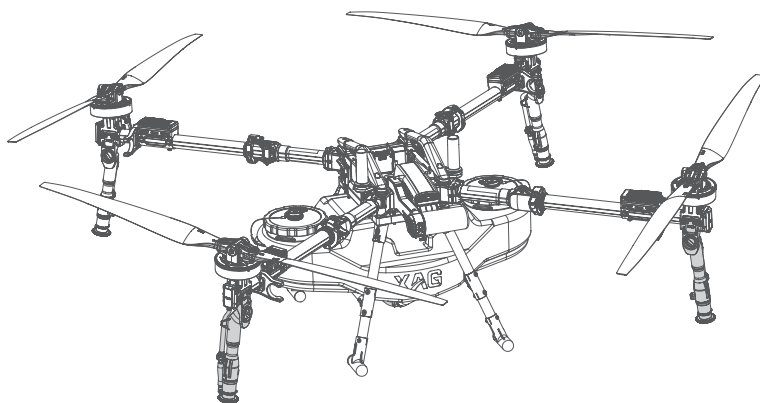


XAG 4-Nozzle Upgrade Kit

User Manual

Version 1.0 **EN**



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

Safety Guidelines

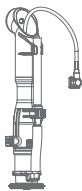
- The XAG 4-Nozzle Upgrade Kit is only compatible with the XAG P150 Max 2025, and P150 2024 agricultural drones. Do not use it with other products or for purposes other than agricultural crop protection.
- All assembly and usage instructions in this manual are provided using the XAG P150 Max 2025 agricultural drone as an example. For operational differences in other compatible models, please refer to the user manual of the corresponding model.
- To ensure optimal performance of the kit, it is recommended that the P150 2024 agricultural drone be used with the 2025 High-Flow Nozzles. Please contact your seller for separate purchase.
- Do not install/remove device modules or plug/unplug cables while the drone is powered on.
- Do not arbitrarily modify, alter, or improperly assemble the nozzles or related components in any way to avoid equipment malfunction or personal injury.
- After installation, it is essential to check that all components are properly and securely installed. Improper installation may impair drone performance during operation.
- After installation, complete spray calibration and manual spray testing in the XAG One app. Ensure that installation is correct and the system is functioning properly before use.
- Please reduce the tank's maximum capacity by at least 1.2 L before performing any spraying operations with the Kit installed.
- With the Kit installed, spray mist may attach to the drone's FPV camera lens during operation. It is therefore necessary to clean the lens before and after each operation.
- Please use clean, impurity-free water when mixing chemicals. The prepared solution should be filtered before being added to the tank to prevent impurities from clogging or damaging the liquid tube.
- It is recommended to use protective gear during chemical mixing and spraying operations. Exercise caution during operation, and avoid direct contact between chemicals and the human body or the drone to prevent potential harm caused by chemical splashes.
- Before spraying operations, ensure that the RevoSpray system's nozzles, liquid tubes, and related components are free of blockages, leaks, or other anomalies, and that all performance indicators function normally.
- Before spraying operations, ensure the take-off site and flight route are open and away from people to prevent harm caused by pesticide or liquid splashes.
- During pesticide application and spraying operations, environmental protection must be considered. The use of pesticides must comply with relevant environmental laws and regulations. It is strictly forbidden to pollute the environment, especially rivers, drinking water sources, and vegetation.
- When not in use, the Kit should be thoroughly cleaned and inspected to ensure there are no blockages or anomalies. Store the Kit in a dry, cool, and secure location.
- Do not use non-genuine XAG parts for maintenance or operation of XAG products, as such parts may severely compromise product safety and lifespan. Product damage arising therefrom is not covered under warranty.

Introduction

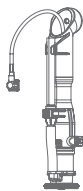
The XAG 4-Nozzle Upgrade Kit (hereinafter referred to as the "Kit") is an upgrade kit for the centrifugal spraying system of XAG agricultural drones. It is compatible with the XAG P150 Max 2025, and P150 2024 agricultural drones. The Kit upgrades the compatible models from a 2-nozzle to a 4-nozzle spraying system to handle higher spraying workloads, offering every user an intelligent, precise, efficient, and flexible production solution.

List of Items

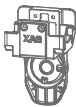
When unboxing, check the package contents against the list. Immediately contact your seller regarding any missing items.



Right Spray Rod
X 1



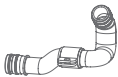
Left Spray Rod
X 1



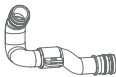
Left Spray Rod Mount
X 1



Right Spray Rod Mount
X 1



Left Tube Fitting
X 1



Right Tube Fitting
X 1



Left L-Shaped Fitting
X 1



Right L-Shaped Fitting
X 1



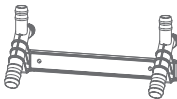
Outlet Fitting
X 1



Pump Unit
X 2



L-Shaped Tube Fitting
X 2



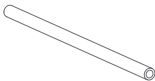
T-Piece Connector
X 1



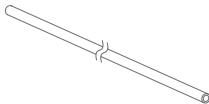
Vertical Tube
X 2



Horizontal Tube
X 2



RevoSpray Liquid Tube
X 4



Arm Liquid Tube
X 2



Dual Pump Bracket
X 1

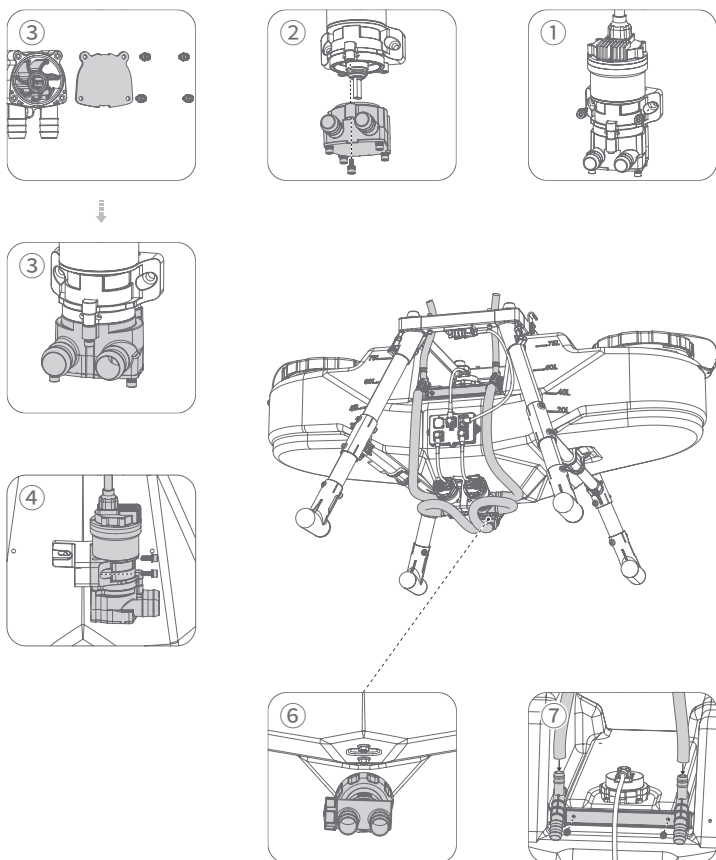


Screw Kit
X 1

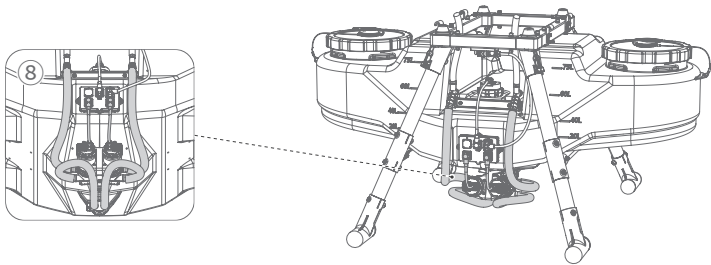
Installation

Install Impeller Pump Assembly

- ① Extract the power connector and liquid tube connected to the impeller pump. Unscrew the screws securing the impeller pump and remove it (the illustration shows the right impeller pump as an example).
- ② Unscrew the three screws securing the pump unit and remove the old pump unit.
- ③ Remove the bottom cover of the new pump unit. Bend the blades clockwise, then reinstall the bottom cover and the new pump unit.
- ④ Align and attach the impeller pumps to the dual pump bracket respectively, and secure them with two screws.
- ⑤ Refer to Steps ② – ④ above to complete the replacement of the left impeller pump.
- ⑥ Rotate clockwise to remove the old tank filter assembly, and reinstall the new tank filter assembly.
- ⑦ Unscrew the two screws on the T-piece connector and remove the old T-piece connector and old vertical tube. Then reinstall the new T-piece connector and the old vertical tube.

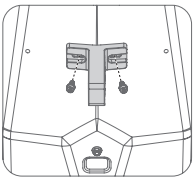


⑧ Connect the four RevoSpray liquid tubes and two power connectors, and use a long cable tie to organize and secure the RevoSpray liquid tubes, completing the installation of the impeller pump assembly.



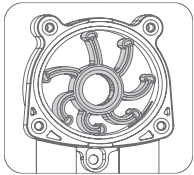
Note

⚠ When installing this upgrade kit on the P150 2024 agricultural drones, an additional step is required after Step ③ : secure the dual pump bracket. Specifically, use two screws to attach the dual pump bracket to the bottom of the liquid tank.

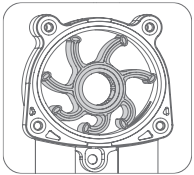


双泵支架安装示意图

⚠ During the replacement of the pump unit, make sure the blades are bent in the correct direction: the right impeller pump blades should be bent clockwise, and the left impeller pump blades should be bent counterclockwise.



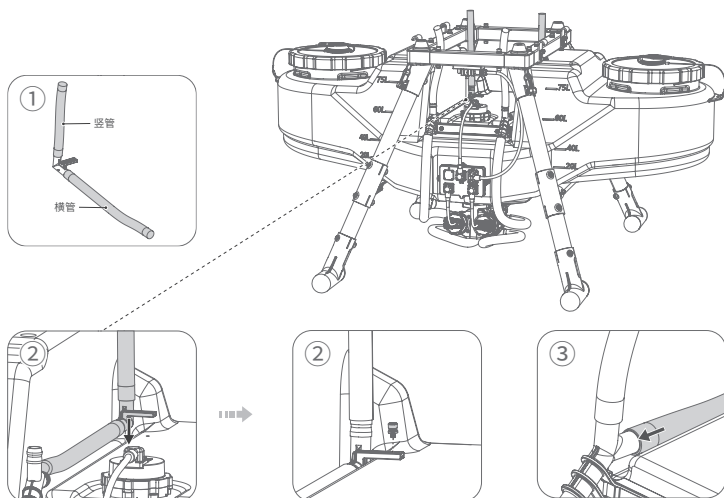
Left Impeller Pump



Right Impeller Pump

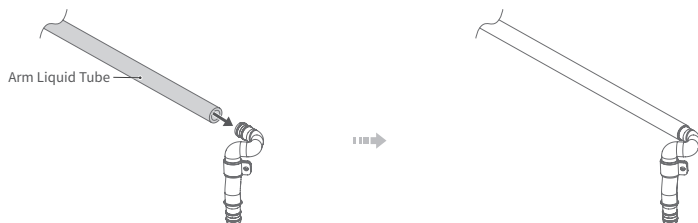
Install RevoSpray Liquid Tubes

- ① Install the horizontal and vertical tubes onto the left L-shaped fitting, and secure the tubes with a short cable tie to form the left L-shaped fitting assembly (the illustration shows the installation of the left L-shaped fitting as an example).
- ② Place the left L-shaped fitting assembly on the tank, and secure it with one M3*8 screw.
- ③ Connect the horizontal tube of the left L-shaped fitting assembly to the T-piece connector to complete the installation of the left L-shaped fitting assembly.
- ④ Refer to the above steps to complete the installation of the right L-shaped fitting assembly.

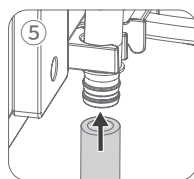
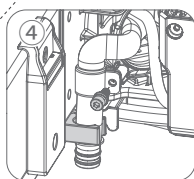
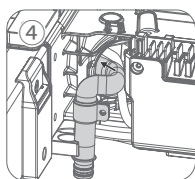
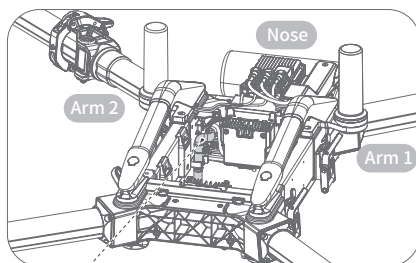
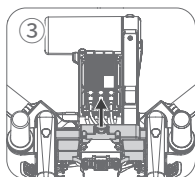
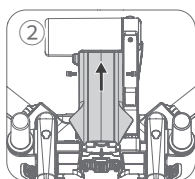


Install Arm Liquid Tubes

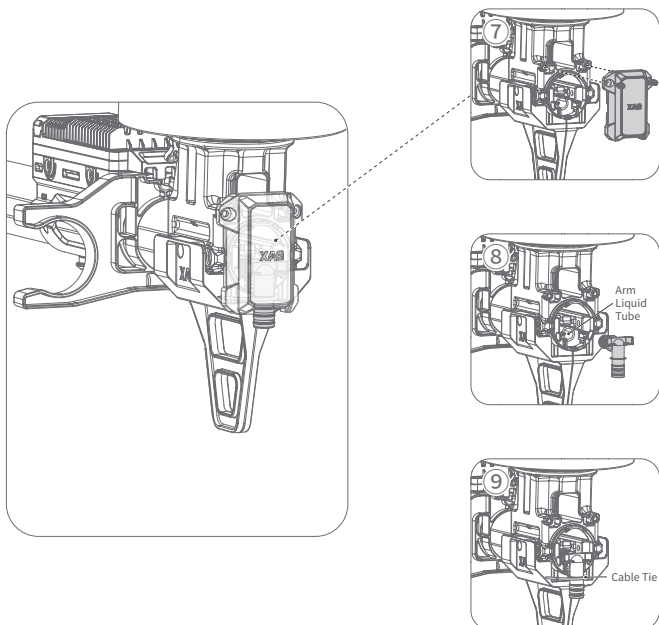
- ① Connect the arm liquid tube to the left tube fitting, and secure the arm liquid tube with a cable tie to form the left tube fitting assembly (the illustration shows the installation of the left tube fitting as an example).



- ② Unscrew the two screws on the sides of the hood and the one screw at the rear, then remove the hood.
- ③ Unscrew the two screws on the front cable cover, then remove the front cable cover.
- ④ Insert the arm liquid tube of the left tube fitting assembly through Arm 2, then snap the left tube fitting assembly on the fuselage mount. Secure the tube fitting clamp with one M4*10 screw.
- ⑤ Connect the horizontal tube of the left L-shaped fitting on the RevoSpray to the left tube fitting on the fuselage, and secure the horizontal tube with a cable tie to complete the installation of the fuselage left tube fitting assembly.
- ⑥ Repeat the above steps to complete the installation of the fuselage right tube fitting assembly.

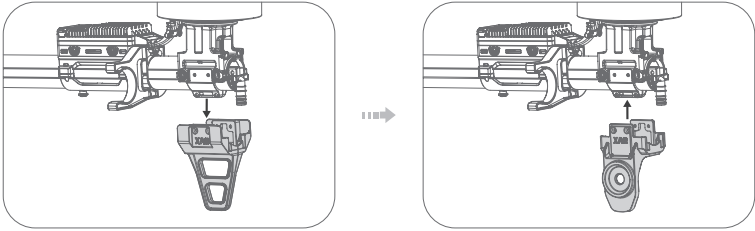


- ⑦ Unscrew the two screws on the motor cover of Arm 2, and remove the motor cover (the illustration shows the installation of the arm liquid tube on Arm 2 as an example).
- ⑧ Connect the L-shaped tube fitting to the arm liquid tube, snap it on the arm mount, and secure it to the arm with a cable tie to complete the installation of the arm liquid tube for Arm 2.
- ⑨ Repeat the above steps to complete the installation of the arm liquid tube for Arm 1.

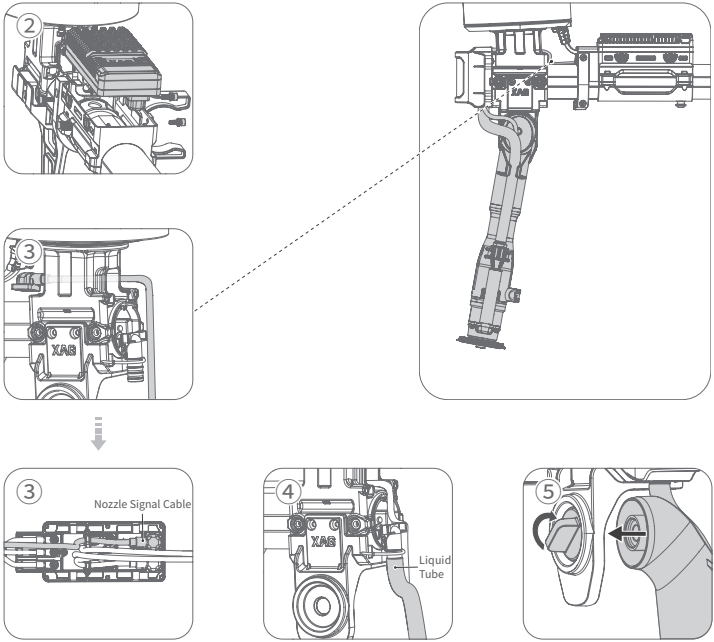


Install Spray Rod

- ① Remove the old spray rod mount, and use four M4*14 screws to reinstall the new left spray rod mount (the illustration shows the installation of the left spray rod on Arm 2 as an example).



- ② Unscrew the four screws of the ESC on Arm 2, and open the ESC cover.
- ③ Pass the nozzle signal cable's ESC connector through the hole beneath the motor, and connect it to the ESC.
- ④ Connect the liquid tube of the left spray rod to the L-shaped tube fitting, and secure the liquid tube with a cable tie.
- ⑤ Insert the knob into the left spray rod mount, align the spray rod with the knob, and rotate the knob clockwise until the spray rod assembly is securely fixed onto the arm's spray rod mount. After making the necessary adjustments, reinstall the ESC and the motor cover.
- ⑥ Repeat the above steps to complete the installation of the right spray rod on Arm 1.



How to Use

Manual Spraying Test

Before spraying, please start "Manual Spraying Test" to make sure that the nozzles work properly.

1. Open the "XAG One" App and tap "Me" and then "Device" to select the drone and enter Device Details.
2. Tap "⚙️" to enter Spraying System screen and select "Manual Spraying Test".
3. Tap "Single Pump Flowrate" and "Droplet Size" to set the flow rate of a single pump and the droplet size during testing. Tap "P1" or "P2" to turn on/off the corresponding water pump. Tap "All On" to control both water pumps simultaneously for spraying test.

Note

- △ After the installation of the 4-nozzle upgrade kit is completed, for the first use, set the Single Pump Flowrate to the maximum before performing a manual spraying test.

Spraying Calibration

After completing the installation of the 4-nozzle upgrade kit, spraying calibration is required. Users can follow the steps below to perform the spraying calibration.

1. Open the "XAG One" App and tap "Me" and then "Device" to select the drone and enter Device Details.
2. Tap "⚙️" to enter Spraying System screen and then "Spraying Calibration". Select "Pump P1", and tap "Next".
3. Follow the App's instructions to add an appropriate amount of clean water to the tank, then tap "Next".
4. Prepare two empty containers and place them under the S1 and S3 nozzles, then tap "Start Calibration".
5. Once Pump P1 calibration is complete, tap "Continue Calibration".
6. Select "Pump P2", tap "Next", and repeat steps 3 and 4.
7. After Pump P2 calibration is complete, tap "Complete" to complete the spraying calibration.

Note

- △ You can also access "Spraying Calibration" or "Manual Spraying Test" through the "Shortcuts" on the Operation screen.

Maintenance

RevoSpray System

After the device completes its operation, the RevoSpray system must be cleaned to avoid potential hazards from contact with pesticide residue during maintenance. The cleaning steps are as follows:

Detergent: soapy water or laundry powder/water mixture

- ① Fill the tank with soapy water or laundry powder/water mixture. Manually start spraying to clean pesticide residues in the spraying system.
- ② Fill the tank with clean water and manually start spraying to wash off residual soapy water or the laundry powder/water mixture in the spraying system.
- ③ Manually start spraying until all tubes are drained.
- ④ Wring out a cloth with soapy water or laundry powder/water mixture, and wipe the surface of the tank, spray rod assembly, and tubes to remove pesticide stains and mud.
- ⑤ Use a clean, dry cloth to wipe the tank, spray rod assembly, and tubes.

Note

-  After cleaning the RevoSpray system, ensure it is thoroughly dried or left to air dry for at least 12 hours to allow any residual moisture in the vent tube to fully evaporate before using it again. Do not use a high-pressure water jet directly on the vent tube during cleaning, as it may cause damage to the vent tube.

Disclaimer

1. Please read this Disclaimer carefully before using this product, as it has much to do with both operational safety and your legitimate rights and interests. You shall be deemed to have read, known, understood, agreed to, and accepted all the terms and conditions as well as information stated herein upon the use of this product.
2. Not being a toy and with certain safety risks, this product is not suitable for those who are under 16 years old, those who have limited or no capacity for civil conduct, or those with mobility impairments as stipulated by law.
3. This product is the upgrade kit of the RevoSpray system of the XAG P150 Max Agricultural Drone and XAG P150 2024 Agricultural Drone solely designed for agricultural plant protection applications. Be sure to read the User Manual carefully before using this product to understand your legitimate rights and interests, responsibilities as well as safety guidelines. Otherwise, property damage and accidents could be caused; personal safety could be at risk.
4. This product is intended for use with XAG agricultural drones. You must obtain the appropriate operator certification required by law for operating conventional agricultural unmanned aerial vehicles. Extra caution must be taken when operating this product in areas where children, crowds, or animals are present.
5. You undertake to use the product within the bounds of the law for legitimate purposes only and agree to the terms and conditions stated herein as well as potential related policies and norms formulated by XAG. You understand and accept that flight records and data created during use will be saved to XAG's server. XAG shall resume no responsibility for the failure to analyze such flight records and data of the product caused by the unsuccessful saving for any reason attributable to 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. Please install, use, transport, and maintain the product under the instructions in this User Manual. Do NOT convert or disassemble this product on your own as any malfunction or damage arising therefrom or resulting from your improper use will not be eligible for repair services, and you shall solely assume the liability arising therefrom, both financially and legally.
8. To the maximum extent permitted by law, XAG shall not be liable for any loss caused by your use of this product outside the instructions in this User Manual. Furthermore, XAG shall not be liable for any indirect, consequential, punitive, accidental, special, or exemplary damage, including any loss incurred as a result of your purchase, use, or inability to use the product, even if you have been advised of the possibility of such loss.
9. You understand that in the use of any products, accidents may occur as a result of a 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 region where the product is used. XAG shall assume no liability arising from the violation of local laws and regulations by the purchaser or user.

11. Please note that the use of this product with agricultural drones may involve the collection, storage, and processing of the geographic information and data of farmland, which are subject to applicable laws and regulations. Before using this product, please ensure compliance with the laws and regulations concerning the collection, storage, or processing of the geographic information and data of farmland in the location where the product is situated. Any financial or legal liability arising from any violations of the laws and regulations shall be borne solely by the operator.
12. As exclusion clauses may be prohibited by certain laws and regulations, your rights may vary. However, this does not imply that certain or all terms contained in this Disclaimer are necessarily invalid. For any reason that certain terms stated herein are deemed void, other terms shall remain in effect.
13. To the extent permitted by law, XAG reserves the right for final explanation and revision of the terms and conditions stated hereinabove. XAG also has the right to update, modify or terminate these terms and conditions via its official website, User Manual, online apps, etc., without prior notice.

Warning

Before using a drone and its peripherals, user is required to read through the User Manual and obtain a UAS operator certificate accredited by XAG or the laws, regulations, and policies of the country/region where the product is used. Otherwise, improper operation of the drone and its peripherals may cause serious injury to user or others, or cause damage to the product and property loss. Safety awareness is of great importance during operation. Meanwhile, this product is not suitable for children or those who are under 16 years old, those who have no or limited capacity for civil conduct, or those with mobility impairments as prescribed by law. Please install and use the product by strictly following XAG's instructions in the User Manual. Do NOT use any components that are not provided or suggested by XAG for the repair of the product.



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