

P20 2020

Quick Start Guide

Version 1.1 **EN**

To Users

Dear user, thank you for choosing XAG products.

For safety reasons and the best experience possible, XAG recommends that you read through the Quick Start Guide and Disclaimer in this document before using the P20 Plant Protection UAS 2020.



Click to View

See the contents below for a quick overview of the Manual; in a digital version, click on each title to be redirected to the corresponding page.

Contact Us

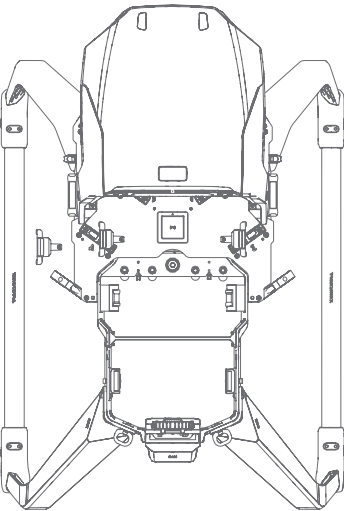
If you have any questions about this document, please contact our Technical Support via email: info@xa.com

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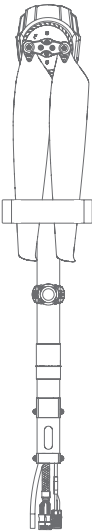
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List of Items

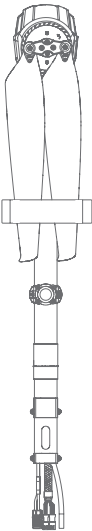
Please carefully check whether the product contains all the items listed below and contact your dealer if there are any missing items.



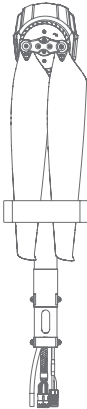
Airframe
x1



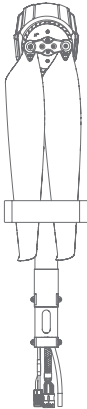
No. 4 Arm
Module
x1



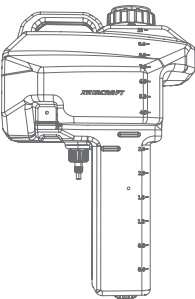
No. 3 Arm
Module
x1



No. 2 Arm
Module
x1



No. 1 Arm
Module
x1



Automatic Liquid Container (10L)
x2



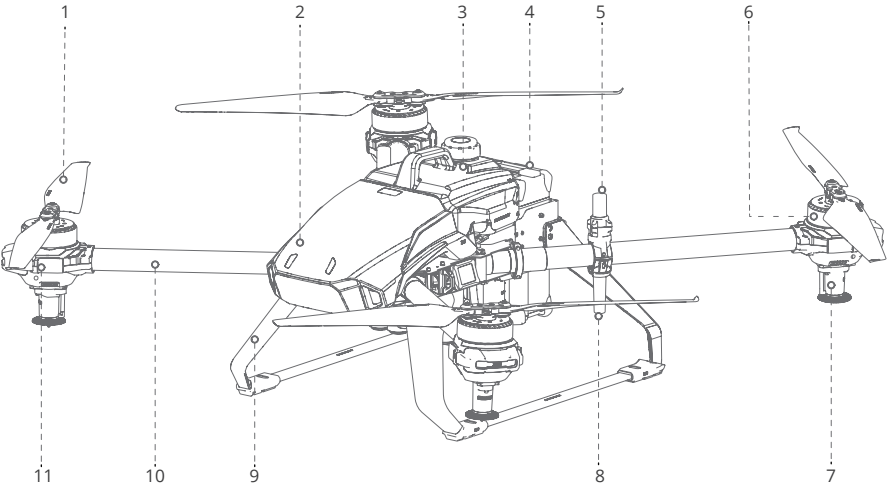
Tool Kit
x1



USB-Type-C Cable
x1

P20 Plant Protection UAS

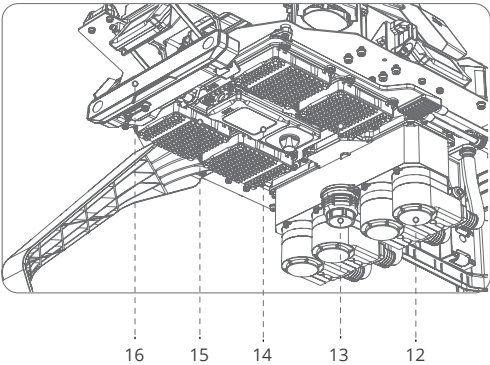
The main structural components of the P20 Plant Protection UAS are as follows:

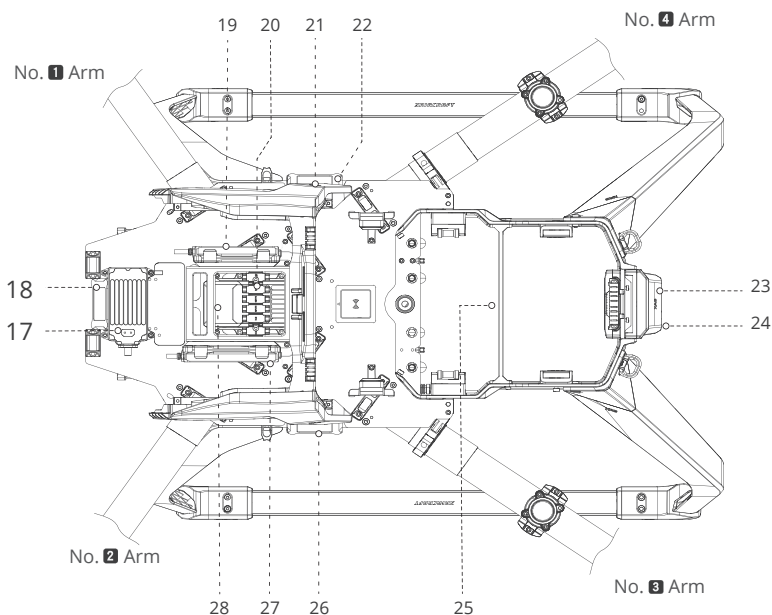


(Above) Figure 1: Airframe Module Structure 1

(Below) Figure 2: Airframe Module Structure 2

- ① Propeller / Blade
- ② head cover
- ③ Liquid Container
- ④ Smart Battery
- ⑤ RTK Antenna (one on each side)
- ⑥ Motor
- ⑦ Sprayer
- ⑧ 2.4/5.8GHz Dual-frequency Antenna (one on each side)
- ⑨ Landing Gear
- ⑩ Arm
- ⑪ Spraying Status Indicator
- ⑫ Liquid Pump
- ⑬ Search Light
- ⑭ Terrain Sensor
- ⑮ ESC (Electronic Speed Controller)
- ⑯ XCope

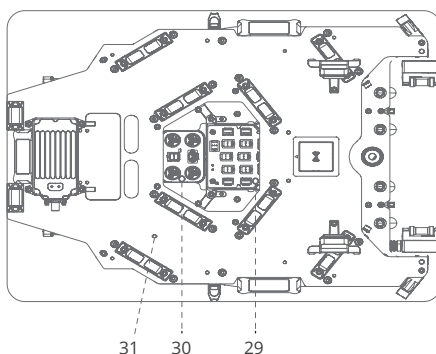




(Above) Figure 3: Airframe Module & Arm Position

(Below) Figure 4: Airframe Module

- 17 FC Backup Power
- 18 Radar (Front)^[1]
- 19 RTK Module
- 20 Antenna Hub
- 21 4G Antenna Frame
- 22 Radar (Right)^[1]
- 23 Radar (Rear)^[1]
- 24 Flight Status Indicator Light (Tail Light)
- 25 Airframe Nameplate (Serial Number/ QR Code)
- 26 Radar (Left)^[1]
- 27 HDLS Module
- 28 Flight Controller / FC
- 29 Central Hub
- 30 Power Grid Hub
- 31 Arm Position Number on Airframe

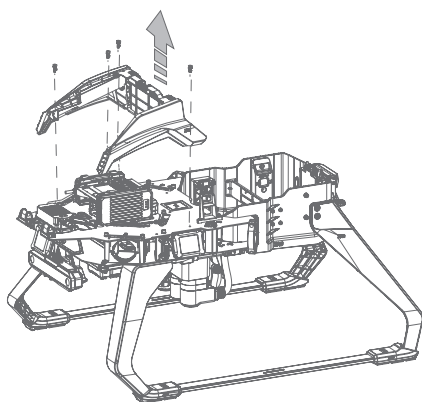
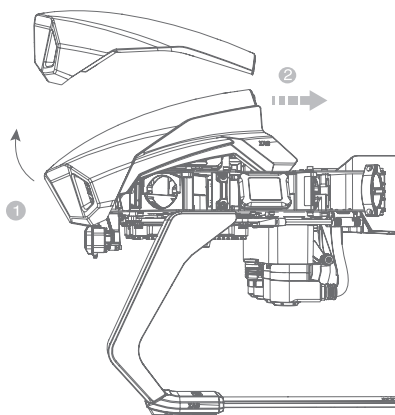


There are markings on the upper plate of the airframe and the aluminum sleeves of arms. The numbers correspond to the position numbers of arms.

[1]: The number of radar modules may vary depending on the UAV Version.

Airframe Assembly

Pre-Assembly Preparations

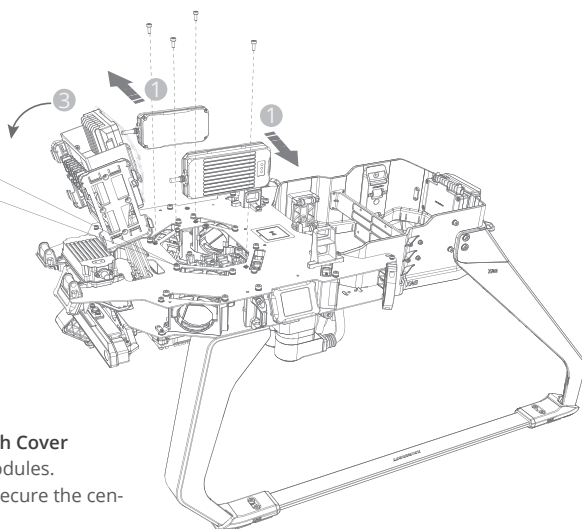
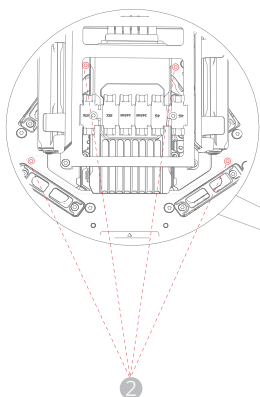


1. Disassemble the Head Cover

Lift the head cover up from the front, then push it backwards.

2. Disassemble the Antenna Frame

Remove the antenna frame fixing screws, and remove the antenna frame from the airframe.

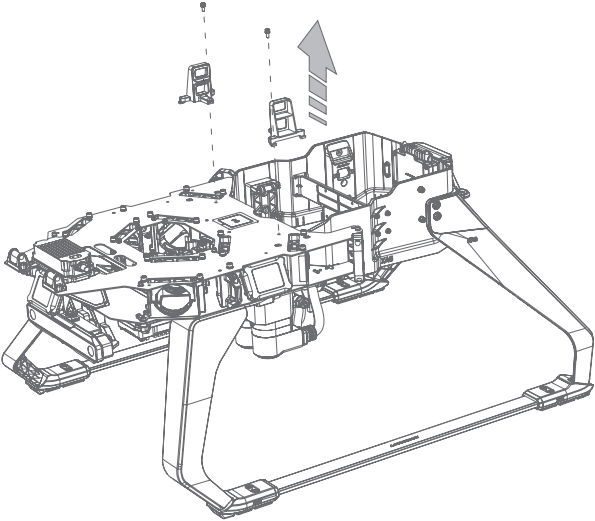


3. Disassemble the Central Hatch Cover

- ① Remove the RTK and HDLS modules.
- ② Remove the four screws that secure the central hatch cover.
- ③ Flip the hatch cover back to remove it as shown in the figure.

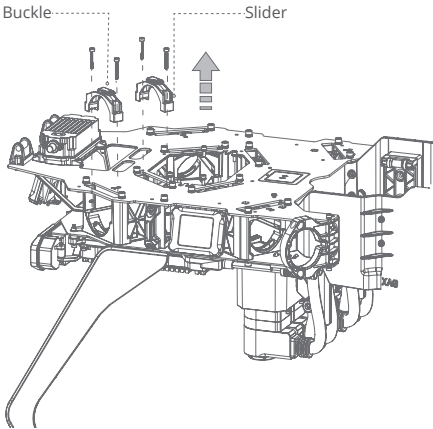
4. Remove the Liquid Container Holder

Remove the liquid container's fixing screws and then the container holder.



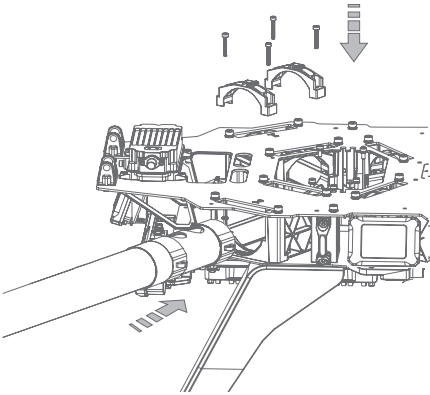
Before reassembling the arms, please ensure that the markings on the upper plate of the airframe match the markings on the aluminum sleeves of the arms (Refer to Page 3, Figure 3: Airframe Module & Arm Position). Incorrect assembly of the arms may cause accidents during flight.

Arms Installation



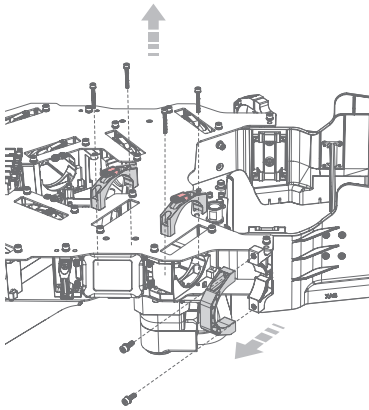
5. Dismantle the Fixed Sliders of No.1 and 2 Arms

Remove the screws on the stopper of No.2 Arm's top sliders, and then pull out the sliders. Please follow the same steps to dismantle No.1 Arm.



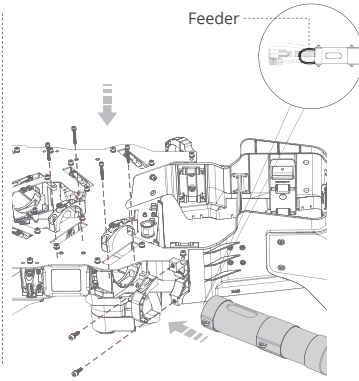
6. Install No.1 and 2 Arms

Insert the No.2 Arm into the designated position along the airframe plate, then return the top sliders back to their original positions. Please follow the same steps to install No.1 Arm.



7. Dismantle the Fixed Sliders of No.3 and 4 Arms

Dismantle the screws on the limiting stopper of No.3 Arm's top sliders, and then pull out the sliders and remove the carbon framed fasteners. Please follow the same steps to dismantle the fixed sliders of No. 4 arms.



8. Install No.3 and 4 Arms

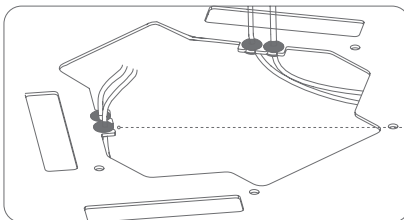
Insert the RTK feeder and the 2.4/5.8GHz feeder into No.3 Arm. Then insert the arm into the designated position of the airframe plate, and return the top sliders and arm fasteners back to their original positions to complete assembly. Please follow the same steps to install No. 4 arm.

Warning Make sure the arms remain horizontal while installing fixed sliders.

Pipe & Cable Connection

9. Correctly Connect the Circuits and Infusion Tubes

For instructions, see "Wiring Guidelines for the P-Series UAV Modules" on Page 8 and 9.

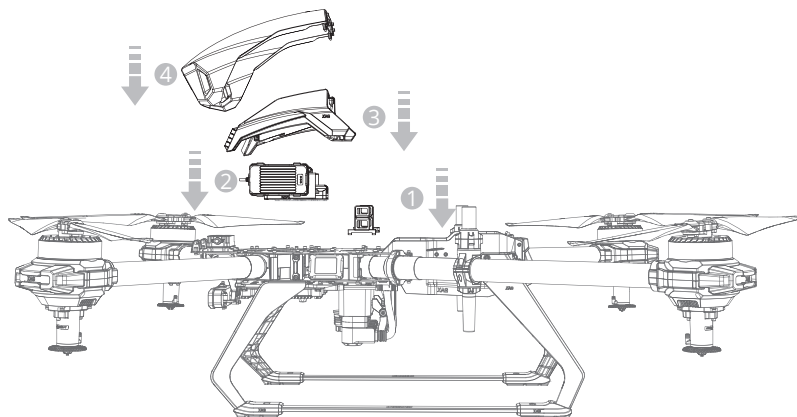


Warning Before installing the central hatch cover, the feeders and protective sleeves of No.3/4 Arm must be installed in the slots as shown in the figure.

Reinstall the Removed Parts

10. Reinstall the Removed Parts

- ① Return the fasteners of the liquid container back to their original positions.
- ② Return the central hatch cover back to its original position and install the RTK and HDLS modules into the slots.
- ③ After returning the antenna frame back to its original position, connect 6 feeders correctly according to the markings and install them into the feeder holder.
- ④ Return the head cover back to its original position.

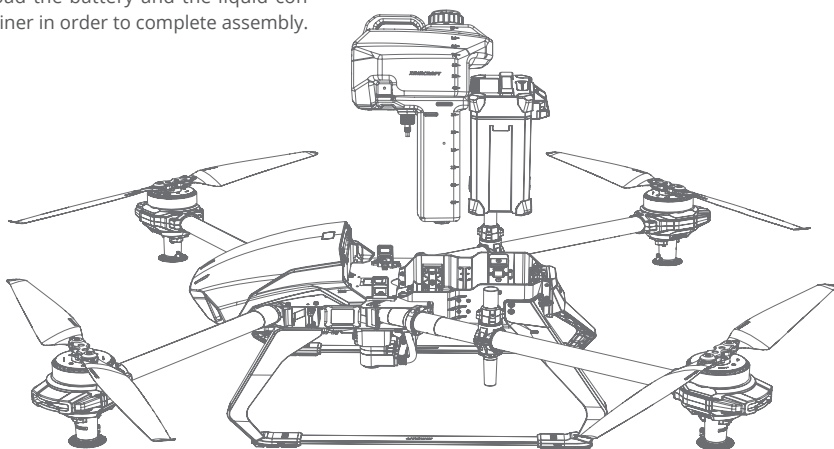


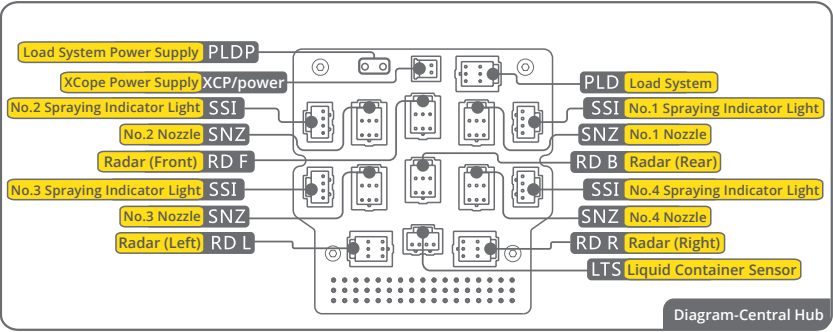
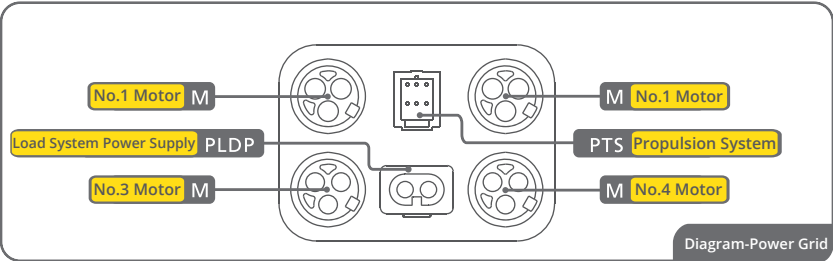
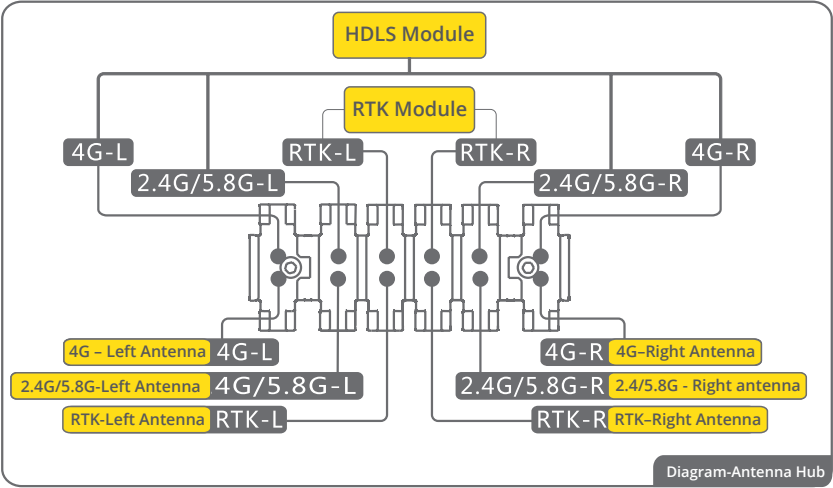
Warning

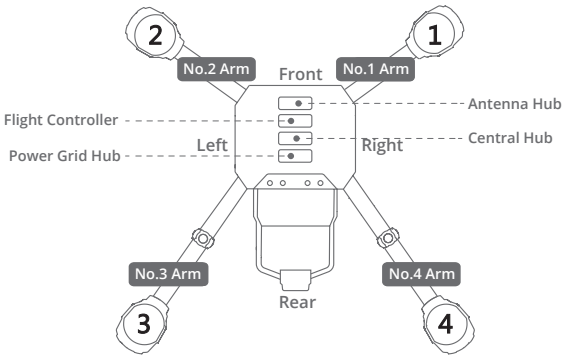
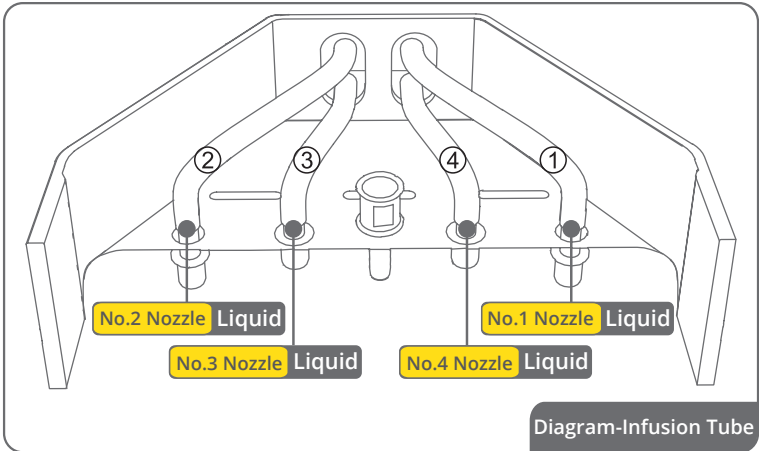
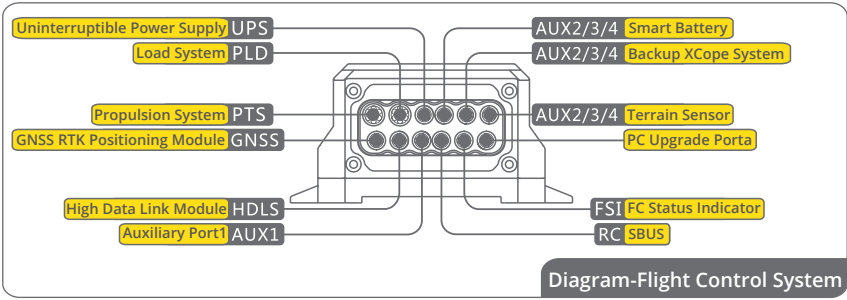
After assembly is completed, please check if the head cover is firmly secured to avoid accidents during flight.

11. Finish Assembly

Load the battery and the liquid container in order to complete assembly.







Note

1. Do not disassemble and assemble any modules while powered on.
2. Turn on the power supply only after all the modules have been installed.



Use Instructions

Activation

Visit XAG User Registration Website at: <https://agri.xaircraft.com/pm/#!/login>

Activation Steps

- 1. Open the "XAgriCentre" app and log in with your User Account Details.
- 2. Select "Scan QR", and add your device by either entering the Serial Number or the Scanning the QR Code of the Aircraft (This information could be found on the Airframe Nameplate).
- 3. Please Scan the QR Code on the Activation Card provided by Official XAG Partners to activate your device.
- 4. The system will validate your QR Activation Code. Once it is validated, please select Activate Device again to finalize the activation.
- 5. Your Device is now Activated.


User

Username

Password

LOGIN

V 1.0.7




Scan QR code

OR

Enter device serial number

Confirm




P30 2020
SN:PPP 2020053001

Please Scan QR to Activate

Device require Activation before USE

Activate Device





P30 2020
SN:PPP 2020053001

Valid Activation Code

Device require Activation before USE

☐ Purchase XAG Care for this UAV

Activate Device

PPP 2020053001		
N0.1		
Device Info	History	Warranty
Device ModelP30 2020		
MFD	2020-04-03 17:06:49	
Activation	2020-04-03 17:13:49	
Binding	2020-04-03 17:13:49	
Owner	JUMP (+86185xxxxxxxx)	
User	JUMP (+86185xxxxxxxx)	
Last known Position>		
FC-SNFP30 2020053001		
FC-ID3A004B000451373236393336		
Unbind	Recover Right-of-use	Lock Device

* The QR code and serial number of the airframe can be found in the fuselage carbon frame beam, Please see Page 6, Icon 25 for Reference

* The QR code of activation card can be obtained from your dealer when you purchase the aircraft.

Download XAG AGRI APP



Scan to Download XAG AGRI APP

Prepare the Remote Controller

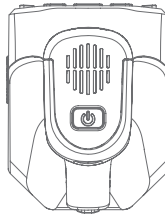
The XAG P Agricultural UAS needs to be used together with professional remote controllers and APP. The available control mode combinations include:

- ① ACB1 CommBack (optional) + Smartphone;
- ② ACS1 ControlStick (optional);
- ③ ARC1 Agricultural Remote Control (optional);


Operation modes vary slightly depending on different remote controllers. Using the ACS2 ControlStick as an example:

• Turning on the ControlStick

Press and hold the Power Button for 2 seconds twice to turn on the device.



• Connect the Device

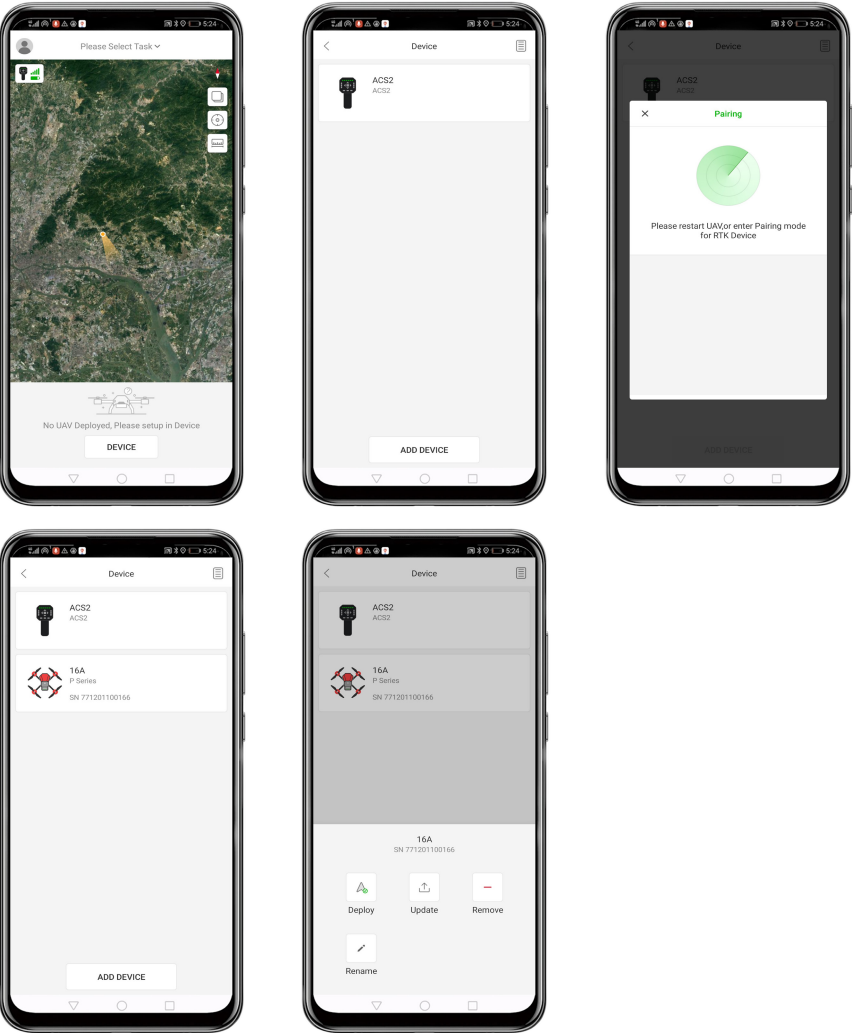
1. Open your mobile phone, locate the hotspot for the remote control in the Wi-Fi list and enter the corresponding password. (By default, the hotspot name is "ACS2_ XXX", with XXX referring to the serial number indicated on the top of the remote control, and the default password is 20070401.
2. Open the Xplanet App again, and wait for connection. (the icon  turns green)

Pair the UAV

Steps

- ① Once your remote control and smartphone are wirelessly connected via hotspot, open XPLANET APP, and select "Device";
- ② Click "Add Device" to start device searching;
- ③ After the system prompts "Please restart UAV, or enter Pairing mode for RTK Device", restart the UAS for pairing;
- ④ If successfully paired, a "Successful Pairing" notification will display, and the device will be displayed on the device interface;
- ⑤ Check if the UAS is functioning normally by selecting the UAS and "Deploy" button. If "Deploy" is then displayed, it means the device is functioning normally.

Note: Before pairing, please visit the "XAG Service" WeChat mini-program and click "My Device"->"Scan QR Code to Add Device" to scan the QR code printed on the airframe.

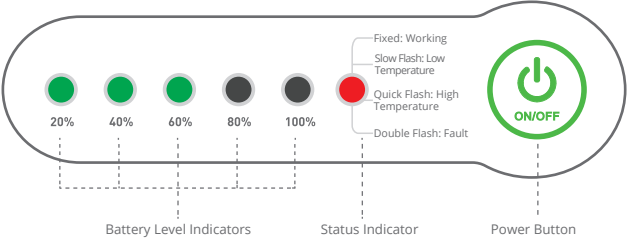


Note: Only devices that have obtained the right to use at the XAG Service mini-program can be successfully paired.

Prepare the Smart Battery

The XP Agricultural UAS 2020 is designed to be powered by B13860S Smart Battery. The Smart Battery contains a power button and six indicator lights.

The buttons/indicator lights are as follows:



• Battery ON/OFF

ON: The battery will be powered on after 2 long presses. With the power OFF, connect the device , press and hold the power button for at least 1 second, and release the button once all battery level indicator lights flash at the same time. Then, press and hold the button for at least 1 second until a beep is heard and the status indicator is on. This indicates that the battery has been powered on successfully.

OFF: The battery will be powered off after 2 long presses. With the power ON, press and hold the power button for at least 1 second, and release the button once all battery level indicator lights flash at the same time. Then, press and hold the button for at least 1 second until a beep is heard and the status indicator is off. This indicates that the battery has been powered down successfully.





•Checking Power Level

When the battery is OFF, press the power button once to display the battery level;
When the battery is ON, see the battery indicator lights for the battery level.

Battery Level LED	Status	Description
1 LIGHT FLASH		0%–10%
1 LIGHT ON		10%–30%
2 LIGHTS ON		30%–50%
3 LIHGTS ON		50%–70%
4 LIHGTS ON		70%–90%
5 LIHGTS ON		90%–100%
2 LIGHTS DOUBLE FLASH		Self-locked Battery is locked due to low power level. Please contact customer support to unlock the device.
3 LIGHTS DOUBLE FLASH		Remotely locked Battery is locked remotely. Please contact customer support to unlock device.
4 LIGHTS DOUBLE FLASH		Anti-tamper lock Battery is disabled. Please contact customer support to unlock device.

[1] Device: Device as UAV or Charger.

Checking Battery Status

Battery Level LED		Status	Description
RED LIGHT ON		Normal	Normal
RED QUICK FLASH		Overheated	Temporarily locked. Prohibited from charging and usage.
RED SLOW FLASH		Low Temperature	Low temperature triggers charging protection. Please keep battery temperature at over 10°C.
RED DOUBLE FLASH		Battery Malfunction	Stop using immediately.

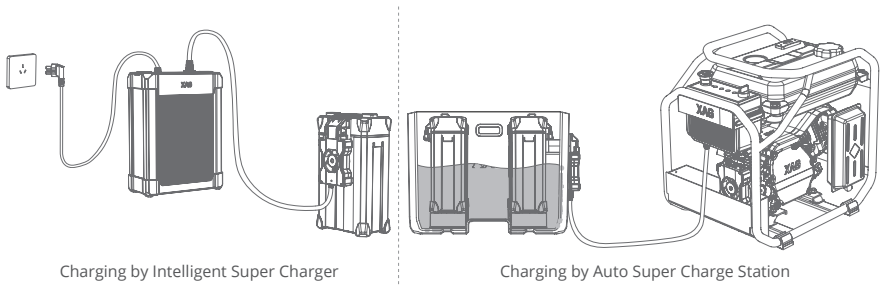
Battery Use Instructions

- Do not plug or unplug the battery when it is turned on, otherwise the power connector may be damaged.
- Check the battery firmware before flight operation. If there is a new version, please update first. Flight loss caused by the user's failure to update the battery firmware and software will be borne by the user.
- The battery should be used between 10 °C and 45 °C (ambient temperature). Overheating (>45 °C) may cause the battery to ignite or explode.
- Do not connect the positive and negative poles of the battery with a wire or other metal objects to avoid short circuiting.
- Do not immerse the battery in a corrosive liquid. When the battery is placed in clean water for heat dissipation, please keep the water level between the Max and Min marks. Do not leave the battery in water for more than 60 minutes. Otherwise, the liquid may flow into the battery and cause damage.
- If there is liquid or foreign matter on the battery terminal, wipe immediately and keep it clean. Otherwise it may cause poor contact, resulting in loss of energy or charging failure.
- Please handle with care during use. Do not disassemble it, puncture its case or manually press the battery, including but not limited to the following: Sitting on the battery, placing heavy objects on the battery or otherwise putting pressure on the battery.
- Regularly check the battery terminal, plug and other components before use. Do not use alcohol or other flammable agents to clean charging devices. Do not use a damaged charging device.
- When charging, place the battery and charging devices on flat ground that is free of flammable or combustible materials. Battery charging shall be watched over to prevent accidents.
- For safety, when charging, a distance of more than 30cm shall be kept between two batteries, or between a battery and a charger, to avoid the malfunction of the charger or the battery, and even serious consequences such as fire due to overheating.
- Before each flight, make sure the battery has completed charging; never operate with a full load when the battery is not fully charged.
- It is strictly forbidden to use batteries other than those provided by XAG, or to dismantle or replace a battery without authorization. For repairs or replacement, please contact XAG or a designated dealer. The user shall bear the responsibility for battery accidents, flight failures or other accidents caused by the use of batteries not provided by XAG.
- In case of ONE GREEN LIGHT FLASH after flight, please charge the battery to 40%-60% capacity before storage. Otherwise it may damage the battery. The battery should be recharged and discharged every 90 days to maintain its activity.
- The battery should be stored in a dry environment at a temperature between 10-30°C . Do not place the battery in a location that is too damp or has leakages.
- Do not charge the battery in a damp environment. Product damage caused by liquid immersion due to reasons other than product quality (such as a damaged battery case) is not covered by the warranty.
- The battery has been tested under controlled experimental conditions to be resistant to splashes and water. However, such protective performance becomes less effective over time, and may diminish due to daily wear and tear.

- The battery has been tested under controlled experimental conditions to be resistant to splashes and water. However, such protective performance becomes less effective over time, and may diminish due to daily wear and tear.
- When the battery is found swollen, leaking, deformed, or damaged, stop using the battery immediately and contact XAG or your dealer promptly.
- The liquid inside the battery is highly corrosive. If it makes contact with your skin or eyes, rinse with clean water and seek medical advice immediately.
- When disposing of the battery, please follow local laws and regulations. Protect the natural environment, and do not discard it irresponsibly.

Charging Battery

During the battery charging, the battery level indicators corresponding to the current battery level will be on, while the remaining lights will flash in series, indicating that the battery is charging. After charging is completed, the buzzer will beep for 30 seconds. Meanwhile, all battery level indicators will flash for 2 minutes before the battery turns off automatically.



Warning

The battery must be charged with the charging devices designated by XAG. The user shall bear the responsibility for all the consequences caused by the use of the charging devices not designated by XAG.

Charger Status Indicators

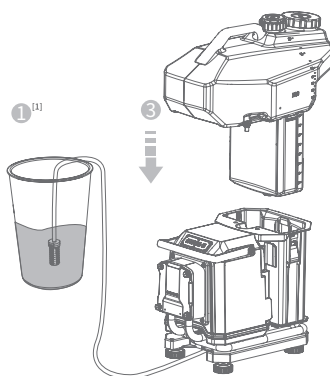
Status Type	LED	Status	Description
Power Output	Green Light On	Normal	Normal input
	Green Light Flash	Not Grounded	Charging at risk
	Red Light On	Device Fault	Temporarily locked. Prohibited from output.
	Red Light Flash	Device Overheated	Temporarily locked. Prohibited from output.
Charge Output	Green Light On	Idle	Idle
	Green Light Flash	No Communication	Battery not connected or communication failed.
	Red Light On	Charging	Charging
Charge Port	Green Light On	Normal	Communication succeeded. Charging normally.
	Red Light On	Irregular Communication	Communication between charge port and battery failed.
	Red Light On	Battery Overheated	Battery is overheated.

Charger Use Instructions

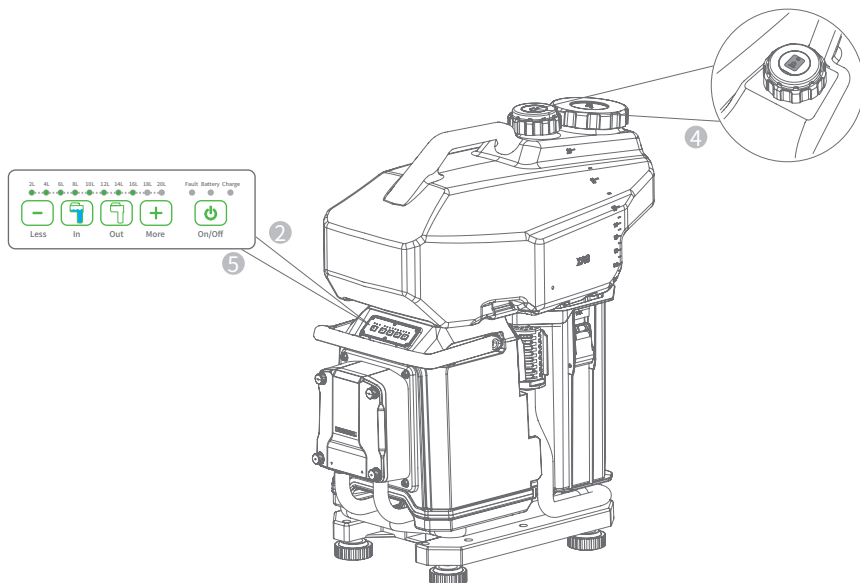
- Please keep all battery terminals clean and avoid contact with metal objects.
- If there is liquid or foreign matter on the charge port, immediately clean and remove the substance. Otherwise it may cause poor contact, resulting in short circuit or charging failure.
- Do not expose the Super Charger to sunlight or rain.
- Do not charge with AC power beyond the rated voltage range. Keep the Super Charger away from flammable and explosive materials when charging, and do not leave it alone while it is being charged.
- If an error or warning is issued during the charging process, please turn the power off immediately, and resume use only after the product has been checked for safety.
- For safety, when charging, a distance of at least 30cm shall be kept between two batteries, or between a battery and a charger, to avoid the malfunction of the charger or the battery, and even serious consequences such as fire due to overheating.
- Regularly check the battery terminals, plug and other components before use. Do not use alcohol or other flammable agents to clean charging devices.
- When the Super Charger is found damaged, stop using immediately and contact XAG or your dealer.
- Do not use damaged chargers. For repairs or replacement, please contact XAG's aftersales or designated dealers.
- Do not use the smart batteries or chargers other than the original ones manufactured by XAG. The user shall bear the responsibility for charging accidents, battery failures, flight accidents or other accidents caused by the use of batteries or chargers not provided by XAG.
- Do not modify or disassemble the Super Charger without permission. The user shall be liable for any consequence caused by the unauthorized modification and disassembly of the Super Charger.
- After use, remove the charge port from the Super Charger, and keep both in a safe, clean and cool place.
- When the Super Charger is found damaged, stop using the battery immediately and contact XAG or your dealer.

Prepare the Liquid Container

1. Place the liquid inlet tube into a barrel containing prepared liquid.
2. Press the ON/OFF button of the refiller to power the machine on.
3. Place the container into the refiller. If the container is positioned properly, a beep will be heard from the buzzer.
4. Press the ON/OFF button of the container. When the power indicator is green, the container is ON.
5. Press the Refill button to transfer liquid into the container.














[1]: It corresponds with Step 1 of 5 in total .













Description of Status Indicator/Buzzer

There are 3 indicator LEDs on the Automatic Liquid Refiller, each indicating a status as follows:

Charge	LED Display		Description
	RED LIGHT ON		Charging
	OFF		Charging completed
	RED LIGHT FLASHES		Charging circuit failure or battery overdischarge
Battery	LED Display		Battery Level
	GREEN LIGHT ON		50%-100%
	YELLOW LIGHT ON		25% -50%
	RED LIGHT ON		5%-25%
	RED LIGHT FLASH		Power level lower than 5%. Please recharge in a timely fashion.
Fault	LED Display	Warning/Beep	Description
		Once	The refiller detects that the container has been accurately placed.
	RED LIGHT ON 	Twice	The refiller fails to detect the placement of the container when it starts operation.
	RED LIGHT ON 	Three times	The refiller fails to connect to the container via Bluetooth when it starts operation.
	RED LIGHT ON 	Four times	The float of the container is stuck or the inlet tube or the refiller is blocked.
	RED LIGHT ON 	Five times	The refiller detects irregular rotational speed.
		Six times	The refiller has completed the operation.
		Eight times	The filler detects low battery level. The operation is suspended. All indicators flash eight times and the buzzer beeps eight times before refiller turns off automatically. Charge the refiller immediately.




Check the UAV Status

The Flight Status Indicator Lights (Tail Lights) indicate the status of the UAV. See the table below for details:

Flight Status Indicator		Status	Description
ONE RED + ONE GREEN LIGHT FLASH		Manual	WEAK GPS SIGNAL
TWO LIGHT FLASHING (Green)			GOOD GPS SIGNAL
THREE LIGHT FLASHING (Green)		Auto	GPS MODE
TWO LIGHT SLOW FLASH (RED)			SAFE MODE
SOLID RED		Abnormal	Flight controller is not initiated yet or is being preheated after being powered on
QUICK FLASH PURPLE			FC Formatted / Abnormal Parameter
QUICK FLASH BLUE			Abnormal power system
QUICK FLASH RED			GPS Error Low Precision Abnormal sensor (Exclude IMU)
QUICK FLASH WHITE			IMU Error
THREE LIGHT FLASHING (RED)		Low Voltage	Low voltage Warning

Check Spray Status

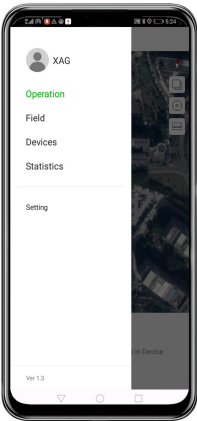
Two Spray Status Indicator Lights (Arm Lights) are located on the side of each motor base, representing the status of corresponding nozzles under each motor. The color of the indicators can be adjusted in the “Plant Protection Operation” APP. Status indicator light definitions are as follows: (using the red light as an example)

Spraying Status Indicator		Description
SOLID		Spray system is Normal
QUICK FLASH		UAV is Taking off / Landing
SLOW FLASH		Spray system is Abnormal observe interface of plant protection operation APP

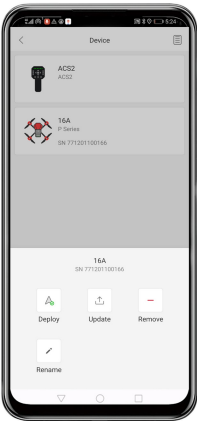
Firmware Upgrade

Users of XP Agricultural UAS 2020 may upgrade its modules, remote controls and RTK devices via the XPLANET APP.

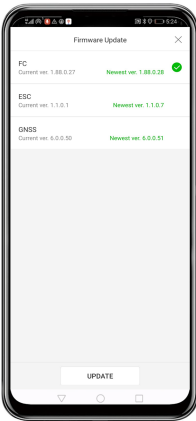
- ① Click the user portrait on the homepage and select “Device”.
- ② Choose a device (such as the UAS, remote control, RTK device), and click “Update”.
- ③ Select the module to be upgraded and click “UPDATE”.
- ④ Once the firmware transfer is complete, follow the instructions to restart the UAV, and the system will be automatically upgraded. The motor beeps and the white light flashes quickly when the upgrade is in progress. The beeping will stop once the upgrade is complete. (Do not disconnect the smartphone and the remote control while downloading or transmitting data.)
- ⑤ Visit the module information page to check whether the firmware upgrade was successful.



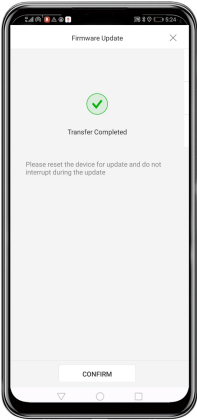
①



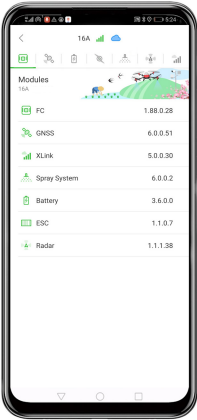
②



③



④



⑤

Technical Specifications

Multicopter Plant Protection UAS

Overall dimensions:

1172×1179×490mm (when the propellers are folded)
1830×1822×490mm (when the propellers are unfolded)
Waterproof grade: IP67

Flight Parameters

Empty weight: 13.1kg (w/o battery or liquid container)
Rated take-off weight: 28kg (10L liquid container)
Maximum effective take-off weight: 32kg (near sea level)
Maximum thrust-weight ratio: 2.14
Load ratio: 0.35
Hovering precision (good GNSS signal):
RTK enabled: ±10cm (horizontal), ±10cm (vertical);
RTK not enabled: ±0.6m (horizontal), ±0.3m (vertical)
(radar function enabled: 0.1m)
Hovering duration: 16min (14,000mAh, no-load)
8min (14,000mAh, full load)
Power battery: B12620/B12800/B13860S smart battery is applicable
Maximum flight speed: 12m/s
Maximum acceptable wind speed: 10m/s
Maximum flight altitude: 4000m
Recommended operating temperature: -10°C to 40°C

Spraying System

Sprayer

Model: SNZ-14000A
Number of nozzles: 4
Type: rotary atomising nozzle
Length of spray rod: 1010mm
Atomizing size: 90-300µm (according to operation requirements)
Effective spray width: 2~5m (depending on operating height and consumption per ha)

Peristaltic Pump / Kidney Pump

Model: PP-14A
Quantity: 4
Voltage: 32V
Flow rate: 1.4L/ minute (single pump)
5.6L/ minute (4 pumps)

Automatic Liquid Container

Model: LT-2010A
Capacity: 10L
Error range: ±0.2%~3.4%
Material: plastic (HDPE)

Propulsion System

Motor

Model: A12
Dimension (stator): 83×14mm
KV value: 100rpm/V
Rated power: 1000W (single)

ESC (Electronic Speed Controller)

Model: VC12100
Maximum operating voltage: 52.2V(12S Lipo)
Maximum continuous operating current: 100A

Foldable Propeller

Model: F3311CCW/F3311CW (A/B)
Weight: 218g (two blades + clip)
Diameter x screw pitch: 33×11.5inch

Obstacle Avoidance System

XCOPE

Model: XCOPE201819
Power consumption: 19W
Operating frequency: 30Hz
Obstacle avoidance direction: avoid obstacles in front according to the flight direction
Obstacle sensing range: 1.5~20m
Viewing angle: ±30° (horizontal)
0.2m below and 0.3m above the obstacle avoidance system (vertical)
Safe distance: 2.5m (the distance between propeller tip and the obstacle after the UAV brakes stably)

Terrain Sensor

Model: TR24S30
Power consumption: 5W
Operating frequency: 40Hz
Height measurement range^[1] : 0.5~30m
Fixed height range: 1-30m
Viewing angle to ground:

Omni bearing Radar (front, rear, left, and right)

Model: OM24S30
Power consumption: 2W
Operating frequency: 40Hz
Quantity: standard (0)
optional (4)
Obstacle sensing range: 2~30m (subject to material, position, shape, etc. of the target object)
Service conditions: relative flight height of the UAV is higher than 1.5m and the speed is less than 7m/s.

[1]: The effective use range of the radar is subject to material, position, shape, etc. of the target object.

Communication System

Operating frequency: 2.400~2.4835GHz

5.725~5.850GHz

Transmission power (EIRP): 2.400~2.4835GHz

FCC $\leq 28\text{dBm}$

CE $\leq 20\text{dBm}$

SRRC $\leq 20\text{dBm}$

MIC $\leq 20\text{dBm}$

5.725~5.850GHz

FCC $\leq 31\text{dBm}$

CE $\leq 14\text{dBm}$

SRRC $\leq 27\text{dBm}$

Maximum effective signal range (near ground level):

2.400~2.483GHz

FCC $\leq 2000\text{m}$

CE $\leq 1000\text{m}$

SRRC $\leq 1000\text{m}$

MIC $\leq 1000\text{m}$

5.725~5.850GHz

FCC $\leq 2000\text{m}$

CE $\leq 300\text{m}$

SRRC $\leq 1300\text{m}$

* Transmission distances vary from ground communication devices. The maximum effective signal ranges are measured when WG1, ACB1, and ACS2 devices are operating in an ideal environment without interference and obstruction.

* The data (parameters, etc.) indicated in this Manual is obtained from measurement performed when the UAV is at its best flight status, which is subject to the comprehensive conditions in actual use scenarios.

Other Features

Operating efficiency: 12ha/h

AI intelligent engine 3D operation planning: Supported

High-precision flow measurement: Supported

Hot swap of liquid container/ battery: Supported

Swarm Operation: Supported

Dual engine RTK technology: Supported

GNSS redundant backup: Supported

Variable-rate spraying (dynamic liquid control technology): Supported

Intelligent turning function: Supported

Flight Safety Instructions

- Receive UAV operation training courses and obtain a corresponding UAS operator certificate prior to operation. Unqualified users are not allowed to operate this product without authorization.
- Ensure that all flights are carried out in an open and familiar area, avoid obstacles and crowds, and beware of all risks.
- Do not operate the UAV in case of fatigue, after drinking or in poor conditions.
- Keep away from heat sources to avoid damage to electronic equipment or other components.
- Do not operate alone as a beginner. It is recommended to get help from an experienced operator before operation.
- Operate within the safe take-off weight. Do not overload the machine to avoid danger.
- Please conduct a Pre-flight Check to ensure that the device is normal and there is no frequency interference.
- Maintain a proper distance from the UAV during operation. Do not touch the propeller with your body or any other body parts. Do not wear loose clothes during flight to avoid injury caused by the propeller.
- Suggestion: for safety reasons, it is recommended that the propeller not be installed during the Pre-flight Check of the airframe, motor, and remote control device. The propeller should only be mounted after the check.
- It is strictly forbidden to conduct obstacle avoidance tests with a human body or animal (stationary or moving) and any object as obstacle. It is strictly forbidden to directly obstruct, interfere, or impact the UAV with your body, animals, or objects.
- Promptly hover the UAV and perform return flight in case of gale or other weather changes such as rain, snow, hail, etc.
- Strictly abide by the local laws and regulations regarding UAV flight, and operate the product within the flying height and areas specified by law.

Disclaimer

01. Please read this document carefully before using this product. This Disclaimer has an important impact on the safe use of the product and your legitimate rights and interests. The use of the product shall be deemed as you having known, understood, acknowledged, and accepted all terms and contents of this document.
02. This product is not a toy, and the use of the UAV comes with certain safety risks. It is not suitable for people under the age of 18 or those who have not obtained the UAV operator certificate recognized by XAG (or existing laws, regulations, and policies). Please keep this product out of the reach of children and be very careful when operating in the presence of children.
03. This product is a multi-functional, unmanned aerial system designed for agricultural use. Please read this document and the "Product Manual" carefully before using the product to understand your legitimate rights, interests, responsibilities, and safety instructions; otherwise, it may cause property damage, accidents, and personal safety risks.
04. The user agrees to use the product only for the purpose of which it is intended to be used and agrees to these terms and to any relevant policies or rules that may be established by XAG. Users know, understand, and accept that this product will automatically upload and save relevant flight records and data to XAG servers during use. In the event that the flight records and data fail to be uploaded and saved and XAG fails to analyze the flight records and data due to any reason of the user, XAG will not assume any responsibility.
05. To the maximum extent permitted by law, XAG does not under any circumstances provide any warranty, express or implied, with respect to the products, including but not limited to implied warranties of merchantability, fitness for a particular use, or non-infringement.
06. To the maximum extent permitted by law, XAG shall not be liable for all losses caused by users' failure to use the product in accordance with this document and the "Product Manual". XAG shall not be liable for any indirect, consequential, punitive, contingent, special, or penal damages, including any losses incurred as a result of your purchase, use, or inability to use the product (even if the possibility of such losses has been notified).
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10. To the extent permitted by law, XAG has the final right to interpret and modify the above terms. XAG has the right to update, modify, or terminate these terms through its official website, the "Product Manual/Operation Manual", online app and other means without prior notice.

Warning

Users are required to read the complete the "Product Manual" and obtain UAS operator certificate recognized by XAG (or existing laws, regulations, and policies). Otherwise, it may cause serious injury to the user and others, or cause product damage and property loss. Strong safety awareness is required to operate this product. This product is not suitable for children. Do not use parts that are not provided or recommended by XAG with this product. Please strictly follow the instructions of XAG to install and use the product.

Real-name Registration (China Only)

In order to strength the management of civil UAVs, Civil Aviation Administration of China (CAAC) has issued the Regulations on Real-name Registration of Civil Unmanned Aerial Vehicles, which requires the owners of civil UAVs to register in real name at uas.caac.gov.cn and attach the registration marks to the UAVs. Failure to comply with the Regulations is subject to punishment by regulatory authorities in accordance with relevant regulations.



Scan by WeChat for more details

P-Series UAV Systems include supporting modules such as Airframe, Remote Controller, Battery, Operation Box, Liquid Refiller, Charger, RTK Rover, RTK Base Station, etc. Users may also check the "User Manuals" of the modules for a better use experience of the system.

Visit our website (www.xa.com/en)
for more information



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