XAG **FS2** Local Server User Manual

Version 1.0 **EN**

XAG ADVANCING AGRICULTURE
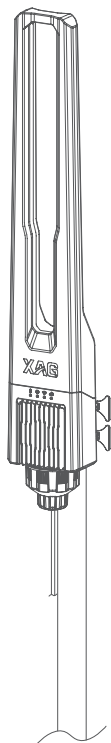
To User

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

Manufacturer: Guangzhou Xaircraft Technology Co., Ltd.

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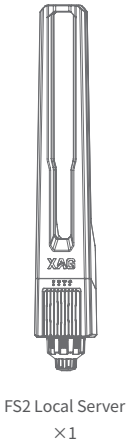
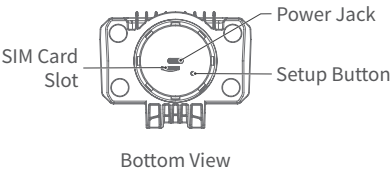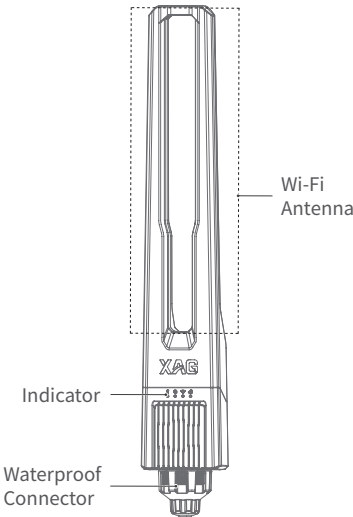Technical Support Team: support@xa.com

Introduction

The XAG FS2 Local Server (hereinafter referred to as the "Local Server") is a device that provides network access and control functions for smart agricultural equipment. As part of the 2025 XAG Smart Farm product series, it enables device interconnectivity within the farm's network coverage area and supports farm data storage. Users can connect to the Local Server via the "XAG Farm" app for remote device management.

List of Items

Please see that all of the following items are present when unpacking the box. Should there be any item missing, please contact your seller immediately.

FS2 Local Server
×1

Clamp
×2

Main Components

Wi-Fi
Antenna

Power Jack

SIM Card
Slot

Setup Button

Bottom View

Indicator

Waterproof
Connector

Setup Button

Action	Description
Long press for 5 seconds	Enable Bluetooth pairing mode

Indicator

The Local Server's status can be identified by its indicator, defined as follows:

Indicator	Status		Description
Battery 🔋	Solid Green	▭	Power connected
System ⚙️	Solid Green	▭	System application normal
	Solid Red	▭	System application error
	Flashing Green	☀ ☀ ☀	System application starting
	Flashing Yellow	☀ ☀ ☀	OTA firmware updating
Farm Network 📶	Solid Green	▭	Farm network normal
	Solid Red	▭	Farm network error
	Solid Yellow	▭	Device waiting for binding
	Flashing Green	☀ ☀ ☀	Farm network starting
	Flashing Yellow	☀ ☀ ☀	Configuring network
Internet ☁️	Solid Green	▭	Internet normal
	Solid Red	▭	Internet error
	Flashing Green	☀ ☀ ☀	Internet starting

How to Use

Installation

① Turn the waterproof connector assembly counterclockwise to remove it from the bottom of the Local Server. Insert one end of a Type-C cable[1] through the waterproof connector, silicone seal, and claw compression gland, then connect it to the power port of the Local Server.

② Loosen the clamp key counterclockwise and insert the clamp through the hole on the back of the Local Server.

③ Vertically mount the Local Server on top of the pole. Tighten the clamp key clockwise to secure the Local Server to the pole.

④ Plug the other end of the Type-C cable into a power source to complete the installation.

① Claw Compression Gland
Silicone Seal
Waterproof Connector
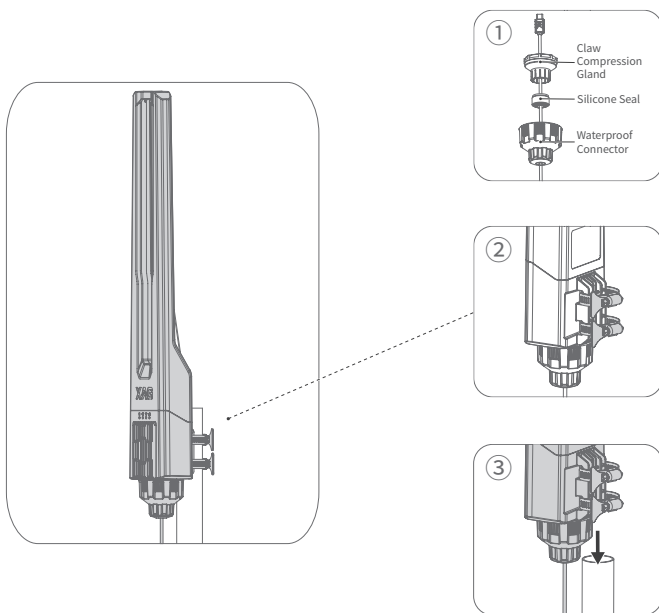
⚠ Note

⚠ The pole used for installation is not included and must be purchased separately by the user. It is recommended to use a round pole with a diameter of 33–50 mm. The model shown in the user manual is for reference only. Please refer to the actual product.

⚠ Ensure the pole is securely installed and remains vertical. Tighten the clamp to prevent movement of the Local Server.

⚠ Always orient the Local Server's antenna upwards and keep it vertical to the ground. Avoid positioning the antenna near metal objects to prevent communication interference.

⚠ Ensure the antenna area is unobstructed to maximize communication range.

[1]: Type-C cable is not included in the Local Server package and must be purchased separately.

Download "XAG Farm" App

Android Users: Scan the QR code above to download and install the "XAG Farm" App
iOS Users: Search for "XAG Farm" in the App Store to download and install

Add Device

When using the Local Server for the first time, you need to add the device in the "XAG Farm" app. Follow these steps to add a Local Server.

1. Open the "XAG Farm" app, enter your phone number to register and log in.
2. On the "Farm ▇▌" screen, tap ⊕ in the top right corner, and select "Add Local Server".
3. After successfully scanning the device, tap "Add" to add the device. If the device displayed on the screen is not the current Local Server, tap "Rescan" until the device to be added is successfully scanned.
4. A message saying "Added successfully" will appear, indicating the Local Server has been added.

⚠ Note

⚠ Before adding devices, ensure the "XAG Farm" app is updated to the latest version.
⚠ Before adding devices, ensure the Local Server is unobstructed, the phone's location service is enabled, and the "XAG Farm" app has location and Bluetooth permissions.
⚠ When adding devices, keep your phone close to the device and ensure Bluetooth is enabled to scan for nearby devices.

Network Topology

Smart Electric Valve 1

Smart Electric Valve 2

Wireless Relay 1

FS2 Local Server

Smart Electric Valve 3

Smart Electric Valve 4

Wireless Relay 2
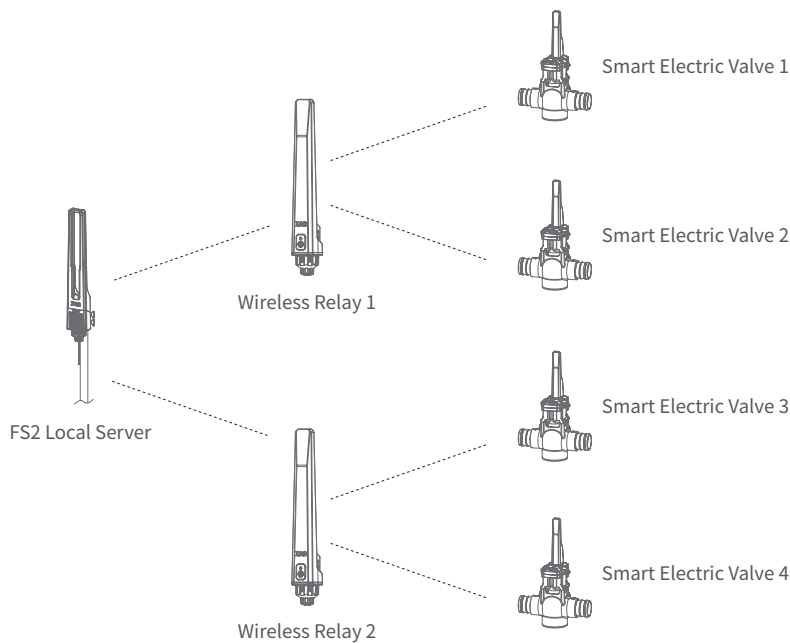
Precautions

- This product is compatible only with the XAG Smart Farm series and is designed for agricultural use. It shall NOT be used with other products or for other purposes.
- Before transporting the Local Server, ensure it is tightly wrapped with shock-absorbing materials to prevent collisions or accidents during transportation.
- When not in use, turn off the device and disconnect its power supply. Store it horizontally in a safe, dry, and cool place.
- During installation, ensure proper safety measures are taken to prevent the device from falling, which could result in personal injury or safety accidents.
- Before use, ensure that the firmware version and the "XAG Farm" app are updated to the latest version.
- Please keep the antenna part of the Local Server unobstructed during use to avoid affecting communication, resulting in inability to use or ineffective use.
- Always power off the device before inspecting or repairing the Local Server.
- In outdoor environments with variable weather conditions, shorten the maintenance intervals appropriately.
- Users who do not use, store, transport, or maintain the product in accordance with the user manual, or if the product malfunctions or is damaged due to human factors, are not covered by the product warranty.
- To protect the rights of users outside the Chinese mainland, distributors/dealers, and XAG, products not purchased through officially authorized channels may experience network connection issues or usage restrictions outside the Chinese mainland. Please ensure that you purchase XAG products through official channels in your region.

Specifications

Model	13LS-2AH
Dimensions	598×113×139 mm
Weight	950 g
Average Power Consumption	2 W
Power Jack	USB Type-C
Power Input	5V-2A / 12V-1A
IP Rating	IP65
Operating Ambient Temperature	-20 ℃ ~ 50 ℃
Wi-Fi Operating Frequency	2.412 ~ 2.472 GHz for CE, 2.412 ~ 2.462 GHz For FCC；5.725~ 5.850 GHz
Wi-Fi Radiated Power (EIRP)	2.412 ~ 2.472 GHz: ＜ 20 dBm (CE) 5.725~ 5.850 GHz: ＜ 14 dBm (CE)
Wi-Fi Protocol	802.11 b/g/n
Network Frequency Band	LTE-FDD: B1/B2/B3/B4/B5/B7/B8/B20/B25/B26 LTE-TDD: B38/B40/B41
Network Antenna	Built-in antenna
Operating Frequency for CE	Band 1: 1922.5 MHz ~ 1977.5 MHz Band 3: 1710.7 MHz ~ 1784.3 MHz Band 7: 2502.5 MHz ~ 2567.5 MHz Band 8: 880.7 MHz ~ 914.3 MHz Band 20: 834.5 MHz ~ 859.5 MHz Band 38: 2572.5 MHz ~ 2617.5 MHz Band 40: 2302.5 MHz ~ 2397.5 MHz
4G Maximum Transmit Power	Class 3 (25 dBm) for CE
Bluetooth Operating Frequency	2.4020 ~ 2.4800 GHz
Bluetooth Radiated Power (EIRP)	＜ 9.1 dBm (CE)
Bluetooth Protocol	Bluetooth LE V5.0
GNSS Frequency Band	BDS B1I: 1561.098 MHz；GPS L1C: 1575.42 MHz

FCC Compliance Notice

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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.

"FCC RF Radiation Exposure Statement Caution: To maintain compliance with the FCC's RF exposure guidelines, place the product at least 20cm from nearby persons."

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

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

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

"Hereby, *[Guangzhou Xaircraft Technology CO.,LTD.]*, declares that this *[FS2 Local Server]* is in compliance with the essential requirements and other relevant provisions of 2014/53/EU.
The full text of the EU declaration of conformity is available at the following internet address:
www.xa.com/en/service/downloads"

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

KCC Warning Message
이기기는업무용환경에서사용할목적으로적합성평가를받은기기로서가정용환경에서 사용하는경우전파간섭의우려가있습니다.

FCC Supplier's Declaration of Conformity

Brand name / model number：*13FR-2AH*
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Suppliers Name(FCC): Pegasus Spray Inc
Suppliers Address (FCC): 2235 79th Ave NE, Medina, WA 98039, USA
Suppliers phone number and / or internet contact information: +1 (503) 866-1228

NCC statement

取得審驗證明之低功率射頻器材,非經核准,公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。低功率射頻器材之使用不得影響飛航安全及干擾合法通信;經發現有干擾現象時,應立即停用,並改善至無干擾時方得繼續使用。前述合法通信,指依電信管理法規定作業之無線電通信。低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Without permission granted by the NCC, any company, enterprise, or user is not allowed to change frequency, enhance transmitting power or alter original characteristic as well as performance to a approved low power radio-frequency devices. The low power radio-frequency devices shall not influence aircraft security and interfere legal communications; If found, the user shall cease operating immediately until no interference is achieved. The said legal communications means radio communications is operated in compliance with the Telecommunications Management Act. The low power radio-frequency devices must be susceptible with the interference from legal communications or ISM radio wave radiated devices.

減少電磁波影響,請妥適使用。

電波功率密度 MPE 標準值: 0.9mW/cm^2,送測產品實測值: 0.088 mW/cm^2,建議使用時設備天線至少距離人體 20 公分。

警告使用者:此為甲類資訊技術設備,於居住環境中使用時,可能會造成射頻騷動,在此種情況下,使用者會被要求採取某些適當的對策。

取得審驗證明之低功率射頻器材,非經核准,公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。低功率射頻器材之使用不得影響飛航安全及干擾合法通信;經發現有干擾現象時,應立即停用,並改善至無干擾時方得繼續使用,前述合法通信,指依電信管理法規定作業之無線電通信低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

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.

3. This product is in the XAG Smart Farm series solely designed for agricultural use. Be sure to read the User Manual carefully before using this product to understand your legitimate rights and interests, responsibilities as well as safety guidelines. Otherwise, property damage and accidents could be caused; personal safety could be at risk.

4. 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 records created during use may be saved to a server. XAG shall resume no responsibility for the failure to save records for any reason attributable to the user.

5. 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.

6. 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.

7. 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.

8. 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.

9. 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 laws and regulations of the location where the product is used by the purchaser or user.

10. 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.

11. 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 App, etc., without prior notice.

Warning

Before using this product, user is required to read through the User Manual. Improper operation may cause injury to user or others, or cause damage to the product and property loss, and any financial or legal accountability arising therefrom shall be borne by the user. Safety awareness is of great importance during operation. Please install, maintain, and legally use the product by strictly following the instructions in the User Manual.

overseas@xa.com

@XAGofficial

@xag_official

@XAG Official

XAG ADVANCING AGRICULTURE

This User Manual is subject to update without prior notice.