

# XMISSION Multi-functional Unmanned Aerial System

Quick Start Guide

Version 1.0 [en](#)

## **To users:**

Dear users, thank you for choosing XAG products.

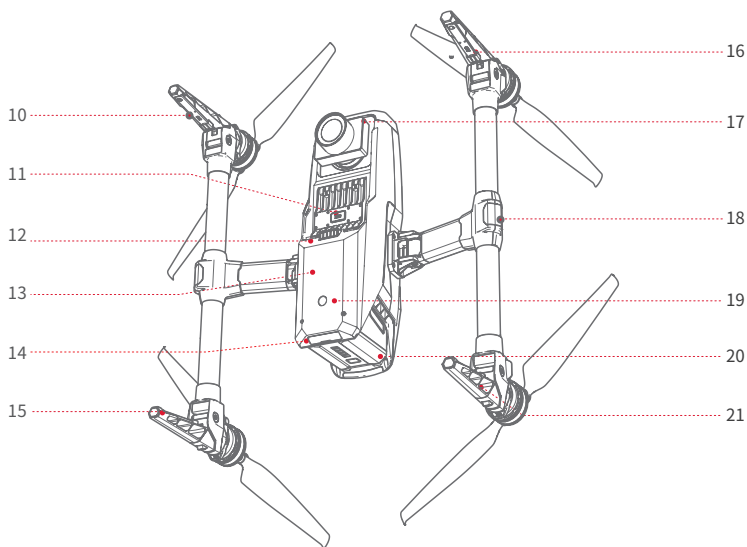
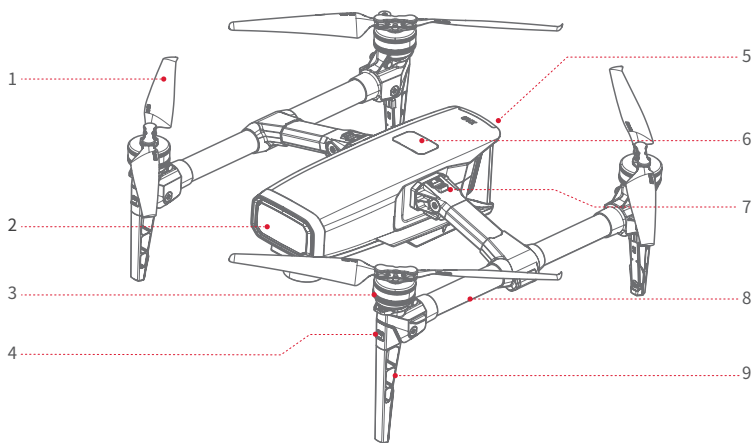
For SAFETY reasons and for the best experience possible, XAG recommend that you should read through this Quick Start Guide and Disclaimer within this document before attempting to use the XMission Unmanned Aerial System.

## **XAG Support**

If you have any question about this document, please contact us at Technical Support by Email: [Support@xa.com](mailto:Support@xa.com)

# Overview - XMISSION Multi-functional Unmanned Aerial System

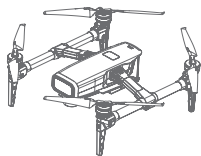
## Aircraft Structural Components



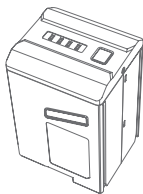
- |  |                         |                            |                        |
|--|-------------------------|----------------------------|------------------------|
| 1. Propeller                             | 6. Expansion interface  | 12. Battery buckle         | 18. Navigation light   |
| 2. Visual-based obstacle avoidance radar | 7. Arm buckle           | 13. Terrain tracing radar  | 19. Visual positioning |
| 3. Motor                                 | 8. Arm                  | 14. SD card/data interface | 20. Battery            |
| 4. Landing Skid buckle                   | 9. Landing Skid         | 15. 4G Antenna             | 21. 2.4/5.8GHz antenna |
| 5. Flight indicator light                | 10. 2.4/5.8GHz Antenna  | 16. 4G antenna             |                        |
|  | 11. Expansion interface | 17. Camera                 |                        |

# List of items

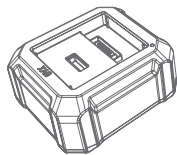
Before unpacking and using the product, please carefully check to see if it contains all the items listed in this list. Please contact XAG or your dealer if there are any missing items.



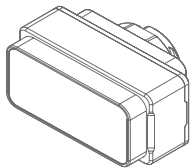
XMISSION



Smart battery

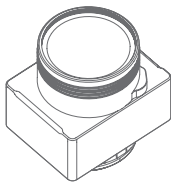


Charger



XCAM 2000s multispectral camera

☐ (optional)



XCAM 2000s mapping camera

☐ (optional)



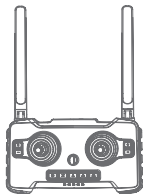
ACB1 CommBack

☐ (optional)



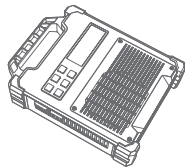
ACS1 ControlStick

☐ (optional)



ARC1 Agricultural Remote controller

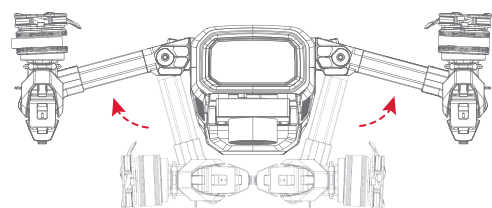
☐ (optional)



XSTATION

☐ (optional)

# Assembling of aircraft

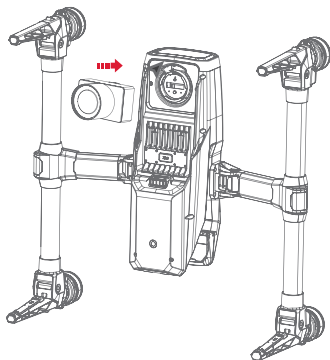
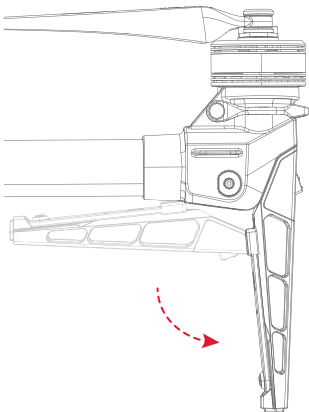


## Expand Frame Arms

As shown in the figure, expand the arms gently until you hear a "click" sound, and confirm that the arms are firmly secured.

## Expand Landing Skid

As shown in the figure, expand the Landing Skid gently until you hear a 'click' sound, and confirm the Landing Skid is locked in firmly secured.

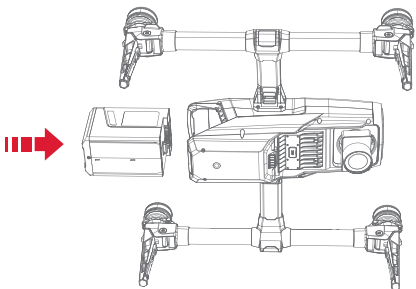


## Mount the Camera

Insert the camera into the slot, then rotate the buckle clockwise from left to right, and make sure it is firmly secured.

## Mount the Battery

Insert the battery into the battery compartment from the back of the aircraft. Ensure the battery is securely mounted.



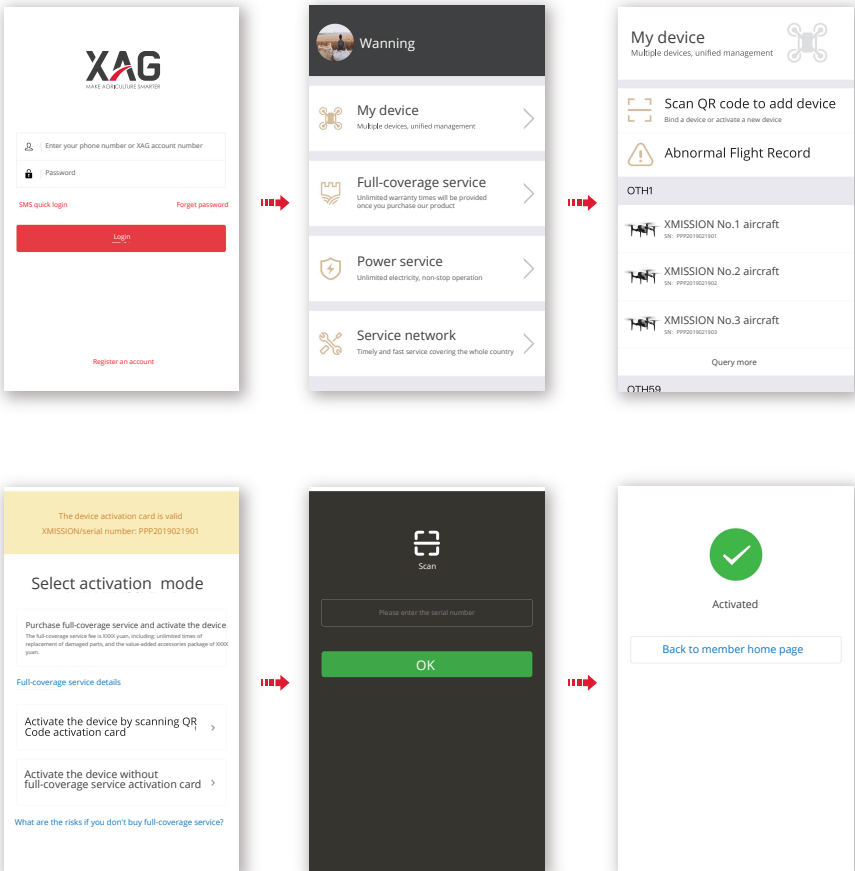
# Using the XMISSION

## 1.Activation

When the XMISSION Multi-functional UAV is activated for the first time, it is necessary to search for "XAG member" applet in WeChat, register an account and add the device.

### Activation steps:

- 1.Open WeChat – search the "XAG member" applet – register an account
- 2.Click “My device”
- 3.Click “Scan code to add device”
- 4.Scan the QR code to activate or manually input serial number of the aircraft
- 5.Select activation mode: activate the device by scanning the QR Code activation card/activate the device directly without full-coverage service
- 6.Activated successfully



2.Using the Remote Controller

The XMISSION UAS needs to be used operated with XAG remote controller and APP, which supports various control modes. There are three supported control devices/combinations:

- (1) ACB1 CommBack (standard) + smart phone;
  - (2) ACS1 ControlStick
  - (3) ARC1 Pro Agricultural Remote Controller
- Each Option has a slightly different operation mode.  
For example, the following descriptions use Option 1

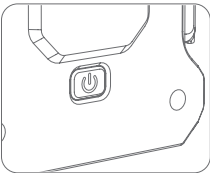
·Download the "XGEOMATICS "APP






Scan and enter XAG Academy to  
Download the "XGEOMATICS" APP

·Turn On the ACB1 CommBack

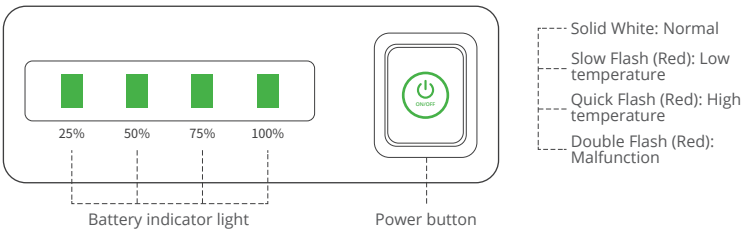
Long press the Power Button twice (2 seconds each time) to turn the remote controller on.



·Device connection

1. Connect your phone to the remote controller by a data cable;
2. Open the "XGEOMATICS" APP and wait for the connection to succeed (the  icon turns green);
3. Click the  icon to view and record the hot spot name and password in the remote controller (the default hot spot name is XAG123 and the password is 20070401, which can be changed);
4. Set the hot spot name and password of your phone to be consistent with that displayed in the remote controller, and turn the hot spot on;
5. Disconnect the data cable between your phone and the remote controller, and wait for the WIFI connection icon on "XGEOMATICS" APP to light up (  turns green), which means the remote controller is connected to your phone normally connected wirelessly.

3.XMISSION Smart battery



Battery ON/OFF

ON: Press and hold the power button for 2 times to turn it on. (1) When the battery is OFF, connect the load\*, press and hold the power button for at least 1 second, and then release the button after all battery level indicator lights flash at the same time; (2) press and hold the power button for at least 1 second again until a “beep” is heard from the battery and all state indicator lights turn on, which shows that the battery is turned on successfully.

OFF: Press and hold the power button for 2 times to turn it off. (1) When the battery is ON, press and hold the power button for at least 1 second, and then release the button after all battery level indicator lights flash at the same time; (2) press and hold the power button for at least 1 second again until a “beep” is heard from the battery and all state indicator lights turn off, which shows that the battery is turned off successfully.

Battery preheating\*

No Device\* shall be connected during pre-heating\*. Long Press (5 Seconds) the power button until “beep” is heard from the battery and all state indicator lights turn on, pre-heating of the battery will be started and the battery will turn off automatically after heating. It shall be noted that the battery cannot be charged/discharged in preheating state.

Checking battery level

When the battery is OFF, short press the power button once to display the current battery level  
When the battery is ON, the battery indicator light will display the battery level

Battery level indicator light (green)

LED light display					Status	Battery level
1 LIGHT FLASHING						0%-12%
1 SOLID LIGHT						12%-37%
2 SOLID LIGHT						37%-65%
3 SOLID LIGHT						65%-87%
4 SOLID LIGHT						87%-100%
2 LIGHT FLASHING					Self-locking	Battery is locked due to low voltage, please contact customer support to unlock device
3 LIGHT FLASHING					Remote locked	Battery is locked remotely, please contact customer support to unlock device

Battery level indicator light (red)

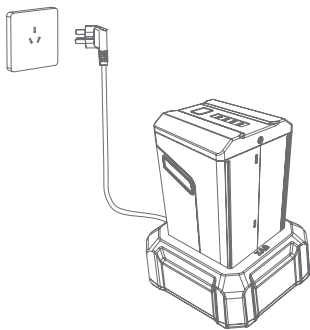
LED light display					Status	Status description
SOLID RED					Normal	Normal
QUICK FLASH RED					Overheated	Temporary Locked. Prohibited from charging and usage.
SLOW FLASH RED					Low Temperature	Battery requires Pre-heating
2 LIGHT FLASHING (RED)					Battery Malfunction	Stop using immediately

\*Device: Device as Aircraft or Charger  
\*Preheating: Preheating can be conducted when the battery is not connected to device



Battery charging

During charging, the battery level indicator lights in undercharged area will flash “in series”, indicating that the battery is being charged, and the lights in fully-charged area will be solid. When charging is completed, the buzzer will beep for 30 seconds. Simultaneously, the Battery level indicator lights will flash for 2 minutes and then the battery will turn off automatically.



Warning: The battery must be charged by the designated charging device, and all consequences caused by use of non-designated charging device shall be borne by the user.

4.Aircraft Status

The Flight Indicator indicates the status on the aircraft. See the table below for details of the Flight Indicator:

LED light display		Status	Battery level
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)			GPS MODE
SOLID RED			Flight controller is not initiated yet or is being preheated after being powered on
QUICK FLASH PURPLE		Normal	FC Formatted / Abnormal Parameter
QUICK FLASH BLUE			Abnormal power system
QUICK FLASH RED			GPS Error or Low Precision
QUICK FLASH WHITE			Abnormal sensor (Exclude IMU)
THREE LIGHT FLASHING (RED)		Low voltage	IMU Error
			Low voltage alarm

## Flight safety

- Ensure that all flights are carried out in an open and familiar area, and avoid obstacles, crowds, and acknowledge of all Risks
- Please do not operate the UAV when you are fatigue or under influence
- Keep away from heat sources to avoid damage to electronic equipment or other components.
- Please do not operate alone during the preliminary stage of learning. It is recommended to get help from an experienced operator before operation.
- Please conduct Pre-flight Check to ensure the device is normal and if there is frequency interference.
- Keep away from the aircraft in operation, and Do not touch the propeller with your body or any other parts.
- Do not wear loose clothes during flight to avoid injury caused by involvement with the remote controller or propeller.
- Recommendation: For Safety reason, it is recommended that propeller should not be installed during pre-flight check of the aircraft, motor and remote controller device. Propeller should only be mounted after the pre-flight check.

## Disclaimer

1. Please read this document carefully before using this product. This disclaimer has an important impact on safe use of the product and your legitimate rights and interests. Once using the product, you shall be deemed to have known, understood, recognized and accepted all terms and contents of this document.

2. This product is not a toy, and use of this aircraft has 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). Do not allow children to touch this product. Please be very careful when operating in the presence of children.

3. This product is a multi-functional unmanned aerial system. Please read this document and "Product Manual" carefully before using the product to understand your legitimate rights, interests, responsibilities and safety instructions; otherwise, it may cause property damage, safety accidents and personal safety risks.

4. User undertakes to use the product for legitimate purposes only and to the extent permitted by law and agrees to these terms and to any relevant policies or rules that may be established by XAG. Users understand and accept that this product will automatically upload and save relevant flight records and data to XAG server during use. In the event that the flight records and data cannot be uploaded and saved and XAG cannot analyze the flight records and data due to any reason of the user, XAG will not assume any responsibility.

5. 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.

6. 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 "Product Manual/Operation Manual". And, 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).

7. To the maximum extent permitted by law, the liability or amount of XAG under any circumstances to you for all damages, losses and litigation arising therefrom will not exceed the amount paid to XAG by you for the purchase of the product.

8. In any case, the purchaser or user shall comply with relevant laws and regulations of the country and region where the product is used. XAG does not assume any liability arising from violation of relevant laws and regulations by the purchaser or user.

9. It is important to note that this product and the services it provides are capable of obtaining high-resolution geo-location information. When using this product, please be sure to comply with relevant laws and regulations of local UAV mapping. XAG shall not be responsible for any consequences caused by violation of relevant mapping laws and regulations.

10. Laws in some countries may prohibit exemptions from liability clauses, so your rights in different countries may vary.. This does not mean that the contents of this disclaimer are necessarily invalid.

11. 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, "Product Manual/Operation Manual", online APP and other means without prior notice.

## Warning

Users need to read the complete "Product Manual" and obtain UAS operator certificate recognized by XAG (or existing laws, regulations and policies), and operate after they are fully familiar with operation of the product. Otherwise, it may cause serious injury to yourself or others, or cause product damage and property loss. Strong safety awareness is required to operate this product. Do not use the parts that are not provided or suggested by XAG. 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) issued the Regulations on “Real-name Registration of Civil Unmanned Aerial Vehicles”, which requires the owners of civil UAV’s to register in real name and attach the registration marks in accordance with the Regulation. UAV Owners failing to compliance with the regulation will be punished by regulatory authorities in accordance with relevant regulations.



Please scan by WeChat for more details.

## Technical Specifications

### Aircraft: XMISSION

Weight (including propeller and battery): 2.25kg  
Wheel base: 492mm  
Maximum take-off altitude: 6,000m  
Maximum ascending speed: 4m/s (manual flight)  
6m/s (automatic flight)  
Maximum descending speed: 3m/s  
Maximum horizontal flight speed: 57.6km/h (flight mode)  
Maximum tilt angle: 35°  
Maximum rotation angular velocity: 150°/s  
Flight duration: up to 35 minutes  
Operating environment temperature: -20°C to 40°C  
Operating frequency:  
2.400 GHz to 2.483 GHz (Europe, Japan, South Korea)  
5.725 GHz to 5.850 GHz (China, the United States)

### Equivalent Isotropically Radiated Power (EIRP)

2.4GHz  
FCC: ≤28 dBm  
CE: ≤19 dBm  
SRRC: ≤19 dBm  
MIC: ≤19 dBm  
5.8 GHz  
FCC: ≤31 dBm  
CE: ≤14 dBm  
SRRC: ≤27 dBm

### GNSS

Single frequency high sensitivity GNSS  
GPS+BeiDou+Galileo (Asia)  
GPS+GLONASS+Galileo (other regions)  
Multi-frequency, multi-system and high-precision RTK/GNSS  
Used frequency point: GPS: L1/L2GPS: L1/L2  
GLONASS: L1/L2  
BeiDou: B1/B2  
Galileo\*: E1/E5  
Initial positioning duration: <50s  
Positioning precision: 1.5 cm + 1 ppm (RMS) (vertical)  
1 cm + 1 ppm (RMS) (horizontal)  
1 ppm means that error of the aircraft increases by 1 m for every 1 km it moves  
Terrain tracing  
Above 100m: hypsographic map terrain tracing, precision ±10m  
Below 100m: radar terrain tracing, precision ±0.5m

### Camera

Image sensor: 1-inch CMOS; 20 million effective pixels (20.48 million total pixels)  
Lens: FOV 75°/10.6mm/29mm (35mm equivalent format)/diaphragm f/2.8 - f/11/with automatic focusing (focusing distance 1m - ∞)  
ISO range  
Video: 100 - 3200 (automatic)  
100 - 6400 (manual)  
Photo: 100-3200 (automatic)  
100 - 12800 (manual)  
Mechanical shutter: 8-1/2000 s  
Electronic shutter: 8-1/8000 s  
Maximum photo resolution: 4864×3648 (4:3)  
5472×3648(3:2)  
Image format: JPEG  
Supported file system: FAT32 (≤32 GB)  
exFAT (> 32 GB)  
Internal Storage: emmc 5.1 32G  
Type of memory card supported: the microSD card (up to 128G) that the writing speed is ≥15 MB/s and transmission speed is of Class 10 or above or up to uhs-1 rating

### Smart flight battery

Model: B6130  
Capacity: 6,000-mAh  
Battery type: LiPo 6s  
Energy: 130Wh  
Overall weight of battery: 720g

### Power adapter

Model: C26200  
Voltage: 26V  
Rated power: 200W

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[xa.com](http://xa.com)





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without prior notice.

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