



BITMAIN S19 XP ANTMINER Bitcoin Miner Instruction Manual

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BITMAIN S19 XP ANTMINER Bitcoin Miner



Product Information

The S19 XP server is the newest version in the 19-server series by BITMAIN. It comes with a power supply APW12, which is tested and configured prior to shipping to ensure easy setup. BITMAIN warrants the performance of its products to the specifications applicable at the time of sale in accordance with BITMAIN's standard warranty. The company assumes no liability for third-party applications assistance.

S19 XP Server Components

The main components and controller front panel of S19 XP servers are shown in the following figure:

Note: There are two versions of the control panel, please refer to the pictures above to check the differences of the SD Card Slots.

APW12 Power Supply:

- Power supply APW12 is part of S19 XP server.
- For detailed parameters, please refer to the specifications below.
- Additional two power cords are needed.

Specifications

| | |
|--------------------------|----------------------------|
| Model | S19 XP |
| Hash Rate | 110 TH/s (±3%) |
| Power Consumption | 3250 W (±5%) |
| Power Efficiency | 29.5 J/TH (±5%) |
| Rated Voltage | AC 200-240V |
| Chip Type | BM1397 |
| Dimensions | 400mm(L)*195mm(W)*290mm(H) |
| Weight | 14.2 kg |

Product Usage Instructions

- Ensure that you have received all the components of the S19 XP server, including power supply APW12 and two additional power cords.
- Refer to the control panel version provided with your server and connect the SD Card Slots accordingly.
- Connect the power cords to the power supply and plug it into a rated AC 200-240V socket.
- Power on the S19 XP server and it should start the mining process automatically.
- Ensure that you provide adequate design and operating safeguards to minimize the risks associated with customer products and applications using BITMAIN components.

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Overview

The S19 XP server is BITMAIN's newest version in the 19 server series. Power supply APW12 is part of S19 XP server. All S19 XP servers are tested and configured prior to shipping to ensure easy set up.



Front View



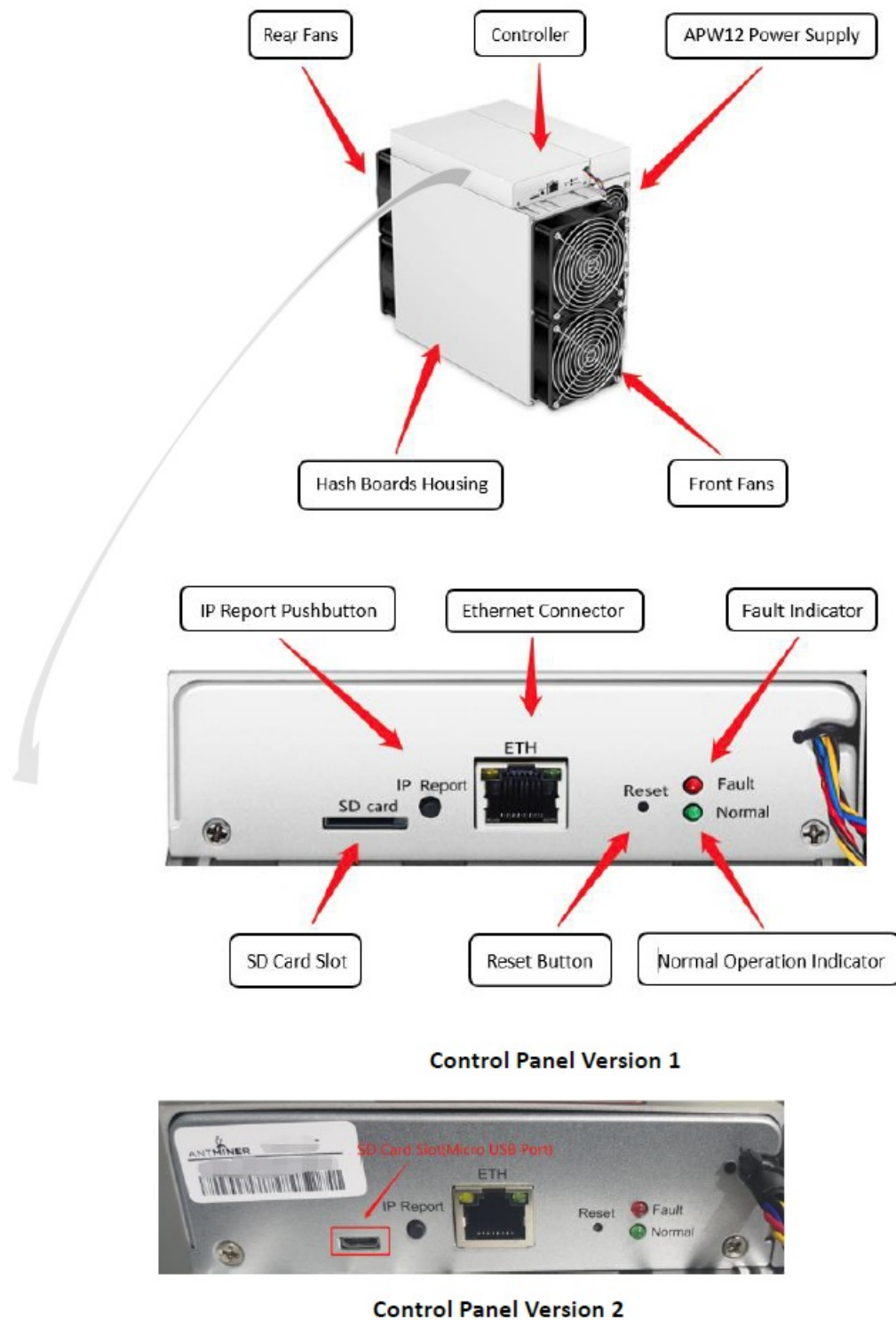
Back View

Caution:

1. Please refer to the layout above to place your goods in usage in case of any damage.
2. The equipment must be connected to an earthed mains socket-outlet. The socket-outlet shall be installed near the equipment and shall be easily accessible.
3. The equipment has two power inputs, only by connecting those two power supply sockets simultaneously can the equipment run. When the equipment is powered off, be sure to power off all power inputs.
4. DO NOT remove any screws and cables tied on the product.
5. DO NOT PRESS the metal button on the cover.
6. Please note that the actual server shall prevail.

S19 XP Server Components

The main components and controller front panel of S19 XP servers are shown in the following figure:



Note: There are two versions of the control panel, please refer to the pictures above to check the differences of the SD Card Slots.

APW12 Power Supply:



1. Power supply APW12 is part of S19 XP server. For detailed parameters, please refer to the specifications below.
2. Additional two power cords are needed.

Specifications

Version: S19 XP 141T

Model No.: k0-10

| Product Glance | Value |
|--|------------------------------|
| Version | S19 XP |
| Crypto Algorithm/Coins | SHA256/BTC/BCH |
| Hashrate, TH/s | 141 |
| power on wall@25°C, Watt | 3075 |
| power efficiency on wall @25°C, J/TH | 21.5 |
| | |
| Detailed Characteristics | Value |
| Power Supply | |
| Power supply AC input voltage, Volt ⁽¹⁻¹⁾ | 200~240 |
| Power supply AC Input Frequency Range, Hz | 47~63 |
| Power supply AC Input current, Amp ⁽¹⁻²⁾ | 20(1-3) |
| Hardware Configuration | |
| Network connection mode | RJ45 Ethernet 10/100M |
| Server Size (Length*Width*Height, w/o package), mm ⁽²⁻¹⁾ | 400*195*290 |
| Server Size (Length*Width*Height, with package), mm | 570*316*430 |
| Net weight, kg ⁽²⁻²⁾ | 14.4 |
| Gross weight, kg | 16 |
| Environment Requirements | |
| Operation temperature, °C | 0~40 |
| Storage temperature, °C | -20~70 |
| Operation humidity(non-condensing), RH | 10~90% |
| Operation altitude, m ⁽³⁻¹⁾ | ≤2000 |

Notes:

- Caution: Wrong input voltage may probably cause server damaged.
- Max condition: temperature 40°C, altitude 0m.
- Two AC input wires, 10A per wire.
- Including PSU size.
- Including PSU weight.
- When the server is used at an altitude from 900m to 2000m, the highest operating temperature decreases by 1°C for every increase of 300m.

Setting up the Server

To set up the server:

The file IPReporter.zip is supported by Microsoft Windows only.

1. Go to the following site:

<https://shop.BITMAIN.com/support.htm?pid=00720160906053730999PVD2K0vz0693>

2. Download the following file: IPReporter.zip.

3. Extract the file.

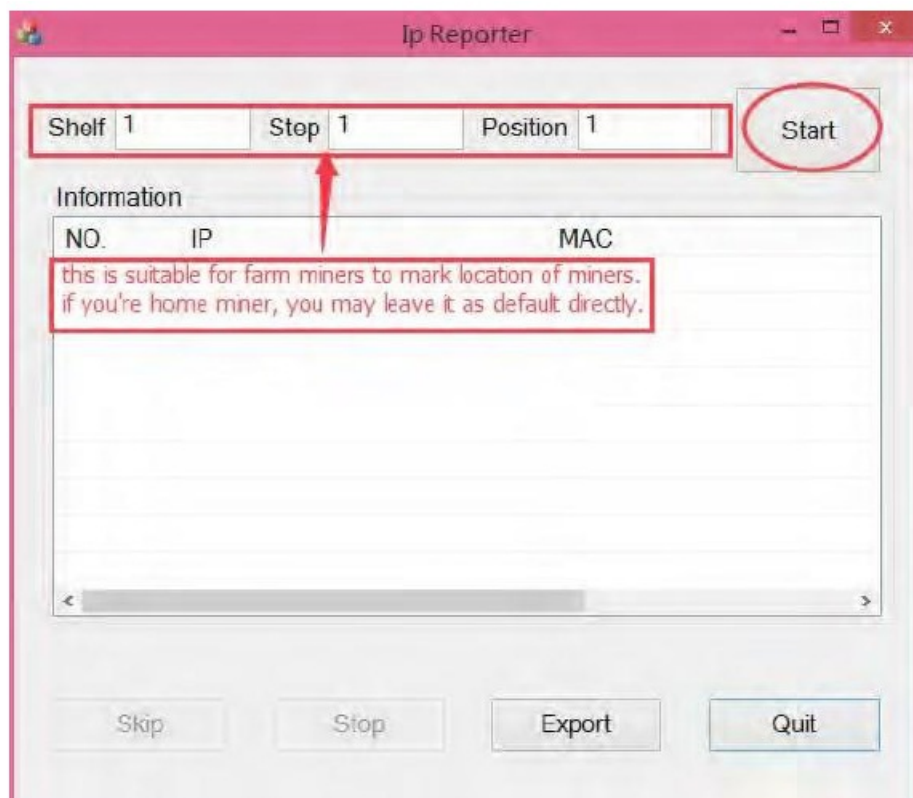
The default DHCP network protocol distributes IP addresses automatically.

4. Right-click IPReporter.exe and run it as Administrator.

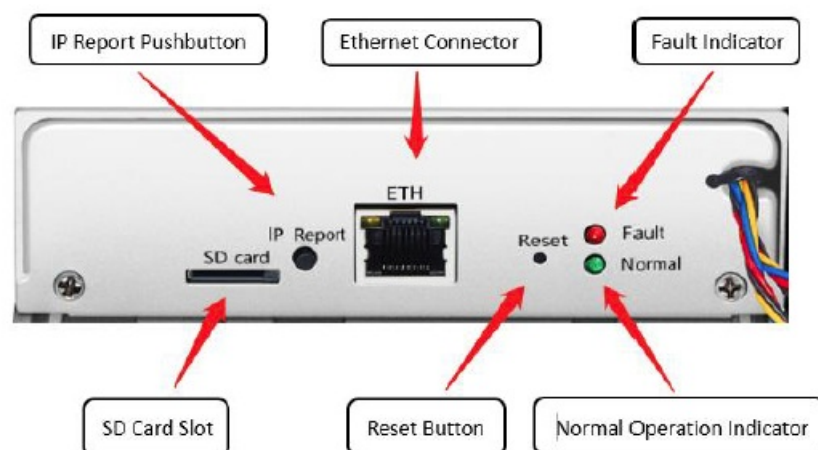
5. Select one of the following options:

1. Shelf, Step, Position – suitable for farm servers to mark the location of the servers.
2. Default – suitable for home servers.

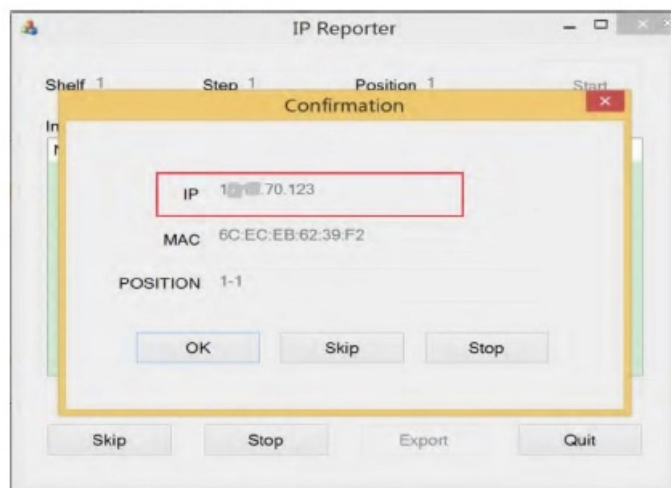
6. Click Start.



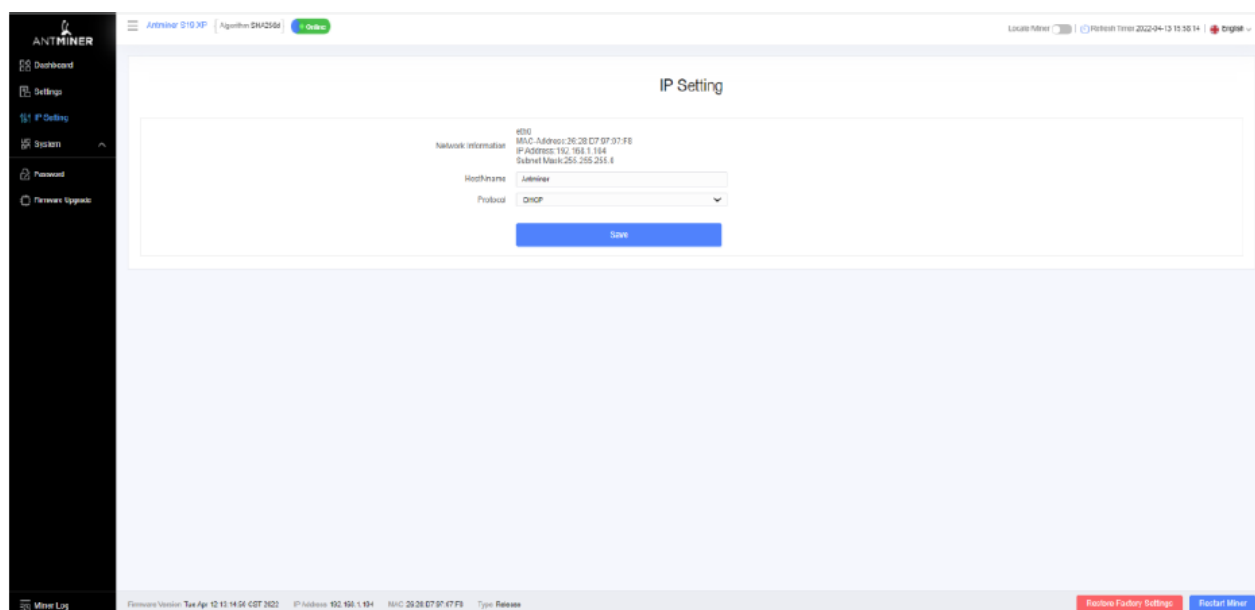
7. On the controller board, click the IP Report button. Hold it down until it beeps (about 5 seconds).



The IP address will be displayed in a window on your computer screen.



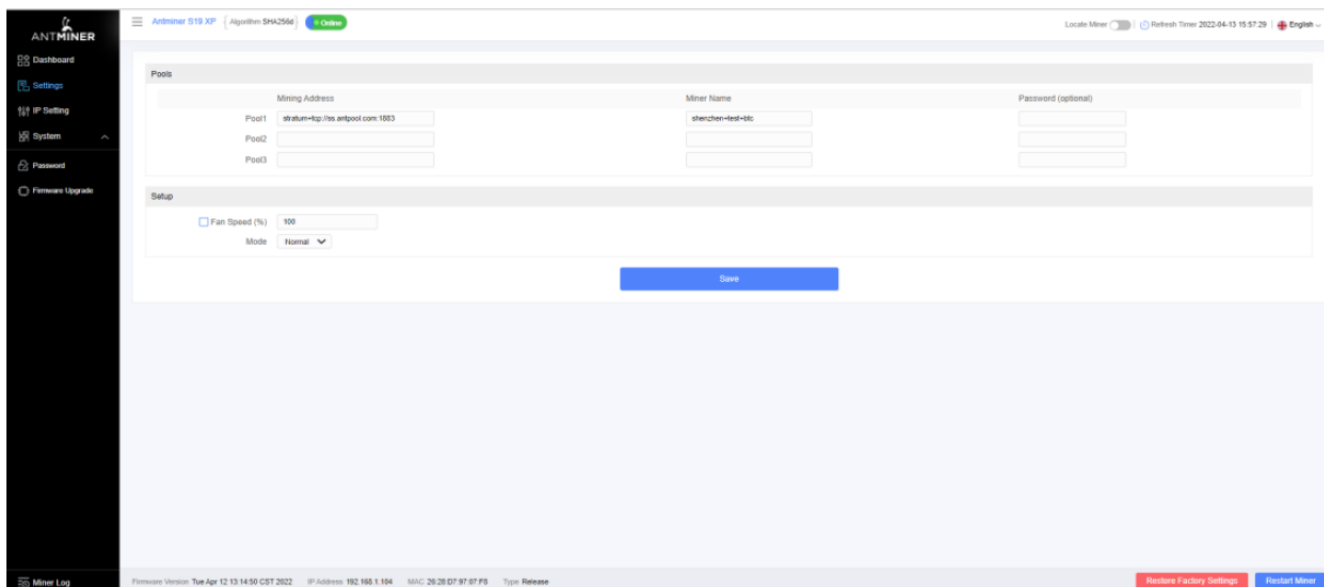
8. In your web browser, enter the IP address provided.
9. Proceed to login using root for both the username and password.
10. In the Protocol section, you can assign a Static IP address (optional).
11. Enter the IP address, Subnet mask, gateway and DNS Server.
12. Click "Save".
13. Click <https://support.BITMAIN.com/hc/en-us/articles/360018950053> to learn more about gateway and DNS Server.



Configuring the Server

Setting up the Pool

To configure the server:



1. Click Settings as below.

Note:

Fan speed percentage can be adjusted, but we recommend keeping the default setting. The server will adjust the fan speed automatically if the fan speed percentage has yet been selected.

There are two working modes of S19 XP server: Normal mode and Sleep mode. The server enters sleep mode under the condition that the control board is powered while dashboards are not powered

2. Set the options according to the following table:

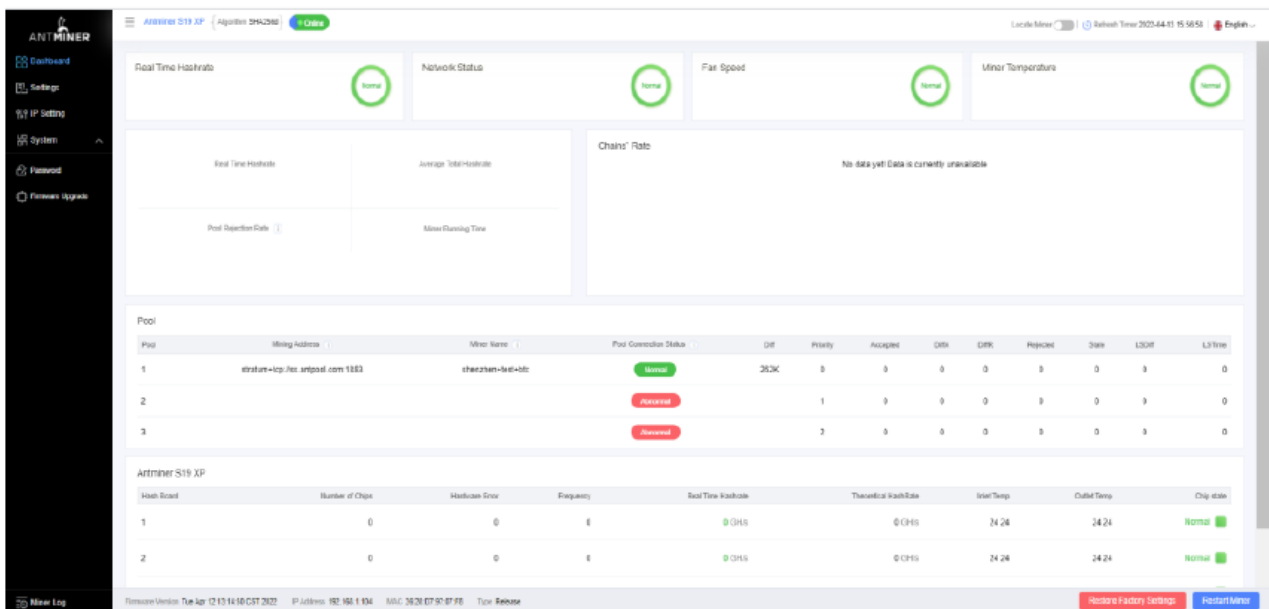
| Option | Description |
|---------------------|--|
| Mining address | Enter the address of your desired pool. The S19 XP servers can be set up with three mining pools, with decreasing priority from the first pool (pool 1) to the third pool (pool 3). The pools with low priority will only be used if all higher priority pools are offline. |
| Name | Your worker ID on the selected pool. |
| Password (optional) | The password for your selected worker. |

3. Click Save after the configuration.

Monitoring Your Server

To check the operating status of your server:

1. Click the dashboard marked below to check the server status (taking S19 XP 141T as an example).



Note: The S19 XP server (141T) is with fixed frequency 485 MHz. Firmware will stop running when the Temp (Outlet) reaches to 75°C there will be an error message “over max temp, pcb temp (real-time temp)” shown on the bottom of the kernel log page. Meanwhile, the server temperature on the dashboard interface turns abnormal and shows “Temp is too high”.

2. Monitor your server according to the descriptions in the following table:

| Option | Description |
|-----------------|---|
| Number of chips | Number of chips detected in the chain. |
| Frequency | ASIC frequency setting. |
| Real Hashrate | Real-time Hashrate of each hash board (GH/s). |
| Inlet Temp | Temperature of the inlet (°C). |
| Outlet Temp | Temperature of the outlet (°C). |
| Chip state | <p>One of the following statuses will appear:</p> <ul style="list-style-type: none"> The Green Icon – indicates normal The Red Icon– indicates abnormal |

Administering Your Server

Checking Your Firmware Version

To check your firmware version:

1. Enter the backstage of your server, find the firmware version on the bottom.

2. Firmware Version displays the date of the firmware your server uses. In the example below, the server is using firmware version 20220412.

The screenshot shows the ANTMINER S19 XP web interface. The left sidebar contains navigation links: Dashboard, Settings, IP Setting, System, Password, and Firmware Upgrade. The main content area is divided into two sections: 'Pools' and 'Setup'. The 'Pools' section has three rows for Pool1, Pool2, and Pool3, each with input fields for Mining Address, Miner Name, and Password (optional). The 'Setup' section has a checkbox for 'Fan Speed (%)' set to 100 and a dropdown for 'Mode' set to 'Normal'. A 'Save' button is at the bottom of the Setup section. The footer bar displays 'Firmware Version Tue Apr 12 13:14:36 CST 2022', IP Address 192.168.1.104, MAC 28:28:07:87:87:F8, and Type Release. There are also buttons for 'Restore Factory Settings' and 'Restart Miner'.

Upgrading Your System

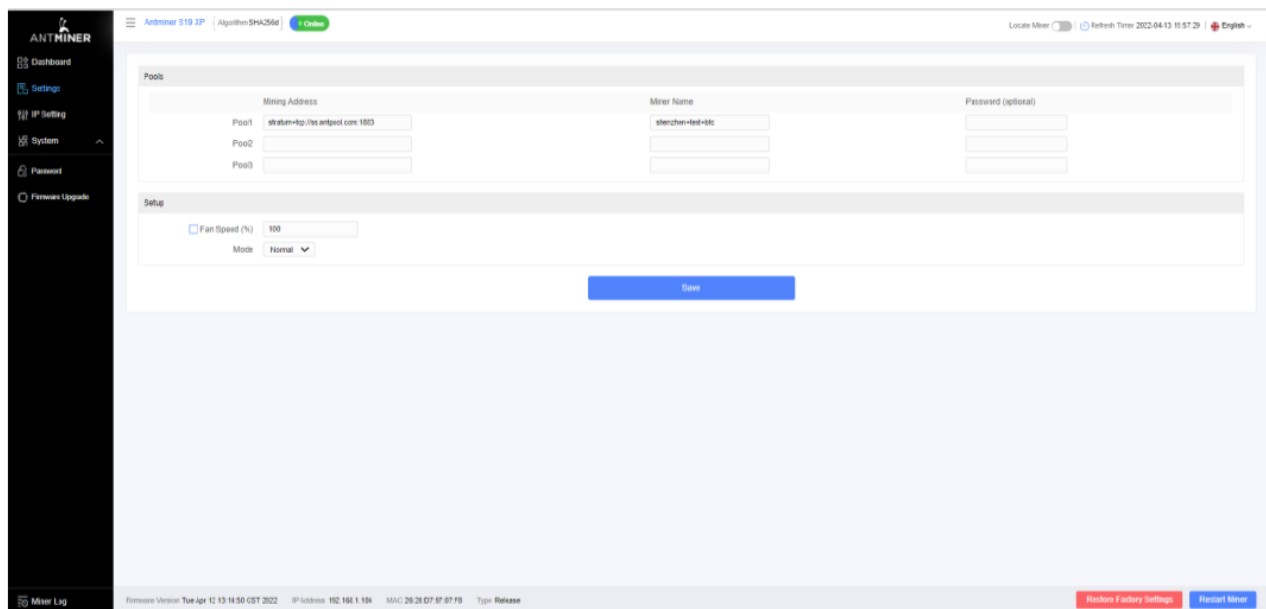
Make sure that the S19 XP server remains powered during the upgrade process. If power fails before the upgrade is completed, you will need to return it to BITMAIN for repair.

To upgrade the server's firmware:

1. In System, click Firmware Upgrade.

The screenshot shows the ANTMINER S19 XP web interface with the 'Firmware upgrade' section selected in the left sidebar. The main content area is titled 'Firmware upgrade' and contains a 'Firmware File' input field with a download icon button. Below the input field is a checkbox labeled 'Keep settings' which is checked. A blue 'Update' button is at the bottom of the section.

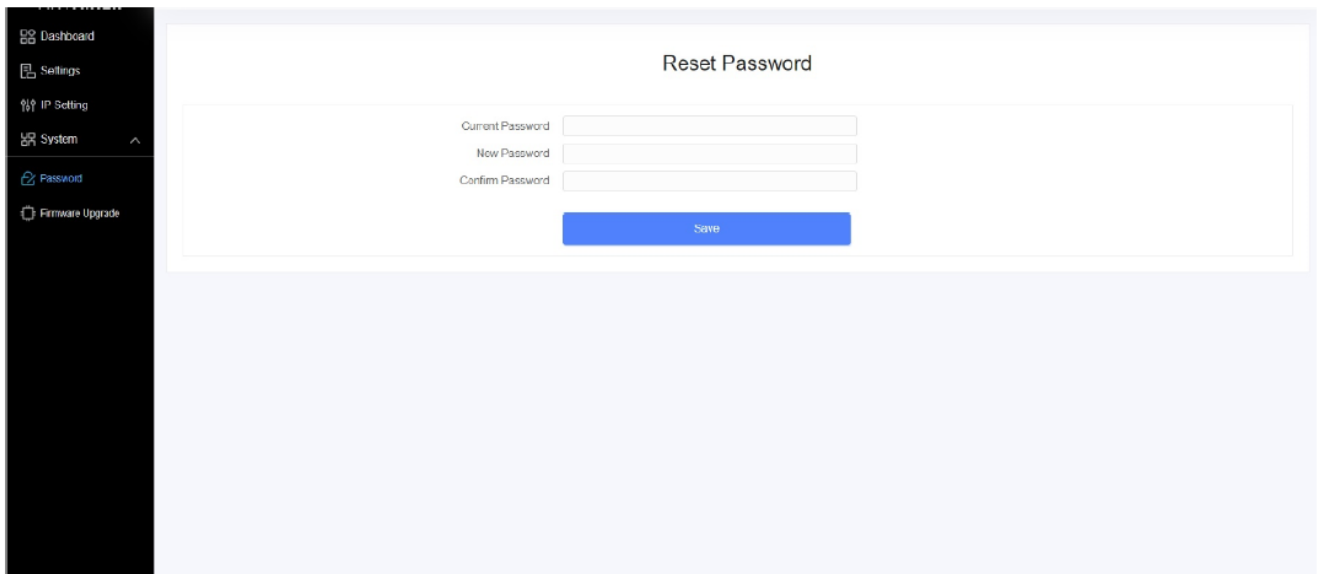
2. For Keep Settings:
 1. Select "keep settings" to keep your current settings (default).
 2. Unselect "keep settings" to reset the server to default settings.
3. Click the button and navigate to the upgrade file. Select the upgrade file, then click Update.
4. When the upgrade is completed, restart the server and it will turn to the setting page



Modifying Your Password

To change your login password:

1. In System, click the Password tab.
2. Set your new password, then click Save.



Restoring Initial Settings

To restore your initial settings

1. Turn on the server and let it run for 5 minutes.
2. On the controller front panel, press and hold the Reset button for 10 seconds.

Resetting your server will reboot it and restore its default settings. The red LED will automatically flash once every 15 seconds if the reset is operated successfully.

Please run your server in accordance with the following requirements

Basic Environmental Requirements:

| Description | Requirement |
|-----------------------|---------------------------|
| Operating Temperature | 0-40°C |
| Operating Humidity | 10-90%RH (non-condensing) |
| Storage Temperature | -20-70°C |
| Storage Humidity | 5-95%RH non-condensing |
| Altitude | <2000m |

Site Requirements of the Server Running Room:

- Please keep the server running room away from industrial pollution sources:
- For heavy pollution sources such as smelters and coal mines, the distance should be more than 5km.
- For moderate pollution sources such as chemical industries, rubber and electroplating industries, the distance should be more than 3.7km.
- For light pollution sources such as food factories and leather processing factories, the distance should be more than 2km.
- If unavoidable, the site should be chosen in the perennial upwind direction of the pollution source. Please do not set your location within 3.7km from the seaside or the salt lake. If unavoidable, it should be built as airtight as possible, equipped with air conditioning for cooling.

Electromagnetic Environmental Conditions:

- Please keep your site away from transformers, high-voltage cables, transmission lines and high-current equipment, for example, there should be no high-power AC transformers (>10KA) within 20 meters, and no high-voltage power lines within 50 meters.
- Please keep your site away from high-power radio transmitters, for example, there should be no high-power radio transmitters (>1500W) within 100 meters.

Other Environmental Requirements

The server running room shall be free of explosive, conductive, magnetically conductive and corrosive dust. The requirements of mechanical active substances are shown below:

Requirements of Mechanical Active Substances

| Mechanical Active Substance | Requirement |
|-----------------------------|---------------------------------|
| Sand | $\leq 30\text{mg/m}^3$ |
| Dust (suspended) | $\leq 0.2\text{mg/m}^3$ |
| Dust (deposited) | $\leq 1.5\text{mg/m}^2\text{h}$ |

| Corrosive Gas | Unit | Concentration |
|--|------|---------------|
| H ₂ S | ppb | < 3 |
| SO ₂ | ppb | < 10 |
| Cl ₂ | ppb | < 1 |
| NO ₂ | ppb | < 50 |
| HF | ppb | < 1 |
| NH ₃ | ppb | < 500 |
| O ₃ | ppb | < 2 |
| Note: ppb (part per billion) refers to the unit of concentration 1ppb stands for the volume ratio of part per billion. | | |

FCC Notice

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


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.

EU WEEE: Disposal of Waste Equipment by Users in Private Households in the European Union

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

Documents / Resources

| | |
|---|---|
|  | <p>BITMAIN S19 XP ANTMINER Bitcoin Miner [pdf] Instruction Manual S19 XP, S19 XP ANTMINER Bitcoin Miner, ANTMINER Bitcoin Miner, Bitcoin Miner</p> |
|---|---|

References

-  [BITMAIN](#)
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