slow card due to slow write speed.

Do not plug or unplug the MicroSD card during shooting. Plugging or unplug the MicroSD card during shooting may cause damage to the MicroSD card and loss of stored data.

- When using this equipment to take important images, please take several test shots before actual shooting to ensure that the equipment is in normal working condition.

- Please turn off the smart flight battery correctly, otherwise the camera parameters will not be saved and the video being recorded will be damaged. The seller shall not be liable for any loss caused by the failure to read the video and photos.

UAV Navi



· The UAV Navi interface and specific functions will be slightly changed with the APP version update. Please refer to the actual version for specific interface and functions.

■ 1. Flight Data

- The UAV Navi has the function of flight data recording, which can be viewed in the App.
- Flight records can record the basic data of each flight.
- Flight logs will record the user's detailed flight data.
- Users can report any abnormality encountered during flight in the App, and upload flight logs if necessary to provide help for users.
- After downloading the App, enter the login page for the first time



- UAV Navi is not available without login, and some functions such as flight data recording and dynamic no-fly zone application will not be available.
- It is recommended to use the login status to experience the full service.
- All flight data is saved on the user's mobile device. The company will not obtain any flight data except that the user actively uploads it to the cloud.

■ 2. Display of the Home Page

Swipe left and right to select the model you want to use. If the remote control is connected, it will automatically switch to the corresponding model.



■ 3. Introduction of Home Page Functions



Click My to go to Settings



You can return to the login page to log in

Regional display

Language switch

App version query



Swiping left and right can switch the model. If the remote control is connected to the aircraft, the APP will be automatically recognized and switched after opening



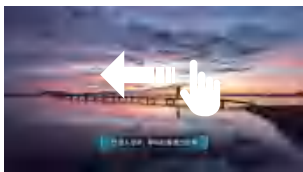
Click to start flying, the first time

Use to enter the new user guide page

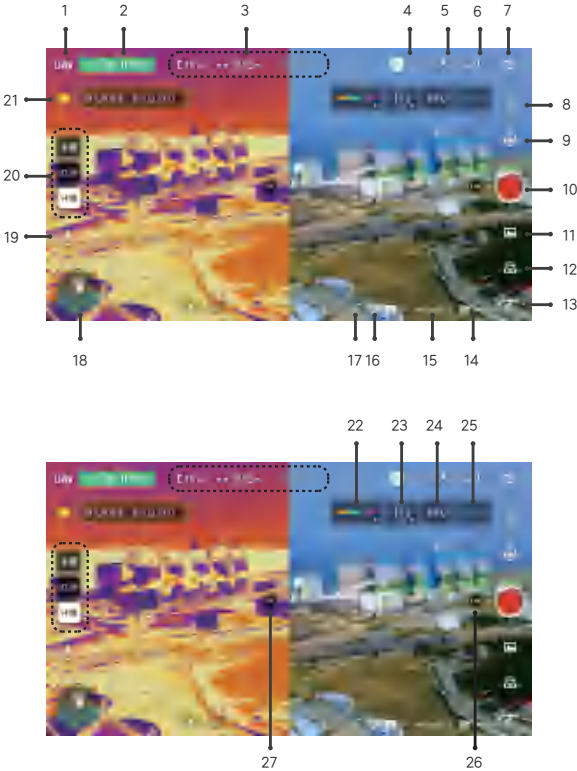


■ 4. Gesture Operation

Enter the gallery interface, swipe left to enter full screen display, swipe right to exit full screen mode



■ 5. Flight Interface Display



1. Return to the Home Page

Click to return to the home page.

2. Displays the Current Flight Mode of the Aircraft

Flight mode display: Green bar: GNSS mode, yellow bar: VPU mode, red bar: ATTI mode.

3. Real-Time Flight Parameters

-  : The vertical height of the aircraft from the Home point at its current position.
-  : The horizontal distance between the aircraft's current position and Home point.
-  : The current vertical flight speed of the aircraft.
-  : The current horizontal flight speed of the aircraft.

4. Intelligent Battery Power for Aircraft

-  : Display the real-time percentage of power, battery voltage and flight time countdown. Click to view more battery information.

5. GNSS signal intensity

-  : Display the GNSS signal strength. Low signal strength is marked red; medium signal strength is marked red; high signal strength is marked white. When the icon is white, it indicates that the GNSS signal is good and the return point can be refreshed.

6. Figure 3 shows the signal transmission quality

-  : Displays the strength of the video transmission signal between the current aircraft and the remote control.
-  : Displays the signal strength of 4G network and mobile devices.

7. System Settings

-  : Includes aircraft parameter setting, camera parameter setting, remote control parameter setting, PTZ setting, transmission frequency band, battery information, other parameter setting, etc.

: aerobat

Flight speed, distance, altitude and return altitude setting:

- Turn on/off novice mode (speed, distance, altitude is limited), the drone will be restricted to a cylindrical space with a radius of 100m and an altitude of 50m, and will be restricted to normal gear.
- Set up the aircraft to lose contact and return, land or hover.
- FPV displays HOME point, on/off precision landing, on/off indicator light, magnetic field environment interference amount, compass calibration, return point setting, control feel setting, night vision auxiliary lamp mode, GNSS configuration, etc.
- Reset the parameters of the aircraft and restore the above Settings to the factory default Settings.

: telecontroller

- Remote control calibration: calibrate the center of the handle, sensitivity and maximum amount of the roller.
- Rake mode: Japanese hand, American hand, Chinese hand.
- Five-dimensional key customization: You can set up the function of up, down, left, right and center respectively.

: Cloud Terrace

- PTZ calibration, PTZ pitch speed, advanced setting.
- Pan-tilt speed: The pan-tilt speed can be adjusted.

-Advanced Settings, PTG gain, fine-tuning function.

Reset the PT parameters and restore the factory default parameters



: Photo gallery

-Picture transmission frequency band, showing the range of frequency bands used.

Channel mode, which can be selected manually or automatically.

-Signal interference, display the current signal interference intensity.



: Smart battery information

-View the voltage, current power, cycle times, temperature, overcharge times and other information of a single smart battery cell.



: other

-View flight records, unit Settings, sensor data, firmware version, find aircraft and other information.

8. Camera Parameter Settings



: Click to expand the relevant options



: Video mode selection: normal video, time-lapse video, super night view mode.

Video size: You can choose the resolution and frame rate.

Video quality: You can choose normal, medium and high, and the default quality is medium.

Other Settings: HDR, white balance, metering mode, color, vertical, video encoding format.



: Image parameter setting

Mode selection: manual/automatic selection, corresponding to parameter setting.



: Camera Settings

You can choose to close and open the grid line, open/close the histogram, SD card status display, hard decode open/close, SD card formatting, reset camera parameters, etc.

9. Switch the Camera's Current Mode



: Quick switch, can quickly switch between photo/video mode.

10. Shooting Buttons



: Start recording, stop recording.



: Start taking photos and stop taking photos.

11. Media Library



: Access to videos and photos stored on the camera's MicroSD card for download and viewing.

12. Smart Flying



: Click to enter the intelligent function page. Intelligent flight includes pointing flight, route flight, follow 3.0, fly around a point, and spiral flight.

Flight modes include aerial photography mode, tripod, heading lock, fixed wing, and SAR mode.



: Pointing at the flight.



: airline operation .



: Follow the flight.



: Fly around points.



: corkscrew .

 : Aerial mode.

 : tripod .

 : Heading lock.

 : fixed wing .

 : SAR pattern .

13. Flight Gear Shift Shortcut Key

- Displays the current flight gear. Click to switch between "Motion" (Sport), "Normal" (Normal) and "Smooth" (Cine) modes.
- Sport mode: maximum horizontal speed 18m/s, maximum upward speed 5m/s, maximum downward speed 4m/s.
- Normal: maximum horizontal speed 10m/s, maximum upward speed 4m/s, maximum downward speed 3m/s.
- Steady mode (Cine): maximum horizontal speed 6m/s, maximum upward speed 1.5m/s, maximum downward speed 1.5m/s.

14. SD Card Status Bar

-  : Display the remaining capacity of SD card and total capacity of SD card. Click to quickly enter SD card Settings.

15. Camera Current Mode Parameters Are Displayed

-  Display the current video resolution/frame rate in video mode, and display the image size in photo mode. Click to set video or photo mode, resolution, image size, white balance, style, etc.
-  : Displays the current Shutter value. In manual mode, click to set it.
-  : Displays the current ISO value. In manual mode, click to set it.
-  : Displays the current EV value. Click to set it.

16. AI Super Night View

-  : In video mode, AI Super Night View quick switch.

17. Follow 3.0

-  : Click to enter the follow function page.

18. Contraction map / attitude sphere

-  : Real-time display of aircraft position, click to switch between map interface, attitude ball, thumbnail map and full-screen map display.

Map interface



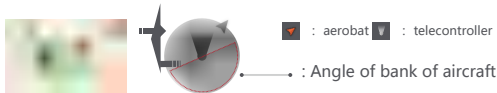
-  Click to switch between the center of the aircraft or the center of both the aircraft and the phone.

 : Current position of the aircraft.

 : Home point location.

 : Current location of the phone.

-  : One-click correction.
-  : Layer switching.
-  : Return point.
-  : A diagram of the state of the aircraft. Click to switch to map mode.
-  : Represents the phone and orientation.
-  : The position of the aircraft relative to the phone and the orientation of the nose.
-  : compass .
-  : The position and proportion of the blue area on the circle represent the attitude of the aircraft in the current horizontal and pitch direction.



The attitude ball shows the orientation of the aircraft's nose, tilt Angle, direction of the remote control, and position information of the return point. The attitude ball can reflect the Angle and direction of the aircraft on the ground, as shown in the following figure:

Posture diagram legend				
Pitch of aircraft	Forward tilt: The water level line is biased toward the upper half of the attitude ball	Tilt backward: the water level line is biased toward the lower half of the attitude ball	Tilt to the right: The water level line tilts to the right	Tilt to the left: The water level line tilts to the left

19. Quick Flight Operation

-  : One-click automatic takeoff is available.
-  : One-click automatic landing is available.
-  : One-click return.

20. The Graphical Interface Mode Is Displayed

 Click to switch to full screen display of visible light camera, default visible light display.

 Click to switch to full screen thermal imaging.

 Click to switch to split screen display, visible light/thermal imaging on the same screen.

21. Information Status Bar

 : Flight restricted area, environmental change, temperature,

sensor calibration and other prompts.

22. Thermal Imaging Pseudo-Color Display Mode

 : You can choose white heat, rainbow, jungle, black heat, red heat, gold, aurora, golden red, iron red, faint light, and medical effects.  : Thermal imaging camera parameters can be set, such as detail enhancement on/off, noise reduction automatic/manual, image setting, etc.

23. Thermal Imaging Display Mode

 : Click to enter split-screen display mode.



Click to enter the picture-in-picture display mode.



In picture-in-picture mode, the transparency of the thermal camera can be adjusted.

24. FFC Calibration



: Click to trigger the plane field calibration of the thermal imaging camera. After calibration, the thermal imaging picture quality will be optimized and easier to observe.

25. Linked Zoom



: After clicking, the visible light camera and thermal imaging camera zoom in sync.

26. Visible Light Camera Zoom



Click to zoom in the visible light camera.

27. Thermal Imaging Camera Zooms In



Click to zoom in the thermal camera.



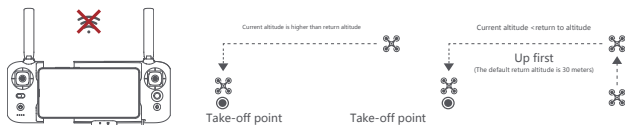
- Do not point the thermal imaging camera lens at a strong energy source, such as the sun, lava, laser beam, etc., when using the thermal imaging camera. Otherwise, the camera sensor may be burned and irreparable damage may be caused to it.
- Super Night scene uses the main image sensor to detect whether the surrounding environment needs to be opened. If there is an object blocking the lens for more than 5s, it will be mistakenly prompted.
- Make sure your mobile device is fully charged before flying.
- You need to use cellular data when using the App. Please contact your mobile device data provider for the latest data rate information.
- When using the App, please be sure to read and understand the prompts and warnings pop up in the App, and keep abreast of the current status of the aircraft.
- If your mobile device is too old, it may affect the App experience. You are advised to replace your mobile device.
- The altitude limit and flight restriction area vary from country to country. Please comply with local regulations.

Flight Safety Protection

1. Automatic Return

The aircraft is equipped with automatic return function, and the return trigger mode is mainly divided into user active trigger, low power trigger of the aircraft, and loss of contact trigger (the remote control and the aircraft lose communication signal).

The aircraft only supports lost contact return navigation in GPS mode. When GPS signals are stable, the compass is functioning properly, and the aircraft has successfully recorded the takeoff point, if the connection between the aircraft and remote control is lost for over 2 seconds, the system will determine a lost contact situation. The flight control system will then take over control of the aircraft, referencing the original flight path to plan a return route, causing the aircraft to fly back to the takeoff point. If the signal connection between the aircraft and remote control is restored during the return process, short-press the return button . If contact is lost and the aircraft returns, control of the aircraft will be handed back.



2. Low Power Protection

During flight, when the battery power is only enough for return, the App will prompt the user to return. When the battery power is 30% (default), the App will prompt low power and suggest landing as soon as possible. When the battery power is 10%, the aircraft will start automatic landing. During landing, click the " button on the right side of the remote control . Or you can stop the automatic landing through the APP to cope with different environments.



The low power alarm range can be set in the App.

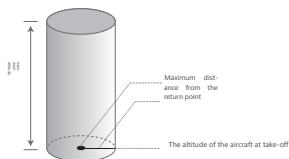
3. Hover at the Edge of the No-Fly Zone

In the restricted flight area demarcated by the state, such as the edge of the airport, the aircraft will automatically hover, and the screen of the remote control will show the corresponding prompt of the restricted flight area. The user can control the aircraft to evacuate the edge of the restricted flight area by using the joystick, but the joystick cannot control the aircraft to fly into the restricted flight area.



■ 4. Height and Distance Restrictions

Maximum altitude is used to limit the flight altitude of the aircraft, and maximum distance is used to limit the flight distance of the aircraft. Users can set it in UAV Navi.



GNSS signal is good

	Flight restrictions	UAV Navi
maximum altitude	The flight altitude shall not exceed the maximum altitude set in UAV Navi	You are prompted to reach the maximum flight altitude
The farthest distance	The straight-line distance between the aircraft and the return point shall not exceed the maximum distance set in UAV Navi	You are prompted to reach the maximum flight distance

■ 5. Flight Environment Requirements

- The aircraft is dangerous and not suitable for use or operation by persons under the age of 16 or other persons without full civil capacity.
- Make sure to keep a safe distance from people, animals, trees, vehicles and buildings during the use of the aircraft. Be careful when someone approaches.
- When operating the aircraft, please keep away from dangerous environments such as airports, railways, expressways, high-rise buildings and telephone poles.
- When operating the aircraft, please stay away from communication base stations, high-power antennas and other areas with complex electromagnetic signals.
- The flight altitude and distance of the aircraft relative to the take-off point will be limited according to relevant regulations and policies.
- Do not use this product in places and times where the use of this product is prohibited by laws and regulations.
- To protect the legitimate rights and interests of users, please ensure that you comply with the product safety instructions during use.
- Do not fly in bad weather such as wind, rain, snow, fog, etc.
- Choose a location with good GPS signal and open environment to fly.
- Users are advised to take their first flight under the guidance of experienced users.
- It is recommended to fly in an environment with good visibility. Please pay attention to safe flight at night
- This product is an integrated folding design and does not support the installation of protective devices
- This product does not support overweight use and has no load capacity. Exceeding the

maximum take-off weight of the aircraft may cause uncontrollable flight, and the losses caused thereby shall be borne by the user himself/herself and have nothing to do with the seller.

- All flight data is saved on the user's mobile device. The company will not obtain any flight data except that the user actively uploads it to the cloud.

■ 6. Pre-Flight Inspection

- Ensure that the aircraft battery and remote control are fully charged.
- Ensure that the propeller is correctly installed and not damaged or aged.
- Ensure that the PTZ cover has been removed and the camera lens is clean.
- Confirm that the SD card has been inserted.
- Confirm that the PTZ cover has been removed.
- The front and rear arms are fully extended.
- Whether the camera and PTZ work normally after the power is turned on.
- Whether the UAV Navi is connected and running normally.

■ 7. Novice Mode

Flight mode is set to novice mode when the aircraft is first used.

In novice mode:

- Flight distance and altitude will be limited to: 0~100m.
- Speed gear is limited to the photography gear.
- It is recommended that beginners learn and master the aircraft in novice mode first.

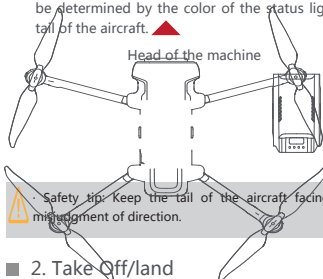
Flight

■ 1. Basic flight

Confirm the direction of the aircraft

- The camera position of the PTZ camera is in the direction of the nose.

- After the aircraft is turned on, the direction can also be determined by the color of the status light at the tail of the aircraft. ▲



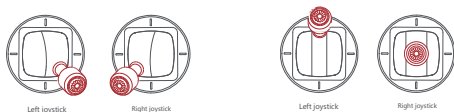
· Safety tip: Keep the tail of the aircraft facing the operator when operating the aircraft to avoid misjudgment of direction.

■ 2. Take Off/land

- Push the two joysticks of the remote control inward and downward to the maximum extent, forming a bow shape and keeping it for more than 3 seconds, and the blade will start to turn.

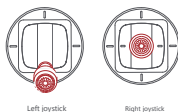
- After the blade starts to rotate, release both joysticks back at the same time. Push up the left joystick to take off the aircraft.

- During flight, release the two joysticks of the remote control, and the aircraft will automatically hover.



- During landing, slowly and steadily pull down the left joystick to make the aircraft descend steadily.

- After the aircraft lands on the ground, keep the left joystick down to the maximum for 5 seconds and then stop the motor.



· The aircraft must be placed on a stable and fixed plane when taking off. Hand-held or palm takeoff or



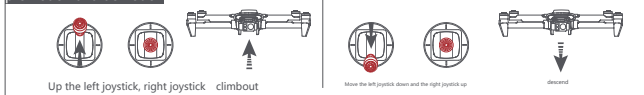
landing is not supported.

- The aircraft is not waterproof, do not land on the water, for safety reasons, do not land on the slope.

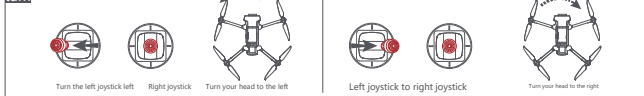
3. Basic Flight Operations

- Push the two joysticks of the remote control inward and downward to the maximum extent, forming a bow shape and keeping it for more than 3 seconds, and the blade will start to turn.
- After the blade starts to rotate, release both joysticks back at the same time. Push up the left joystick to take off the aircraft.
- During flight, release the two joysticks of the remote control, and the aircraft will automatically hover.

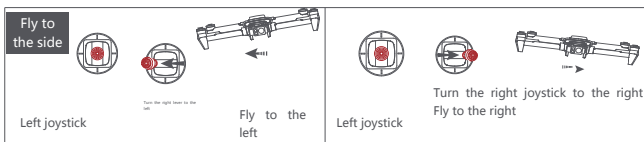
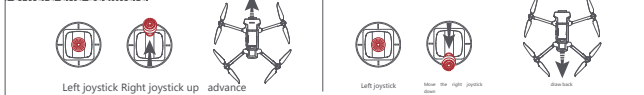
promotion and demotion



turn



Forward and backward



⚠ · The remote control lever can be changed in the remote control Settings menu (default is American hand)

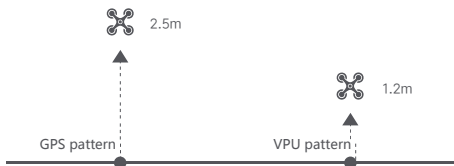
■ 5. Take Off/降落/return With One Button

· Automatic take-off

When the aircraft meets the automatic take-off conditions, click the "automatic take-off button" on the left side of the APP  Follow the instructions and the aircraft will take off automatically. After reaching the specified altitude, the APP will indicate that the automatic takeoff is complete.



In GPS mode, the aircraft automatically takes off and hovers at a distance of 2.5 meters from the ground waiting for joystick instructions; in VPU mode, the aircraft automatically takes off and hovers at a distance of 1.2 meters from the ground waiting for joystick instructions.



· Automatic landing

When the aircraft meets the automatic landing conditions, click the "Automatic landing button" on the left side of the APP  Follow the instructions and the aircraft will descend vertically from the current flight position to the ground. After the propeller stops rotating on the ground, the APP will indicate that the automatic landing is complete.

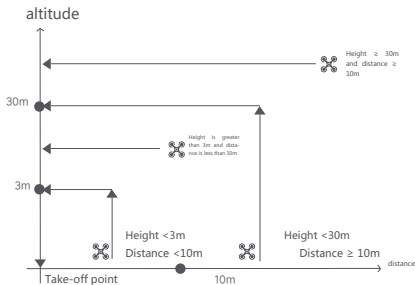


· Automatic return

When the aircraft is flying in the air, the user can long press the return button on the remote control with a "beep" sound or through the automatic return button on the left interface of the APP . Let the aircraft enter automatic return, and after arriving at the ground, the APP indicates that the automatic return has been completed



When the aircraft is in flight, users can activate the remote control's return button to initiate automatic return. The system operates as follows: If the return distance D is less than 10 meters and the flight altitude H is below 3 meters, the aircraft will ascend to 3 meters before returning to the takeoff point. When the altitude reaches or exceeds 3 meters, it will maintain its current altitude for landing. For distances ≥ 10 meters with altitudes < 30 meters, the aircraft will first ascend to 30 meters before returning. For altitudes ≥ 30 meters, it will land at the takeoff point while maintaining its current altitude. Users can disable this automatic return function either through the remote control's return button or via the app interface.



Smart Flying

■ Follow 3.0

Only follow flight is supported in GNSS mode.

Users can use the UAV Navi APP . The icon enters the intelligent flight menu. Click "Follow Flight" to select normal follow, parallel follow or lock follow. The aircraft will take the target selected in the APP as the tracking target.



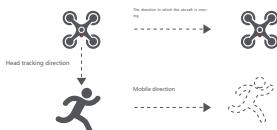
· General follow-up

In the normal follow mode, the aircraft head is always aimed at the tracking target, and flies at a certain distance by following the moving direction of the target.



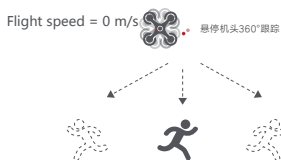
· Parallel tracking

In parallel follow mode, the aircraft head is always aimed at the tracking target, and the flight path is along the left and right direction of the fuselage, keeping a certain distance.



· acquire

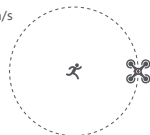
In lock mode, the flight speed is 0 and the aircraft hovers to lock the target.



· Goal alignment

The aircraft will circle the target position 360 degrees, and the user can adjust the speed of the flight. The aircraft will fly around the target at a certain distance.

Flight speed = 0m/s

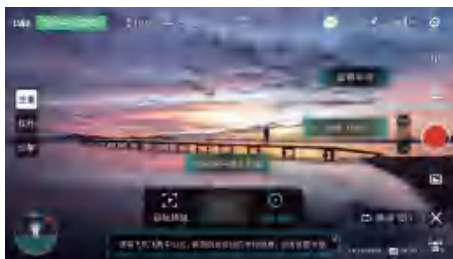


- During the following flight, the user should ensure that people, animals and obstacles are always avoided on the following path to ensure flight safety.
- Users should comply with local laws and regulations when using the follow flight function.

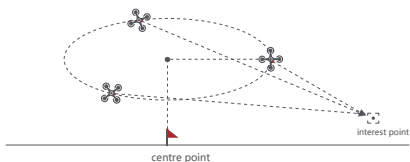
■ 2. Fly Around the Point

Users can select fly around the point in the APP menu. After setting the center point and radius, the UAV will fly around the center point at the default speed. If an interest point is set, the camera shooting will be locked on the interest point, and users can drag a box around the interest point to select the target.

- Fly to a point first to set the center point.
- Then set the flight radius from the center point.
- Set the flight speed, movement direction and heading.
- After setting the parameters, click "GO" to execute.

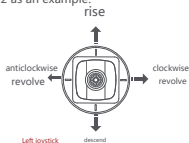


During the flyover, you can set the turn and speed of the flyover flight on the UAV Navi APP. Click "X" to Exit the flyover.

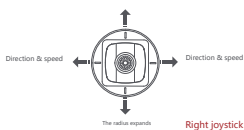


If the stick is operated during flight, the set altitude or radius will change.

Take mode 2 as an example:



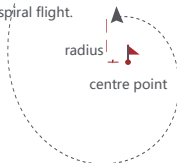
The radius shrinks



■ 3. Spiral Flight

Users can select the spiral mode in the App and set the center point and radius. The aircraft will hover upward and shoot video at the same time, showing a strong sense of space.

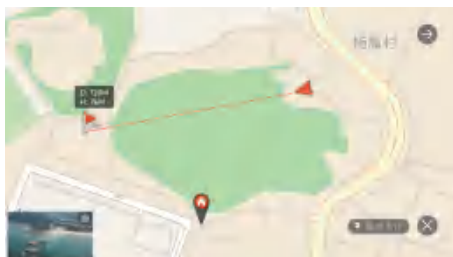
- Fly to a point and set it as the center point.
- The distance from the center point is set as the radius.
- Set the direction and distance of the turn, and start recording.
- During flight, operation of the stick will interrupt the spiral flight.



■ 4. Pointed Flight

Users can select the point of flight in the App, click on the map to select the destination and set the speed of the flight. The aircraft will fly straight at the set speed. If an interest point is set, the camera will always face the interest point.

- Click the map to select your destination.
- Switch to the image interface and box an interest point.
- Set the flight altitude and speed.



■ 5. Flight of the Airline

Multiple flight points can be set on the map, and the aircraft will fly along the flight path at the set speed. If you select an interest point during the flight, the camera will lock the interest point, and the user can choose a way to fly along the flight path.

Location:

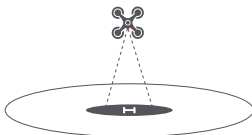
- Fly the aircraft to the position where the destination point is to be set, and click Add Destination Point.
- Set the heading, pan Angle, course point action and rotation direction.
- When all the waypoints are ready, set the characteristics of the waypoints, including flight speed, nose direction, etc.
- Interest points are enabled when executing path points.



■ 6. Precise Landing

During the automatic return landing or automatic landing process, the aircraft performs ground detection. When the stop pad logo is detected, the aircraft starts to correct the landing position so that the aircraft can land precisely on the stop pad.

Click Settings -> Click on the aircraft -> Choose precision landing



· Please turn on this function in the APP in advance.

■ 7. Smart Flight Mode

The following mode can only be used when flying in GNSS mode. Short press the remote control return button Or click the "X" on to exit the mode.

Aerial mode

When the aircraft is flying in GNSS mode, it can be clicked in App map interface -> Select, aerial mode-> Enter aer mode. In aerial mode, the braking distance of the aircraft is increased, the angular velocity of rotation is limited, the control is more gentle, and the shooting picture is more stable and smooth.

tripod

When the aircraft is flying in GNSS mode, it can be clicked in App map interface  -> Select the tripod-> Enter SAR mod  maximum flight speed of the aircraft is 1m/s, and the maximum rotation speed is 60 degrees/s. In the tripod mode, the sensitivity of the aircraft is reduced, and the shooting picture is more stable and smooth.

Heading lock

When the aircraft is flying in GNSS mode, it can be clicked in the App's map interface  -> Select-> Heading lock. In  mode, the aircraft will take the current nose direction as the forward direction, and the heading lock can be changed by the stick to adjust the shooting Angle, but the forward direction remains unchanged.

fixed wing

When the aircraft is flying in GNSS mode, it can be clicked in the App map interface  -> Select  fixed wing-> Enter fixed wing mode, the aircraft can only fly forward, not backward.



The user can freely control the speed and direction of the aircraft by turning the lever, as shown below:

Left joystick	boost up	Climb up
	Downward pull	Dive down
	Go left	Turn left
	Go right	Turn right
Right joystick	boost up	Increase the flight speed
	Downward pull	Slow down the flight speed
	Go left	Turn left
	Go right	Turn right

SAR pattern

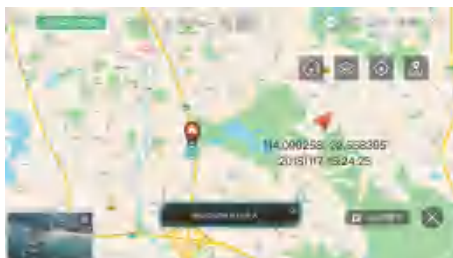
When the aircraft is flying in GNSS mode, it can be clicked in  mode-> Enter SAR mode, and the image transmission interface will be App map interface  -> select  By displaying GNSS coordinates in real time, the aircraft can help with search and rescue.



The map interface displays the coordinates and current time of the aircraft in real time, and supports the function of map screen zoom and screenshot.



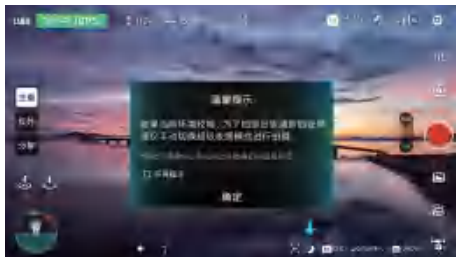
The map interface displays the coordinates of the aircraft and the current time in real time, and supports switching between satellite maps and screenshots.



AI Super Night View

The product is equipped with a new generation of AI ISP, and the super night scene has been revolutionized. The ultra-sensitive noise reduction improves the signal-to-noise ratio by four times, capturing pure and bright images in low-light environments at night. The automatic mode supports the highest ISO 25600 sensitivity.

On mode, the main image sensor recognizes the ambient brightness and prompts whether to enable night mode. You can also manually enable or disable it as needed.



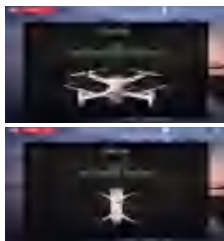
- It is recommended to enable this function at night for a better shooting experience.
- Night mode currently only supports 24/25/30fps specifications.
- Night mode does not support zoom.

Calibration

■ 1. Compass calibration

Note: Follow the App prompts to change the flight site. The aircraft needs to calibrate the compass when detecting the surrounding environment. Calibration steps: When the App prompts calibration, the aircraft indicator light will be green and on to start calibration.

- Rotate the aircraft horizontally for at least two full rotations. Upon successful calibration, the interface will transition to vertical alignment mode, with the indicator light remaining permanently red during calibration.
- Keep the aircraft nose-up and rotate horizontally for over two full rotations until the calibration interface confirms completion, marked by a green indicator light staying on.
- Users may also manually initiate compass calibration through the App's System Settings → Aircraft → Compass Calibration section.



⚠ · If multiple calibrations fail, update the calibration site.

⊘ · Do not calibrate the compass with the arm folded.

■ 2. PT Calibration

After the flight instrument is turned on, the self-test is completed. If the pan-tilt unit cannot be started or obvious tilt occurs after the pan-tilt unit starts, the pan-tilt unit should be calibrated before taking off.

- Calibration steps

The gimbal fine-tuning can correct the tilt of the gimbal by adjusting the roll and yaw angles separately. At this time, the calibration interface will display the flight plan view. When the aircraft is placed on a horizontal plane and the gimbal cannot remain level with slight tilt, the fine-tuning correction can be performed.



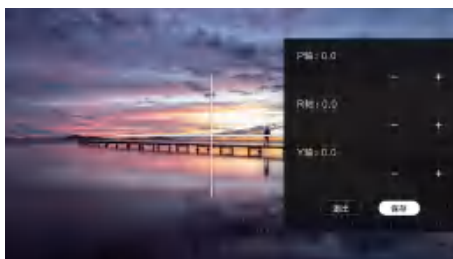
- Connect the aircraft and the PTZ before calibration. PTZ calibration cannot be performed during flight.
- During calibration, please select a flat and stable environment, otherwise the calibration will fail.

· Cloud platform fine tuning

The gimbal fine-tuning can correct the tilt of the gimbal by adjusting the roll and yaw angles separately. At this time, the calibration interface will display the flight plan view. When the aircraft is placed on a horizontal plane and the gimbal cannot remain level with slight tilt, the fine-tuning correction can be performed.

· Introduction of the cloud platform fine-tuning function

1. Enter the PTZ fine-tuning interface and adjust the horizontal and yaw angles of the PTZ, whose adjustment range is $\pm 10^\circ$. Each click of "+" or "-" will adjust the PTZ angle by " $+0.1^\circ$ " or " -0.1° ", or you can directly input the Angle value through the keyboard to adjust it.
2. Level adjustment: Click + to roll right, click-to roll left. Heading adjustment: Click + to steer right, click-to steer left.
3. Click "Default value" to restore the PTZ to its default Angle (all 0°).



■ 3. Remote Control Calibration

If the remote control operation and the UAV flight response are inconsistent during the flight, you can try to calibrate the remote control. Select remote control calibration in the remote control Settings of the APP, click start to enter the median calibration.

- Do not touch the joystick during calibration.
- After successful median calibration, jump to joystick calibration. Turn the joystick to the maximum stroke according to the prompt.
- After the lever calibration is successful, jump to the roller calibration. Turn the roller to the maximum stroke according to the prompt.





To calibrate the remote control, turn off the power supply of the aircraft; during flight, the remote control cannot be calibrated.

Maintenance

■ Screw maintenance

Propeller is a fragile part. When the propeller is worn or deformed, it needs to be replaced in time, otherwise it will affect the normal use of the aircraft.

■ Battery maintenance

Do not put the battery in fire; do not hit the battery violently; the capacity of lithium battery will be greatly reduced under low temperature conditions; do not use in the environment below 0°; do not put the battery in the sun. For the safe use of the battery, please refer to the Disclaimer and Safety Operation Guide.

■ Cloud platform maintenance

The product's PTZ is an integral PTZ, which cannot be disassembled. When storing the aircraft, please be careful not to scratch the camera and pay attention to the cleaning of the camera. The PTZ is a precision component, so do not squeeze it.

■ Aircraft self-inspection

The machine will enter the self-test every time it is powered on. If the self-test fails, there will be relevant prompts in the APP.

■ firmware upgrade

Please check the firmware version number regularly. The new firmware will be pushed in the APP. After connecting the APP to the aircraft or remote control, download the new firmware. After the firmware is downloaded, the APP prompts you to upgrade according to the prompts.

Product firmware version number query path:

Enter the gallery interface and click system Settings " "-> Select Other in the drop-down menu

 -> Click firmware upgrade to view the current version

Noise test results

observation point	hover	Flight 5.9m/s
Surface observation point (vertically below)	77.5 dB(A)	75.2 dB(A)
Side observation points (elevation plane)	72.5 dB(A)	73.3 dB(A)

Essential Parameter

aerobat

Body size: 218 x 106 x 72.6 mm when folded (without paddle) and 242 x 334 x 72.6 mm when unfolded (without paddle)

Take-off weight: The smart battery is about 768g / long endurance version of the smart battery is about 837g

Axle spacing: 372 mm

Maximum upward speed: 5 m/s

Maximum descent speed: 4 m/s

Maximum flight speed: 18 m/s * sea level windless environment.

Maximum take-off altitude: ≤5000 meters

Maximum hover time: 29 minutes* In a windless environment, the aircraft turns off vision, the camera parameters are adjusted to 720p/30fps, and the video recording mode is turned off. The aircraft hovers at sea level height until 0% battery power is measured. For reference only, please pay attention to the App prompt during actual flight.

Maximum flight time: 38/47 minutes * In the windless environment, the aircraft turns off the vision, adjusts the camera parameters to 720p/30fps, and turns off the video recording mode. The aircraft flies forward at a speed of 25.2 km/h at sea level altitude until the remaining power is 0% measured. For reference only, please pay attention to the App prompts during actual flight.

Maximum tilt Angle: 35 degrees

Maximum wind speed: 12 m/s

Working environment temperature: 0~40°C

Satellite positioning: Beidou/GPS/ Glonass/Galileo hover accuracy, vertical: ±0.1 meters (visual positioning normal working)

± 0.5 meters (horizontal when GPS positioning is normal); ± 0.3 meters (visual positioning is normal)
± 0.5 meters (when GPS positioning is normal)

Expansion interface: 12-PIN data interface (female)

Wide-angle camera

Image sensor: 1/2 inch CMOS

Lens: FOV 79°

Aperture: f/1.6

Camera focal length: 4.71mm

Equivalent focal length: 24 mm

Depth of field: 1 meter to infinity

Effective pixels: 48 million

ISO range: video automatic 100-25600/

telecontroller

Product weight: about 373 grams

Product size: 204x91x47 mm

Working band: 2.4000GHz to 2.4835GHz Maximum battery life: 8 hours* without charging the mobile device

4 hours * Charging a mobile device under the condition that the battery level of the mobile device is above 95%. The test results will vary depending on different mobile devices and the current battery level. Please refer to the actual use for details.

Battery type: Li-ion

Battery capacity: 3900mAh

Nominal voltage: 3.7 volts

Input: 5V-- 2A

Working temperature: 0-40°C

Charging temperature: 5-40°C

Maximum effective signal distance (no interference, no

FCC: The data of approximately 20 km or more is measured in an open and undisturbed outdoor environment. It is the maximum communication distance for each standard one-way flight without return flight. Please pay attention to the return prompt of the App during actual flight.

Minimum delay: approximately 120 milliseconds

Supported mobile device interface

types: Li-
ghtning,
USB-C,
Micro USB

Telephoto camera

Image sensor: 1/2.5 inch CMOS

Lens: FOV 21.5°

Aperture: f/3.0

Camera focal length: 14.46mm

Equivalent focal length: 120 mm

Depth of field: 10 meters to infinity

Effective pixels: 13 megapixels

ISO range: video 100-6400

manual 100-6400 photo 100-6400
Shutter speed: 1/8000 to 2 seconds
Maximum photo size: 8064 x 6048
Maximum video resolution: 3840 x 2160@30/25/24fps
Maximum video bit rate: 100Mbps
Video format: MP4
File system: FAT32/ex-FAT
Image format: JPG, JPG+DNG
Digital zoom: 1-5 times

Photo 100-6400
Shutter speed: 1/8000 to 2 seconds
Maximum photo size: 4000 x 3000
Maximum video resolution: 3840 x 2160 @30/25/24fps
Maximum video bit rate: 100Mbps
Video format: MP4
File system: FAT32/ex-FAT
Image format: JPG, JPG+DNG
Digital zoom: 5-30 times

Thermal imaging camera

Thermal imaging sensor: vanadium oxide non-refrigerating focal plane

Lens: FOV 30.7°

Aperture: f/1.1

Camera focal length: 19mm

Equivalent focal length: 80 mm

Depth of field: 7.6 meters to infinity

Wavelength range: 8-14μm

Photo size: 640 x 480

Photo format: JPG

Video resolution: 640 x 480@30 fps

Video format: MP4

Pseudo-color: white heat, gold, iron red, rainbow, faint light, medical jungle, red heat, black heat, golden red

Digital zoom: 1-8x

Cloud Terrace

Three-axis mechanical pan-tilt structure design
range: -115° ~ 40° (pitch)

-30° ~ 30° (roll)

-40° ~ 40°

(heading) controllable rotation range: 10° ~ -90° (pitch)

Angular momentum range: ±0.01°

Look down

Single optical flow, TOF ranging Precision ranging
range: 0.3 m to 6 m

Underlight fill light: dual LED * The surface is diffuse reflective material with rich surface texture and reflectivity greater than 20% (e.g., cement pavement, etc.) sufficient illumination conditions (more than 15 Lux, indoor daylight and other normal illumination environments)

Smart batteries

Product model: DC03A5

Capacity: 4,650 mah

Weight: About 260 grams

Nominal voltage: 11.55 volts

Charging limit voltage: 13.2 volts

Battery type: Li-ion 3S

Energy: 53.7 watt-hours

Charging environment temperature: 0-40°C

Long life version of smart battery

Product model: DC04A3

Capacity: 5000 mah

Weight: About 333 grams

Nominal voltage: 14.4 volts

Charging limit voltage: 16.8 volts

Battery type: Li-ion 4S

Energy: 72 watt-hours

Charging environment temperature: 0-40°C

Charging case

Enter USB-C: 5V-20V

Fast charging protocol: supports PD and QC3.0

Output (charging) battery interface: 13.05V-17.6V

charger

Input: 100V-240V (AC), 50-60Hz, 1.5A

Output USB-C: 5.0V 3.0A, 9.0V 3.0A

Charging temperature: 5-40°C

12.0V — 3.0A, 15.0V — 3.0A

20.0V — 2.25A

Rated power: 45W

Recommended memory card list:

SanDisk Extreme PRO 32GB V30 U3 A1 microSDHC
SanDisk Extreme PRO 64GB V30 U3 A1 microSDHC
SanDisk Extreme PRO 128GB V30 U3 A1 microSDHC
SanDisk Extreme PRO 256GB V30 U3 A1 microSDHC
Lexar 1066x 64GB V30 U3 A2 microSDXC
Lexar 1066x 128GB V30 U3 A2 microSDXC
Lexar 1066x 256GB V30 U3 A2 microSDXC
Lexar 1066x 512GB V30 U3 A2 microSDXC
Kingston Canvas GO! Plus 64GB V30 U3 A2 microSDXC
Kingston Canvas GO! Plus 128GB V30 U3 A2 microSDXC
Kingston Canvas React Plus 64GB V90 U3 A1 microSDXC
Kingston Canvas React Plus 128GB V90 U3 A1 microSDXC
Kingston Canvas React Plus 256GB V90 U3 A1 microSDXC
Samsung EVO Plus 512GB V30 U3 A2 microSDXC

APP Mobile App

UAV Navi mobile device system version requirements: iOS 12.0 or later /Android 9.0 or later

 · This manual introduces the high-performance version of battery and charging kit. Please refer to the actual purchase for specific specifications.

FCC WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum 20cm distance between the radiator and your body: Use only the supplied antenna.