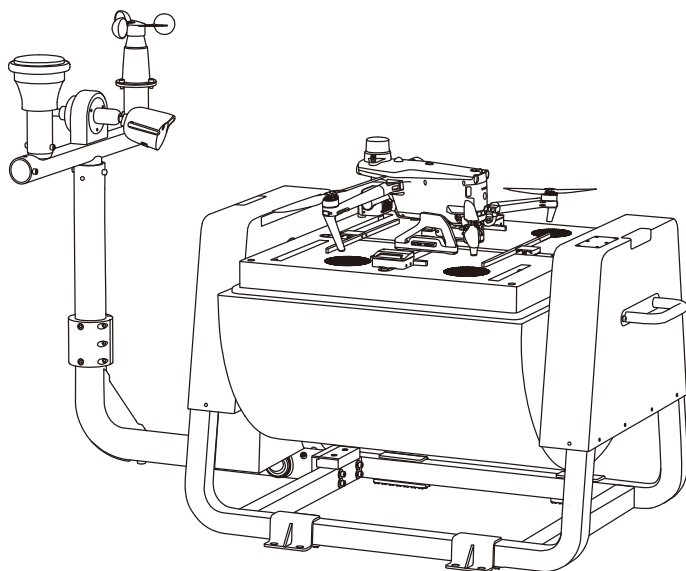


# Quick Start Guide

Autel Multi-rotor Drone Nest

EVO Nest



# contents

- Reading Assistance** ----- 02
- Nest Components** ----- 02
- Installation Preparation** ----- 03
  - Item Acceptance Check ----- 03
  - User-Prepared Tools and Items ----- 03
  - Equipment Inspection ----- 04
    - Check the Landing Pad ----- 04
    - Manually Close the Cabin Door ----- 05
- Nest Installation** ----- 05
  - Confirm the Installation Position and Orientation ----- 05
  - Install the Expansion Bolts ----- 06
  - Mount the Base Brackets ----- 07
- Component Installation** ----- 07
  - Install the Weather Monitoring Pole ----- 08
  - Install the Mechanical Wind Speed Sensor ----- 09
  - Install the Rainfall Sensor ----- 09
  - Install the Nest 4G Dongle Module (Optional) ----- 09
- Cable Connection** ----- 10
  - Connect the Earth Wire ----- 10
  - Connect the Pole Lead Out Wires ----- 11
  - Connect the Mains Electricity Cable ----- 12
  - Connect the Solar Power Supply (Optional) ----- 13
  - Connect the Ethernet Cable ----- 14
- Power On the Nest** ----- 14
  - Checklist before Power On ----- 15
  - Power On and Checking ----- 15
- Aircraft Preparation** ----- 15
  - Install the RTK Module on the Aircraft ----- 16
  - Aircraft Real-Name Registration ----- 16
  - Aircraft Inspection ----- 16
- Nest Configuration** ----- 17
- Automatic Flight Test** ----- 17
  - Use AICS to Add Nest and Aircraft ----- 20
  - Create Routes and Missions ----- 20
  - Perform Flight Missions ----- 22
  - Before Leaving Checklist ----- 22
- Appendix** ----- 23
  - Nest Indicator Light ----- 23
  - Nest Power Distribution Cabinet ----- 24

# Reading Assistance

## Warning

- Please entrust Autel Robotics or authorized service provider for installation. Self-installation may bring product safety risks. Contact Autel Robotics for relevant technical support.
- Brand new nest and aircraft need to be activated for frequency matching operation and related configuration when they are first used. Please ensure that the remote controller can access the Internet at the deployment site.



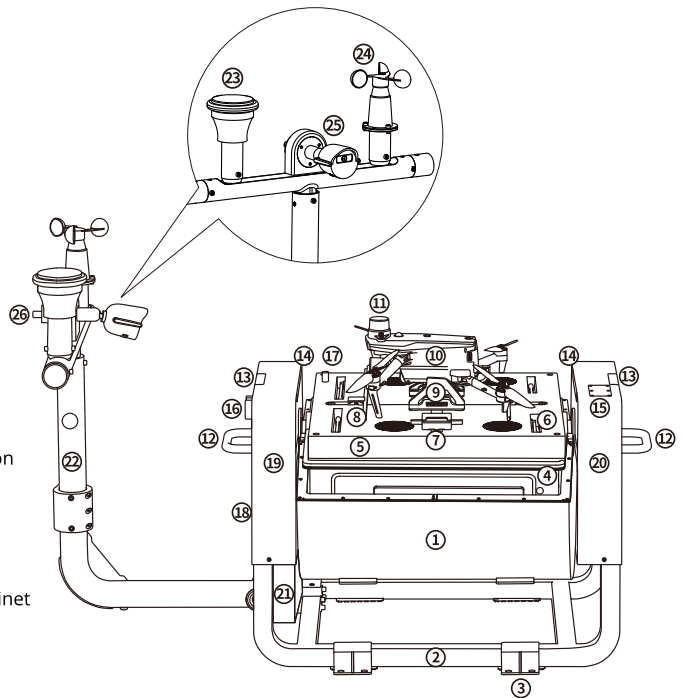
<https://www.autelrobotics.cn/videos/nest/>



<https://manuals.autelrobotics.com/?dir=/EVO%20Nest/Suite/>

## Nest Components

- ① Nest Cabin Door
- ② Nest Support Base Bracket
- ③ Nest Foundation Plate
- ④ Manual Release Hole
- ⑤ Landing Pad
- ⑥ Propeller Rod
- ⑦ Charging Connector
- ⑧ Centering Rod
- ⑨ Aircraft Charging Stand
- ⑩ Aircraft
- ⑪ RTK Module
- ⑫ Nest Lifting Handle
- ⑬ Nest Indicator Light
- ⑭ Landing Pad Lighting Lamp
- ⑮ 4G Dongle Module Installation Compartment
- ⑯ Nest Emergency Stop Button
- ⑰ Temperature and Humidity Sensor (Inside the nest)
- ⑱ Nest Power Distribution Cabinet (Side View)
- ⑲ Left Antenna Cover
- ⑳ Right Antenna Cover
- ㉑ Nest Power Distribution Cabinet Interface Waterproof Cover
- ㉒ Weather Monitoring Pole
- ㉓ Rainfall Sensor



- ㉔ Mechanical Wind Speed Sensor
- ㉕ Surveillance Camera
- ㉖ Temperature and Humidity Sensor (outside the nest)

# Installation Preparation

## Item Acceptance Check

Please check all items in the packaging box according to the "Product List" in the main packaging box of the nest after unpacking.

Please note that the standard nest kit consists of five packaging boxes.

- 1. Nest main packaging box
- 2. Weather monitoring pole packaging box
- 3. Aircraft packaging box
- 4. Battery packaging box
- 5. Remote controller packaging box (optional, subject to actual order)









---

### Important













- It is recommended to configure at least one remote controller on site for easy configuration of the nest.
  - Please be sure to upgrade the firmware of the remote controller, the aircraft, battery, and the nest to the latest version for the first use.
  - If any abnormalities, missing items, or model discrepancies are found, please record them and contact Autel Robotics and equipment carriers in a timely manner.
- 

## User-Prepared Tools and Items

The following tools and items are required during the installation process. Please prepare them in advance and ensure that the tools work properly.

	Hammer Drill (drill diameter Φ 14 mm)		Laptop
	Claw Hammer		Digital Level
	Wire Strippers		Multimeter
	Diagonal Cutting Pliers		Wire Ferrule Crimping Pliers



	Electrical Tape		Shielded Pass-Through Connector
	Forklift (optional)		Grounding Resistance Meter (optional)
	Steel Blade Measuring Tape (optional)		Screwdriver (optional)
	Electroprobe Test Pen (optional)		Metal Gasket (optional)
	Electric Soldering Iron (optional)		Solder Wire (optional)
	Flux (optional)		BD-24-3 Pin Metal Round Connector

## Equipment Inspection

When the nest is packed before leaving the factory, its cabin door is open; after long-distance transportation, please conduct relevant inspections on its landing pad and cabin door.

### Check the Landing Pad

1. Remove the transport cover on the main packaging box of the nest, pull out the packaging box upwards, and remove the paper guard plates at the four corners and the protective foam above the nest (including user documents and triangle key).
2. Check the surface components of the landing pad to ensure that the appearance is normal and there is no looseness, shedding, deformation, or scratching of the components.
3. After inspection, please close the cabin door of the nest and keep other items in an orderly manner.

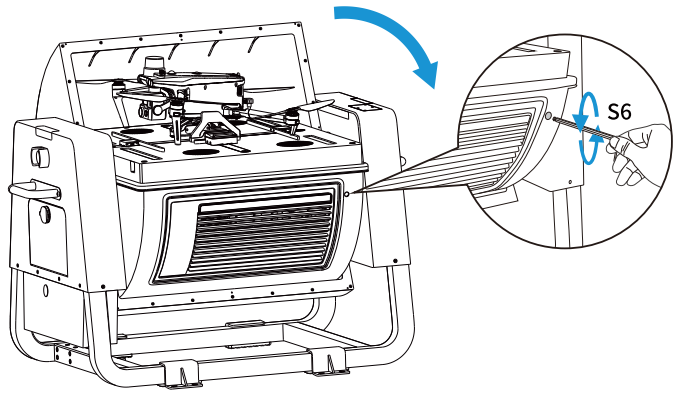
---

### Important

- Please keep the corresponding packaging box. If the nest needs to be relocated or transported again, it needs to be placed in the packaging box for protection.
-

## Manually Close the Cabin Door

1. Unpack the weather monitoring pole box and take out the **S6 hex key** from the maintenance kit.
2. Remove the rubber protective cover for the manual release hole of the cabin door, insert the hex key directly into the hole and lock the internal structure, and rotate the key counter-clockwise to control the angle of the cabin door closure.



---

### Warning

- After manually closing the cabin door, be sure to install the rubber protective cover back into the manual release hole of the cabin door. In this way, the protective performance of the nest will not be affected.
- When manually opening or closing the cabin door, do not insert your fingers or other objects into the gap between the cabin door and the landing pad to avoid squeezing your fingers or damaging the nest shell.
- When you rotate the key clockwise to open the cabin door manually, the door is not restrained by position limit control. Please always pay attention to the distance between the side of the door and the key to avoid compression (**the maximum manual opening and closing angle of the door is controlled within 160°**).
- The cabin door is a semi-circular non-load-bearing structure. Please do not place heavy objects on the cabin door to avoid damaging the cabin door or causing personal injury due to heavy objects slipping.

---

## Nest Installation

### Confirm the Installation Position and Orientation

Before selecting a site for the nest or installing it, the following factors should be considered comprehensively:

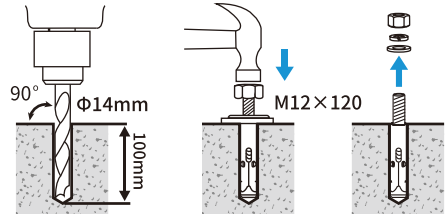
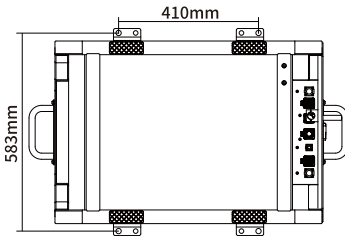
- If there is a long-term strong wind in a single direction (not exceeding 12 meters/second) at the installation site, the weather monitoring pole should not be installed downwind to prevent the aircraft from being too close to the weather monitoring pole during takeoff and landing in a windy environment.

- Surveillance cameras should avoid direct sunlight, as backlighting will affect the image quality and surveillance camera lifespan of Autel Integrated Command System (AICS).
- Please ensure that there is no debris accumulation on both sides of and below the cabin door of the nest, and do not obstruct the rotation and opening of the cabin door.
- Ensure that there are no objects within 5 meters near the nest that resemble the shape or visual identification of the landing pad, in order to avoid false detection when the aircraft lands.

## Install the Expansion Bolts

During the construction phase, concrete horizontal bases need to be made in advance at the installation site.

1. Mark the bolt drilling points on the concrete horizontal base according to the final determined installation direction of the nest, and the spacing is shown in the figure.
2. Align a hammer drill (**drill bit diameter: 14mm**) with the perforation point, keep the drill perpendicular to the horizontal base, and drill four mounting holes at least **100mm** deep in sequence.
3. Slightly tighten the **4 M12 × 120 expansion bolts** packed in the weather monitoring pole packaging box into nuts and put them vertically into the installation holes; use a claw hammer to tap them until the expansion tubes are inserted into the installation hole, and then unscrew the nut, spring washer and flat washer.



### ! Important

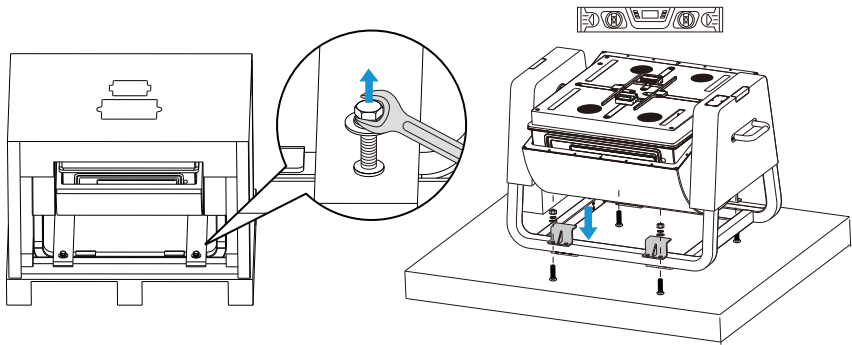
- Please keep the corresponding packaging box. If the nest needs to be relocated or transported again, it needs to be placed in the packaging box for protection.

### ! Warning

- Before drilling, it is necessary to wear protective goggles and a dust mask to prevent dust from entering the eyes or the throat.
- Please pay attention to safety when using the corresponding electrical tools.

## Mount the Base Brackets

1. Use a 19 open-end wrench to remove the four bolts used to install the base brackets at the bottom of the nest main packaging box.
2. Two people hold the lifting handles on both sides of the nest, carefully move the nest to the installation position, and adjust the base brackets and the expansion bolts of the nest appropriately.
3. Manually open the cabin door of the nest, place the digital level on the landing pad for measurement to make sure that the landing pad is horizontally level. If the landing pad is not level, please add hard materials such as metal gaskets to the corresponding position under the base brackets of the nest for elevation.
4. As shown in the figure, align the holes of the foundation plates with the expansion bolts and put them down, and press the base brackets. After installing the flat washers, spring washers and nuts in turn, use the 19 open-end wrench to tighten the nuts.



---

### Warning

- When moving or adjusting the position of the nest, be sure to hold the handles on both sides of the nest for operation. Do not put your hand under the base brackets of the nest to avoid injury.
  - Please ensure that the foundation plates tightly press on the base brackets, and if necessary, gaskets can be added between the plates and the brackets.
- 

## Component Installation

---

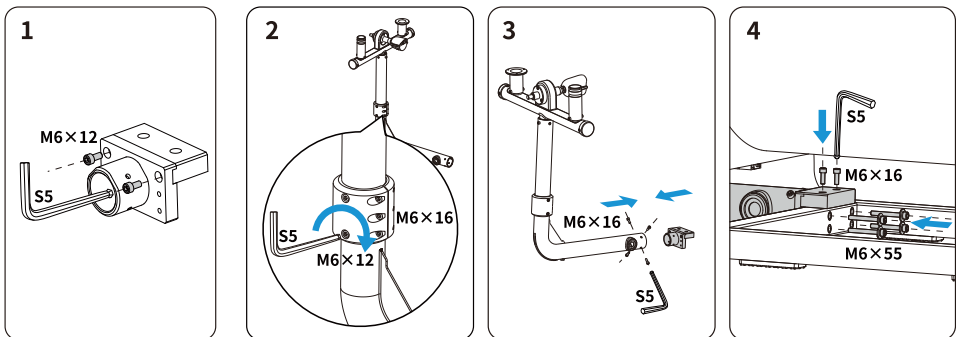
### Warning

- Before installation, use the triangle key to open the nest power distribution cabinet, and make sure the miniature circuit breaker is turned to the OFF position, and the nest is off.
-

## Install the Weather Monitoring Pole

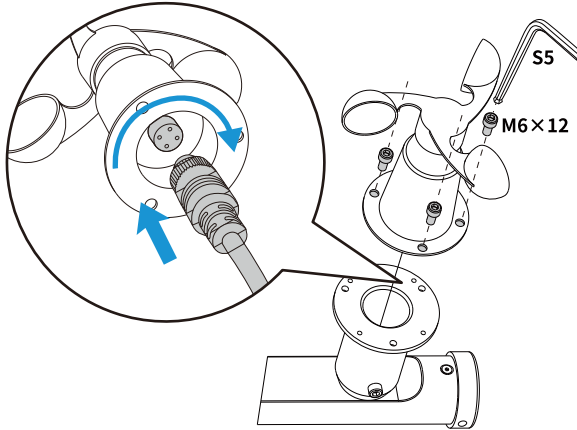
The weather monitoring pole is used to install components such as mechanical wind speed sensor, rainfall sensor, and surveillance camera (installed at the factory and it only needs to adjust the fixed angle). It consists of an upper T-shaped tube and a lower L-shaped tube. The T-shaped tube and the L-shaped tube are secured by structural components and screws, and relevant cables are pre-installed inside, so users do not need to rewire.

1. From the weather monitoring pole packaging box, take out the connecting baseplate and the reinforcement plate which are used to connect the weather monitoring pole and the nest as shown in Figure 1. First, embed the convex groove of the reinforcement plate into the groove of the connecting baseplate, and insert **2 M6 × 12 screws** and tighten them with a **S5 hex key**.
2. From the weather monitoring pole packaging box, take out the T-tube and the L-tube, and as shown in Figure 2 below, insert the L-tube into the connecting sleeve at the lower end of the T-tube. Insert **1 M6 × 12 screw** into the screw hole in the middle of the connecting sleeve, and use the **S5 hex key** to tighten it. When tightening, make sure that the screw passes through the position limit screw hole at the top of the L-tube; then use the **S5 hex key** to tighten the **3 M6 × 16 screws** at the edge of the connecting sleeve. After tightening all the screws, make sure that the surveillance camera installation position faces the same direction as the tail end of the L-tube does.
3. As shown in Figure 3, insert the tail end of the L-shaped tube into the connecting baseplate. When inserting, make sure that the bolt hole at the tail end of the L-shaped tube is aligned with the bolt hole on the connecting baseplate, and the pole is perpendicular to the reinforcement plate (the dust-proof wiring hole at the tail end of the L-shaped tube faces to the right). Insert **4 M6 × 16 screws** into each of the four bolt holes and tighten them using the **S5 hex key** to ensure that the pole is firmly connected to the connecting baseplate.
4. Place the combination as shown in Figure 4 on the base brackets of the nest, and ensure that the bolt holes on the connecting baseplate and the reinforcement plate are aligned with the bolt holes on the base brackets. Use the **S5 hex key** to tighten **2 M6 × 16 screws** used to install the reinforcement plate in vertical direction and **4 M6 × 55 screws** used to install the connecting baseplate in the horizontal direction.



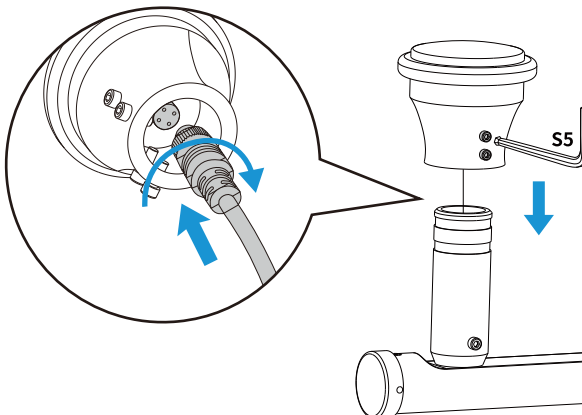
## Install the Mechanical Wind Speed Sensor

1. Connect the cable (RS485 + power supply) connector leading out of the mechanical wind speed sensor installation position correctly to the bottom interface of the mechanical wind speed sensor, rotate and tighten it, and store the excess cable in the pole.
2. Align the base of the mechanical wind speed sensor to its mounting position, ensure that the screw holes are aligned, place **3 M6 × 12 screws** into the screw holes and re-tighten the screws using the **S5 hex key**.



## Install the Rainfall Sensor

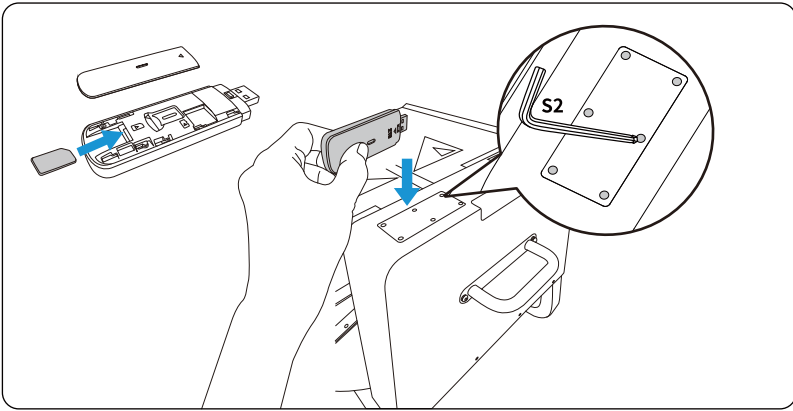
1. Connect the cable (RS485 + power supply) connector leading out of the rain sensor installation position correctly to the bottom interface of the rain sensor, rotate and tighten it, and store the excess cable in the pole.
2. Insert the rain sensor into its mounting position from top to bottom.
3. Use the **S5 hex key** to tighten the screw on the side of the rain sensor, ensuring that the screw is inserted in the limit slot of the installation position.



## Install the Nest 4G Dongle Module (Optional)

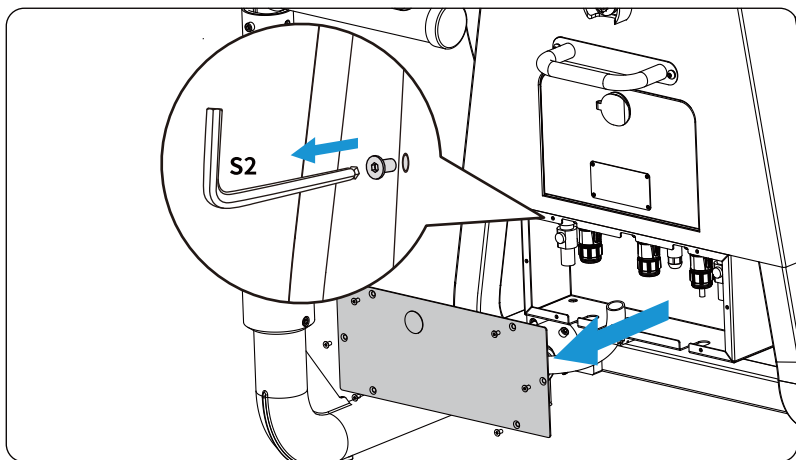
The nest needs to be connected to the Internet through a wired or 4G network. According to the on-site network situation, a 4G Dongle module can be optionally installed (optional, contact Autel Robotic to purchase) to connect the nest to the 4G wireless network.

1. Remove the cover of the 4G Dongle module and insert the SIM card in the correct direction.
2. Use a **S2 hex key** to unscrew the **6 screws** on the 4G Dongle module installation compartment cover plate at the top of the antenna cover on the right side of the nest, store those screws properly, and then remove the cover plate.
3. Insert the 4G Dongle module (the side with status indicator lights faces outwards) into the USB-A interface inside the antenna cover along the slot to ensure a secure connection.
4. Close the cover and tighten those **6 screws** firmly.



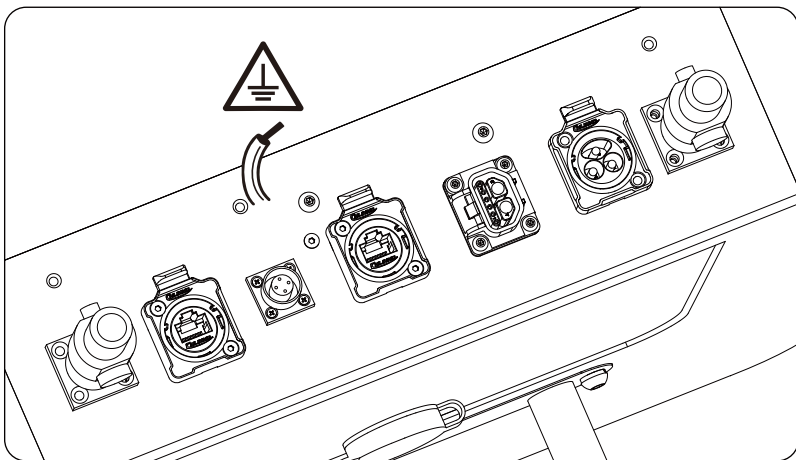
## Cable Connection

Before connecting each cable to the power distribution cabinet, use a **S2 hex key** to unscrew the **6 screws** on the waterproof cover panel of the cabinet interface, remove the waterproof cover panel, and keep the screws.



## Connect the Earth Wire

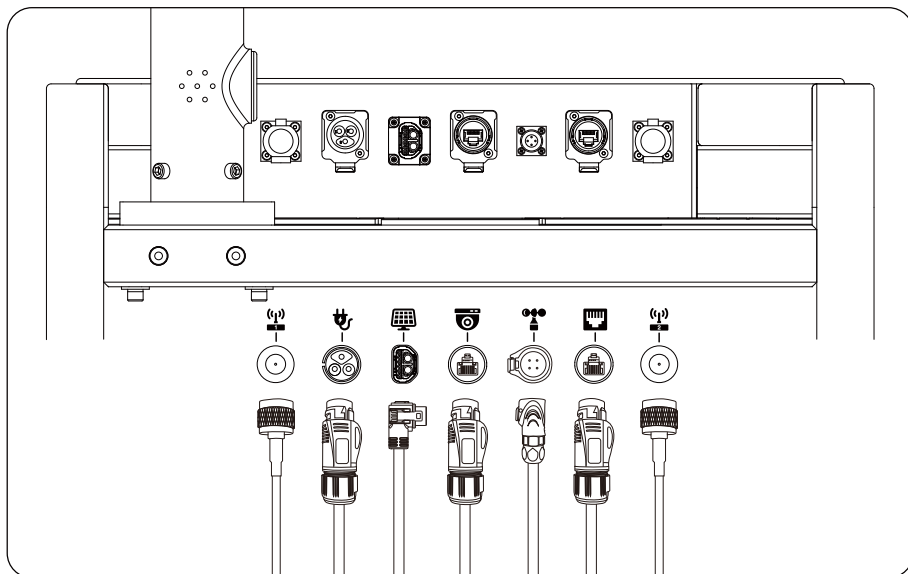
Crimp the lead-out end of the earth wire (yellow-green) pre-installed in the nest into the circular wiring terminal. After passing the earth wire through the wiring groove on the left side at the bottom of the power distribution cabinet interface waterproof cover, lock it on the grounding angle steel bolt hole (grounding point) of the horizontal base by bolts. The earth wire wiring should be as short and straight as possible (the earth wire should not be longer than 1 meter), and do not wind or tangle it with the signal cable.







## Warning

- The nest must be grounded as required.
- Before installation, please ensure that the design and the construction of the grounding device meet the requirements. Use a grounding resistance meter for testing to ensure that the grounding resistance is no more than 10Ω.



## Connect the Pole Lead Out Wires

There are two pre-installed lead out wires inside the weather monitoring pole, including one 100Mbps network cable for monitoring camera video transmission and one 2-in-1 (RS485 + power supply) cable for sensor communication power supply on the pole. The ends of the 100Mbps network cable and the 2-in-1 cable use waterproof aviation connectors. All lead out wires pass through the waterproof cable sleeve at the dust-proof wiring hole at the end of the L-shaped tube and are led out from the tail of the pole.

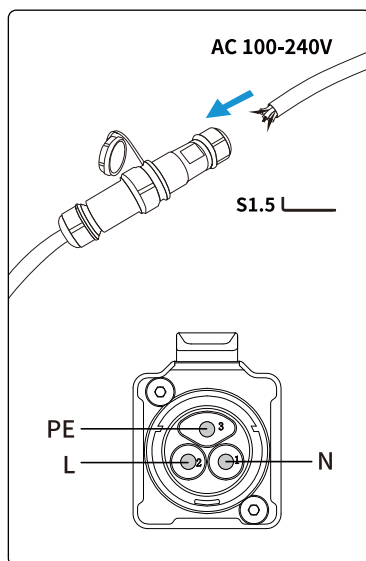
1. Remove the buckle in the middle of the wiring groove at the bottom of the power distribution cabinet interface waterproof cover, clip the waterproof wire sleeve at the end of the pole lead out wires into the wiring groove, and lock the buckle at the wiring groove.
2. Remove the protective cover of the camera network port connector corresponding to the "  " at the bottom of the power distribution cabinet, align the RJ45 aviation plug among the pole lead out wires and insert it into the connector to ensure that both are locked firmly.
3. Remove the protective cover of the weather sensor connector corresponding to the "  " at the bottom of the distribution cabinet, align the 4-pin aviation plug among the pole lead out wires and insert it into the connector to ensure that both are locked firmly.

## Connect the Mains Electricity Cable


1. Remove the protective cover of the AC connector corresponding to the " ⚡ " at the bottom of the distribution cabinet, take out the standard two-meter-long power cord from the weather monitoring pole packaging box, correctly insert one end with **BD-24-3 pin metal round connector** into the AC connector of the nest, and pass the cable through the wiring groove on the left side of the distribution cabinet interface waterproof cover. The other end (with waterproof docking plug but the attached three-pin plug removed) is docked with the mains electricity cable pre-embedded near the end of the nest. When docking, rotate and remove the end cover and the waterproof shell of the waterproof docking plug at the inlet end in turn, and after passing the mains electricity cable through the end cover and the waterproof shell, use a **S1.5 hex key** to lock the live wire (red wire), neutral wire (blue wire), and earth wire (yellow-green wire) of the mains electricity cable into the terminal in the docking plug according to the wire sequence shown in the figure. After the locking is completed, be sure to rotate and lock the waterproof shell and the end cover of the waterproof docking plug, and re-dock the plug.
2. Users can also make their own power cord for mains electricity access (users need to bring their own **1 BD-24-3 Pin Metal Round Connector**, as well as **soldering iron, solder wire, flux** and other tools and items). After passing the mains electricity cable embedded in advance near the end of the nest through the wiring groove on the left side of the distribution cabinet interface waterproof cover, lock it to the self-provided **BD-24-3 Pin Metal Round Connector** according to the illustrated wiring sequence, and correctly insert it into the AC connector.

### Warning


- Only certified electricians can carry out above-safety-voltage operations.
- Before operation, be sure to turn off the upstream power switch of the mains electricity cable and hang a No-Closing sign near the switch.
- Use a multimeter or an electroprobe test pen to measure the electrical current at the end of the cable, and do not operate with electrical current.
- When connecting the mains electricity cable, please pay attention to the wiring sequence. The live wire (L) and neutral wire (N) cannot be reversed in the sequence.



## Connect the Solar Power Supply (Optional)

1. Remove the rubber protective cover on the waterproof cover panel of the distribution cabinet interface, expose the solar power supply wiring hole, and pass the output end (plug end) of the solar power supply UPS module (users should purchase on their own) through the wiring hole of the waterproof cover panel.
2. Remove the protective cover of the solar power supply connector corresponding to the "  " at the bottom of the distribution cabinet, and insert the output end of the solar power supply correctly into the connector to ensure that both are locked firmly.

## Connect the Ethernet Cable

1. Remove the BD24 type RJ45 aviation plug locked on the external network port connector corresponding to the "  " at the bottom of the distribution cabinet. Unscrew the aviation plug, reserve the proper length for the pre-embedded Category 5 or above shielded twisted pair (Cat 5e) network cable, lead it into the waterproof cover from the wiring groove on the right side of the waterproof cover at the bottom of the distribution cabinet interface, and pass through the end cover and waterproof sealing limit rubber ring of the aviation plug in turn. Use a **diagonal pliers** to peel off the outer skin of the network cable, crimp it into the **shielded pass-through connector** according to the T568B wiring sequence, ensure that the shielded metal mesh of the network cable is connected to the shielded pass-through connector metal shell, and the PVC surface of the network cable is effectively pressed into the connector, and the internal core wire is not exposed; clip the pass-through connector into the aviation plug firmly and lock the aviation plug end cover.
2. Align the **BD24 type RJ45 aviation plug** and insert it into the external network port connector to ensure that both are locked firmly.

---

### Warning

- Network surge protector needs to be installed in the user computer room and properly grounded.
  - The upstream bandwidth of the network should be at least 10Mbps.
- 

After the interfaces on the power distribution cabinet are all connected to the corresponding cables, use a **S2 hex key** and retained screws to lock the waterproof cover panel of the distribution cabinet interface to ensure that the internal cables are not tangled but stored in an orderly manner.

# Power On the Nest

## Checklist before Power On

Before powering on the nest, please make sure to check and confirm the following items:

- Confirm that both ends of the earth wire of the nest are well connected to the grounding point and the nest shell, and the screws have been tightened firmly.
- Confirm that the surface of the AC power cord is not damaged, the cable joints are firmly connected, the wiring sequence is followed correctly, and the insulation and waterproof treatment meets the specifications.
- Confirm that the AC power plug is firmly connected to the AC connector of the nest.
- Confirm that the reserved part of the AC power cord is tied neatly, and not tangled with other cables.
- Confirm that the 100Mbps Ethernet cable RJ45 pass-through connector leading out of the pole is correctly inserted into the camera network port connector of the nest and connected firmly.
- Confirm that the internal wiring sequence of the RJ45 pass-through connector of the wired network is correct, the shielded metal mesh of the network cable is connected to the shielded pass-through connector metal outer casing, and the PVC surface of the network cable is effectively pressed into the pass-through connector, and the internal core wire is not exposed.
- Confirm that the pass-through connector of the wired network is correctly inserted into the external network port connector of the nest and connected securely.
- Confirm that the plug leading out of the pole for supplying and communicating with the weather monitoring sensor is correctly inserted into the weather sensor connector of the nest and connected securely.
- Confirm that the nest has been installed and is stable, the landing pad is horizontally level, and there are no foreign objects or dirt on the surface.
- Ensure that the mechanical wind speed sensor of the nest can rotate normally, and the surface of the rain sensor and the temperature and humidity sensors inside and outside the nest are not covered with dirt or foreign objects.
- Confirm that the nest power distribution cabinet is clean and tidy, without any dust, dirt or construction leftovers.
- Confirm that the emergency stop button of the nest is in the released state.
- Confirm that the area around the nest has been cleared of packaging materials such as cartons, pallets, foam, and plastic.
- Confirm that there is no debris accumulation on the surface of the cabin door and on both sides of and below the nest.

## Power On and Checking

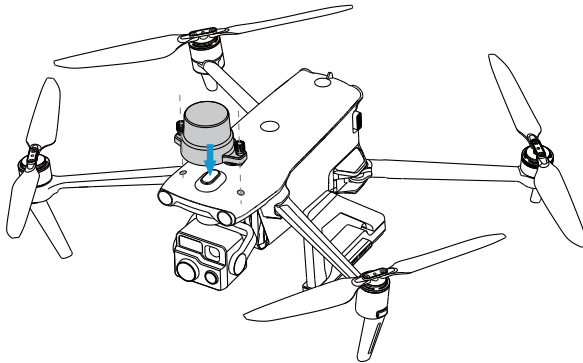
1. After checking properly before powering the nest on, use the multimeter AC mode to measure the external input AC voltage (black lead probe tests the N terminal and red lead probe tests the L terminal) in the superior waterproof distribution box (performing this operation in the nest power distribution cabinet is not favorable) to ensure that the voltage meets the power supply requirements (100-240V~).
2. Turn the miniature circuit breaker in the power distribution cabinet of the nest to the ON position, and the nest will be powered on normally. At this time, press the "T" button (yellow button) on the

leakage protector to test whether the leakage protector is working properly. If it is working properly, the nest will be powered off. At this time, press the leakage protection button (blue button), and then turn the miniature circuit breaker to the ON position to restore the power supply.

## Aircraft Preparation

### Install the RTK Module on the Aircraft

Take out the aircraft (with a charging stand installed) and the RTK module from the aircraft packaging box. The aircraft can be directly used in combination with the nest, or the RTK module can be installed on the aircraft to achieve higher navigation and positioning accuracy. It is recommended to install the RTK module on the aircraft to perform complex automated mission flights with the nest.



### Aircraft Real-Name Registration

- In US: Before using a drone, the owner of the drone must register the drone on the FAA website (<https://faadronezone-access.faa.gov/#/>) in real name (Registrants must be 13 years of age or older). Failure to register an unmanned aircraft that is required to be registered may result in regulatory and criminal penalties.
- In Canada: Before flight, please register your drone through the following portal: <https://tc.canada.ca/en/aviation/drone-safety/drone-management-portal>
- In EU: Drone operators/owners must register with the National Aviation Authority (NAA) of the Member State in which they reside. (<https://www.easa.europa.eu/drones/NAA>).

---

### Important

If you are operating the aircraft in countries or regions (except US, Canada and EU), please refer to relevant local laws and regulations.

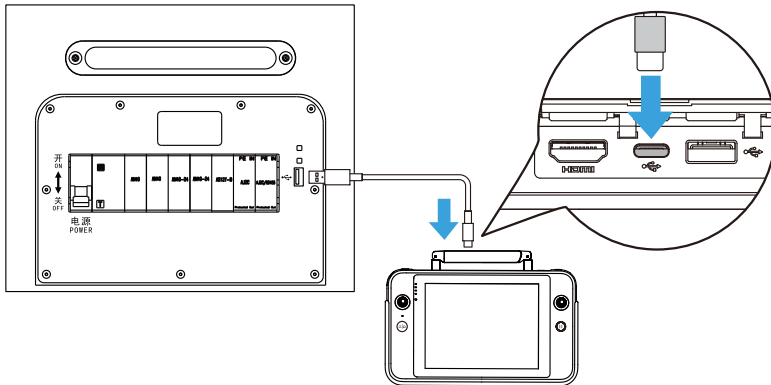
---

## Aircraft Inspection

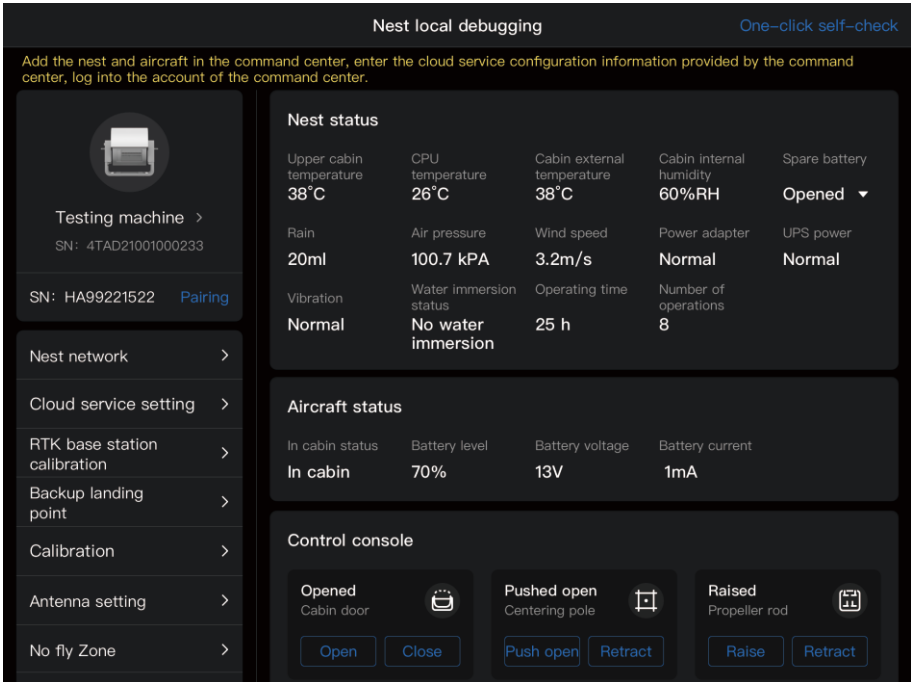
- Ensure that the aircraft battery is installed properly, fully charged, and the battery unlock button is locked.
- Ensure that the aircraft propeller is installed correctly and locked firmly, the blades are not damaged or deformed, the motor and propeller surfaces are clean and clear of foreign objects, and the propeller and arm are fully deployed.
- Ensure that the visual obstacle avoidance lens of the aircraft, the lens of the gimbal camera, and the lens of the auxiliary light are free of foreign objects, dirt, fingerprints, and are not blocked by the mounting or external accessories on the fuselage.
- Ensure that the protective cover of the aircraft gimbal has been removed and the three-axis movement of the gimbal is working properly.
- Ensure that the microSD card slot of the aircraft is tightly covered with a rubber protective cover, and the RTK module is firmly installed on the fuselage PSDK interface, otherwise the aircraft's protective performance will be affected.
- Ensure that there are no foreign objects in the battery compartment and interface of the aircraft.
- Ensure that the installation between the aircraft and the charging stand is stable, and the installation screws have been tightened firmly.
- Ensure that there are no foreign objects at the charging interface of the aircraft charging stand, and the charging cable is securely connected to the battery.

## Nest Configuration

After the nest is installed and powered on normally, it is necessary to connect to the remote controller through a data cable to activate frequency matching and related configuration operations of the nest and the aircraft. The standard process is as follows:



1. Open the power distribution cabinet of the nest, turn the miniature circuit breaker to the ON position, and turn on the power of the nest; at the same time, turn on the power of the aircraft and the remote controller.
2. Use the standard USB-A to USB-C data cable to connect the remote controller USB-C interface and the USB-A interface in the nest distribution cabinet.
3. After the remote controller is connected to the network, run Autel Enterprise and complete the activation of the nest and antenna setup according to the instructions.
4. Click the "Start Nest Deployment" button in the upper right corner of the "Antenna setting" interface, follow the prompts on the "One-click self-Check" interface to ensure that the installation connection is correct and the nest equipment is in normal condition.
5. Click the "Next step" button at the upper right corner of the "One-click self-Check" page, follow the prompts on the "Nest Connect Aircraft" interface to perform the frequency matching between the nest and the aircraft, and activate the aircraft.
6. Refer to the above operation methods and corresponding interface prompts to complete the nest network configuration, cloud service configuration, RTK base station calibration, and backup landing point setting in order.
7. After completing the above nest configuration, you can perform functional testing and calibration operations on the "Nest local debugging" interface.
8. After ensuring that the nest is in normal condition, make the landing pad centering rods being pushed open; place the aircraft correctly in the direction of the nose and the tail marked on the landing pad.

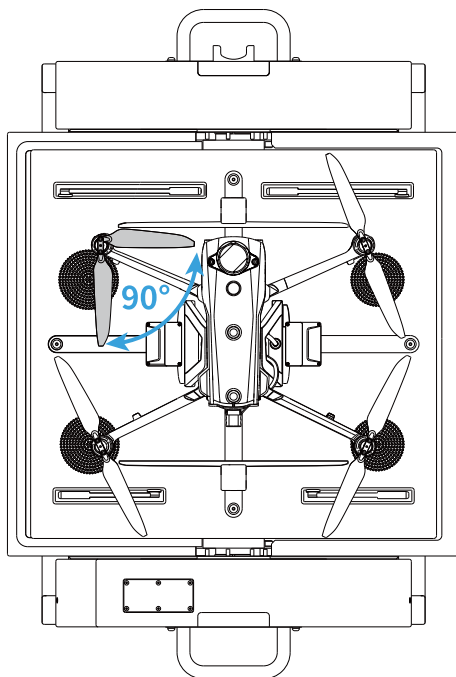


---

## **! Important**

Some interfaces may be optimized and adjusted due to subsequent version updates. The pictures provided in this manual are for reference only. Please refer to the actual operation interfaces for all operations.

---



---

## **! Important**

- Brand new nest and aircraft need to be activated before use. Please ensure that the remote controller can be connected to the Internet when being activated.
  - Ensure that the debugging button and BOOT button in the upper right corner of the power distribution cabinet are in the released state when the remote controller is connected to the nest.
  - Please upgrade the nest, battery, and aircraft-related firmware to the latest version after completing the configuration.
  - Please add a nest to AICS before configuring cloud service, so that the nest can successfully log in to the cloud service.
  - To reconfigure the nest, simply reconnect the remote controller to the nest.
-



---

## **Warning**

- The configured nest cannot be moved. If its location changes, the nest RTK base station needs to be calibrated again.
  - When configuring the nest, it is necessary to set up a backup landing point to ensure that the backup landing point is within 50 meters near the nest.
  - When using the remote controller to connect the nest for local debugging, make sure to keep a safe distance from the cabin door to avoid personal injury when opening/closing the cabin door.
  - When the aircraft is placed on the nest landing pad, ensure that the charging cable of the aircraft charging stand is firmly connected to the battery; before performing the door closing operation, be sure to hold the aircraft propellers so that they are inside the landing pad and turn the two blades of each propeller to form an angle of 90°, preventing the damage to the blades when closing the door.
  - After the local debugging is completed, remove the connection between the remote controller and the nest, and close the power distribution cabinet door.
- 

## **Automatic Flight Test**

After the configuration of the nest is completed, routes and missions can be created through AICS, and missions can be issued to the nest for flight testing to ensure that the nest and the aircraft can work normally.

## **Use AICS to Add Nest and Aircraft**

1. On the Chromium browser in computer, access: <https://skycc.autelrobotics.cn/> ; log in to the platform account obtained in advance to enter the AICS page.
  2. In the "Nest" sub-page of AICS, click the "Add Nest" icon, and enter relevant information in the pop-up Add Nest interface to complete the addition of the nest.
  3. In the "UAV" sub-page of AICS, click the "Add Aircraft" icon, and enter relevant information in the pop-up "Add Aircraft" interface to complete the addition of the aircraft.
- 

## **Important**

In the Add Nest interface, be sure to complete the RTK configuration synchronously to ensure the accuracy of subsequent mission execution and support the configuration of multiple groups of RTK accounts.

---

# Create Routes and Missions

---



## Warning

- After establishing a new route, it is necessary to conduct on-site flight tests.
  - When creating a new flight route, please ensure that the flight area is in an uncontrolled area, or apply for flight authorization and report to the local aviation authority in advance for controlled airspace.
- 

1. In the "Route Library" sub-page of AICS, click the "+ Route" icon, configure the relevant route information in the pop-up Create Route interface, and complete the new route in the Route Task Editing page.
  2. In the "Task Library" sub-page of AICS, click the "+ Task" icon, select the nest and created route added in the above steps on the new task interface, set the task strategy to execute immediately, confirm the execution method is nest execution, and confirm the task to be issued to the nest after completing the relevant information input.
- 



## Important

- When creating a route, users can also choose to import KML or KMZ format files in the "Route" column to generate routes. After importing such file, please check whether the route generated meets the requirements.
  - Before issuing a task, please make sure to set "Route Accuracy". It is recommended to use RTK positioning, which supports the following three methods:
    1. Use the nest RTK service. When using this method, it is required to calibrate the RTK base station of the nest in advance.
    2. Use the network RTK service and log in to it through the nest. When using this method, it is required to configure an RTK account in AICS.
    3. Use 4G network RTK service to log in through the aircraft terminal. When using this method, it is required to install a 4G Dongle module (with a 4G SIM card inserted) and an RTK module on the aircraft, and configure an RTK account in AICS.
- 

# Perform Flight Missions

1. After starting to execute a mission, the nest will open its cabin door and its centering rods. After the aircraft takes off, the cabin door will be closed; the aircraft begins to perform the flight route mission.
2. In the "Live" column of AICS, you can view the real-time status and real-time alarm information of the nest and the aircraft; in the live small window in the upper right corner, you can view the real-time screen of the nest and aircraft; on the map interface, you can view the route information of the aircraft in real-time.
3. After completing the flight mission, the aircraft returns to above the nest. At this time, the cabin door of the nest opens. After the aircraft lands on the landing pad of the nest, the centering rods close

and the cabin door of the nest closes.

4. After completing the flight mission, you can view the media folder generated by the flight mission in the "Results" column of AICS. Click to open the folder to view detailed media files.

---

### **Warning**

- When creating an automatic flight test route through AICS, be sure to keep the remote controller connected to the nest; in case of accident, you can take over the aircraft at any time by controlling the remote controller sticks.
  - Please adjust and fix the camera angle manually according to the footage of the nest monitoring camera to ensure that the footage can cover the landing pad and the monitoring camera will not loosen due to vibration.
  - It is necessary to conduct a backup landing point test before flight testing to ensure that the backup landing point settings meet expectations.
- 

## **Before Leaving Checklist**

Before leaving the scene, please make sure to check and confirm the following items:

- ☐ Confirm that AICS has no abnormal alarm.
- ☐ Confirm that the mechanical wind speed sensor is installed securely; after you turn the mechanical wind speed sensor with your hand, there will be data displayed on AICS.
- ☐ Confirm that the surface of the rainfall sensor is clean and tidy, without any debris covering it; after you gently tap the rainfall sensor with your hand, there will be data displayed on the AICS.
- ☐ Confirm that the surface of the temperature and humidity sensor is clean and tidy, without any debris covering it; after you touch the temperature and humidity sensor with your hand, there will be data displayed on the AICS.
- ☐ Confirm that the surveillance camera footage in AICS completely covers the landing pad, and the surveillance camera is locked firmly.
- ☐ Confirm that the leakage protection button in the power distribution cabinet is pressed and the miniature circuit breaker is turned to the ON position; the debugging button and BOOT button at the upper right corner of the distribution cabinet are in the released state; the distribution cabinet is clean and tidy without debris, and the distribution cabinet door is locked.
- ☐ Confirm that there are no foreign objects or dirt on the surface of the landing pad; there are no foreign objects or dirt on the surface of the charging connector interface on the landing pad.
- ☐ Confirm that the aircraft is correctly positioned on the landing pad, with its nose and tail facing correctly.
- ☐ Confirm that a microSD card has been inserted into the aircraft and that all protective covers on the fuselage are tightly closed.
- ☐ Confirm that the aircraft battery is in a locked state, and the charging cable of the charging stand is firmly connected to the battery.

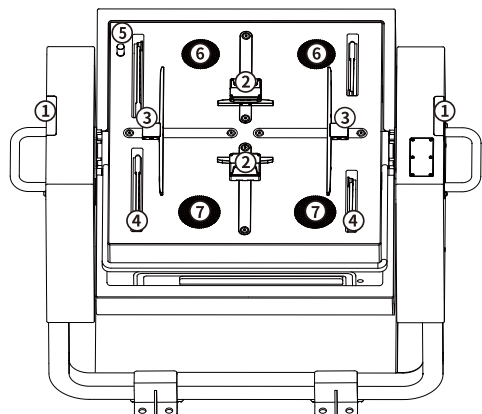
- ☐ Confirm that the charging interface surface of the aircraft charging stand is clean and free of foreign objects.
- ☐ Confirm that the aircraft arms are fully deployed and the motor surface is clean without foreign objects.
- ☐ Confirm that the aircraft propellers are installed correctly and are locked firmly, the blades are not damaged or deformed, the blade surface is clean and free of foreign objects, and have been turned inside the landing pad.
- ☐ Confirm that the visual obstacle avoidance lens of the aircraft, the lens of the gimbal camera, and the lens of the auxiliary light are free of foreign objects, dirt, fingerprints, and are not blocked by the mounting or external accessories on the fuselage.
- ☐ Confirm that the protective cover of the aircraft gimbal has been removed and the three-axis movement of the gimbal camera is normal.
- ☐ Confirm that the aircraft backup landing test has been completed.
- ☐ Confirm that the centering rods of the landing pad are closed and closely connected to the aircraft charging tripod.
- ☐ Confirm that the cabin door is closed, the surface of the cabin door is clean and tidy, and there is no debris around the door.
- ☐ Confirm that the waterproof cover of the power distribution cabinet interface is secured firmly, and the bottom waterproof cable sleeve is tightly clamped without falling off.
- ☐ Confirm that the official authorization for the target flight airspace has been obtained for the aircraft and the lifting application has been completed (if necessary).

# Appendix

## Nest Indicator Light

The nest indicator lights are located on the antenna cover on both sides of the nest and can be used to assist in understanding the current working status of the nest.

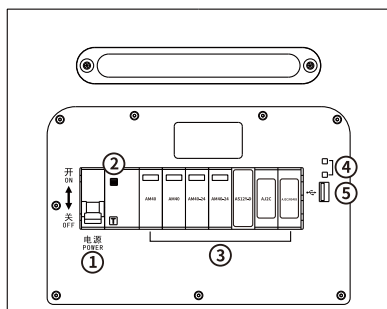
Indicator light status	Nest working status
Green light is always on	The nest is running normally
Green light flashing	The nest is being upgraded.
Red light flashing	Nest alarm/emergency stop button pressed



- ① Nest Indicator
- ② Charging Connector
- ③ Centering Rod
- ④ Propeller Rod
- ⑤ Inside Temperature and humidity Sensor
- ⑥ AC Air Inlet
- ⑦ AC Air Outlet

## Nest Power Distribution Cabinet

The nest's power distribution cabinet is located on the one side where the weather monitoring pole is installed. You can rotate the triangle key clockwise 90 ° to open the distribution cabinet door. The distribution cabinet has leakage protectors, various lightning protection devices, as well as local debugging interface and debugging/BOOT buttons.



- ① Miniature Circuit Breaker
- ② Leakage Protector Button
- ③ Surge Protector
- ④ Debugging Button/BOOT Button
- ⑤ Local Debugging Interface

## Warning

The debugging button/BOOT button is only for technical personnel in testing. Please do not press it when deploying and configuring the nest on site. The debugging button/BOOT button should be kept in the released state.



**Contact**  
Autel Robotics Support



**This content is subject to change without notice.**  
Download the latest version from  
<https://manuals.autelrobotics.com/?dir=/EVO%20Nest/Suite/#/home>.

**EVO Nest** is a trademark of Autel Robotics.  
Copyright © 2024 Autel Robotics All Rights Reserved.