Loolinn®

Z6Pro

GPS BRUSHLESS DRONE

User Manual

5G

Camera with 500 m
Image
transmission range
(Please ensure your mobile
phone supports with 5G WiFi)

5G WIFI Camera	GPS tracking	One key to retrun
Circle flight	Flight plan	Waypoint flight
Human tracking	Palm control	Optical flow positioning
Take-off/landing	Long battery life	Dual-frequency technology

Catalogue

Important safety information

Thank you for purchasing this Loolinn product. To ensure that you operate the drone correctly, please read these instructions carefully before first use and store them in a safe place for future reference.

Safety Guide

1. Adult or experienced RC pilot's supervision is recommend for children.
2. Rechargeable batteries are only to be charged under adult supervision.
3. Turn off the drone/transmitter and remove the batteries when not in use.
4. The supply terminals are not be short-circuited.
5. Keep away from the rotating blades (rotating blades may cause bodily injuries, or damage to property).
6. Attention：please assemble the drone with the guidance of adults.
7. Do not look directly into the LED lights of the drone as make your eyes uncomfortable.
8. Exhausted batteries are to be removed from the drone.
9. Please store the smaller-sized drone accessories in places that are out of reach of children.
10. This drone is very powerful. For all first-time flights, the left joystick must be slowly pushed up in order to prevent the drone from ascending too fast to avoid unnecessary collision and possible damage and injury.
11. When the flight is ended, first turn off the power of the remote control. Then turn off the power of the drone.
12. Avoid placing the batteries in places with high temperatures and exposure to heat.
13. Please keep a safe distance from the spinning propellers to avoid injury.
14. To ensure the electromagnetic environment requirement of the aviation radio (station), using remote controls in the zone, which is in a radius of about 5000m zone from the circle center of the airport runway, is forbidden. All users also should abide by the regulation of the radio set forth by government and regulatory agencies including the duration and area.
15. Pay attention to keeping distance of 2-3 meters from the user or other people when the drone is flying, avoid the drone landin to hit the head, face or face or body of anoter person.
16. The packing has to be kept since it contains important information.

Repair and maintenance

1. Use clean and soft cloth to clean the product.
2. Keep away the product from heat sources.
3. Avoid water exposure to this product. Moisture may cause damages of the drone electronic parts.
4. Transformers used with the drone should be examined regularly,such as the cord,plug,enclosure and other parts,If any damages are found, please stop using it unless it is repaired or replaced.

About this product

Specifications

· Drone

Drone weight	216 g
Drone Size	305x280x65 mm
Range	500 m
Altitude	100 m
Image transmission range	500 m
Flight time	Hovers indoors for 24-25 minutes
Operating conditions	0°C to 40°C
Video transmission frequency	5 GHz
Motor	1503 Brushless motor
Battery	7.6 V 1700 mAh
Charging time	About 3 hours

· Remote control

Operating frequency	2.4 GHz
Range	500 m
Operating conditions	0°C to 40°C
Charging time	About 1 hours

· Package contents

Drone	1
Remote control	1
USB charging cable	2
Clockwise/anticlockwise propellers	4
Instructions	1

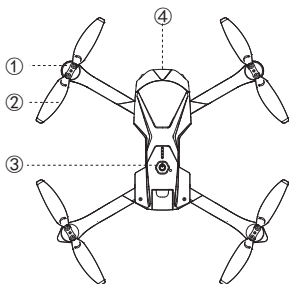# Download and install the Loolinn Air App

For Android phones, download and install the Loolinn Air App by visiting Google Play or by scanning the QR code.
For IOS Apple phones, download and install the Loolinn Air App by visiting the App Store or by scanning the QR code.
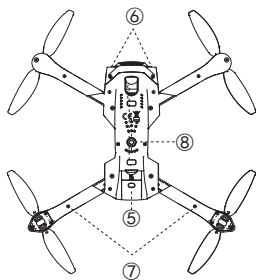
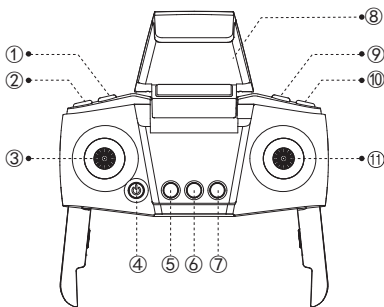* Note: For best results, use a device with iOS 8.0/Android 5.0 or later.

Drone components

① Motor
② Propeller blades
③ Power switch
④ Front camera

⑤ Battery
⑥ Front LED indicator
⑦ Rear LED indicator
⑧ Bottom camera

Remote control
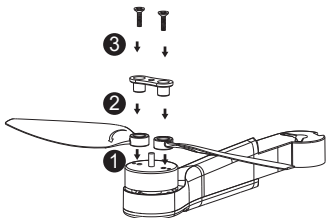

① Photo button
② Record button
③ Left joystick
④ On / Off button
⑤ One Key Take Off / Landing
⑥ Calibrating the compass
⑦ Home button
⑧ Phone holder
⑨ Lens up
⑩ Lens down
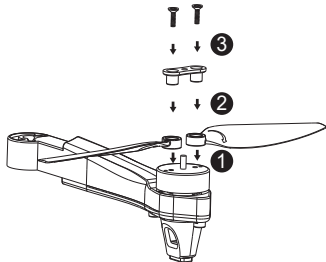⑪ Right joystick

Assembling the product

Installing the propellers
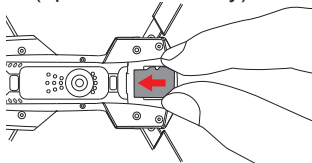
Clockwise propellers   Anticlockwise propellers
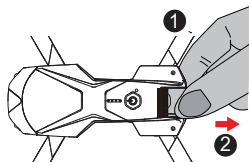

* Attach the propellers as shown in the diagrams above. Ensure that they are attached in the correct orientation.

* Ensure that the clockwise and anticlockwise propellers are attached to the correct arms. The drone will not fly correctly if the propellers are attached in the wrong position.

* The propellers are made from a delicate material. Pay attention when attaching them to the drone.

* Only use propellers that are supplied by the manufacturer.

* The propellers are consumable parts. If necessary, purchase replacements from the manufacturer.

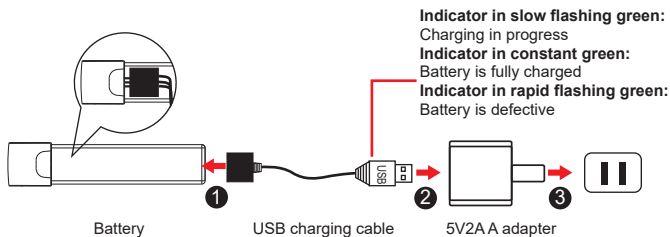## Inserting a memory card (optional accessory)

Charging the drone battery

Remove the battery

Charge the battery

Indicator in slow flashing green:
Charging in progress
Indicator in constant green:
Battery is fully charged
Indicator in rapid flashing green:
Battery is defective

Battery   USB charging cable   5V2A A adapter

* Charge the drone with the USB charging cable that came with the product.
* The battery will take longer to charge when you use an adapter with a smaller rated current.
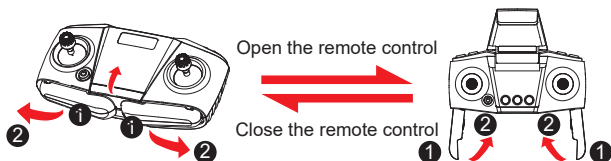
Insert the battery
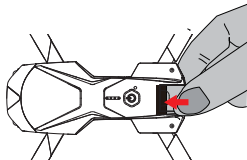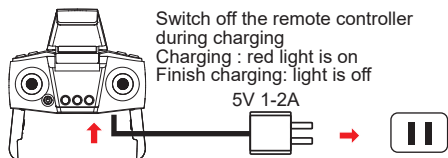

* Ensure that the battery holder clicks into place.

⚠️

* Do not short circuit or compress the battery, as this may cause an explosion.
* Do not disassembling the battery or store it in a hot environment.
* If you do not plan to use the drone for at least 10 days, discharge the battery to 40%-50%. This helps to prolong the lifespan of the battery.
* Rechargeable batteries should be removed from the drone before being charged.
* Rechargeable batteries should only be charged under the supervision of adults.and keep away from flammable materials.
* Exhausted batteries should be removed from the drone.
* Caution: Risk of explosion if battery is replaced with incorrect ones, please install the batteries according to the instructions.
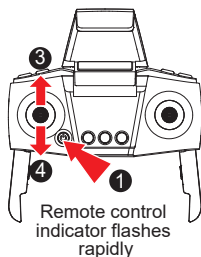
Attaching the phone holder

Open the remote control

Close the remote control

Charging the remote control batteries

Switch off the remote controller during charging
Charging : red light is on
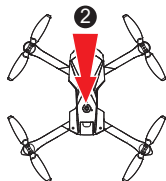Finish charging: light is off

5V 1-2A

Flight preparation and turning the drone on/off
Pairing the remote control with the drone

Switch on the remote control Indicator flashes rapidly -> slowly

Remote control indicator flashes rapidly

Indicator stays constant when pairing is complete.
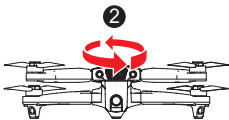
⚠   * When you switch on the remote control, the indicator will flash rapidly for approximately 20 secs to indicate that the remote control is waiting for a signal. The indicator will then flash slowly to indicate that pairing mode has been disabled.

Calibrating the compass
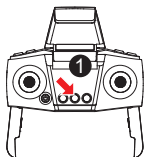
Press to calibrating the compass

Hold the drone horizontally and rotate 360 degrees for few time. Indicator flashes from slowly to rapidly.

Hold the drone vertically and rotate 360 degrees for few times. Indicator flashes from rapidly to constant.

* Do not calibrate the compass near strong electromagnetic fields or large pieces of metal, e.g. magnetite, car parks or buildings with underground steel reinforcements.

* When holding the drone horizontally, the angle of inclination must not exceed 30 degrees.

Searching for satellites

The rear indicator will change from orange to green when the drone has locked on to a satellite and recorded the take-off location. The drone is now ready to fly.

* It should take approximately one minute for the drone to lock on to a satellite. If the drone fails to find a satellite, recalibrate the compass.

* Before take-off, place the drone in an open space away from obstacles and ensure that GPS mode is enabled.

* When the rear green indicator flashes rapidly, this indicates that the GPS signal is weak. If this occurs, land the drone manually and restart the satellite search.

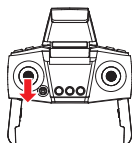## Turning the drone on

or
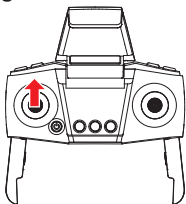
Move the left joystick upwards
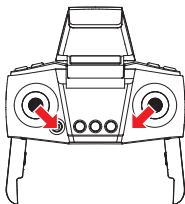
Push the left and right joysticks downwards in a V shape for 1 second.

Turning the drone off

Method one	Method two	Method three

Push the left joystick downwards for 2-3 seconds.
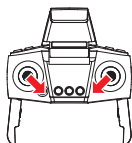
Push the left and right joysticks downwards in a V shape for 2 seconds.

Press the take-off/landing button to make the drone land automatically and switch off.

⚠   * The drone will switch off automatically if its angle of inclination exceeds 90 degrees.

Using the remote control

Ascend

Descend

Right Rotation   Left Rotation

Front

Rear

Backward

Forward

Front

Leftward   Rightward
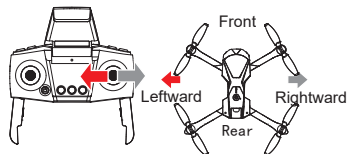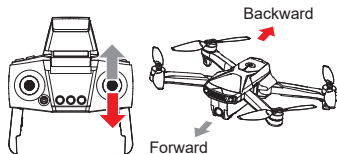
Rear

Flight modes

Optical flow positioning
Front indicator is constant white, rear indicator is constant yellow.

* If the rear indicator starts to flash rapidly, this indicates that the optical signal is weak and the drone cannot determine its position.
* Performance may be impaired in dark surroundings, areas with reflective surfaces (e.g. water), or at altitudes of more than 6 m.
* Optical flow positioning only supports altitudes of less than 6 m.

GPS

GPS mode
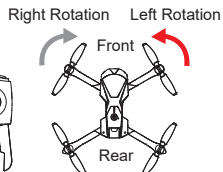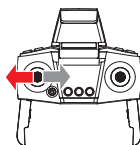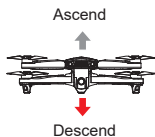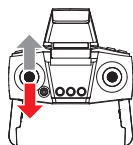Front indicator is constant white, rear indicator is constant green.

* When the battery level is normal, the drone can fly to a distance of 500 m at a maximum altitude of 100 m.
* When the battery level is low, the drone can fly to a distance of 20 m at a maximum altitude of 20 m.
* If the rear indicator starts to flash rapidly, this indicates that the GPS signal is weak and the drone cannot determine its position.
* GPS mode cannot be used indoors.

Headless mode
The indicator on the drone will flash once every 4 seconds.

1. Configuring the forwards direction
   When you switch on the drone for the first time, the direction in which the front side of the drone is pointing will be set as the forwards direction.

2. Enabling headless mode
   ① After pairing the remote control with the drone, hold down the right joystick for approximately 3 seconds. The remote control will beep 8 times to indicate that headless mode is enabled. To disable headless mode, hold down the right joystick again for approximately 3 seconds.
   ② In headless mode, you do not need to determine the drone's orientation. You can move the joysticks on the remote control to make the drone move in the corresponding direction.

Place the drone on a level surface and move the left and right joysticks to the lower right corner for approximately 3 seconds. The indicator will flash rapidly and then stay constant to indicate that the calibration process is complete.
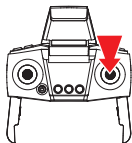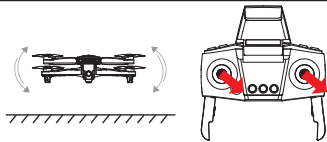
Level calibration

* The drone cannot be calibrated if the angle of inclination is greater than 10 degrees.

Briefly press the right joystick to switch between high and low speed mode.
1. Low speed mode is enabled by default when the drone is switched on.
2. The remote control beeps twice when high speed mode is enabled and once when low speed mode is enabled.
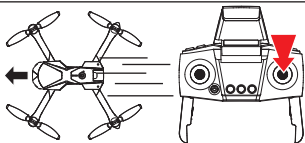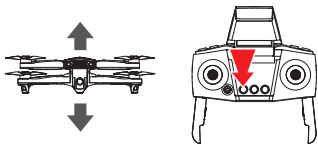
High/low speed mode

1. When the drone is under standby mode, Press the take-off/landing button to make the drone take off automatically and hover at a height of 1.5 m.
2. When the Drone is under active mode, it will automatically land on ground if you press the one key landing

One - Key take-off/landing

Take a photo — Lens up
Record video — Lens down
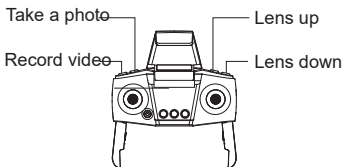
Taking a photo or video recording with the remote control

1. Take a photo: Press the photo button. The indicator on the drone will flash to indicate that a photo is taken.
2. Record video: Press the record button. The indicator on the drone will flash twice to indicate that recording is in progress. Press the record button again to end the recording. The indicator on the drone will turn on to indicate that recording is complete.

Photo button   Record button

Taking a photo or video recording with hand gestures

1. Take a photo: Position your hand approximately 1.5 m away from the front lens and hold the ✋ hand gesture for 3 seconds.
2. Record video: Position your hand approximately 1.5m away from the front lens and hold the ✋ hand gesture for 3 seconds.

⚠

* Photo and video recording gestures cannot be used when the bottom camera is on.（See Loolinn Air App User Manual for further information）
* The camera may accidentally take a photo or start a video recording if there are surrounding objects that resemble the 🤙 or ✋ gestures.
* If there is no memory card in the drone, photos and video recordings will be saved to your phone.
* If there is a memory card inserted in the drone, photos and video recordings will be saved to the memory card and your phone.
* The drone supports memory cards with a capacity of up to 64 GB.

Return to home function

In GPS mode (when the 📡 indicator is constant), hold the return to home, so the drone will return to its take-off position automatically. During the return flight, you can use the joystick to control the drone ascend, descend and move left/right in order to avoid obstacles. To terminate the return flight, hold the return to home button.

* If the drone is flying at an altitude less than 20 m, it will automatically ascend to an altitude of 20 m before returning home.
* If the drone is flying at an altitude more than 20 m, it will return home at the same altitude.
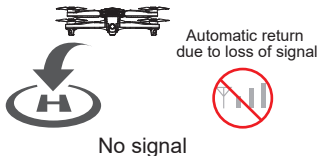
Automatic return due to loss of signal

No signal

If the remote control signal is lost for more than 6 seconds, the drone will automatically return to the take-off position. If the signal is restored during the return flight, you can hold the return to home button to terminate the return flight.

* The drone cannot automatically avoid obstacles during the return flight.
* The automatic return to home function is not available when the GPS signal is weak (flashing 📡 indicator).
* If the drone does not receive a GPS signal and lost contact with the remote control for more than 6 seconds, it will not be able to return to home but will land automatically.

Automatic return due to low battery

Low battery

When the drone battery is low, the drone will automatically return to the take-off position. During the return flight, you can use the joystick to control the drone ascend, descend and move left/right in order to avoid obstacles.

* If the drone is further than 20 m from the landing position, the return flight cannot be terminated.

* If the drone is less than 20 m from the landing position, the return flight can be terminated.

Landing position: The initial unlock/take-off position.

Smart Loolinn Air app features

Function description of operation interface

WiFi   Number of Satellite   GPS Signal   Lens switch   Flight record   Album

Optical flow   power   VR Mode   Parameter   back

A : 5.0m   H : 10.0m/s   S : 20.123456
D : 10.0m   V : 10.0m/s   Y : 10.987654

stop

Emergency landing

Joystick ON/OFF   MV   Autonomus Return

Speed switch   100%

Photo/Video   GPS- Tracking / Master-Tracking / Palm-Control

05:46

Master-Tracking   Round Flight

Palm-Control

unlock   GPS- Tracking   Trajectory flight/ Waypoint Flight

Trajectory flight

take off/landing   Waypoint Flight   switch to map

front camera gimbal controller   Flight posture

−12−

WiFi
Show the strength of the image transmission signal;

Satellite signal
Show the current flight mode and the number of satellites. Steady light indicates it is the GPS mode, so the GPS Auto return to home, GPS tracking, round flight, waypoint flight are available. Flashing indicates that it is the optical flow fixed-point mode, so master tracking, palm control, trajectory flight are available.

Battery State
Battery State of drone
(1) 2-4 bars indicate normal power. In GPS mode, the return, tracking, round, and pointing flight functions can be operated normally;
(2) 1 bar (flashing state) means that the drone is currently in a low battery state, and the drone will perform the automatic return to home function; in the low battery state, there is no tracking, round, or pointing flight function; the maximum flight distance is 20 meters, and the maximum flight altitude is 20 meters.

GPS Signal
A | H | S
D | V | V
Show the current altitude, distance, and corresponding latitude and longitude of the drone from the home point.

stop Emergency landing
You can make an emergency landing when the drone gets out of control.

Lens switch
The front lens and the lower lens can be switched.

VR Mode
Click for VR Mode.

Flight record
Records the relevant parameters of each flight;

Album
Check photos and videos.

Parameter
The beginner mode and the parameter adjustment mode can be switched.

Joystick ON/OFF
Tap to switch between mobile phone control or remote control.

Speed switch
Shows the current fast and slow status. Click on the mobile phone control mode to switch the fast and slow status.

Photo/Video
Switch to Photo/Video

Photo/Video

Click to take photos and video according to the current lens (front lens or bottom lens). When taking a picture, the indicator lights on the body flash once; when recording, the indicator lights flash twice continuously.

When recording, resolution of videos on the mobile phone is 720P and resolution of videos in the storage card is 1080P.

Motors Unlock

After unlocking, click to achieve one-key take-off or one-key descent.

Take-off/landing

After unlocking, click to achieve one-key take-off or one-key descent.

Front camera gimbal controller

After the drone takes off, the front camera gimbal controller will be displayed on the left side of the screen. At this time, if you move the slider of the controller upwards, the front lens of the drone will move up a certain angle; if you move the slider down, the front lens of the drone will move a certain angle downward.

Flight posture

Show the flight posture change, relative position and direction change of the drone. The center of the white circle indicates the position of the operator, the white triangle tip indicates the direction of the drone's head; the offset of the white triangle indicates the left and right offset of the drone relative to the operator.

Auto Return To Home

Click in GPS mode and automatic return to home will be performed.

Master- Tracking

In the optical flow mode, click "master tracking", a blue circle pops up to indicate the target is detected, select the blue circle and click to confirm then it will turn red, when the target is lost, the indicator light will turn yellow. In master tracking mode, the drone will automatically fly back when you open your both arms, and the drone will automatically move forward when you retract your arms.

Palm -Control

In the optical flow mode, click the palm control, a blue circle pops up to indicate that the target is detected. Select the blue circle and click to confirm and it will turn into a red circle. At this time, the rear indicator light of the drone turns red. When the target is lost, the indicator turns yellow.

GPS- Tracking

In GPS mode, the drone will head in the direction of the mobile phone and follow the mobile phone to move. The minimum distance of GPS tracking is 5 meters. During GPS tracking, operations such as ascent, descent, forward, backward, and left and right flying can be performed.

Round Flight

In GPS mode, the drone will circle clockwise or counterclockwise around the current position of the drone. The minimum radius of the orbiting flight is 5 meters, and the ascent, descent, forward and backward can be controlled during the orbiting process.

Trajectory flight

In the optical flow mode, the drone will fly according to the selected position.

Waypoint Flight

In the GPS mode, the drone will fly according to the selected position. When the drone altitude is lower than 15 meters, the drone will automatically rise to 15 meters before performing waypoint flight. When the drone altitude is higher than 15 meters, the drone will perform directly waypoint flight.

* Before using the smart app features, see Loolinn Air App User Manual for further information)

* Ensure that you pre-configure the flight altitude and distance in the Loolinn Air App.

Understanding the drone LED indicators

| No.	Indicator status	Meaning
1	Front indicator = constant white, rear indicator = constant yellow	Optical flow positioning
2	Front indicator = constant white, rear indicator = constant green	GPS mode
3	Front and rear indicators flash once every 4 seconds	Headless mode
4	Front and rear indicators flash twice every 1.5 seconds	Recording in progress
5	Front and rear indicators flash rapidly	Pairing or level calibration in progress
6	Front and rear indicators flash twice every second	Low battery
7	Front and rear indicators flash once every second	Signal lost
8	Front indicator = constant, rear indicator = flashing slowly	GPS fault
9	Front indicator = constant, rear indicator = flashing rapidly	Poor GPS reception

Troubleshooting

Problem	Cause	Cause Solution
The drone does not respond.	1. Undervoltage protection was enabled. 2. The remote control battery level is low and the power indicator is flashing.	1. Charge the drone battery. 2. Change the batteries in the remote control.
The drone's response is intermittent.	1. The remote control batteries are nearly empty. 2. There is interference from a remote control on the same frequency.	1. Change the batteries. 2. Move to a different area where there is no interference.
The drone drifts to one side whilst hovering.	The drone is not calibrated level to the ground.	Calibrate the drone.
The drone does not travel in a forwards direction in headless mode.	The drone was involved in a collision.	Reconfigure the forwards direction.
The drone does not hover properly/the drone keeps moving up and down.	1. The drone is not calibrated level to the ground. 2. The air pressure is unstable due to poor weather conditions. 3. A violent collision corrupted the gyroscope's data.	1. Calibrate the drone. 2. Avoid flying in poor weather. 3. Calibrate the drone.

Accessories (available separately)

The following section contains a list of optional accessories that are available to purchase. Accessories can be purchased from the seller.
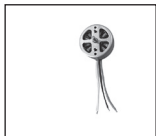

Drone body
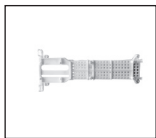
Main unit battery cover
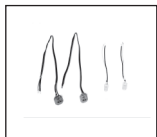

Arm

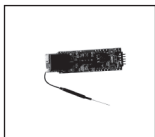Arm parts

Light cover

Motor
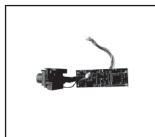

Feet

Protective cover
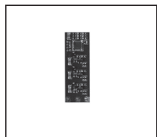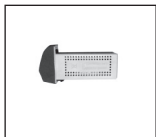

Lights

GPS module

Receiver board

Camera circuit board

PCB

Battery

Charging cable

Remote control
Charging cable

Remote control

Warning: Changes or modifications to this unit 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.

 "This device complies with FCC radiation exposure limits set forth for general population (uncontrolled exposure).This device must not be collocated or operating in conjunction with any other antenna or transmitter."

RF frequency band :2409-2475MHZ
Transmitter power : -3.73dBm (Max.)
product name: [GPS BRUSHLESS DRONE]
model number: [Z6 Pro]
Brand name :Loolinn