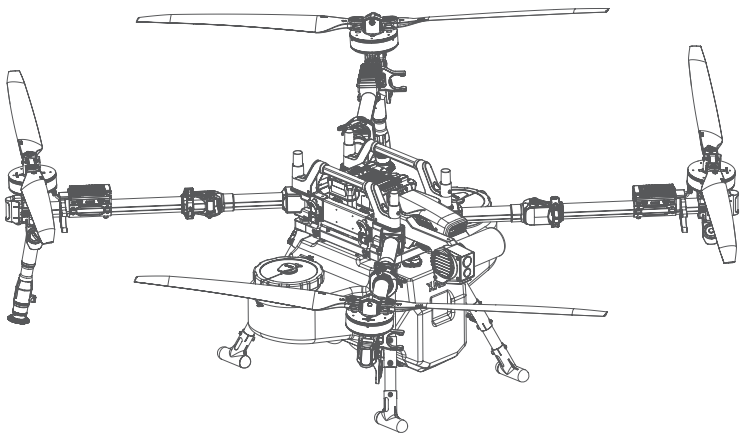
XAG **P150** 2024 Agricultural Drone

(Model: 3WWDZ-60AH)

User Manual

Version 1.5 EN



XAG ADVANCING AGRICULTURE

To User

Dear user, thank you for choosing XAG's products.
For safety purposes and better user experience, it is highly recommended that you read this manual carefully and strictly follow the instructions hereof.

Contact Us

Manufacturer: Guangzhou Xaircraft Technology Co., Ltd.
Add: XSpace, No.115, Gaopu Road, Guangzhou, Guangdong Province, China
Technical Support Team: support@xa.com

目录

Disclaimer 1

Safety Guidelines 3

Introduction 6

List of Items 6

Main Components 8

Prepare Drone 9

- Install RevoSpray 9
- Unfold Arms 10
- Unfold Spray Rods 11
- Install Propellers 11
- Unfold Propellers 12
- Prepare Batteries 13
- Tank Filling 15

Prepare Remote Controller 17

- ACS4 17
- SRC4 21

How to Use 24

- Download "XAG One" App 24
- Add a Device 24
- App UI 25
- Firmware Update 28
- Flight Restrictions 28
- Create a Field 30
- Manage Fields 31
- Offset Correction 32
- Start Operation 32
- Multi-field Operation 34
- Operation Records 34
- Safe Parking 35
- Operation Template Sharing 35

Device Sharing 35

Maintenance 36

Post-operation Cleaning 36

Regular Maintenance 36

Transportation 39

Appendix 40

Indicator Description 40

Wiring Quick Guide 42

Troubleshooting 43

Specifications 48

Compliance Information 53

Disclaimer

1. Please read this document carefully before using the product, as it concerns both operational safety and your legitimate rights and interests. You shall be deemed to have read, understood, agreed, and acknowledged all terms and conditions and information stated herein upon the use of the product.
2. The product is not intended for recreational use and carries certain safety risks. It is NOT suitable for individuals under 16 years old, those with limited or no capacity for civil conduct, individuals with mobility impairments, or those without conventional agricultural UAS operator certificates as required by local laws and regulations. Please ensure that individuals falling under these categories do not come into contact with or use this product. Exercise extra caution when operating in the presence of children, crowds, or animals.
3. The product, manufactured by XAG, is a multi-rotor agricultural unmanned aerial vehicle solely for agricultural use. Please read this User Manual carefully to scrutinize your legitimate rights and interests, responsibilities, and safety guidelines, or it may pose risks of property loss, flight accidents, or personal injury.
4. User pledges to use the product within the bounds of the law only for a legitimate purpose and acknowledges the terms and conditions herein and the future policies or norms formulated by XAG. User understands and accepts that the product has the features of uploading and saving flight records and operation data to XAG's server during operation. XAG assumes no responsibility for the failure to analyze the above-mentioned records and data caused by any failure to upload and save them ascribed to user's reasons.
5. Please install, use, transport, and maintain the product under the instructions of the User Manual. Do not adapt, modify, or dismantle the product without permission. Any malfunction or damage caused by improper use, adaption, modification, or dismantling of the product by the user will not be covered under the warranty, and all resulting financial and legal responsibilities shall be borne solely by the user.
6. To the maximum extent permitted by law, under no circumstances shall XAG offer an implicit or explicit guarantee for this product, including but not limited to implicit guarantees pertaining to vendibility, fitness for a particular use, or non-infringement.
7. To the maximum extent permitted by law, XAG shall not be liable for all losses incurred by user's improper use. Also, XAG shall not be liable for any indirect, consequential, punitive, accidental, special, or exemplary damage, including any loss resulting from your purchase, use, or inability to use the product, even if you have been advised of the possibility of such loss.
8. To the maximum extent permitted by law, under any circumstances, the liability or compensation amount from XAG to you for all damage, losses and litigation arising therefrom will not exceed the amount that you paid to XAG for purchasing the product.
9. You understand that in the use of any products, accidents may occur due to single or combined factors, including but not limited to improper operation, surroundings, and communication networks. You understand that the aforesaid accidents are reasonable and acceptable in the use of the product, and that XAG shall not be held accountable for such accidents.
10. On any account, purchaser or user shall comply with the laws and regulations of the country and the region where the product is used. XAG shall assume no liability arising from your violation of relevant laws and regulations.

11. Please note that, as services provided by the product and its auxiliary devices may involve the capture, storage, and processing of geographic information and data on the fields, the use of the product shall comply with local laws and regulations dealing with such issues. Otherwise, the user shall bear the sole responsibility, both financially and legally, for any illegal acts.
12. As exclusion clauses may be prohibited by some laws and regulations, your rights and interests may vary. However, this does not imply that the terms contained in this Disclaimer are necessarily invalid.
13. To the extent permitted by law, XAG reserves the rights for final explanation and revision of the terms and conditions hereinabove. XAG also has the right to update, modify, or terminate these terms and conditions via channels including its official website, the User Manual, and online App, without prior notice.

Warning

User should read through the User Manual and obtain a UAS operator certificate accredited by XAG or laws, regulations, and policies of their country or region before using the drone and associated products. Failure to do so may result in serious injury to yourself or others, damage to the product, or loss of property. User should be highly safety conscious. In addition, this product is not suitable for individuals under 16 years old, or those with limited or no capacity for civil conduct. Please install and use the product by strictly following the instructions in XAG's User Manual.

Safety Guidelines

Safety Rules

- Please make sure that you have completed a drone pilot training program, passed the exam, and obtained a UAS operator certificate prescribed by laws and regulations where the product is used before use. Otherwise, you shall NOT operate the product.
- Instead of operating alone, the beginner should seek help from a veteran beforehand and operate the drone accompanied by a veteran.
- It is necessary to observe the surroundings in advance to ensure an open operation area with no buildings and obstructions around, clear of electromagnetic interference sources including high-voltage lines, base stations, and radio towers, far away from obstacles and crowds, and free from potential hazards. Please refrain from indoor flying.
- For safety purposes, it is advisable to remove all propellers before each flight or after firmware update until you conduct a trial run of the drone, inspect the remote control devices, motors, and other modules, and ensure everything is in order.
- Please see that all parts are intact and that those aging or broken are replaced before each flight. All devices should be sufficiently charged. When the battery runs low during operation, you should return the drone immediately and replace the battery.
- Please see that areas where the drone is going to fly have good and stable signal coverage since sustained RTK and 4G networks are essential for the drone to function properly.
- It is required to keep the firmware and the "XAG One" App up to date before each flight.
- You should strictly observe local laws and regulations on flying agricultural drones, including but not limited to the rules on flight height, flight area, and visual line of sight.
- It is advisable to use the product on sunny, cloudy, or overcast days with winds of force 3 or below. NEVER use it in adverse weather conditions including rain, snow, frost, fog, thunder, hail, dust storms, and gale, or in an area with strong electromagnetic interference.
- Hover and return the drone immediately when encountering bad weather, such as gale, rain, snow, or hail, or other causes preventing operation. In case of conditions unfavorable for returning, hover and fly the drone toward a safe place nearby immediately.
- Please ensure that the drone does not carry a load beyond the safe takeoff weight specified in this User Manual. Overload, a safety hazard, is NEVER allowed.
- To prevent impurities from clogging the tubes, please mix pesticide with clean and purified water and filter it before adding it to the tank.
- Be cautious when preparing and spraying pesticides. Using personal protective equipment is highly advisable. Refrain from direct contact with the pesticide. Avoid splashes that may result in damage to the drone and bodily injury. (See pages 16 for "Precautions for Pesticide Preparation")
- Before spraying, please see that propellers are free of damage and contaminants. Also, they should be securely installed with blades fully spread out. Motors on the drone should be clean and intact. Ensure the spraying system runs smoothly.
- Before spraying, please see that the space around the takeoff point and along the route is open and far from crowds. Besides, select an appropriate height for takeoff/return according to the working environment.
- Be environmentally aware when preparing and spraying pesticides. It is prohibited to pollute rivers and drinking water sources.

- Make sure to keep the drone in view and stay alert for obstacles throughout the operation. Autonomous obstacle avoidance will not work when the obstacle avoidance module fails to recognize some hard-to-identify obstacles, like sloping power lines, due to their special material, size, shape, and position. In that case, please maneuver the drone manually at once.
- Strong and stable GNSS signal coverage throughout the operation is a must to complete the task.
- No crowd, animal, or obstacle is allowed to stay near the spinning propeller which is hazardous. NEVER approach the running propeller and motor or touch them with any object. NEVER wear loose-fitting clothing as it could pose an entanglement hazard.
- The electromagnetic compatibility test reveals that the product meets the Class B requirements of test method GB/T17626.3 outlined in the Technical Specification of Quality Evaluation for Crop Protection UAS (NY/T 3213-2018) in the radiated, radio-frequency, electromagnetic field immunity test results conducted within the radiated interference frequency range of 30 MHz-230 MHz (quasi-peak value: 50 dB, μV/m), 230 MHz-1 GHz (quasi-peak value: 57 dB, μV/m), 1 GHz-3 GHz (average/peak value: 56/76 dB, μV/m), and 3 GHz-6 GHz (average/peak value: 60/80 dB, μV/m). However, should the ambient radiated interference frequency exceed the above peak ranges, the reliability of the product may be affected.
- During takeoff, operation, or return, the operator should carefully observe the drone's surroundings. If spotting people, animals, or obstacles along the route, immediately steer the drone away to avoid accidents.
- NEVER install/remove any module or insert/extract any circuit while the power is on.
- Please charge the remote controller or the drone when the battery level drops below 20% to avoid damage to the device caused by overdischarge due to prolonged storage at a low charge. When the drone sits idle, remove the battery and store it separately in a dry, well-ventilated, and clean place at a charge between 50% and 60%.
- Be sure to remove the battery and put it in a safe and level place before transporting the drone.
- When the drone sits idle, or for long-term storage or long-haul transportation, it is necessary to remove and empty the liquid tank, and store the drone in a cool, dry place.
- Keep the product away from heat to prevent damage to the electronic component and other parts or fire incidents.
- Never take human bodies or animals, whether static or in motion, or other hazardous objects as obstacles in the obstacle avoidance experiment.
- Do NOT use non-XAG components as they may seriously affect the safety and service life of the drone.
- Do NOT turn off the communication device connecting to the drone during the flight. Do NOT make or answer phone calls during operation. Do NOT fly the drone after drinking alcohol or taking medication.
- Since the drone requires access to both RTK and a 4G network for operation, it is important to thoroughly understand local network conditions before making a purchase.
- As insufficient mobile data will prevent the drone from accessing real-time locations, please make sure you have adequate data for the operation.
- The drone comes with a built-in SIM card. Upon activation of the whole set of devices, XAG will provide each account with 2GB of free basic data. Extra data, if needed, can be purchased through the "XAG One" App - Device Details - Mobile Data. If the SIM card remains inactive for two consecutive years, it will be automatically deactivated.

Safety Sign



Personal Protection



Read User Manual First



Install Blades Properly



High Voltage



Toxic Hazard



Risk of Pinching Hands



Hot Surface



Mind the Blade



Do Not Press



Do NOT Fold Blades Here



Put Blade Holder Here

Read/Download E-Document

Scan the QR code below to read/download this User Manual.

Note

⚠ The instructions in this document will be updated and improved on a continuous basis. You can scan the QR code to read or download the latest version of the "XAG P150 2024 Agricultural Drone User Manual".

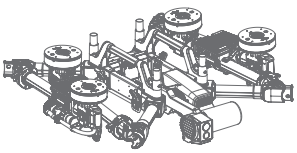
Introduction

XAG P150 2024 Agricultural Drone, or the "drone", features a new generation of architectural design. It delivers a giant leap in payload capacity and intelligence through a more robust and efficient airframe structure, powerful propulsion system, brand-new X5 Pro flight controller, and highly integrated 4D radar perception module. Coupled with the high-precision, ultra-high flow-rate operation by the 4th generation RevoSpray and RevoCast systems, and the instant map generation by the 3rd generation RealTerra system, it is a highly efficient and reliable new flagship of smart agriculture that caters to various farming scenarios.

List of Items

The list below contains three boxes - **P150 airframe**, **XAG P150 RevoSpray 4**, and **remote controller**[1]. Please see that all of the following items are present when unpacking the boxes. Should there be any item missing, please contact your seller immediately.

P150 Airframe



P150 Airframe
×1



CW Propeller
×2



CCW Propeller
×2



Tool Kit
×1

Blade Holder-Model 1



Blade Holder
(M1 & M2)
×2



Blade Holder
(M3 & M4)
×2

Blade Holder-Model 2



Blade Holder
(M1 & M2)
×2

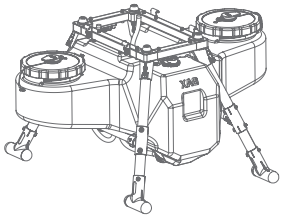


Blade Holder
(M3 & M4)
×2

Note

⚠ The drone comes with two models of blade holders. Please refer to the actual model shipped.

XAG P150 RevoSpray 4



XAG P150 RevoSpray 4
×1

Remote Controller - XAG Agricultural Control Stick 4 (ACS4)

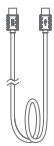


ACS4
×1

Remote Controller - XAG Smart Remote Controller 4 (SRC4)



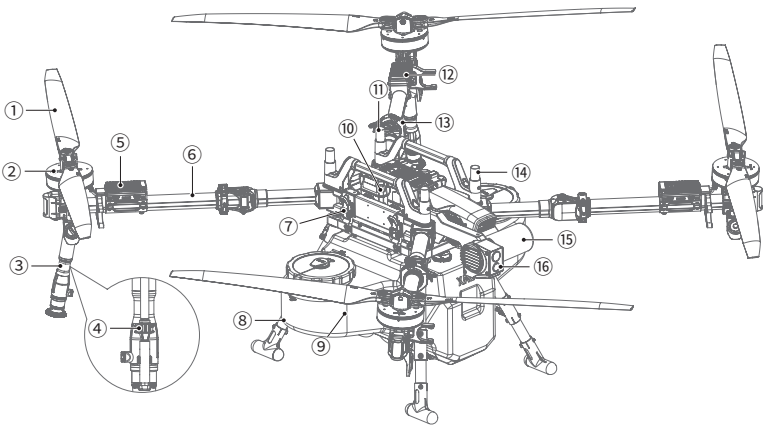
SRC4
×1

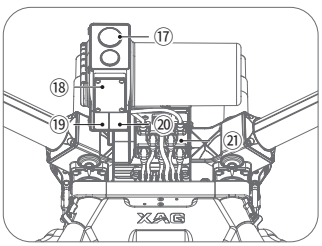


Type-C Cable
×1

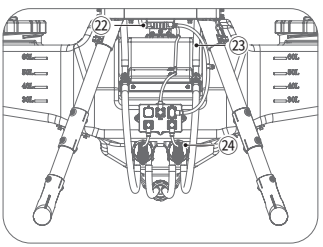
[1] The remote controller comes in two options, the ACS4 and the SRC4. Please refer to the actual model you purchase.

Main Components





Front Bottom View



Rear View

① Propeller
② Motor
③ Spray Rod
④ Anti-drip Valve
⑤ ESC
⑥ Foldable Arm
⑦ Airframe Hasp
⑧ Landing Gear
⑨ Liquid Tank
⑩ Battery Compartment
⑪ RTK Antenna[1]
⑫ Arm Light
⑬ Arm Fastener
⑭ Wi-Fi Antenna[2]
⑮ 4D Imaging Radar
⑯ Forward FPV Camera
⑰ Forward Searchlight
⑱ Terrain Radar
⑲ Downward Fill Light
⑳ Downward FPV Camera
㉑ Cable Hub
㉒ Payload System Cable
㉓ Liquid Tube
㉔ Flexible Impeller Pump

[1] RTK antennas are positioned diagonally.
[2] Wi-Fi antennas are positioned diagonally.

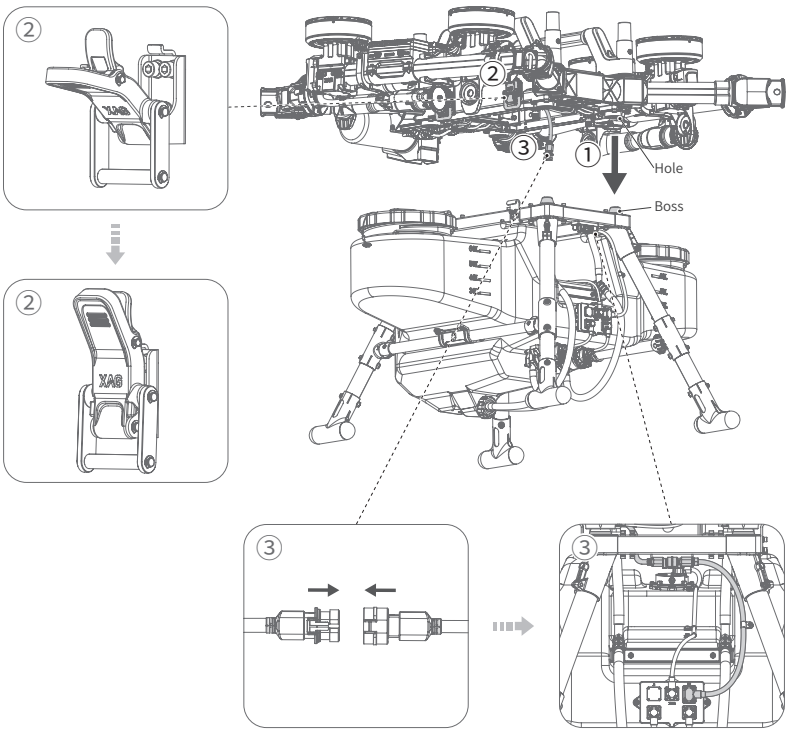
Prepare Drone

Install RevoSpray

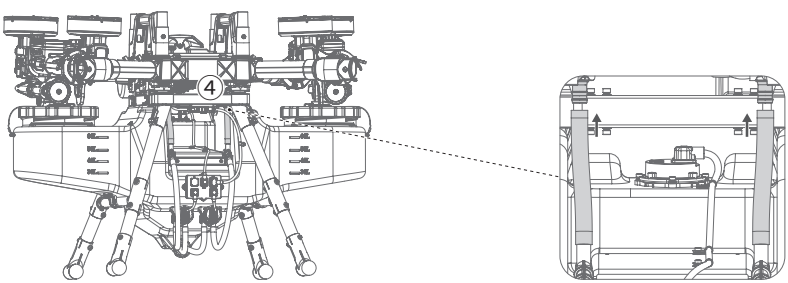
① Secure the airframe onto the RevoSpray by aligning the holes of the airframe with the bosses on the RevoSpray.

② Open the two hasps on each side of the airframe and fasten the airframe to the RevoSpray.

③ Connect the payload system cable of the airframe to that of the RevoSpray, then affix them to the cable holder.



④ Connect the two liquid tubes to the pump of the RevoSpray.

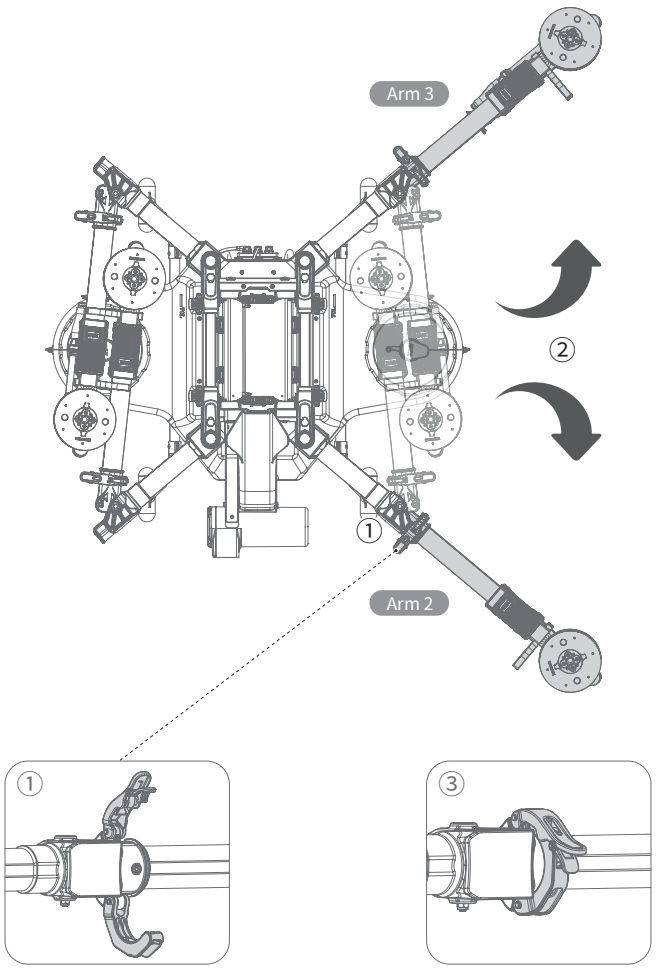


Unfold Arms

① Release the fasteners on arms 2 and 3 (take the left arm as an example).

② Gently spread arm 3 (the outer one) to disengage the fastener securing arm 2. Then unfold arm 3 followed by arm 2.

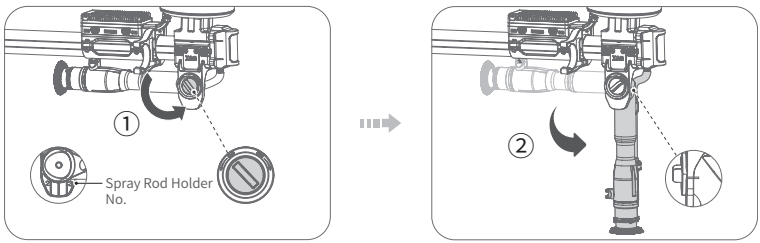
③ Once fully unfolded, secure the fasteners on arms 2 and 3.



Unfold Spray Rods

① Loosen the spray rod knob by turning it counterclockwise.

② Spread out the spray rod to its maximum angle limit, and then tighten the knob clockwise.

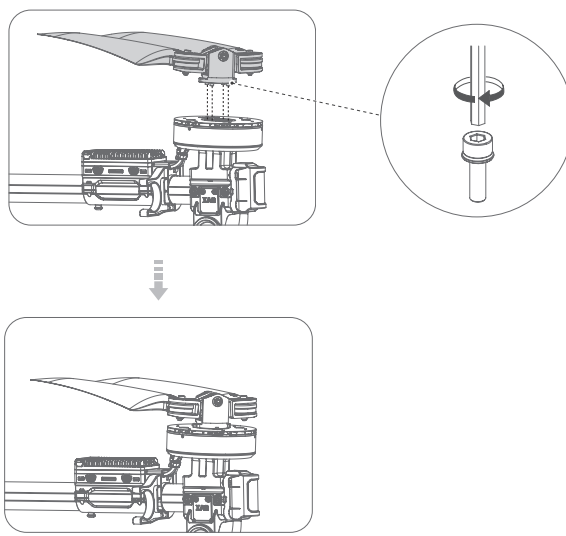


⚠ Note

⚠ Before unfolding the spray rod, ensure that the numbering on the rod holder matches the respective arms: holder 1/4 is for arms 1 and 4, while holder 2/3 is for arms 2 and 3. When installing the rod, ensure that both the rod and its knob are correctly inserted into the corresponding rod holder (with the knob facing toward the nose of the drone).

Install Propellers

Place the CW propellers on the CW motors of arms 1 and 3, and the CCW propellers on the CCW motors of arms 2 and 4. Use the L-shaped wrench and weighted socket from the tool kit to tighten the 4 screws that secure the propeller to the propeller base (4 screws for each base) to complete the propeller installation.

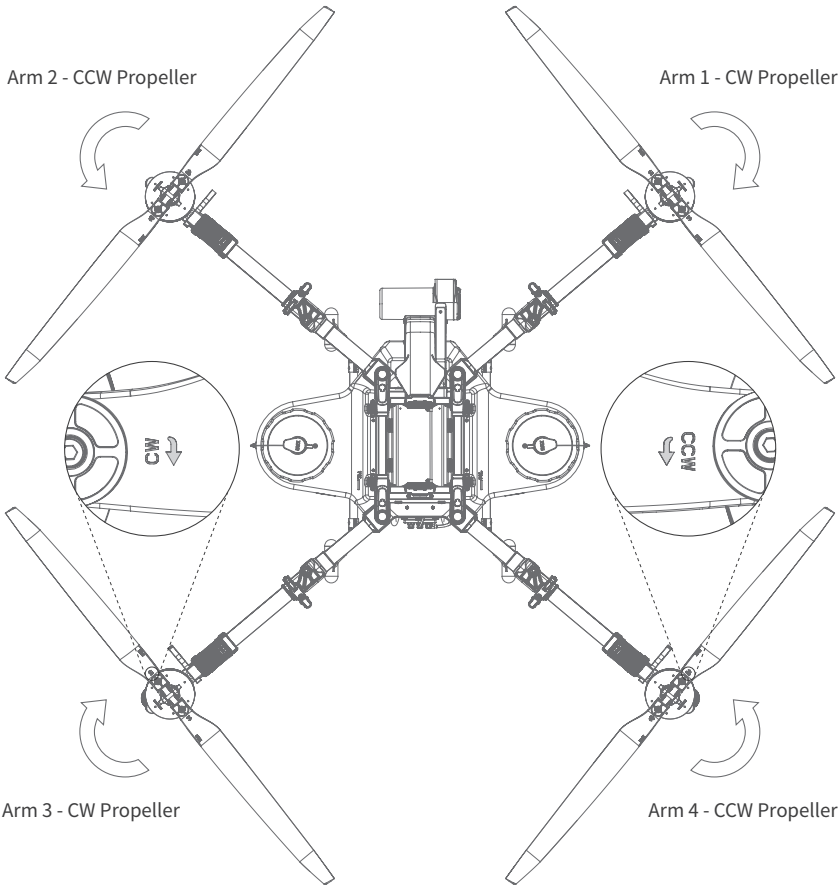


⚠ Note

⚠ **CW propeller and CCW propeller are NOT interchangeable, or it may cause accidents.**

Unfold Propellers

Spread out 4 propellers and see whether their models, which could be found between the clamp and the blade, match those on the arms respectively. CW propellers, rotating clockwise, should be on Arms 1 and 3. CCW propellers, rotating counterclockwise, should be on Arms 2 and 4.



Prepare Batteries

The 2024 P150 Agricultural Drone is compatible with three types of batteries: B13960S and B13970S Smart Supercharge Batteries (referred to as "the batteries"). This user manual will use the B13970S Smart Supercharge Battery as an example.

Power ON / OFF

While the battery is off, connect it to a charger or a device. Press and hold the power button for 2 seconds until all the battery level indicators flash simultaneously. Then release the button. The status indicator will light up, indicating successful power-on.

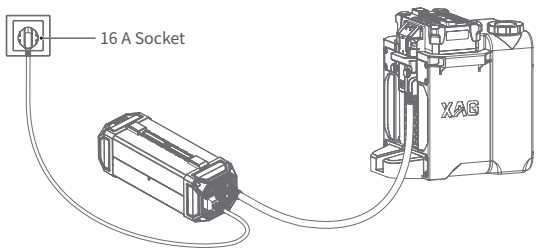
While the battery is on, press and hold the power button for 2 seconds until all the battery level indicators flash simultaneously. Then release the button. The status indicator will go off, indicating successful power-off.

Charge

When using a Supercharge Station or a charger to charge the battery, the charging process will automatically stop once the battery is fully charged, and the battery will power off automatically.

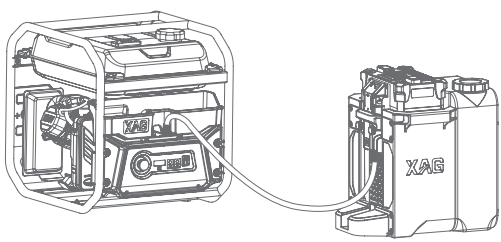
Charge with Charger

CM13600 Charger



Charge with Supercharge Station

GC4000+ Auto SuperCharge Station

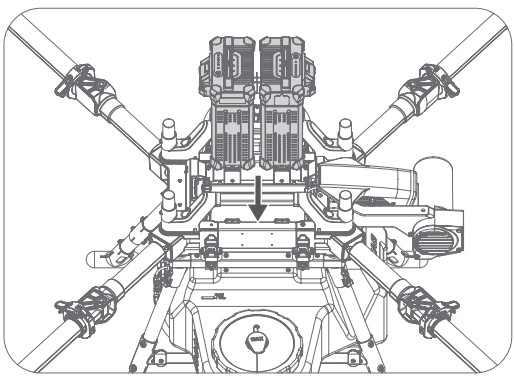


⚠ Note

- ⚠ For water or mist cooling, submerge the battery in clean, non-corrosive water for a maximum of 60 minutes. Ensure that the water level remains between the Min and Max marks on the battery casing for optimal heat dissipation. Do not fully submerge the battery in water.
- ⚠ Before charging, please see that the power contact is clean and dry and the charging plug and battery interface are free of any metal objects or liquid residue.
- ⚠ While charging, monitor the water level in the battery cooling tower. If it falls below the Min mark, refill with fresh water without exceeding the Max mark.
- ⚠ While charging, be sure to prevent water from the water/battery cooling tower from splashing onto the charger or supercharge station to avoid power failure or damage to the station and battery.
- ⚠ If you need to remove the battery during charging, please turn off the battery or the supercharge station first. Direct removal may cause the supercharge station to trigger over-voltage protection, resulting in a shutdown.
- ⚠ Please remove the battery before draining the water/battery cooling tower.

Install Batteries

Insert the battery into the battery compartment until hearing a clicking sound.



⚠ Note

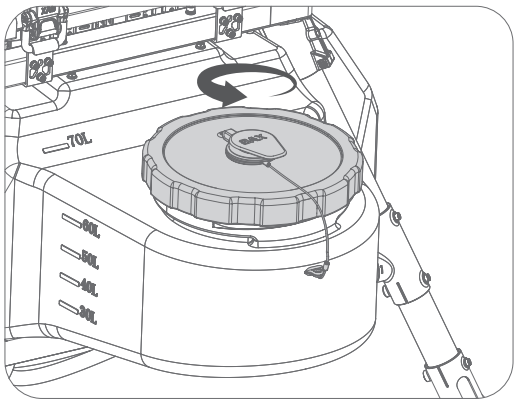
- ⚠ Before installing the battery, please keep the power connector of the drone and the battery connector clean, dry, and free of metal foreign objects and liquid.
- ⚠ When equipped with batteries B13960S, the P150 is unable to perform full-load flight operations. To ensure operational safety, when fitted with either RevoSpray or RevoCast systems, the maximum payload for the P150 shall not exceed 60 kg. Users shall bear responsibility for any battery malfunctions, flight incidents, or safety issues resulting from overloading.
- ⚠ Before powering up the battery, please ensure that it has been fully inserted into the battery compartment, or it may cause a flight accident during operation.

Tank Filling

You can fill the tank directly or with a pump nozzle.

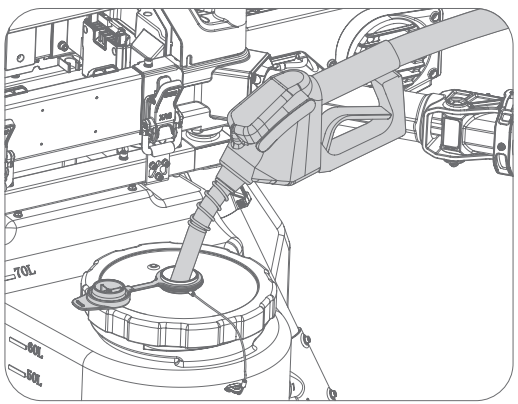
Fill Directly

Unscrew the cap counterclockwise, fill up the tank, and then tighten the cap clockwise.



Fill with Pump Nozzle

Unscrew the cap, fill up the tank with a pump nozzle, and then tighten the cap.



Protective Measures for Pesticide Preparation

Safety is paramount when preparing pesticides, so please strictly follow the guidelines below.

① Wear long-sleeved clothing, trousers, a mask, goggles, and rubber gloves, and stand in a well-ventilated, shady area upwind while preparing pesticides.

② Check your long-sleeved clothing, trousers, mask, goggles, and rubber gloves and replace them immediately if worn.

③ During pesticide application, refrain from smoking, eating, or drinking. If the tubes or nozzles become clogged, do not attempt to clear them by blowing with your mouth; instead, use soft objects or clean water for unclogging.

④ If pesticides accidentally splash into your eyes, rinse with plenty of clean water immediately. If you experience symptoms like headaches, nausea, or vomiting, stop all activities, remove your work clothes, and bring the pesticide packaging to the nearest hospital for medical attention.

⑤ After completing the operation, be sure to wash your hands with soap and thoroughly cleanse your entire body promptly.

⑥ Soak and wash your protective equipment with alkaline water.

⑦ Used pesticide containers and packaging should be collected and disposed of properly. Under no circumstances should they be casually discarded in ditches, wells, or areas frequented by humans and animals to prevent pesticide contamination, poisoning, or environmental pollution.

Precautions for Pesticide Preparation

- When handling pesticides, it is important to follow the safety instructions provided by the pesticide manufacturer.
- During operation, attention to drone protection is just as vital as ensuring personal safety. Prevent the entry of pesticides into the circuit board during tank installation/removal to avoid short circuits that may damage the drone. Minimize device failures caused by improper handling.
- Pesticides should be prepared with clean water; avoid using dirty or muddy water as they can reduce the dispersity, wettability, and permeability of pesticides in water, leading to precipitation and reduced efficacy. Impurities in water may degrade some active ingredients in pesticides, diminishing their effectiveness.
- After adding clean water, thoroughly stir the pesticide mixture to ensure full dissolution, minimize precipitation, and enhance pesticide effectiveness. Avoid using warm water as it may cause the solution to crystallize and precipitate.

Pesticide Poisoning Symptoms and Emergency Response

Symptoms: dizziness, headache, nausea, vomiting, excessive sweating, chest tightness, blurred vision, weakness, shortness of breath, increased heart rate, and in severe cases, incontinence and constricted pupils.

Emergency Response: In case of ingestion, do NOT induce vomiting. Immediately take the individual to the hospital with the pesticide label.

Prepare Remote Controller

There are two types of remote controllers: ACS4 and SRC4. Unless otherwise specified, the features or precautions described in this document for the "remote controller" apply to both models.

⚠ Warning

⚠ As the remote controller is specially designed for XAG's product, most likely it is not compatible with non-XAG products. User who uses it on other products shall be held accountable for the damage and legal responsibilities arising therefrom.

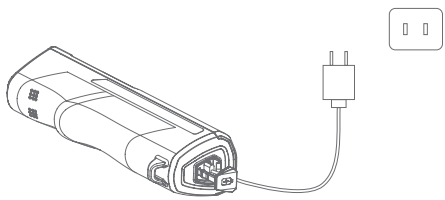
⚠ Since the remote controller is not waterproof, please avoid getting it wet or soaked during charging and use. Otherwise, user shall be responsible for any product failure or damage arising therefrom.

⚠ When flying the drone with the remote controller, please ensure the surrounding area is clear and maintain a safe distance from the drone. Keep the drone away from crowds, animals, or any other obstacles.

ACS4

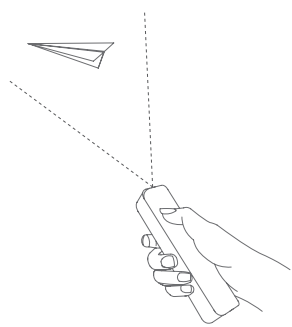
Charging

Insert the Type-C end of the cable into the charging port of the ACS4 and the USB end into the charging adapter before connecting it to a power source. When you hear the voice prompt "charging complete" and the power indicator light turns solid green, the ACS4 is fully charged.



Operation Methods

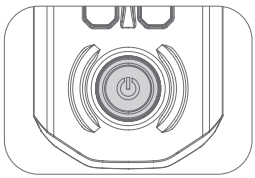
When operating a drone with the ACS4, always make the Wi-Fi antenna on the top of the ASC4 face the drone and avoid obstruction to prevent signal blockage.



⚠ Note

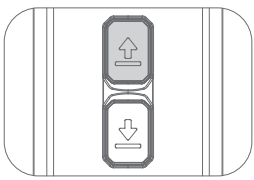
⚠ When operating the drone with the ACS4, the ACS4's warning indicator will blink red, along with a voice prompting "Drone's battery low" when the drone's battery level is less than 20%. During operation, make sure the drone is always within your line of sight, keep a close eye on it, and return or force it to land in a timely manner according to the warning prompts.

Power on/off



- When the ACS4 is off, turn it on by pressing and holding the ⏻ for 2 seconds until you hear the "XAG" voice prompt.
- When the ACS4 is on, turn it off by pressing and holding the ⏻ for 2 seconds until you hear the "power off" voice prompt.

Take-off

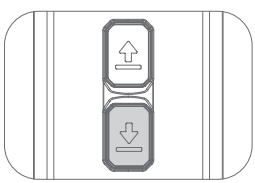


- Press and release ⇧ once, followed by a long press until you hear the voice prompt "take off soon", the propeller will start to idle. Keep pressing until the drone takes off. Alternatively, press and hold ⇧ and ⇩ at the same time, and the drone will automatically take off and hover at 2.5 meters.

⚠ After take-off, the propeller will idle. Please stay away from the drone.

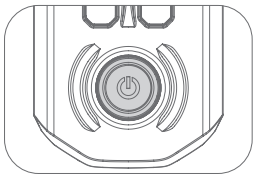
⚠ If the drone does not take off within 5 seconds after the propellers start to idle, it will lock automatically and the propellers will stop.

Landing



- Press and hold ⇩ until the drone lands and the propellers stop. Alternatively, press and hold ⇧ and ⇩ at the same time to land the drone during flight.

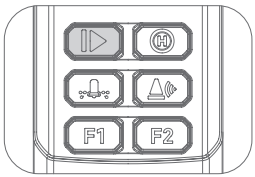
Joystick Lock



- Short press ⏻ to lock the joystick, and the joystick lock indicator will turn solid red; Short press ⏻ to unlock the joystick, and the joystick lock indicator will turn solid green.

⚠ When locked, the ACS4 joystick is disabled for directional control, ascending/descending, and left/right rotation.

One-Tap Operation

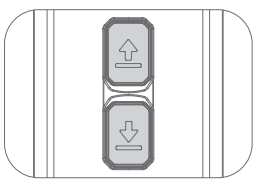


- Press and release ⏯ once, then press and hold ⏯ to activate One-Tap Operation.

⚠ One-Tap Operation allows the drone to take off and resume its previous task from the breakpoint.

⚠ When the drone is on the ground and One-Tap Operation is activated, the propellers will idle. If the drone does not take off within 5 seconds after the button is released, it will automatically lock and the propellers will stop.

Ascend/Descend

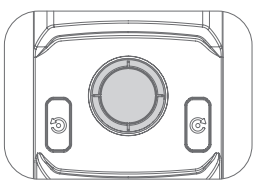


- Short press ⏫ / ⏬ to make the drone ascend/descend by a set altitude. Press and hold ⏫ for continuous ascent/descent.

⚠ Ensure there are no individuals within a 10-meter radius when maneuvering the drone upward or downward.

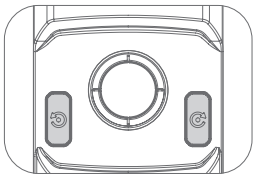
⚠ When flying the drone manually, please make sure the nose of the drone is facing directly forward as you are.

Pitch/Roll



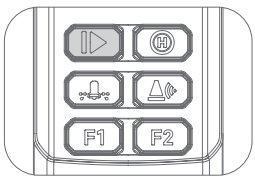
- After unlocking the joystick, you can control the pitch and roll of the drone with the joysticks.

Heading Control



- Short press / to rotate the drone left/right at a specific angle. Press and hold / for continuous left/right rotation.

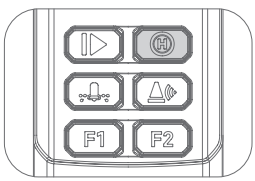
Hover/Resume



- Short press to make the drone hover. Press and hold to resume.

⚠ Resume/Pause operations are actions performed while the drone is in the air.

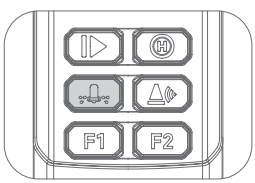
Return to Home (RTH)



- Press and hold to activate RTH.

⚠ When performing RTH with the remote controller, make sure no one is under the return route.

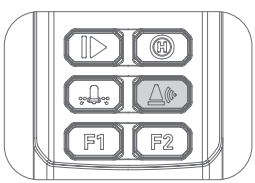
Start/Stop Spraying



- Press and hold to start spraying. Short press to stop spraying.

⚠ The drone cannot spray while hovering.

Enable/Disable Obstacle Avoidance



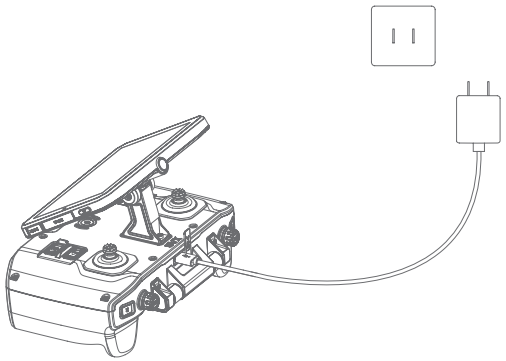
- Press and hold to enable obstacle avoidance, and the indicator light will turn solid green. Short press to disable obstacle avoidance, and the indicator light will turn off.

SRC4

Charging

Insert one end of the Type-C cable into the charging port of SRC4 and the other end into the charging adapter, then connect the adapter to a power source.

While charging with the fast charger, the power indicator will blink rapidly and the buzzer will beep. The power indicator will turn solid green when the SRC4 is fully charged.

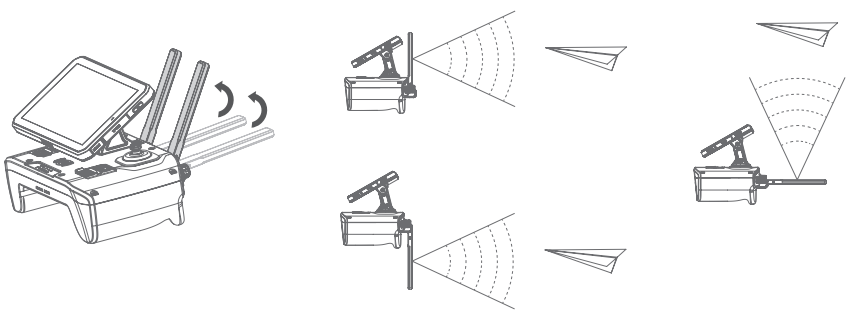


⚠ Note

⚠ When SRC4 is on, slow charging will only allow it to work at a certain battery level. For a full charge, please turn it off.

Unfold Antenna

Spread out the antennas and adjust them to the appropriate positions. Rotate the antennas clockwise to adjust the orientation.



⚠ Note

⚠ The signal strength varies depending on the position of the antenna. When operating the drone remotely, users can adjust the antenna orientation to optimize signal reception.

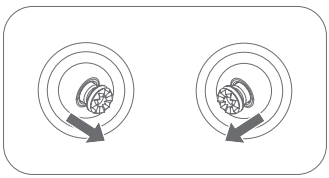
Power on/off

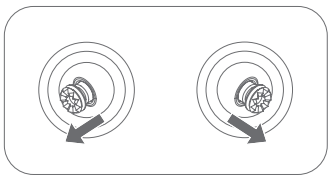
Power on: Press and hold the power button for 2 seconds, the power indicator light will turn solid while the joystick lock indicator will blink, indicating the system is booting up. Once the joystick lock indicator turns solid and you hear the voice prompt "power on", it means the SRC4 has been successfully powered on.

Power off: Press and hold the power button for 2 seconds until all indicators turn off and you hear the voice prompt "power off".

Start Motors

Before take-off, you can start the motors by performing the following two joystick maneuvers. If the throttle is not applied within 3 seconds after releasing the joysticks, the motors will stop automatically.



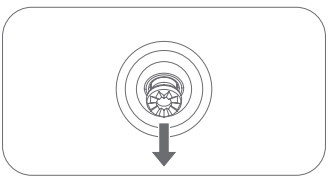


⚠ Warning

⚠ Do NOT push the joysticks to start motors while the drone is flying because it will stop the motors and cause the drone to crash.

Stop Motors

After landing, pull and hold the throttle to the lowest position and the motors will stop after 1 second.



Hover & RTH

When the drone is flying, short press ▷ on the remote controller to make the drone hover. Press and hold ▷ to resume the operation.

When the drone is flying, press and hold ● to perform RTH.

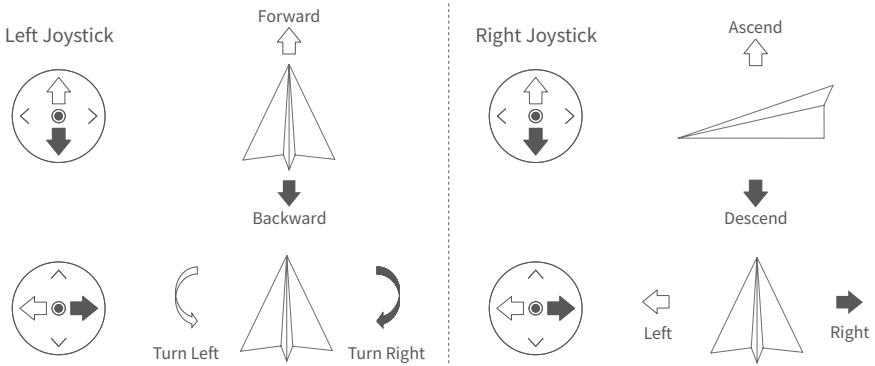
⚠ Warning

⚠ If the joystick malfunctions or the drone becomes uncontrollable, press the Hover button to make the drone hover, and then press the RTH button to bring it back.

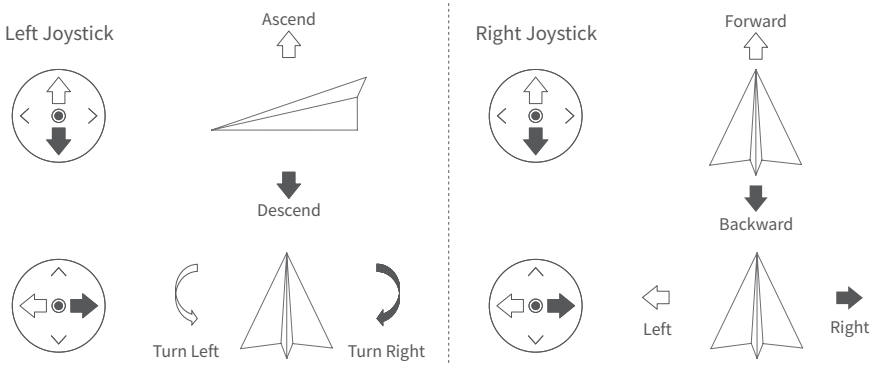
Joystick Mode

The Joystick Mode is divided into Japanese Hand, American Hand and Chinese Hand. The default mode is American Hand (Mode 2).

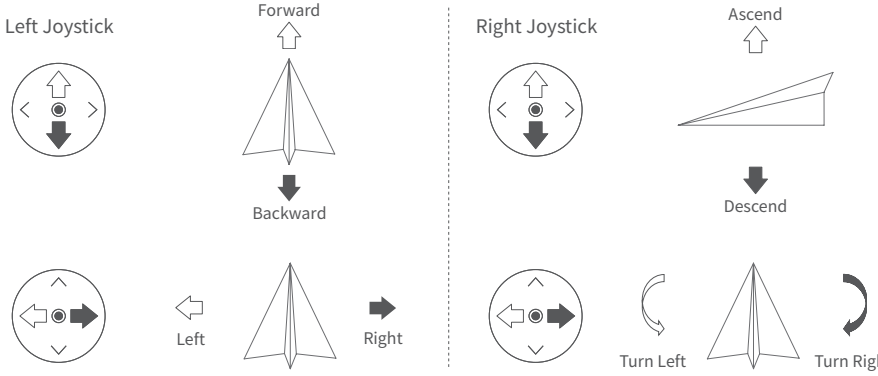
Japanese Hand (Mode 1)



American Hand (Mode 2)



Chinese Hand (Mode 3)



How to Use

Download "XAG One" App

Android system users can scan the QR Code above to download/install XAG One.
iOS system users can search for "XAG One" in the App Store to download and install.

Add a Device

Add a Drone

For the first time use, you need to add the drone to XAG One by following the steps below.

1. Open XAG One, enter the phone number to register for an account and log in.
2. On the home screen (main screen), tap ⊞ in the upper right corner and select "Add a Device". Alternatively, you can go to "Me" - "Device" - " ⊕ " to add the device.
3. Scan the QR code on the nameplate of the fuselage, or enter the serial number on the fuselage.
4. Set the device name and tap "Next".
5. Tap "View Device Details".
6. On the "Device Details" screen, find and select "Set as operation device" to designate this drone as the operation device. You have now successfully added the drone.

Add a Remote Controller

When using the ACS4 for the first time, you need to add it to XAG One by following the steps below.

1. Open XAG One, tap ⊞ in the upper right corner of the home screen (main screen), and select “Add a Device” . Alternatively, you can go to "Me" - "Device" - " ⊕ " to add the device.
2. Scan the QR code on the ACS4 or enter its serial number to add the device.
3. Name your device and tap "OK" to complete the addition.

Bind a Remote Controller

Before using the remote controller to maneuver the drone, you need to bind it by following these steps.

1. Open XAG One, go to "Me" - "Device", and select the drone you want to bind with the remote controller from the device list.
2. Go to "Device Details" - "General" to tap "Bind Remote Controller".
3. Select the remote controller you want to bind and tap "Bind". Now you can operate the drone with the remote controller (refer to pages 17 to 23 on how to use it).

App UI

Home Screen (Main Screen)



List: View Field List, HD Map List, and Device List

Switch Teams: Tap to select the current team

Drone's Location: Drone's current location

Operation Screen: Tap to go to Operation Screen

Operation Records: Tap to go to Operation Records

Feature List: Tap to import data, add a device, etc.

Notifications: Tap to view notifications

Layer: Tap to switch map modes

Track Drone: Access drone's current location

Track User: Access user's current location

Measure: Tap to measure the distance on the map

My Location: User's current location

Mapping Screen: Tap to go to Mapping Screen

Me Screen: Tap to go to Me Screen

Mapping Screen

Tap Home Screen (Main Screen) - "Mapping" to go to Start Mapping Screen.



Collapse: Tap to collapse the current screen

Switch Modes:Tap to select mapping modes (Single-field Mapping/Multi-field Mapping)

More:Other feature settings, such as enabling/disabling Mark with cross cursor marking or virtual keystroke marking, erasing mapping data, and remote controller operation guidance

Undo: Unmark the last boundary point

Field Boundary: Tap to select a boundary type: field boundary, obstacle, or non-spraying zone

Mark by Device: Tap to switch to Fly to Mark, Mark by Remote Controller, or Mark by Rover

Tap to Mark: Tap to switch to Tap to Mark

Save: Save the created field

Start Operation Screen

Tap Home Screen (Main Screen) - "Mapping" to go to the Start Operation screen.



Estimation Operating Parameters: The size of the field to be sprayed and the amount of pesticide required; the operation speed, flight altitude, and flight speed of the drone

Operation Settings: Tap to set spraying parameters and route parameters

Cancel: Cancel current operation

Remote Controller Info: View remote controller information

FPV Camera:i.e. First-Person View. You can view the current flight perspective of the drone

Start Operation: Tap to start operation

Device Details

Tap "Me" - "Device" - "Select Drone" to view the device details of the corresponding drone.

- Tap " ⊞ " to go to "General", where you can perform various operations including binding remote controller, sharing devices, managing cellular data, updating firmware, receiving fault warnings, viewing device logs, subscribing to safety protection services, viewing device info, and setting current operation device.
- Tap " ((•)) " to go to "Communication System", where you can view the current network status (signal strength, signal-to-noise ratio, communication quality), and perform operator settings and network health diagnostics.
- Tap " ✈ " to go to "Positioning System", where you can view information like the drone's RTK positioning status, RTK reference, RTK latency, number of connected satellites, positioning accuracy, and heading accuracy, as well as switch and set positioning mode.
- Tap " 🔋 " to go to "Battery System", where you can view battery information such as remaining battery level, real-time voltage/current, battery temperature, cell voltage, and cycle counts, as well as set the remaining battery level threshold for automatic RTH.
- Tap " 🔔 " to go to "Spraying System", where you can view the information such as the remaining amount of chemical in the liquid tank and the spraying flow rate, as well as perform operations such as discharging the remaining liquid, manual spraying test, general calibration, and test settings (flow rate and rotational speed of the nozzle).
- Tap "⊘ " to go to "Propulsion System". In "Propulsion Motor", you can view the working status of the four motors, and perform the "Idle Test" and "In-situ Takeoff Test".
- Tap " 👁 " to go to "Sensor System", where you can enable/disable terrain following or obstacle avoidance, as well as configure the FPV camera settings.

Firmware Update

Before using the device, you must check if the firmware version is up to date. If not, make sure to install the latest version.

1. Open XAG One and tap "Me"-"Device". Select the drone or remote controller for the operation and go to Device Details. Tap " ⊞ " to go to "General". Tap "Firmware Update" to check for updates.
2. When an update is pushed, tap “Download and Install”. After the update is complete, tap “Finish” and return to Device List to see if all devices for the operation have the latest firmware. If not, repeat the above steps until all updates are complete.

Flight Restrictions

Geofence

Geofence displays and updates information in real time within the fenced area, preventing drones from taking off from or flying into the restricted area. This ensures compliance with relevant laws and regulations. For special needs, users can request permission from competent authorities and seek help from local dealers.

- No-fly zones will be displayed on the map of XAG One. When operating or mapping in these areas, a warning message will be shown, and an error message will appear if a takeoff is attempted. The no-fly zones and license data will be updated every time you open the XAG One.

- Tap "No-fly Zone" in the Settings of the XAG One to view and update the no-fly zone version, check the number of no-fly zones, and add approved no-fly zones.
- For safety reasons, the drone's Geofence system imposes flight restrictions, preventing takeoff from or entry into the no-fly zone. It also limits the drone's altitude and travel distance to ensure safe operation. When GNSS is active, flight is constrained by no-fly zones, altitude, and travel distance. Otherwise, altitude is the only constraint.



Note

⚠ Flying in no-fly zones within 20 kilometers of government buildings, military bases, prisons, nuclear power plants, and airports is prohibited and will result in legal penalties.

⚠ If your operation area falls within a controlled area, you should request permission from local authorities and seek help from local dealers.

Create a Field

Before starting an autonomous operation, you need to create a field. This can be done in two ways: Tap to Mark or Mark by Device. Both methods will be introduced below.

Tap to Mark

After the HD map is generated or imported, you can generate fields by tapping on the HD map to mark them.

1. Open XAG One and tap "Mapping" on the home screen (main screen) to enter the Mapping screen. When you tap to mark, the icon in the lower right corner will be highlighted.
2. Tap the map to mark the boundary points of the field that needs operation (tap at the bottom to undo a marked point). After marking all the boundary points, tap "Auto Close" (or directly tap the starting point), and the system will generate the field automatically.
3. Tap the "Field Boundary" icon to switch to "Obstacle" or "Non-spraying Zone". Then tap to mark the boundary points of the obstacle or non-spraying zone.
4. Once you have marked the operation area, tap "Finish" in the upper right corner.
5. Complete the field information and tap "Done" to save the field.

More Actions

- Tap "More" at the bottom of the Tap to Mark screen to enable"Cursor Marking". Once enabled, a white cross cursor will appear on the Mapping screen. Drag the cursor to the boundary point of the field that needs operation, then tap at the bottom to mark the point.

Note

⚠ HD maps can be obtained either through RealTerra surveying or by importing HD maps from aerial survey drones. For RealTerra surveying, you need to install the RealTerra system. Please refer to the "XAG P150 RealTerra 3 User Manual" for installation instructions.

Mark by Device

Mark by Device comprises two methods: **Mark by Rover** and **Fly to Mark.** Both methods will be introduced below.

Mark by Rover

Only the XRTK6 Pro Ground Module can be used to mark points and generate fields. Here is a step-by-step guide for marking.

1. Open XAG One and tap "Mapping" on the home screen (main screen) to enter the Mapping screen. Tap in the lower right corner and select the bound XRTK6 Pro mapper.
2. Take your XRTK6 Pro to the intended field boundary and short press to mark the boundary points. After marking all boundary points, tap "Auto Close" on the app (or press and hold), and the system will automatically generate the field.
3. Tap the "Field Boundary" icon to switch to "Obstacle" or "Non-spraying Zone".Circle around the obstacle or non-spraying zone with XRTK6 Pro, and short press to mark their boundary points (short press to unmark the point).
4. Once you have finished mapping the operation area, tap "OK" in the upper right corner.
5. Complete the field information and tap "Done" to save the field.

Fly to Mark

For the P150 Agricultural Drone, Fly to Mark is available for field generation only when the drone is controlled by the SRC4. The steps are as follows.

1. Open the "XAG One" app in the SRC4. Tap "Mapping" on the home screen (main screen); Tap on the left-hand side of the screen, tap , and select the drone for mapping.
2. Fly the drone over the field that needs to be marked. Tap the FPV camera view on the screen to switch to downward FPV, or short press the FPV control button on the remote controller. Short press button "L" to mark the boundary points of the field (press button "R" to undo). Fly the drone to other boundary points and mark. After marking all the points, tap "Auto Close" on the screen, or long press button "L" to connect all the points, and a field will be generated.
3. Tap the "Field Boundary" icon in the app to switch between "Obstacle" and "Non-spraying Zone". Fly the drone around the obstacle/non-spraying zone, and short press button "L" (press button "R" to undo) to mark the boundary points of the obstacle or non-spraying zone.
4. After mapping the operation area, tap "Save" in the bottom right corner. Complete field information and tap "OK" in the upper right corner to save.
5. Pilot the drone to to a safe area and land it, or long press RTH to make it return.

Manage Fields

After creating fields, users can edit fields and share fields in batches, or create standard/customized routes via Manage Fields.

Field Editing

Users can edit saved fields created using HD maps through Edit Fields.

1. Open the "XAG One" app. On the home screen (main screen), tap in the upper left corner, select the field to be edited, and tap on "Manage Fields".
2. Tap "Edit Fields" and drag the boundary points to adjust them as needed. Create new boundary points via touch marking, or tap to create new points via device marking. Select a boundary point and tap to undo/delete it.
3. Tap on , select "Obstacle" or "Non-spraying Zone", and drag the boundary points of the obstacle/non-spraying zone to adjust its range as needed. Create new boundary points via touch marking, or tap to create new points via device marking. Tap on the center of the obstacle/non-spraying zone and tap "Delete" to delete the whole obstacle/non-spraying zone.
4. After editing, save the field to complete the edits.

Batch Sharing

After creating fields, users may share multiple fields with others via Batch Sharing.

1. Open the "XAG One" app, on the home screen (main screen), and tap on in the upper left corner to go to the Field List screen.
2. Tap "More" and select "Batch Field Sharing". Select multiple fields to be shared or tap to select multiple fields on the map, and tap on "OK".
3. Enter the recipient account to share the fields with a friend, or share the fields with a team managed by the user.
4. Tap "OK" to complete batch field sharing.

New Standard/Customized Routes

After field mapping, users can create standard or customized routes via Manage Fields for applications in various scenarios.

1. Open the "XAG One" app, tap ☰ in the upper left corner of the "Fields" screen, select the field to be edited, and tap on "Manage Fields".
2. Tap "Routes" in the bottom menu bar, and then tap "New" in the upper right - select a route type.
3. Select "Standard Route", and the system will automatically plan a standard route. Users can manually adjust route direction, route spacing, boundary safety clearance, and obstacle safety clearance. Select "Customized Route", and users can plan a route as needed. Tap the screen or ● to mark points. Two consecutive points will connect and form a line, namely a segment. Multiple points connect in sequence and the drone will follow this route for operation.
4. Tap "Done" in the bottom right corner, enter the route name, and tap "OK" to save the route.

⚠ Note

⚠ Routes with different types and parameters can be created in the same field, and users can select a proper route for flight operations.

Offset Correction

When the device/drone is not in RTK mode during point marking/flight operations, users can correct the locations of the field and drone using the Offset Correction feature to improve the positioning accuracy of the drone in operation.

Offset Correction in Autonomous Mode

1. Open the "XAG One" app and tap "Operation" on the home screen (main screen).
2. Select the field to be operated on the map based on the prompts on the screen. Once the field is selected, lift the drone to the boundary of the field.
3. Tap "Offset Correction" on the left side of the screen to go to its settings. Tap the boundary point closest to the drone's position, adjust the boundary point on the Offset Correction settings screen until it is in the drone's position, or just drag the boundary point to the drone's position. and then tap "Offset to Drone". When the app shows "Offset Correction Done", tap on "Done" to complete it.

Start Operation

After creating fields, start the drone for autonomous flight operations. (Take XAG P150 Agricultural Drone with dual nozzles, for example)

1. Open the "XAG One" app, and tap "Operation" on the home screen (main screen).
2. Based on the prompts, select the field to be operated on the map. Once the field is selected, the menu bar below will display estimation operating parameters for the field and other drone-related information. Tap on "Operation Settings" to customize the basic or advanced settings for spraying and routes as needed.
3. Tap on "Start Operation" and confirm that all propeller blades are properly installed and unfolded with all clamps fastened. Make sure that no one is within 10 meters of the drone, and then slide right to confirm takeoff. The drone will take off automatically for spraying after it completes self-checking.

Basic Settings

Before an operation, tap on "Operation Settings" in the menu bar at the bottom of the operation screen to access settings on the "Basic" screen.

- When there is an existing operation template for the field, tap on the top left corner to select and apply the parameters of the existing template configuration. If it is the field's first operation without an operation template, after setting operation parameters, tap on the top right corner to "Save as Template". This will save the current operation configuration as a template for future use.
- Tap "Dosage & Droplet" under "Spraying Settings" and move the slider to set the drone's spray volume and droplet size. Tap on "Spray During Lane Change" to select the status of nozzles during lane change: turn on both nozzles, turn on outer nozzles only, and OFF.
- Tap "Altitude & Speed" under "Routes" to adjust the drone's altitude and speed on the routes. Tap on "Route Direction & Spacing" to adjust the direction, angle, and spacing of the routes. Tap on "Safety Clearance" to adjust the uniform boundary safety clearance, special boundary safety clearance, and obstacle safety clearance.
- Tap on "Altitude & Speed" under "Access Route" to adjust the drone's height and speed on the route. Tap on the "Safety Zone Mode" button to turn on/off this mode.
- Tap on "Terrain Following" to put the drone on radar terrain following mode.
- Tap on the "Obstacle Avoidance" button to enable/disable obstacle avoidance.

Advanced Settings

On the "Operation Settings" screen, tap to switch to the "Advanced" screen to access related settings.

- Tap on "Operation Range" and move the slider to adjust standard routes on the "Standard" screen. On the "Edge" screen, enable/disable edge application and access related settings.
- Based on actual needs, users can turn on "Waypoint Resumption", "3D Route Operation", "Fly Only", and "RTH & Empty Container" to adjust and optimize autonomous operation settings.

More

- During flight, tap "Hover" and the drone will hover at its current position. Tap "More" for landing, returning, or Tap & Go.
- Upon entering Tap & Go mode, the drone will hover at its current position. Drag the target range circle (green circle) on the map to move its center ⊙ to the desired position. Tap "Go to Tap & Go" and the drone will fly to the target position as planned. After the Tap & Go flight, tap "Exit" to return to the flight screen. Tap "Go to Operation" to exit Tap & Go and continue operation tasks.

⚠ Note

- ⚠ Before operation, please make sure the RevoSpray/RevoCast system is installed.
- ⚠ Before using others' operation templates, please make sure the parameters are correct.
- ⚠ Before enabling 3D route operation, use RealTerra's "Mountain Mode" to generate 3D HD maps.
- ⚠ During flight, operators must closely monitor the flight environment for any unsafe factors, ensuring that the drone is away from obstacles and crowds.
- ⚠ During Tap & Go flight, the drone's obstacle avoidance will be disabled. Please be cautious. Before enabling Tap & Go, ensure that no obstacles are within the field.
- ⚠ The effective range of the target position for "Tap & Go" is within a radius of 50 meters of the drone (i.e. the green circle).

⚠ When the drone flies on routes, users can set the battery level for RTH (10%/15%/20%/25%) via the app. When the battery level is close to the preset value, the app will prompt "Low battery; returning". The drone will calculate the distance between its current position and the return point, and return automatically.

Multi-field Operation

When multiple fields need to be operated at a time, users can follow these steps to combine multiple fields for operation.

1. Open the "XAG One" app, and tap "Operation" on the home screen (main screen) to get ready.
2. Select the fields for operation on the map and then tap on "OK".
3. Tap on "Operation Settings" to access the basic or advanced settings for spraying and routes. Tap on "Field Operation Order" in the advanced settings to adjust the order of the fields to be operated.
4. Tap on "Start Operation" and confirm that all propeller blades are properly installed and unfolded with all clamps fastened. Make sure that no one is within 10 meters of the drone, and then slide right to confirm takeoff. The drone will take off automatically for spraying after it completes self-checking.

⚠ Note

⚠ For a multi-field operation, up to 10 fields with a maximum total area of 13.33 hectares can be operated at a time.

⚠ Multi-field operations usually involve complex environments. To ensure flight safety, it is advisable to enable radar obstacle avoidance.

⚠ Before multi-field operation, all obstacles within the entire white area of the map need to be mapped to ensure flight safety.

Operation Records

After operation, users can view field conditions via operation records. Operation data can be accessed through three different views: "My Operations", "Team Operations", and "Device Operations". Take "My Operations", for example.

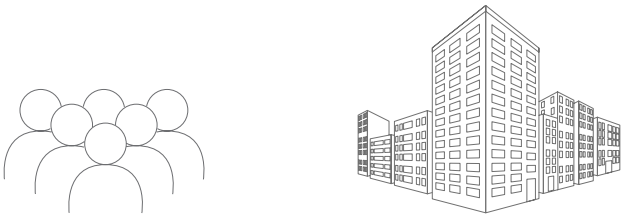
1. Open the "XAG One" app, and tap on "Operation Records" on the home screen.
2. On the "Operation Records" screen, the total area, spray volume, spread amount, and duration of operation for the most recent time period will be displayed for the current account. Tap on a specific day to expand details, view all the operation records for that day, and perform conditional filtering. Tap on "More Dates" to select a date range and view the operation data report during that period.
3. Tap on ☁ in the top right corner for local operation data on the drone and app.
4. Tap on ⋯ in the top right corner to "Migrate Operation Records".
5. Tap on the top left corner to switch between "Team Operations" and "Device Operations".

⚠ Note

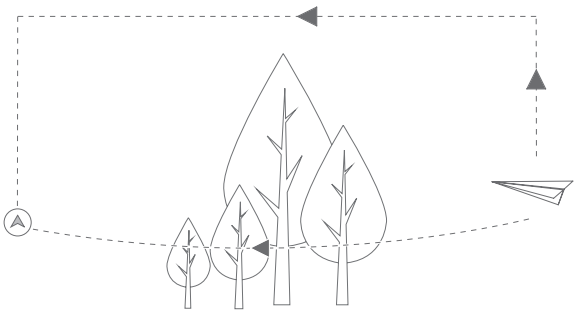
⚠ "My Operations" displays the current account's all operation data, including data from the team; suitable for operators. "Team Operations" provides operation data for the entire team; suitable for team leaders and managers. "Device Operations" allows users to view operation data based on the devices they own, including data generated during sharing.

⚠ Users can switch to team from the home screen. After switching to team, mapped fields, and operation records will automatically be attributed to the team and shared within the team.

Safe Parking



- The return point should be in an open area far from buildings and crowds. Make sure that the drone's return trip is free of obstacles.



- When the drone is flying back, the operator should monitor the environment around it and steer it away from any obstacle found on the route.
- Power off the drone once it lands safely.

Operation Template Sharing

After operation, users can share the operation parameter configurations of the fields via "Operation Template Sharing".

1. Open the "XAG One" app and tap "Operation Templates" on "Me" screen.
2. Select an operation template to view and edit its parameter configuration.
3. Tap on "Share" and enter the recipient's account to share the template with a friend.
4. Tap on "OK" to complete the sharing.

Device Sharing

Users (device owners) can share the use of a device with other users through device sharing, while the owner still possesses the device.

1. Open the "XAG One" app, and tap on "Me" - "Device" to get to the device list.
2. Select the drone to be shared, enter the "Device Details" screen, and tap on "Device Sharing".
3. Enter the recipient's account, set the duration for sharing, and tap on "OK".
4. Make sure the account is correct, and tap on OK. After the drone is shared, information on the shared device, recipient account, and duration will be displayed on the screen. Tap on "Stop Sharing" to withdraw the use of device.

⚠ Note

⚠ Device owner will not be able to use the device when it is shared.

⚠ Device owner will not be able to withdraw the use of a device in operation.

Maintenance

After each use, clean the spray parts and surface of the drone in a timely manner. Regular drone maintenance is required.

Post-operation Cleaning

Pesticides are caustic and could corrode the device, shortening its lifespan. Clean the device timely after each use. The cleaning steps are as follows.

Detergent: soapy water or laundry powder/water mixture

① Fill the liquid tank with soapy water or the laundry powder/water mixture. Start spraying to clean pesticide residues in the spraying system.

② Fill the liquid tank with clean water and start spraying until all tubes are drained to wash off residual soapy water or the laundry powder/water mixture in the spraying system, avoiding damage to other objects during transportation or storage.

③ Wring out a damp rag and wipe the surface of the drone to remove pesticide stains and mud. Empty the liquid tank and drain the tubes if you need to transfer the drone or will not use it for an extended period.

Regular Maintenance

Wear and tear as well as malfunctions in/of the device could occur as a result of ordinary use. Regular maintenance ensures that the device performs at its best in farming activities with fewer malfunctions and improved efficiency. Maintenance steps are as follows.

A. Airframe

① Check if any screw on the airframe is loosening or missing.

② Check if the components including landing gears, fuselage, arms, motors, and antennas are secure.

③ Check if the connectors of each component are firmly in position, if they have oxidized, and if the battery plug is deformed.

④ Check breakages and cracks on the airframe and its components. Check if the beams of the drone are bent out of shape or cracked, if the fasteners joining the arms and motors together are secure, if the arms are bent and twisted, or if the parts on the arms are at a proper angle.

⑤ The drone should be cleaned regularly and thoroughly, especially those hard-to-clean spots including the liquid tank socket and battery plug on the airframe.

B. Propulsion System

(1) Propeller

① Check by sight if the propeller clamps are cracked or deformed, and if the blades are loosening, damaged, bent out of shape, or softened.

② Check if the blades and clamps are properly joined.

③ Check if the setscrews holding the clamps and motors are missing or loosening.

④ Wipe the propellers clean with a damp rag.

(2) Motor

① Remove the propellers and clean the motors with an air blow gun.
② Rotate the motors and check whether the bearings wobble or make noise.
③ Check by sight if the enameled wires of the motors are damaged or broken.
④ Gently rock the motors and see if they are firmly fixed on the motor mounts.
⑤ Check the connectors and cables between motors and ESCs.

(3) ESC

① Remove the power plugs of the ESCs and check if the metal parts are deformed or oxidized.
② Check if the setscrews on the ESCs are missing or loosening.
③ Check if there is any dirt including pesticides on the heat dissipation part of the ESCs.

C. RevoSpray System

The spraying system requires calibration in the case of a large error (beyond plus or minus 5%) caused by chemical corrosion, thick pesticides, replacement of parts and impellers, etc. Calibration needs to be done with clean water in the liquid tank. If the health index remains unusual after calibration, check whether the impellers and spray tubes are in good condition. Replace the parts that shrivel, lose elasticity, or are out of shape/seriously worn.

(1) Impeller Pump

① Take apart the impeller pump and check the wear between the impeller and pump casing. Replace the impeller or pump casing if it is seriously worn.
② Check if the connectors of the RevoSpray system have come loose or oxidized, etc.
③ When the impeller pump is unable to function, check if there is enough liquid in the tank. The impeller pump could run dry without adequate liquid in the tank, triggering its anti-dry running protection. Please add a proper amount of clean water to the tank before operation.
④ Remove the impeller pump cover and check if there is any accumulation of caked powder or viscous chemicals between the impeller and pump casing that prevents the impeller from rotating properly. If so, remove the impeller and clean it with clean water.
⑤ For every 666.67 hectares of operation, one to two months of continuous operation, or when not in use for a long time, the gears inside the gearbox need to be regularly added heat-resistant lubricant for maintenance.

(2) Smart Liquid Tank

① Check the sealing ring of the liquid inlet
② Unscrew the cap, clean dirt off the filter, and check if the inner tubes are in good condition.

D. Power System

(1) Battery

① If the battery shows single blinking green after flight, charge it to 50%-60% in time for storage. Batteries not charged timely before storage could be less active, damaged or even have a shortened lifespan.
② Batteries not in use for an extended period should be charged and discharged every three months to be kept active.
③ When the battery is swelling, leaking, deformed, or having exterior damage, stop using it immediately and contact XAG or any XAG after-sales service center in time.

④ NEVER transport any potentially unsafe battery that is swelling, leaking, or having visible exterior damage.
⑤ Check by sight the exterior of the battery. If there is any damage, send it to any XAG after-sales center.
⑥ Do NOT charge the battery in a damp environment.
⑦ Do NOT insert or remove the battery when it is on, or its socket could be damaged.
⑧ Handle the battery with care; NEVER take it apart without permission.

(2) Supercharge Station

Items		Maintenance Tips
Oil	Check Oil Level	Check the oil level before each use; the oil level should fall between the MIN and MAX marks on the oil dipstick
	Change Oil	Change oil after 20 hours of first use along with subsequent changes every 50 hours
Air Cleaner	Check	Check the filter element of the air cleaner and the oil level in the oil reservoir before each use
	Clean	Clean the air cleaner every 50 hours or every 20 hours in dusty areas
Spark Plug	Replace	Replace it every 500 hours
Valve Lash	Adjust	Adjustment of valve lash by after-sales professionals is required every 500 hours
Fuel Tank & Filter	Clean	Clean the fuel tank and filter every two years
Oil Tube	Replace	Replace it in the case of aging or cracking

(3) Power Socket

Poor contact, short circuits or sparking could occur in the battery, charger or socket as dust, liquid, or other foreign objects can stick to the power socket during use. Before and after the use of a power device, users should check and clean each component including the battery plug and socket, ensuring that the power socket remains clean, dry and free of foreign objects.

E. Sensor System

After crop protection operations, clean the FPV camera lens of the sensor system. Gently wipe away any pesticide residue, stains, or debris from the lens. When the drone is stored for an extended period, regular cleaning and maintenance of the FPV camera lens are required. Before new operations, ensure that the camera lens is free of dust for smooth operations.

F. Device with Lithium Batteries

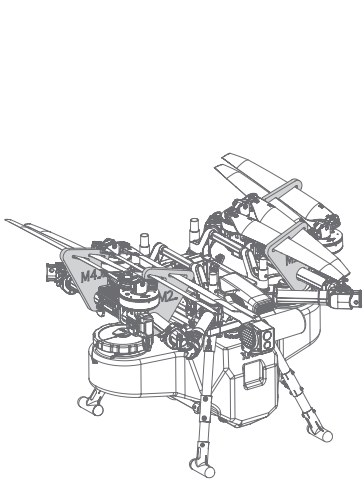
When not used for an extended period, in addition to the Battery, devices with lithium batteries including remote controllers should also be charged to 50% to 60% every two months for storage.

Device Storage

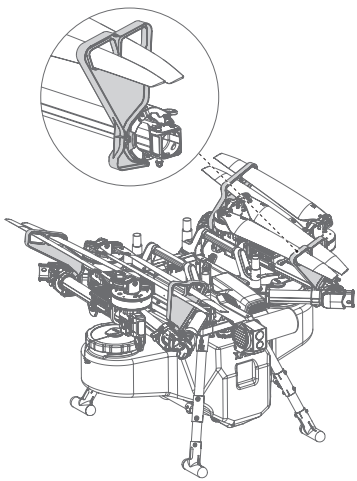
Devices like batteries, drones, remote controllers and chargers should be stored in a dry place with a temperature between 10°C and 30°C . Do NOT store devices in leaky or damp places.

Transportation

Fold the propeller blades of the drone and fasten them with blade holder for transportation. Meanwhile, fasten the drone with a safety belt. Make sure the drone is secure during transportation.



Blade Holder-Model 1



Blade Holder-Model 2

⚠Note

⚠ **Blade Holder-Model 1:** Please make sure the silk-screened marks M1 to M4 on the blade holders face towards the correct arm motor during installation. Insert the blade holders into the arms at the labels (Blade holders fit only the specified models).

⚠ **Blade Holder-Model 2:** Please make sure the blade holders with silk-screened marks M1 to M4 are securely fitted into the correct arm clamps during installation.

⚠ For long-distance transportation, remove the spray rods of the drone before transportation.

⚠ Before transporting the drone, clean and empty its spraying system and drain all the liquid tubes, to avoid damage to other devices during transportation.

⚠ Pesticide packaging and sewage must be collected for proper disposal to avoid pesticide hazards and environmental pollution.

⚠ NEVER place batteries in the drone for transportation.

⚠ During transportation, do NOT drive while tired; devices should be stored separately with good air circulation to avoid poisoning by inhalation of pesticides.

Appendix

Indicator Description

Determine the drone's current status by checking the indicators on the SuperX 5 Pro Intelligent Control System and arm lights (ESC indicators). Details are as follows.

Flight Controller: RTK	Description
Solid Red	Not searching for satellites; not positioning; no output from PCB module
Blinking Red (slow)	RTK timeout over 10 s
Blinking Green (slow)	Normal
Blinking Red (fast)	Exited RTK; no differential signal; no heading
Blinking Green (fast)	Satellites less than 16; heading accuracy lower than 2°
Double Blinking Red & Green	Initializing/configuring
Blinking Red & Green (fast)	Updating firmware

Flight Controller: 4G	Description
Blinking Red (slow)	Not connected to IoT
Blinking Green (slow)	Connected to IoT
Blinking Green (fast)	Poor 4G network quality

Flight Controller: Wi-Fi	Description
Blinking Red (slow)	Disconnected from Wi-Fi module
Blinking Green (slow)	Connected to Wi-Fi module
Double Blinking Green	Connected to remote controller
Blinking Green (fast)	Weak Wi-Fi signal (connection to the remote controller)

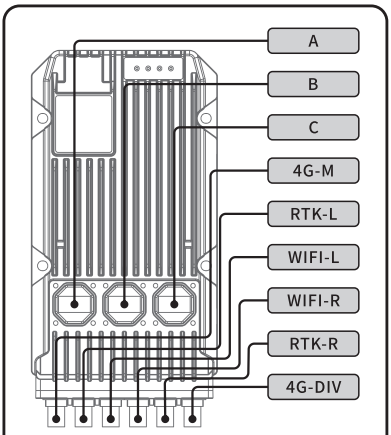
Flight Controller Status	Description
Solid Green	In operation
Solid White	File system mounting failed
Blinking Red (slow)	Taking off/landing
Single Blinking Red	GPS malfunctioning/dramatic satellite loss
Single Blinking Green	Attitude Mode
Single Blinking Blue	Manual Mode
Single Blinking Purple	Initialization failed or preheating
Blinking Red (fast)	Sensor error

Blinking Blue (fast)	Propulsion system error
Blinking Purple (fast)	Underlying controller formatting/incorrect parameters
Blinking Yellow (fast)	First low voltage; battery level: 20%
Double Blinking Red	Flight in Safe Mode; App or remote controller disconnected from drone
Double Blinking Red & Green	Weak GPS signal
Triple Blinking Red	Second low voltage; battery level: 10%
Triple Blinking Green	Auto GPS Mode; good GPS signal
Alternating Blinking Red/ Green/Blue	Unlocking

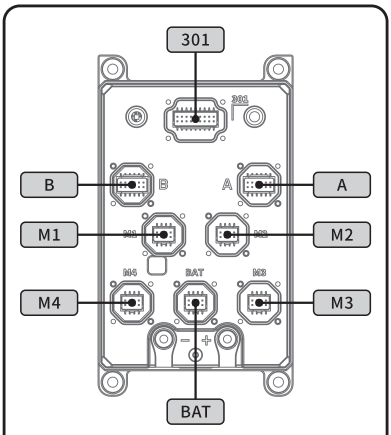
Arm Light (ESC Indicator)	Description
Solid Green	In operation
Solid White	File system mounting failed
Blinking Red (slow)	Taking off/landing
Blinking Cyan (slow)	Updating main ESC
Single Blinking Red	GPS malfunctioning/dramatic satellite loss
Single Blinking Green	Attitude Mode
Single Blinking Blue	Manual Mode
Single Blinking Purple	Initialization failed or preheating
Blinking Red (fast)	Sensor error
Blinking Blue (fast)	Propulsion system error
Blinking Cyan (fast)	Main ESC requesting an update
Blinking Purple (fast)	Underlying controller formatting/incorrect parameters
Blinking Yellow (fast)	First low voltage; battery level: 20%
Double Blinking Red	Flight in Safe Mode; App or remote controller disconnected from drone
Double Blinking Red & Green	Weak GPS signal
Triple Blinking Red	Second low voltage; battery level: 10%
Triple Blinking Green	Auto GPS Mode; good GPS signal
Alternating Blinking Red/ Green/Blue	Unlocking
Breathing Blue	1. Weak communication signal (air) 2. No communication signal (ground)
Breathing Red	Entering, returning, or avoiding/bypassing obstacles

模块接线指引

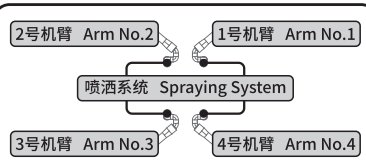
XAG 极飞科技



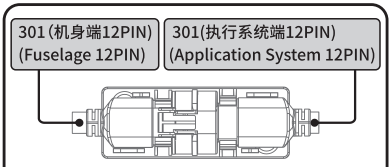
A 飞行控制系统连接图 Flight Controller



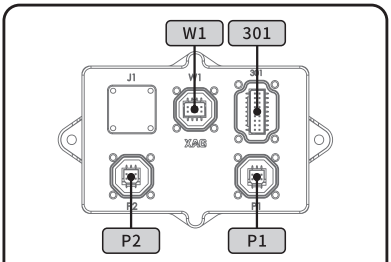
B 机头集线板连接图 Nose Cable Hub



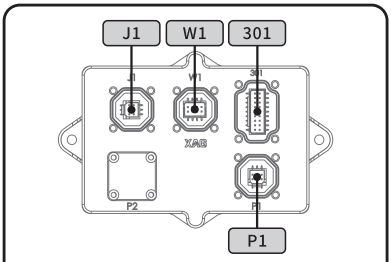
C 输液管连接图 Liquid Tube



D 机身载荷连接图 Payload System



E 喷洒集线盒连接图 Spraying System



F 播撒集线盒连接图 Spreading System

注意 CAUTION

1. 禁止在通电状态下，拆装任意模块。
   Never disassemble or assemble any module while powered on.
2. 所有模块安装完毕后，才可启动电源。
   Do NOT turn the power on until all modules are installed.
3. 接线时保持接线头、接头槽、密封圈洁净。
   Keep connectors, ports, and sealing rings clean when wiring.
4. 安装输液管时，请勿压折。
   Make sure tubes are not crushed or twisted when assembled.

XA.COM

WIRING QUICK GUIDE

XAG 极飞科技

Troubleshooting

Solutions to Risks and Hazards

Module	Exception Description on App	Solution
Communication System	Flight operations service offline	1. Make the drone return using the remote controller. Turn off the drone, remove cable A from the flight controller and restart the drone. 2. If the issue persists, please contact the dealer from whom you purchased the device.
	Underlying controller offline	1. Turn off the drone, remove cable A from the flight controller and restart the drone. 2. If the issue persists, please contact the dealer from whom you purchased the device.
	Low heading accuracy; cannot take off	1. Check if the environment around the drone is open and unobstructed. 2. Check if the RTK antennas are worn or broken. 3. If all else fails, please contact the dealer from whom you purchased the device.
	Barometer error; cannot take off, please restart the device	1. Turn off the drone, remove cable A from the flight controller and restart the drone. 2. If the issue persists, please contact the dealer from whom you purchased the device.
	Sensor initializing; cannot take off, please restart the device	1. Turn off the drone, remove cable A from the flight controller and restart the drone. 2. If the issue persists, please contact the dealer from whom you purchased the device.
	IMU error; cannot take off, please restart the device	1. Turn off the drone, remove cable A from the flight controller and restart the drone. 2. If the issue persists, please contact the dealer from whom you purchased the device.
	Remote controller offline	1. Check if the remote controller is obstructed by anything around. 2. Reconnect the remote controller and the drone. 3. Check if the 2.4/5.8 GHz antennas are worn or broken. 4. If all else fails, please contact the dealer from whom you purchased the device.
Positioning System	RTK error; please take over manually	1. Pilot and land the drone in a safe area using Tap & Go or the remote controller. If you want the drone to return automatically, please pay close attention to the distance between the drone and the obstacles around to avoid any collision. 2. Restart the drone and make sure its heading accuracy is within 2° . 3. Check if there is any interference in the environment near the location where the error occurred; Keep the drone away from tall buildings. 4. Check if the RTK antennas and feeders are worn or broken. 5. If all else fails, please contact the dealer from whom you purchased the device.

Positioning System	RTK error; it might not be safe to fly	1. Pilot and land the drone in a safe area using Tap & Go or the remote controller. If you want the drone to return automatically, please pay close attention to the distance between the drone and the obstacles around to avoid any collision. 2. Restart the drone, wait until it is in RTK positioning status and begin a test flight. If it fails to go into RTK mode, follow the instruction for "drone not in RTK, please check the RTK antennas". 3. If all else fails, please contact the dealer from whom you purchased the device.
	RTK error; drone will hover or land, please stay away from the landing point	1. Check if the environment around the drone is open and unobstructed. 2. Try another RTK base station. 3. Check if the RTK antennas are worn or broken. 4. If all else fails, please contact the dealer from whom you purchased the device.
	GPS heading error; cannot take off	1. Check if the environment around the drone is open and unobstructed. 2. Check if the drone's heading accuracy is within 2° . 3. Check if the RTK antennas are worn or broken. 4. If all else fails, please contact the dealer from whom you purchased the device.
	RTK positioning error; optical flow enabled	1. Wait until RTK positioning returns to normal. 2. Take over the drone with the Control Stick. 3. Make a forced landing with the app.
	Drone not in RTK mode; cannot take off	1. Try another RTK base station. 2. Check if there are over 16 satellites for the drone and make sure the environment around is open and unobstructed. 3. Check if the drone's RTK antennas are worn or broken. 4. If all else fails, please contact the dealer from whom you purchased the device.
	Insufficient satellites, please check the RTK antennas	1. Check if the environment around the drone is open and unobstructed. Make sure there are over 16 satellites. 2. Check if the RTK antennas are worn or broken. 3. If all else fails, please contact the dealer from whom you purchased the device.
	RTK base station error, please switch to another one	1. Restart the drone and connect it to a different RTK base station. 2. Check if the environment around the drone is open and unobstructed. 3. If all else fails, please contact the dealer from whom you purchased the device.

Power System	Battery plug positive/negative terminal overheating	Please contact the dealer from whom you purchased the device.
	Low battery voltage	Please contact the dealer from whom you purchased the device.
Propulsion System	Poor contact in ESC	1. Check if the ESC signal input cable is worn. 2. Check if the ESC signal cable is properly connected to the nose cable hub. 3. If all else fails, please contact the dealer from whom you purchased the device.
Propulsion System	Propulsion system error; cannot take off, please restart the device	1. Restart the drone. 2. Perform an idle test to check if the motor is running properly. 3. If all else fails, please contact the dealer from whom you purchased the device.
Sensor System	Terrain radar offline	1. Check if the cable of the sensor module is firmly connected. 2. Check if the cable of the sensor module is intact. 3. Check if the cable holder of the sensor module is deformed or still works properly. 4. If all else fails, please contact the dealer from whom you purchased the device.
	Terrain radar error; please be cautious	1. Check if the cable of the sensor module is firmly connected. 2. Check if the cable of the sensor module is intact. 3. Check if the cable holder of the sensor module is deformed or still works properly. 4. If all else fails, please contact the dealer from whom you purchased the device.
	4D imaging radar error	1. Check if the firmware is up to date. 2. Check if the sensor module is properly connected to the flight controller communication circuit. 3. Turn off the drone, reconnect the communication cable of the sensor module, and then turn on the drone to test. 4. If all else fails, please contact the dealer from whom you purchased the device.
	4D imaging radar offline	1. Check if the cable of the sensor module is firmly connected. 2. Check if the cable of the sensor module is intact. 3. Check if the cable holder of the sensor module is deformed or still works properly. 4. If all else fails, please contact the dealer from whom you purchased the device.
	4D imaging radar not connected	1. Check if the firmware is up to date. 2. Check if the sensor module is properly connected to the flight controller communication circuit. 3. Turn off the drone, reconnect the communication cable of the sensor module, and then turn on the drone to test. 4. If all else fails, please contact the dealer from whom you purchased the device.

Sensor System	FPV camera communication error	1. Check if the sensor module is properly connected to the flight controller. 2. Check if the firmware is up to date. 3. If all else fails, please contact the dealer from whom you purchased the device.
	FPV camera connection error	1. Check if the firmware is up to date. 2. If this fails, please contact the dealer from whom you purchased the device.
	FPV image error	1. Check if the firmware is up to date. 2. If this fails, please contact the dealer from whom you purchased the device.
Application System	1. Application system initialization failed; cannot work properly 2. Application system initializing, please try again later	1. Please check the application device and its cable. 2. Turn off the drone, remove cable A from the flight controller and restart the drone. 3. If all else fails, please contact the dealer from whom you purchased the device.
	Nozzle motor error	Check if the cable of the nozzle motor is worn or broken, and replace any nozzle motor or cable that is not working properly.
	Spread disc error	Check if the cable of the spread disc motor is worn or broken, and replace any disc motor or cable that is not working properly.
	Spreading application error	1. Check if there is any error in the spreading module. If so, troubleshoot accordingly. 2. If there is no other error, please perform a waypoint resumption flight after the drone returns. 3. If all else fails, please contact the dealer from whom you purchased the device.
	RealTerra error; drone is returning	1. Please check the RealTerra module. 2. Turn off the drone, remove cable A from the flight controller and restart the drone. 3. If all else fails, please contact the dealer from whom you purchased the device.
	RealTerra camera error	1. Please wait two minutes. If it gets back to normal, the drone will continue surveying; if not, the drone will return automatically and a restart will be needed for another survey. 2. If this error occurs frequently, there might be a fault in RealTerra's hardware, please contact the dealer from whom you purchased the device.

Failures and Emergency Procedures

Module	Failure	Emergency Procedure
Propulsion System	Motor failure	Stall protection will be triggered due to motor failure. The drone loses power control and performs a forced landing at its original position to prevent flying to any restricted area.
	ESC failure	Shutdown protection will be triggered due to ESC failure. The drone loses power control and performs a forced landing at its original position to prevent flying to any restricted area.
	Propeller failure	The drone will not be able to fly due to propeller failure and will perform a forced landing at its original position to prevent flying to any restricted area.
	Battery failure	The drone will lose power control due to battery failure and perform a forced landing at its original position to prevent flying to any restricted area.
C2 Link	Wi-Fi link failure	When the Wi-Fi link fails, control over the device will be lost. The drone will hover, awaiting manual takeover. Once taken over, the drone can return or continue operations (use 4G network for manual takeover).
	4G network failure	When the 4G network fails, if the drone is in operation, it will automatically return after completing the current task. If the drone is idle in the air, it will hover, awaiting manual takeover. Once taken over, the drone can return or continue operations (use Wi-Fi for manual takeover). If both fail, when the battery level is low, the drone will automatically land.
	RTK failure	When the RTK link fails, the drone can maintain RTK status for 600 seconds to continue flight. If the flight task is not completed after 600 seconds, the device automatically switches to GPS Mode for hover, awaiting manual takeover. Once taken over, the drone can return or continue operations.
Global Positioning System (GPS)	GPS failure	When the GPS link fails, the drone immediately hovers, activates Optical Flow Mode for altitude holding, and awaits GPS signal recovery. If it fails to recover, it will automatically land or land as commanded.
Flight Control Components	Flight controller failure	When the flight controller fails, the drone hovers. If hovering is not possible, the drone will shut down.
Remote Controller	Remote controller failure	When the remote controller fails, the drone hovers and awaits reconnection. If reconnection fails, the drone automatically returns.
	Mobile app control failure	If the mobile app disconnects from the internet during operation, the operation will not be affected. The drone will automatically complete its current task and return.

Specifications

Drone

Model	3WWDZ-60AH
Flight Control System [1]	SuperX 5 Pro (cloud RTK)
Diagonal Motor Wheelbase	2203 mm
Overall Dimensions	3110×3118×764 mm (propellers unfolded) 1723×1732×764 mm (propellers folded) 1053×1104×764 mm (propellers & arms folded)
Arm Material	Aluminum alloy
Empty Weight	54 kg (with XAG P150 RevoSpray 4 and batteries) 58 kg (with XAG P150 RevoCast 4 and batteries；spray rods excluded)
Rated Takeoff Weight	114 kg (rated takeoff weight for spraying) 125 kg (Max. takeoff weight for spraying) 128 kg (rated takeoff weight for spreading；spray rods excluded)
IP Rating	IPX6K
Operating Ambient Temperature	0~40 °C

Flight Parameters

Operating Frequency	2.400~2.4835 GHz ; 5.725~5.850 GHz 2.402~2.480 GHz (KC)
Effective Isotropic Radiated Power (EIRP)	2.400~2.4835 GHz: <33 dBm (FCC) <20 dBm (SRRC/CE/MIC) 5.725~5.850 GHz: <33 dBm (FCC) <30 dBm (SRRC) <14 dBm (CE) 2.402~2.480 GHz (KC): <33 dBm (FCC) <20 dBm (SRRC/CE/MIC)
Hovering Accuracy (good GNSS signal)	RTK enabled: horizontal ±10 cm, vertical ±10 cm RTK disabled: horizontal ±0.6 m, vertical ±0.3 m
2G Operating Frequency	CE：GSM 900: 880.2 ~ 914.8 MHz；DCS 1800: 1710.2 ~ 1784.8 MHz
2G Maximum transmit power	Class 4（33 dBm）for EGSM900，Class 1 (30 dBm) for DCS1800
3G Operating Frequency	CE：WCDMA Band I: 1922.4 MHz ~ 1977.6 MHz; WCDMA Band VIII: 882.4 ~ 912.6 MHz
3G Maximum transmit power	Class 3（24 dBm ）for WCDMA bands

	Band 1: 1922.5 MHz ~ 1977.5 MHz Band 3: 1710.7 MHz ~ 1784.3 MHz Band 7: 2502.5 MHz ~ 2567.5 MHz Band 8: 880.7 MHz ~ 914.3 MHz Band 20: 834.5 MHZ ~ 859.5 MHz Band 28: 704.5 MHz-746.5 MHz Band 38: 2572.5 MHz ~ 2617.5 MHz Band 40: 2302.5 MHz ~ 2397.5 MHz
4G Operating Frequency	LTE 1B (KC): (Tx) 1920 MHz ~ 1980 MHz; (Rx) 2110 MHz ~ 2170 MHz LTE 3B (KC): (Tx) 1715 MHz ~ 1785 MHz; (Rx) 2110 MHz ~ 2170 MHz LTE 5B (KC): (Tx) 824 MHz ~ 849 MHz; (Rx) 869 MHz ~ 894 MHz LTE 7B (KC): (Tx) 2500 MHz ~ 2550 MHz; (Rx) 2620 MHz ~ 2670 MHz LTE 8B (KC): (Tx) 904.3 MHz ~ 915.0 MHz; (Rx) 949.3 MHz ~ 960.0 MHz
4G Maximum transmit power	Class 3（25 dBm）for LTE-TDD bands
GNSS Frequency Band	BDS: B1I , B1C; GLONASS : G1 , G2; GPS: L1 C/A , L1C , L2C , L5; Galileo: E1 , E5a , E5b
High Precision Positioning Duration with RTK Data Latency	⩽600 s
Hovering Duration [2]	19.23 min (no-load with XAG P150 RevoSpray 4 @20000 mAh×2 & takeoff weight 54 kg) 5.58 min (full-load with XAG P150 RevoSpray 4 (60L) @20000mAh×2 & takeoff weight 114 kg) 5.00 min (full-load with XAG P150 RevoSpray 4 (70L) @20000mAh×2 & takeoff weight 125 kg)
Max. Flight Speed	18 m/s [3]
Max. Above Ground Level	100 m
Max. Flight Distance	2000 m
Recommended Operating Wind Force	Force ⩽3

Propulsion System

Motor

Quantity	4
Dimensions of Stator	145×26 mm
KV Value	70 (r/min)·V
Rated Power (Single Motor)	4700 W
Max. Thrust (Single Motor)	55 kg

ESC

Continuous Operating Current	120 A
Max. Output Current (30 s)	360 A

Foldable Propeller

Quantity	4
Material	Carbon fiber composite
Diameter	1530 mm

Power System

XAG B13970S Smart Supercharge Battery

Model	M1PPA13970BH
Battery Type	Lithium-ion polymer battery
Quantity	2 sets (one set in use; one set as backup)
Rated Output	48.75 V/140 A
Energy Capacity	975 Wh
Rated Capacity	20000 mAh
Max. Charging Current	100 A
Charging Ambient Temperature	10 ~ 45 °C

XAG CM13600 Charger

Model	M2CM1-3600BH
Charging Adapter Quantity	1
Input	100-120V~50/60Hz,15A 220-240V~50/60Hz,16A
Output	56.6V ⎓ 21A（100~120 Vac 50/60 Hz） 56.6V ⎓ 55A（220~240 Vac 50/60 Hz）
Operating Ambient Temperature	-20 ~ 40 °C

XAG GC4000+ Auto SuperCharge Station

Model	GC4000+
Net Weight	31.5 kg
Fuel Tank Capacity	15 L
Total Displacement	223 cc
Output Voltage	56.6 Vdc
Rated Current	75 ± 3 A
Rated Charging Power	3400 W
Max. Output Power	5100 W

RevoSpray System

Smart Liquid Tank

Quantity	1
Material	Plastic (PE)
Rated Volume	Rated: 60 L; max.: 70 L

Centrifugal Atomizing Nozzle

Quantity	2
Nozzle Type	Centrifugal
Spray Rod Length	1671 mm
Spray Disc Rotational Speed	1500~16000 rpm
Droplet Size	60~400 μm
Spray Width [4]	5~10 m (subject to flight speed, flight height, dosage, environment, etc.)

Flexible Impeller Pump

Quantity	2
Voltage	50 V
Pump Type	Other (flexible impeller pump)
Pump Flow Rate [5]	Max. operating flow rate: 30.0 L/min (dual pumps) Single pump flow rate: 0.5~15.0 L/min

Obstacle Sensing & Avoidance System [6]

4D Imaging Radar

Model	RD2488
Operating Voltage	24 V
Power	10 dBm
Operating Frequency	24.05~24.25 GHz
Sensing Mode	Beamforming, 4D imaging
Sensing Parameter	Obstacle's position, distance, direction, and relative speed
Sensing Range	1.5~100 m
Field of View (FOV)	Horizontal: ±40° ; vertical: +90°~-45°
Obstacle Avoidance Distance	2.5 m (distance between propeller tip and obstacle after the drone brakes and hovers stably)
Min. Relative Height of Obstacle Avoidance	⩾1.5 m
Rated Speed of Obstacle Avoidance	⩽13.8 m/s
Max. Relative Speed of Obstacle Avoidance	⩽18 m/s [7]
Obstacle Avoidance Mode	Azimuth, pitch, distance, speed

Terrain Radar

Model	TR24S100_24
Operating Voltage	5 V
Power	10 dBm
Sensing Mode	Millimetre-wave
Operating Frequency	24.05 ~ 24.25 GHz
Sensing Range (Height)	0.5 ~ 100 m (distance from canopy)
Altitude Hold Range	1 ~ 30 m (distance from canopy)
Max. Gradient	45° (@ flight speed ⩽ 2 m/s)

FPV Camera

Image Sensor	1/2.8-inch CMOS-RGB image sensor; effective pixels: 2 MP
Focal Length	Forward FPV (2.7 mm), downward FPV (2.7 mm)
Frame Rate	30 fps
Video Coding Format	H.264 / H.265
Video Resolution	1920×1080
Operating Voltage	24 V

Communication & Control System

XAG Agricultural Control Stick 4

Model	M3ACS4A
Operating Frequency	2.400 ~ 2.4835 GHz
Effective Isotropic Radiated Power (EIRP)	2.400 ~ 2.4835 GHz: < 33 dBm (FCC) < 20 dBm (CE/SRRC/MIC)
Signal Range (no interference/ obstruction)	400 m
Operating Ambient Temperature	-10 ~ 40 °C
Charging Ambient Temperature	5 ~ 40 °C
Compatibility	XAG P150 2024 Agricultural Drone XAG P60 2024 Agricultural Drone

XAG Smart Remote Controller 4

Model	M3SRC4AH
Operating Frequency	2.400 ~ 2.4835 GHz ; 5.725 ~ 5.850 GHz
Effective Isotropic Radiated Power (EIRP)	2.400 GHz ~ 2.4835 GHz: < 33 dBm (FCC) < 20 dBm (CE/SRRC/MIC) 5.725 GHz ~ 5.850 GHz: < 33 dBm (FCC) < 30 dBm (SRRC) < 14 dBm (CE)
Signal Range (no interference/ obstruction)	FCC: 2000 m SRRC: 2000 m CE/MIC: 1000 m
Operating Ambient Temperature	-10 ~ 40 °C
Charging Ambient Temperature	5 ~ 40 °C
Compatibility	XAG P150 2024 Agricultural Drone XAG P60 2024 Agricultural Drone

[1]: Manufacturer of the flight control system: Dongguan Xaircraft UAS Technology Co., Ltd.

[2]: The above data is from tests conducted in a standard laboratory environment. Actual values may vary during use as a result of factors such as the operational environment and the health condition of the drone.

[3]: Flight speed must comply with local laws and regulations.

[4]: A spray width of 8 m is recorded under the flight height of 3±0.5 m, flight speed of 3 m/s, and flow rate (single pump) of 5 L/min. For reference only.

[5]: Actual minimum flow rate varies depending on route spacing, flight speed, flight conditions, etc. Please refer to the app.

[6]: The effectiveness of the obstacle sensing & avoidance system depends on obstacles' material, position, shape, size, etc. Please ensure that the drone is always in your sight during operation. Pay close attention to the drone and steer it away from obstacles using the remote controller when necessary.

[7]: This was measured under test conditions using a vertical metal pole with a 20 cm diameter as the reference obstacle. Actual obstacle avoidance performance may vary depending on the condition of the obstacles.

Compliance Information

FCC Compliance Notice

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This equipment complies with FCC and Canada radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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

Brand name / model number*: *3WWDZ-60AH
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.
Suppliers Name(FCC): Pegasus Spray Inc
Suppliers Address (FCC): 2235 79th Ave NE, Medina, WA 98039, USA
Suppliers phone number and / or internet contact information: +1 (503) 866-1228

EU Compliance Statement

Guangzhou Xaircraft Technology CO.,LTD.All Rights Reserved.hereby declares that this device is in compliance with the essential requirements and other relevant provisions of the RED Directive. This equipment must be installed and operated in accordance with provide instructions and the antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operation in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.



Warning: Operation of this equipment in a residential environment could cause radio interference.

"Hereby, ***[Guangzhou Xaircraft Technology CO.,LTD.]***, declares that this ***[P150 Agricultural Drone]*** is in compliance with the essential requirements and other relevant provisions of 2014/53/EU.
The full text of the EU declaration of conformity is available at the following internet address:
www.xa.com/en/service/downloads"

Suppliers Name(EU)：***NIK ELECTRONICS LTD***
Suppliers Address (EU)：***Sofia, 11B Brussels Blvd., fl.13***
Suppliers phone number and / or internet contact information：***00359899952228***

Note: The accessory kit includes two ring magnets, one large and one small. Attach the large ring magnet to cable 301 and the small one to the power supply cable on the cable hub.

KCC Warning Message

이기기는업무용환경에서사용할목적으로적합성평가를받은기기로서가정용환경에서사용하는경우전파간섭의우려가있습니다 .

Declaração ANATEL

Este equipamento não tem direito à proteção contra interferência prejudicial e não pode causar interferência em sistemas devidamente autorizados.Para maiores informações, consulte o site da ANATEL – (www.anatel.gov.br).

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XAG ADVANCING AGRICULTURE

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