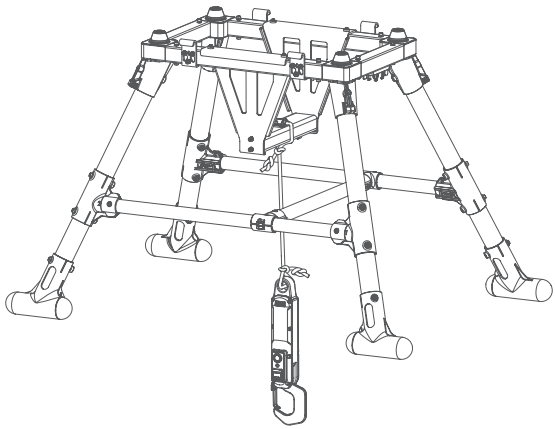
XAG RevoSling User Manual

Version 1.0 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

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Operating Instructions

- XAG RevoSling (Model: M4XRSP80A) is exclusively designed for use with tthe XAG P150 Max Agricultural Drone (2025 model) and XAG P150 2024 Agricultural Drone, and is intended for lifting operations in farming, forestry, animal husbandry, and fishery scenarios. It must not be used with other products or for other purposes.
- This product should be operated in clear, cloudy, or overcast weather conditions with a wind scale of force 3 or below. It is prohibited to use the product in adverse weather conditions such as rain, snow, frost, fog, thunderstorms, hail, sandstorms, or strong winds, at altitudes above 2,000 meters, or in environments with strong magnetic interference.
- Exercise extreme caution when using this product. When taking off, landing, hovering, or operating a drone with RevoSling, ensure that no personnel, animals, or obstacles are present within a 10-meter radius of the drone's area. When planning flight routes, observe the surrounding environment and avoid areas with people, animals, or obstacles to ensure safety.
- When operating the agricultural drone, maintain visual line-of-sight and continuously monitor the flight status. If people or animals approach, issue warnings promptly and control the drone accordingly. If abnormalities occur with the carried load, monitor closely and initiate a return or emergency landing to prevent accidents.
- For safety, operators must wear helmets, protective gloves, and other safety gear when performing lifting operations with the agricultural drone.
- The maximum allowable load for this product with the XAG P150 Max Agricultural Drone is 80kg (with XAG P150 2024 Agricultural Drone this would be 65kg), and the lifting rope length must be between 5 and 15 meters. Exceeding these limits may affect normal operation or cause safety hazards.
- Before operation, ensure that all spray rods of the agricultural drone have been removed to prevent contact or entanglement between the lifting rope, cargo, and spray rods or other situations that could damage spray rods or lead to accidents.
- Conduct a thorough inspection before each operation: verify that all structural components are properly installed, the landing gear is stable, the lifting rope is securely attached to the rope tube (without excessive wear) and smart hook (functional), the wireless link is stable, and no mechanical abnormalities are present.
- Inspect the lifting rope before each operation. Replace it immediately if significantly worn to prevent accidents.
- Do not load or unload cargo until the agricultural drone comes to a complete stop after landing.
- When the product is not in use, perform a comprehensive cleaning and inspection. Ensure that the spring snap and the rope hole are unobstructed and free of abnormalities, then store the product in a dry, cool, and secure location.
- Modification, alteration, or repurposing of this product is strictly prohibited, as it may lead to safety hazards.
- The use of non-genuine XAG parts, lifting ropes, or accessories may severely compromise product safety and lifespan. Damage or losses caused by non-genuine XAG accessories are not covered under warranty. If non-genuine parts result in malfunction, operational issues, or product damage, the user assumes full financial and legal responsibility.
- When operating conventional agricultural drones for lifting tasks at altitudes exceeding 30 meters, users must hold a medium-sized drone operator license issued by the national civil aviation authority and obtain prior approval from air traffic control authorities before operations.
- Users must strictly follow the product's User Manual and operating instructions for installation, use, and maintenance. Any product damage, losses, or legal liabilities arising from non-compliance with this manual are the sole responsibility of the user.

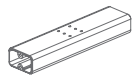
List of Items

The list of items contains two packages - **the RevoSling Main Unit** and **the Landing Gear**. When unboxing, check the package contents against the list. Immediately contact your seller regarding any missing items.

RevoSling Main Unit

Smart Hook
×1

Side Mount
×2



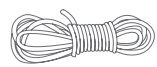
Rope Tube
×1

Vertical Bar
×1

Fixing Clamp
×2

T-Connector
×2

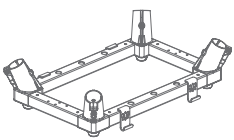
Saddle Mount
×1



15-meter Rope
×1

Screw Kit
×1

Landing Gear



Frame
×1

Landing Gear 1
×2

Landing Gear 2
×2

Fixing Clamp
×4

Horizontal Bar
×2

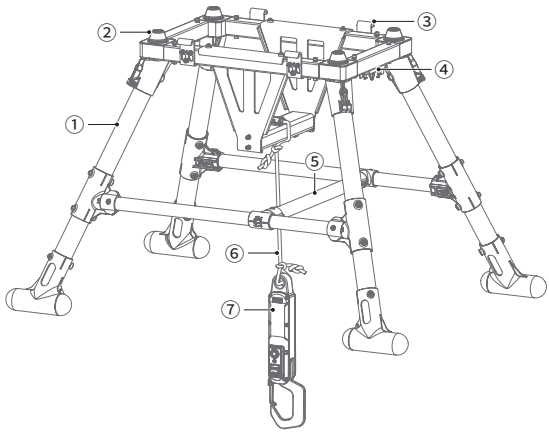
Cable Holder
×1

Screw Kit
×1

⚠ Components from the RevoSpray System are compatible for reassembly into the RevoSling System's landing gear.

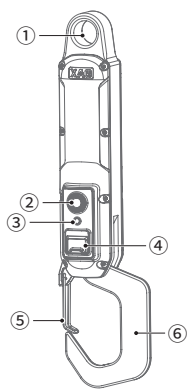
Main Components

RevoSling



① Landing Gear
② Boss
③ Hook
④ Cable Holder
⑤ Vertical Bar
⑥ Rope
⑦ Smart Hook

Smart Hook

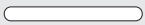
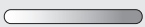
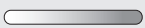


① Rope Hole
② Button
③ Status Indicator
④ Charging Port
⑤ Safety Latch
⑥ Cargo Hook

Button Instructions

Status	Action	Description
Sleep	Long Press for 2s	Power on
Powered On	Press Once	Open hook
	Long Press for 2s	Power off
	Short press + Long press	Unbind hook

Indicator Instructions

Status Indicator		Description
Off		Powered off
Solid Yellow		Disconnected from drone (bound)
Slow Flashing Yellow		Disconnected from drone (unbound)
Slow Flashing Green		Normal
Slow Flashing Red		Low battery
Solid Red		Malfunction
Breathing Green		Charging in progress
Solid Green		Charging complete
Breathing Red		Charging chip failure
Breathing Purple		Update in progress

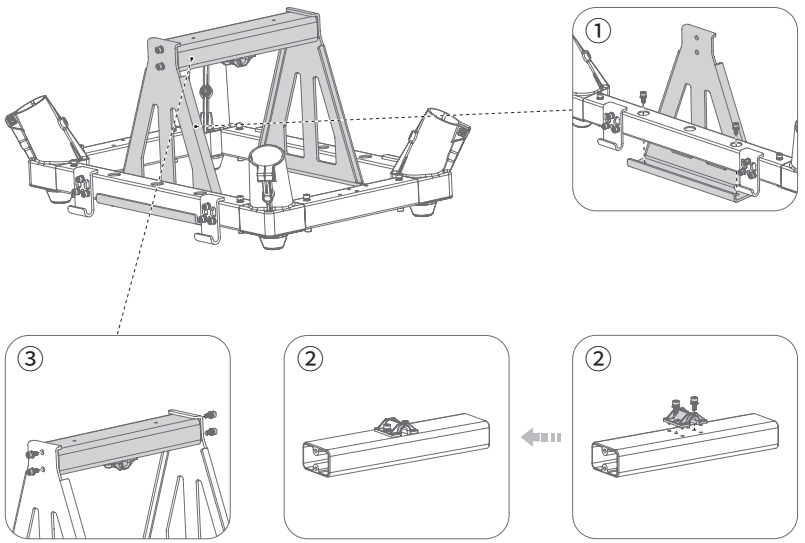
Assembly

Install Lifting Frame

① Use four (4) M5×10 screws to secure two side mounts onto the two longer sides of the frame.

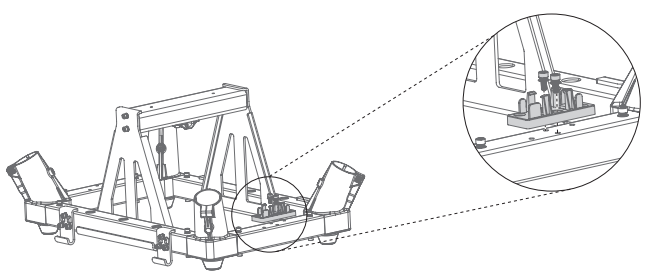
② Align and install the saddle mount onto the rope tube, then secure with two (2) M4×8 screws to assemble the rope tube component.

③ Use four (4) M5×16 screws to fix the rope tube component onto the side mounts.



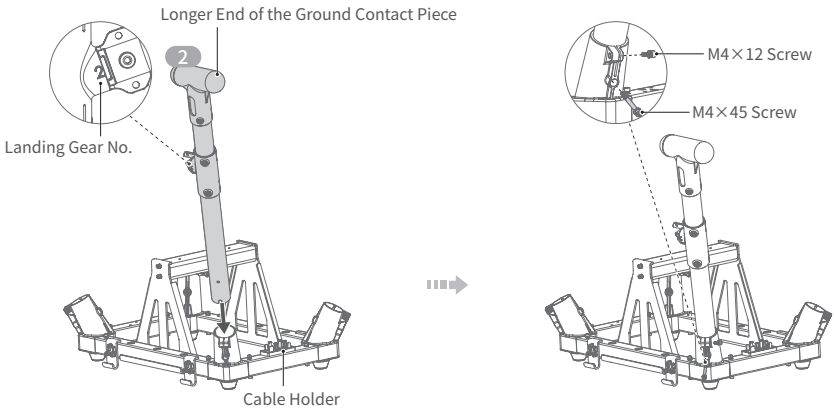
Install Cable Holder

Position the cable holder at the rear end of the frame and secure with two (2) M4×12 screws.



Install Landing Gear

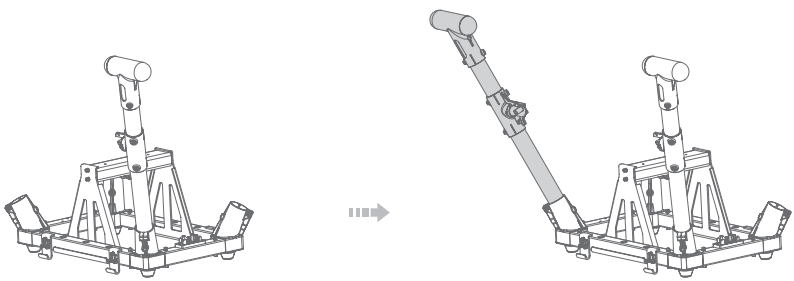
① Insert **Landing Gear 2** into the front-left hole of the frame (ensure the longer end of the ground contact piece faces outward). Loosely fix with one (1) M4×45 screw. Temporarily tighten with one (1) M4×12 screw. After adjustment, fully tighten all screws to secure the landing gear to the frame.



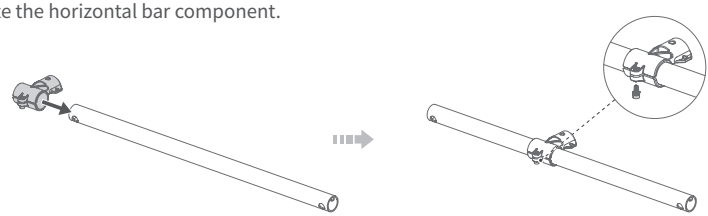
⚠Note

⚠ Reference Orientation: When the lifting frame is inverted, the cable fixing bracket faces the rear. Landing Gear 1 is installed on the front-left, and Landing Gear 2 on the rear-left. Diagonal pairs share the same landing gear number.

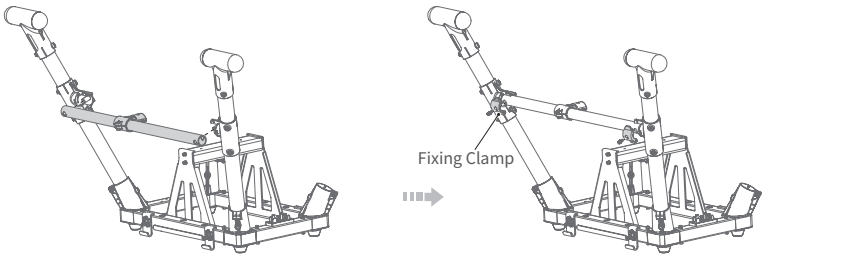
② Repeat the above steps to install the **Landing Gear 1** on the front-left.



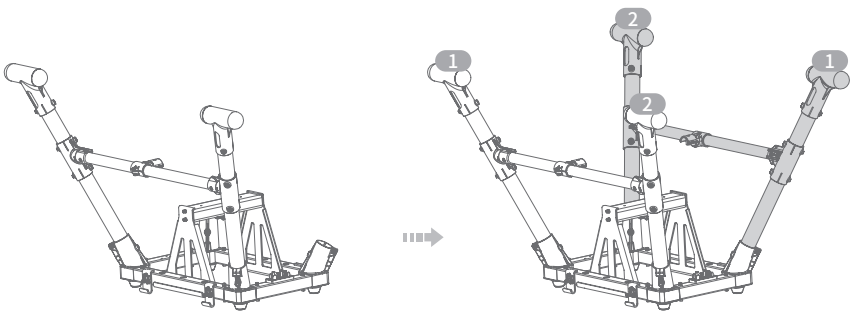
③ Slip the T-connector over the horizontal bar, then loosely secure with one (1) M4×16 screw to complete the horizontal bar component.



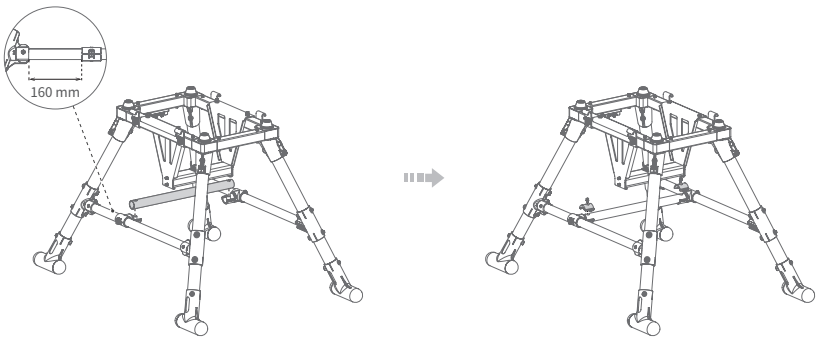
④ Align the horizontal bar component with the locating pins of T-connectors on both landing gears. Snap into place, install two (2) fixing clamps, and temporarily secure with two (2) M4×16 screws. After final adjustments, fully tighten all screws to complete the left-side landing gear installation.



⑤ Repeat the process for the opposite side.



⑥ Flip the frame to its upright position. Slide the T-connector toward the rear end of the horizontal bar (approximately 160 mm from the end) and tighten the set screw. Align the vertical bar with the locating pin of the T-connector and snap into place. Secure with two (2) fixing clamps and two (2) M4×16 screws to complete the landing gear installation.



⚠ Note

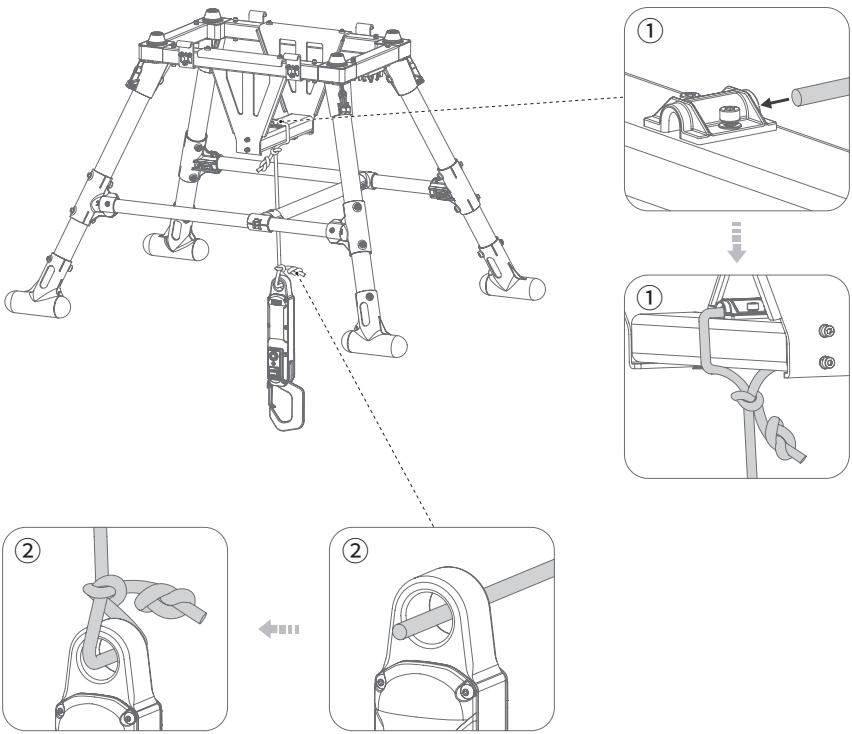
⚠ Always install Landing Gear 1 and Landing Gear 2 in their designated positions. Swapping them will result in installation failure or damage.

⚠ To prevent rope entanglement, fix the vertical bar around 160 mm from the rear end of the horizontal bar.

Install Smart Hook

① Pass the rope through the saddle mount, tie a self-locking knot, and then tie a safety knot to ensure the rope is securely fastened.

② Pass the other end of the rope through the hole at the top of the hook, then tie a safety knot to complete the installation of the smart hook.



⚠ Note

⚠ The knot in the figure is for reference only. Please refer to the actual product during operation.

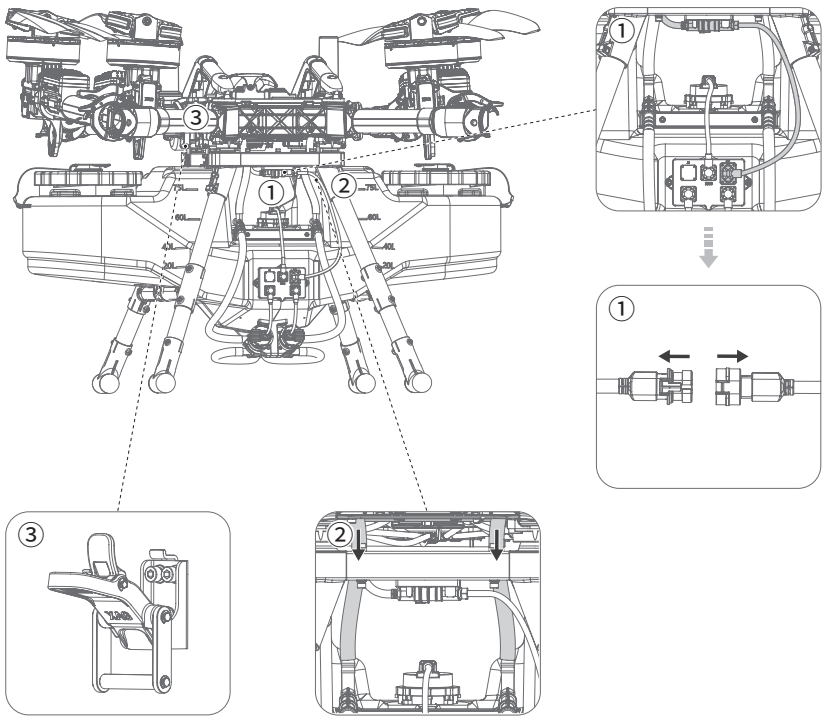
⚠ To ensure the rope is securely fastened, safety knots must be added to both ends of the rope.

Remove RevoSpray

① Remove the airframe payload system cable and the RevoSpray payload system cable from the cable holder and disconnect them.

② Disconnect the two liquid tubes connected to the RevoSpray from the airframe.

③ Open the airframe hasps (two on each side) and remove the RevoSpray.



⚠ Note

⚠ Before removing the RevoSpray, please ensure that any pesticide residue in the liquid tubes has been thoroughly cleaned.

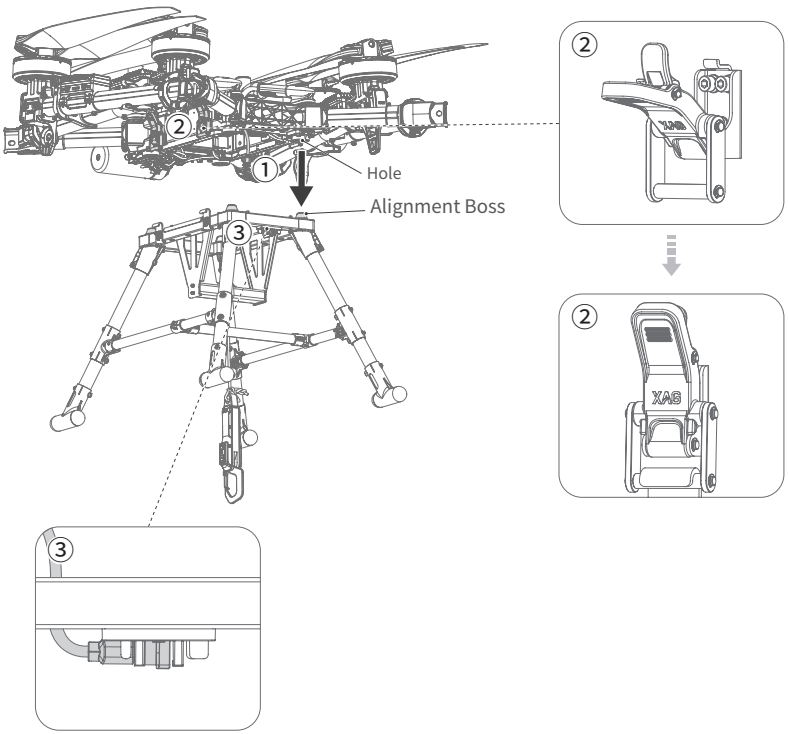
⚠ Before installing the RevoSling, be sure to remove all spray rods from the arms. Users shall be responsible for any damage caused by failure to remove the spray rods during RevoSling operations.

Install RevoSling

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

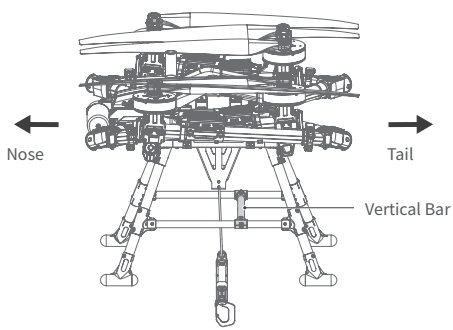
② Open the airframe hasps (two on each side) and fasten the airframe to the RevoSling.

③ Affix the airframe payload system cable to the cable holder to complete the installation of the RevoSling.



⚠ Note

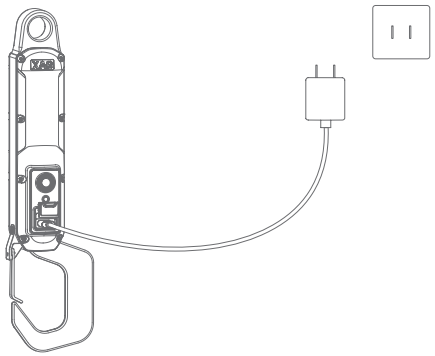
⚠ With the drone's nose facing forward, the vertical bar of the landing skid should be positioned on the side closer to the drone's tail.



Use of RevoSling

Charging

Insert the Type-C cable into the charging port of the Smart Hook (hereinafter referred to as "hook"), and connect the other end to the power adapter and plug it into a power source. When you hear a "beep" sound and the status indicator light stays solid blue, the hook is fully charged.



Power On/Off

When the device is off, press and hold the power button for 2 seconds. Release the button after hearing a "beep". The status indicator light will turn on, indicating successful startup.
When the device is on, press and hold the power button for 2 seconds. Release the button after hearing a "beep". The status indicator light will turn off, indicating successful shutdown.

Bind Device

Before using the RevoSling for the first time, you need to bind the Smart Hook to the drone in the "XAG One" app. Follow the steps below to bind:

1. Power on the SRC5 Smart Remote Controller (hereinafter referred to as "SRC5") and the drone.
2. In the "XAG One" app, go to the drone's Device Details – "General", tap "Bind Remote Controller", and select the SRC5 to bind.
3. Power on the Smart Hook by pressing and holding the button. Then, in the "XAG One" app, go to the drone's Device Details - "Payload System", tap "Switch to Transportation System" (please ensure the spraying/spreading system has been removed first), select "RevoSling", and enter the "Bind Hook" screen.
4. When the hook's indicator light flashes yellow slowly, it is in pairing mode. Wait for the drone and hook to automatically complete the binding. The indicator light will turn green once the hook is successfully bound.

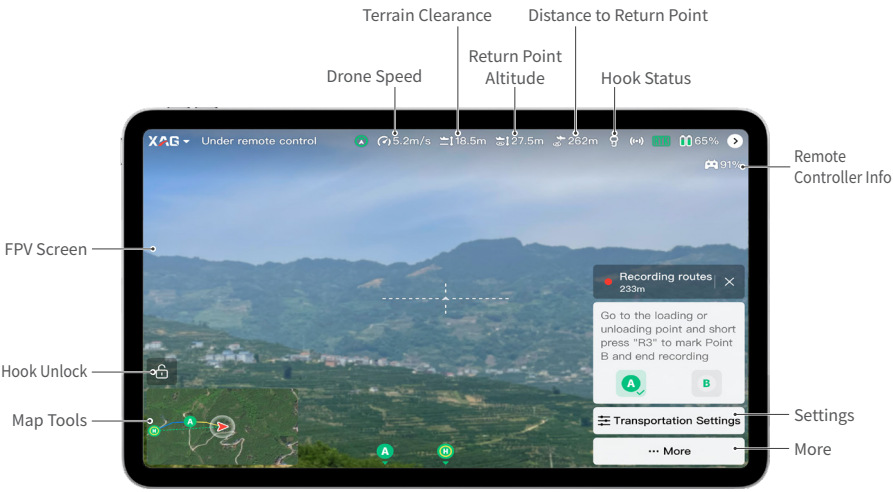
Firmware Update

Before using the device, you need to check whether the current firmware version is up to date. If the firmware is not the latest version, please make sure to update it.

1. Open the "XAG One" app, tap "Me" – "Device", select the drone related to the operation to enter the Device Details screen. Tap " ⊞ " to enter the "General" screen, then tap "Firmware Update" to check for firmware updates.
2. If an update is available, tap "Download and Update". Once the firmware update is complete, tap "Complete" to return to the Device List screen. Check whether all operation-related devices have been updated to the latest firmware version. If not, repeat the update process until all updates are complete.

App UI

Operation Screen



Map Tools: Tap to expand the map toolbar
Hook Unlock: Tap to unlock the Smart Hook
FPV Screen: "First Person View"; displays the drone's current flight view
Drone Speed: Current flight speed
Terrain Clearance: Drone's current relative altitude above the ground
Return Point Altitude: Drone's current relative altitude to the return point
Distance to Return Point: Distance between the drone's current position and the return point
Hook Status: Current status of the Smart Hook
Remote Controller Info: Information about the remote controller bound to the drone
Settings: Tap to enter the Settings screen
More: Tap to perform more actions

Manual Test

Before performing RevoSling operations with the drone, a "manual test" of the RevoSling system must be performed to ensure the hook functions properly.

1. Press and hold the hook button to power it on. The status indicator light will turn on.
2. Press the hook button; the adjustable hook will automatically open (do not attach any load at this stage).
3. Manually close the adjustable hook; it will not automatically open.
4. Repeat the above steps three times to ensure the hook is functioning properly. Once confirmed, the manual test of the hook is complete.

RevoSling Operation

After installing the RevoSling system on the drone, users need to open the XAG One App, go to the drone's Device Details screen - Payload System, tap "Switch to Transportation System" and select RevoSling. Once the hook is bound and the manual test is complete, the drone is ready to start RevoSling operations.

1. Open the "XAG One" app and tap "Operation" on the home screen.
2. On the operation screen, tap " ◎ ", then tap on the satellite map to add target point (or connect a mapping device to add target point).
3. Tap "Transportation Settings" to set RevoSling operation as needed.
4. Move both joysticks of SRC5 diagonally downward to manually take off. After reaching a certain altitude, hover the drone, then fly it above the cargo and vertically lift the cargo to an appropriate height.
5. Tap "Auto Flight"; the drone will automatically fly to the target point.
6. Upon arrival, manually control the drone to descend. Tap "Unlock" to open the hook's safety latch. When the cargo touches the ground, the hook will automatically open to complete unloading.
7. Fly the drone to ascend to an appropriate altitude to proceed with the next transport operation or return home.

⚠ Note

⚠ When manually taking off with the remote controller, check the rope for any entanglement, knots, or other issues that could affect transport. If such issues are found, please land the drone and reorganize the rope before proceeding.

⚠ When loading or unloading cargo, you must monitor the FPV screen and manually control the drone to hover steadily above the takeoff or target point. Ensure the drone and hook are stable before performing any loading or unloading operations.

⚠ When loading or unloading cargo, ensure there are no people, animals, or other obstacles beneath the drone.

Settings

- "Auto Flight": Configure the drone's automatic flight altitude and speed, as well as enable or disable terrain following and obstacle avoidance.

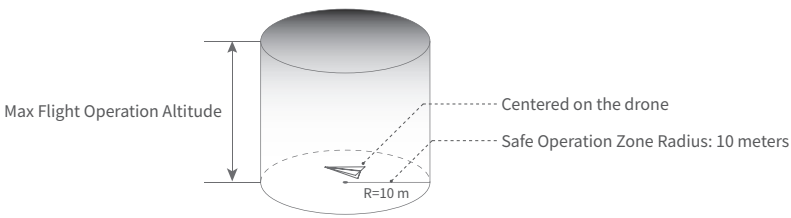
- "One-tap Return": Configure the RTH altitude and speed, and enable or disable terrain following during return.
- "Rope Length": Be sure to set it to the actual rope length before starting operation.

More

- During operation, tap "More" on the operation screen to perform RTH, Landing, or Terminate Operation.

Operation Safety Requirements

To ensure operation safety, agricultural drones must operate within designated altitude and distance limits at takeoff, landing, hovering, and surrounding operation zones. Specifically, within a radius of 10 meters centered on the drone, extending vertically up and down as well as horizontally left and right to the maximum cylindrical operation space of the drone (as shown in the figure below), no personnel, animals, or any obstacles are allowed to be present.



Maintenance

- After operation, clean the RevoSling thoroughly to prevent damage caused by attached mud, liquid, and other foreign objects. Follow the steps below:
  ① Visually inspect the hook latch. If there is any mud, grass residue, or other foreign objects, remove it with a clean tool.
  ② Wipe the hook surface with a wrung-out damp cloth to remove stains and adhered dirt.
  ③ Visually check the condition of the rope. If there are signs of damage such as wear or bulging on the surface, replace the rope promptly.
- It is advisable to apply lubricant to the safety latch and adjustable hook every 6 months of operation.
- It is advisable to replace the hook servo of the smart hook every 6 months of operation.

Transportation and Storage

Transportation

- The smart hook must be securely placed before transporting RevoSling. If necessary, wrap it with shock-absorbing materials to prevent tangling, collision, or accidents during transportation.

- Never place the smart hook near heat sources or inside closed high-temperature environments (above 45° C), such as in closed vehicles or compartments.
- The smart hook should be transported in a dry environment (ambient humidity below 75%). Do not store the hook in humid conditions.
- Do not store or transport the smart hook with flammable, explosive substances or metal objects.
- Never charge or discharge the smart hook during transportation.

Storage

- When not in use, the smart hook should be thoroughly cleaned and stored horizontally in a cool, secure location.
- If the smart hook is not used for a long period, it must be charged and discharged every 90 days to maintain battery activity. Otherwise, the hook may malfunction due to battery degradation.
- Do not store functional batteries together with defective ones.
- Batteries should be stored in an open area, free of flammable materials, debris, or equipment that could generate sparks (e.g., chargers, switches, power sources) within 10 meters.
- Batteries should be stored in a clearly defined or marked area and managed by designated personnel.

Battery Warnings

- Please use the battery at ambient temperatures from 0° C to 45° C. Using it in high temperatures (above 45° C) may lead to fire or explosion.
- Never connect the battery's positive and negative terminals with wires or metal objects, otherwise, it will short-circuit.
- If there is liquid or debris on the battery connector, wipe it clean and keep it dry. Otherwise, it may cause poor contact, power loss, or charging failure.
- Handle the battery with care. Do not disassemble, puncture, or apply external pressure to the battery.
- When charging, keep the battery and charger away from flammable or explosive materials. Never charge in closed or confined areas. Monitor the battery during charging to prevent accidents.
- Store the battery in a dry environment with appropriate temperature[1]. Do not expose it to water, moisture, or direct sunlight.
- The liquid inside the battery is highly corrosive. If it contacts human skin or eyes, rinse it off immediately with clean water and seek medical attention.
- In case of a short circuit during charging, immediately disconnect the charger and place the battery on the ground or in a fireproof sand bucket. Cover the flames with an asbestos blanket (or similar) and extinguish them with fireproof sand on the blanket.
- Please dispose of batteries in accordance with local laws and regulations. Do not discard batteries improperly and help protect the environment.

[1]: Battery Storage Temperature: -20° C to 23° C (over 3 months but less than 1 year); -20° C to 45° C (over 1 month but less than 3 months); -20° C to 60° C (less than 1 month)

Specifications

Model	M4XRSP80A
Dimensions	859×595×532 mm (landing gear only) 300×76×59 mm (smart hook only)
Weight	5.6 kg
Max. Payload	80 kg
Required Rope Length	5 ~ 15 m
Charging Voltage/Current	5V / 2A
Operating Temperature	10 ~ 45 °C
Storage Temperature	-20 ~ 60 °C
Compatible Remote Controller	XAG SRC5 Smart Remote Controller XAG SRC4 Smart Remote Controller
Compatible Drone	XAG P150 Max Agricultural Drone XAG P150 2024 Agricultural Drone

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 .

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

This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

⚠ Warning

⚠ This product can expose you to chemicals including Pb which is know to the State of California to cause cancer. For more information go to ***www.P65Warnings.ca.gov.***

FCC Supplier's Declaration of Conformity

Brand name / model number*：*M4XRSP80A

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. (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): 2265 116th Ave NE, Suite 110, Bellevue, WA 98004, United States

Suppliers Email Address: arthur@pegasusrobotic.com

EU Compliance Statement

"Hereby, *[Guangzhou Xaircraft Technology CO.,LTD.]*, declares that this *[XAG RevoSling]* 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"

Brand name / model number：*M4XRSP80A*
Suppliers Name(EU)：*NIK ELECTRONICS LTD*
Suppliers Address (EU)：*Sofia, 11B Brussels Blvd., fl.13*
Suppliers phone number and / or internet contact information：*00359899952228*

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).

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 18 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 a payload system designed specifically for the XAG P150 Max Agricultural Drone and is intended solely to be mounted on XAG agricultural drones for the carriage of farming-related materials for agricultural applications - such as farming, forestry, animal husbandry, and fisheries. Before using this product, please carefully read the User Manual to understand your legal interests, rights, responsibilities, and relevant safety instructions. Failure to do so may result in property loss, accidents, or personal injury.
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 uploaded and saved to XAG's server. XAG shall resume no responsibility for the failure to analyze such flight records and data 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 modify, convert, or disassemble this product on your own as any malfunction or damage arising therefrom or resulting from your improper use will not be covered by the warranty, 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, purchasers or users 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 the aforementioned laws and regulations by the purchaser or user.

11. Please note that the use of this product on agricultural drones might involve the laws and regulations in connection with the collection, storage as well as processing of the geographic information and data of farmland. Before using this product, be sure to comply with local laws and regulations related to the collection, storage, or processing of such geographic information and data. Make sure that you use this product in accordance with the law. Any financial and legal liability arising from user's violations of the laws and regulations shall be borne solely by the user.
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 partial 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 this product, user is required to read through the User Manual and hold the appropriate operator certification required for operating conventional agricultural unmanned aerial vehicles. Operating the agricultural drone or its peripherals without the required certification, or improper operation, may cause injury to the user or others, or cause damage to the product and property loss. Any financial or legal liability arising from such actions shall be borne by the user. Safety awareness is of great importance during operation. Please install, maintain, and use the product in strict accordance with the User Manual and applicable laws.

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XAG ADVANCING AGRICULTURE

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