



# S21 XP Server Installation Guide

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## 1. Overview

The S21 XP server is Bitmain's newest version in the 21 server series. Power supply APW171215 is part of S21 XP server. All S21 XP servers are tested and configured prior to shipping to ensure easy set up.



Front View



Back View



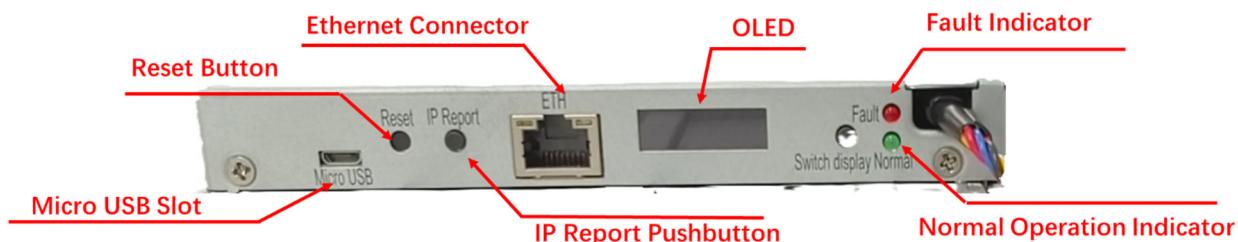
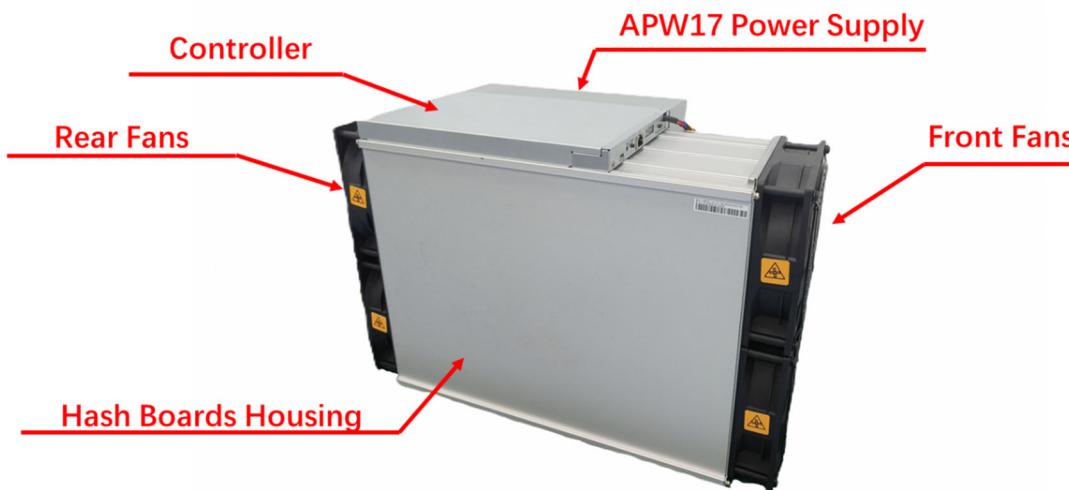
**Caution:**

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.



## 1.1 S21 XP Server Components

The main components and controller front panel of S21 XP servers are shown in the following figure:



### APW171215 Power Supply:



#### Note:

- 1. Power supply APW171215 is part of S21 XP server. For detailed parameters, please refer to the specifications below.
- 2. One ANTWIRE-20SP power cord is needed and should be connected to PDU.



## 1.2 Specification

**Model:** S21 XP

**Version:** 10

| Product Glance   | Value                |
|--|----------------------|
| Model  | S21 XP               |
| Version  | 10                   |
| Crypto algorithm/coins                                       | SHA256   BTC/BCH/BSV |
| Typical Hashrate, TH/s <sup>(1-1)</sup>                      | 270                  |
| Power on wall @25°C <sup>(1-2)</sup> , Watt <sup>(1-1)</sup> | 3645                 |

| Detailed Characteristics                              | Value                 |
|---|-----------------------|
| <b>Power supply</b>                                   |                       |
| Power supply AC input voltage <sup>(2-1)</sup> , Volt | 220~277V AC           |
| Power supply AC Input Frequency Range, Hz             | 50~60                 |
| Power supply AC Input current <sup>(2-2)</sup> , Amp  | 20                    |
| <b>Hardware Configuration</b>                         |                       |
| Network connection mode                               | RJ45 Ethernet 10/100M |
| Server size (Length*Width*Height, w/o package), mm    | 449*219*293           |
| Server size (Length*Width*Height, with package), mm   | 640*360*450           |
| Net weight, kg  | 18.7                  |
| Gross weight, kg                                      | 21.5                  |
| Noise <sup>(2-3)</sup> , dBA                          | 76                    |
| <b>Environment Requirements</b>                       |                       |
| Operation temperature, °C                             | -20~45                |
| Storage temperature, °C                               | -20~70                |
| Operation humidity, RH                                | 10%~90%               |
| Operation altitude <sup>(2-4)</sup> , m               | ≤2000                 |

**Notes:**

(1-1) The Hashrate value, Power on wall, and Power efficiency on wall are all typical values, The actual Hashrate value fluctuates by  $\pm 3\%$ , and the actual Power on wall and Power efficiency on wall fluctuate by  $\pm 5\%$ .

(1-2) Inlet air temperature.

(2-1) Caution: Wrong input voltage may probably cause server damaged.

(2-2) Single-phase AC input 20A.

(2-3) Max condition: Fan is under max RPM(rotation per minute).

(2-4) When the server is used at an altitude from 900m to 2000m, the highest operating temperature decreases by  $1^{\circ}\text{C}$  for every increase of 300m.



## 2. Setting up the Server

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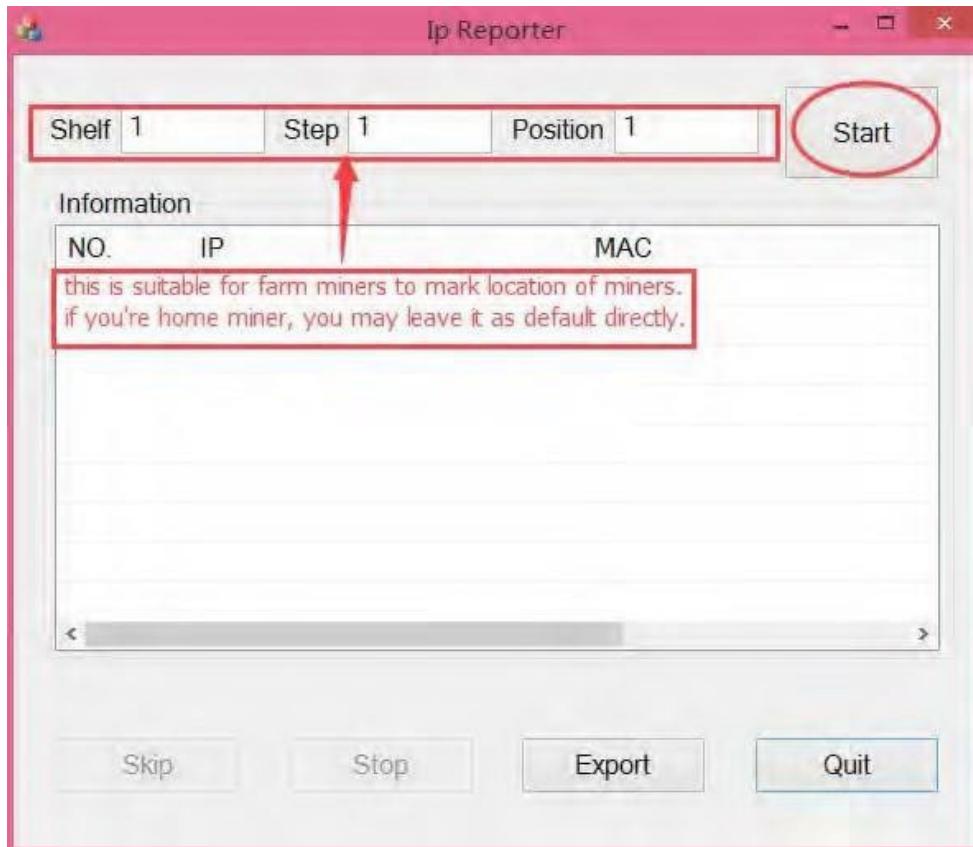
To set up the server:

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

1. Go to the following site:  
<https://file12.bitmain.com/shop-product/firmware/IP%20Reporter.zip>
2. Download the following file: IPReporter.zip.
3. Extract the file.

**i** The default DHCP network protocol distributes IP addresses automatically.

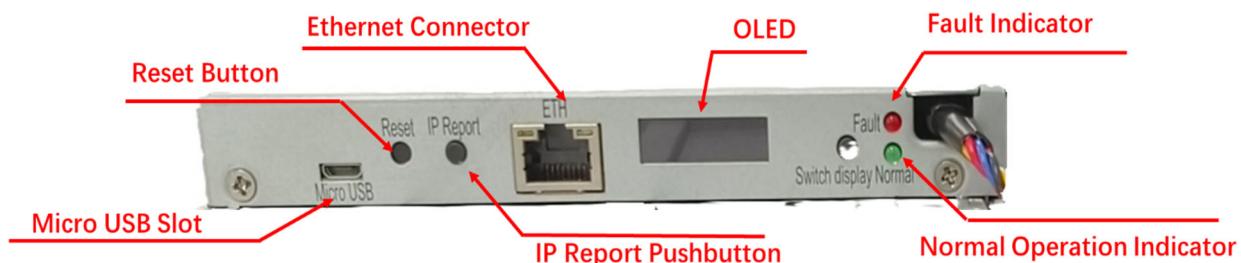
4. Right-click **IPReporter.exe** and run it as Administrator.
5. Select one of the following options:
  - Shelf, Step, Position – suitable for farm servers to mark the location of the servers.
  - Default – suitable for home servers.
6. Click **Start**.



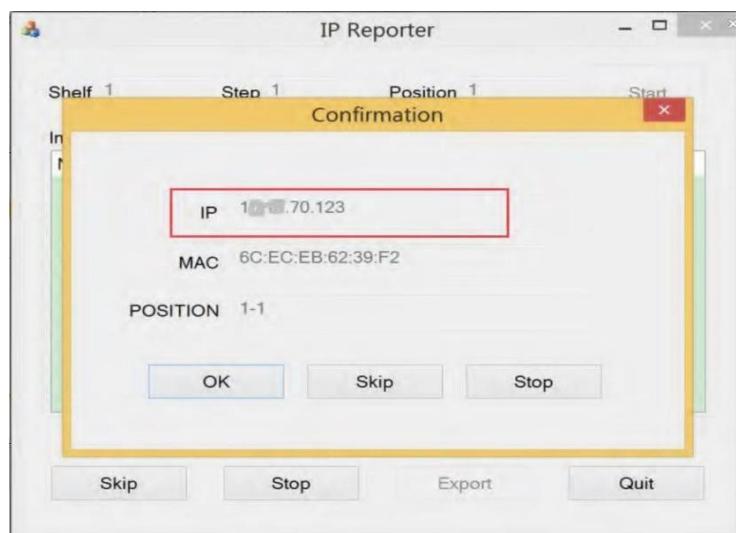


## 2. Setting up the Server

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.



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



## 2. Setting up the Server

IP Setting

Network Information

eth0  
MAC-Address 02:9D:11:XX:XX:XX  
IP Address 192.168.1.99  
Subnet Mask 255.255.255.0

Hostname: Antminer

Protocol: DHCP

Save

Firmware Version Sat Jun 8 16:50:02 CST 2024 | IP Address 192.168.1.99 | MAC 02:9D:11:A0:F3:CD | SN JYZZFMUBOJECJ0008 | Type Release

Restore Factory Settings | Restart Miner



## 3. Configuring the Server

## 3. Configuring the Server

### Setting up the Pool

To configure the server:

1. Click **Settings** as below.

2. Set the options according to the following table:


**Note:**

1. Fan speed percentage can be adjusted, but we recommend to keep the default setting. The server will adjust the fan speed automatically if the fan speed percentage has yet been selected.
2. There are two working modes of S21 XP server: Normal mode and Sleep mode. The server enters the sleep mode under the condition that the control board is powered while hashboards are not powered.

| Option              | Description   |
|---------------------|---|
| Mining address      | Enter the address of your desired pool.<br><div style="border: 1px solid #ccc; padding: 5px; border-radius: 10px; margin-top: 10px;"> <b>The S21 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.</b> </div> |
| Name                | Your worker ID on the selected pool.  |
| Password (optional) | The password for your selected worker.  |

3. Click Save after the configuration.

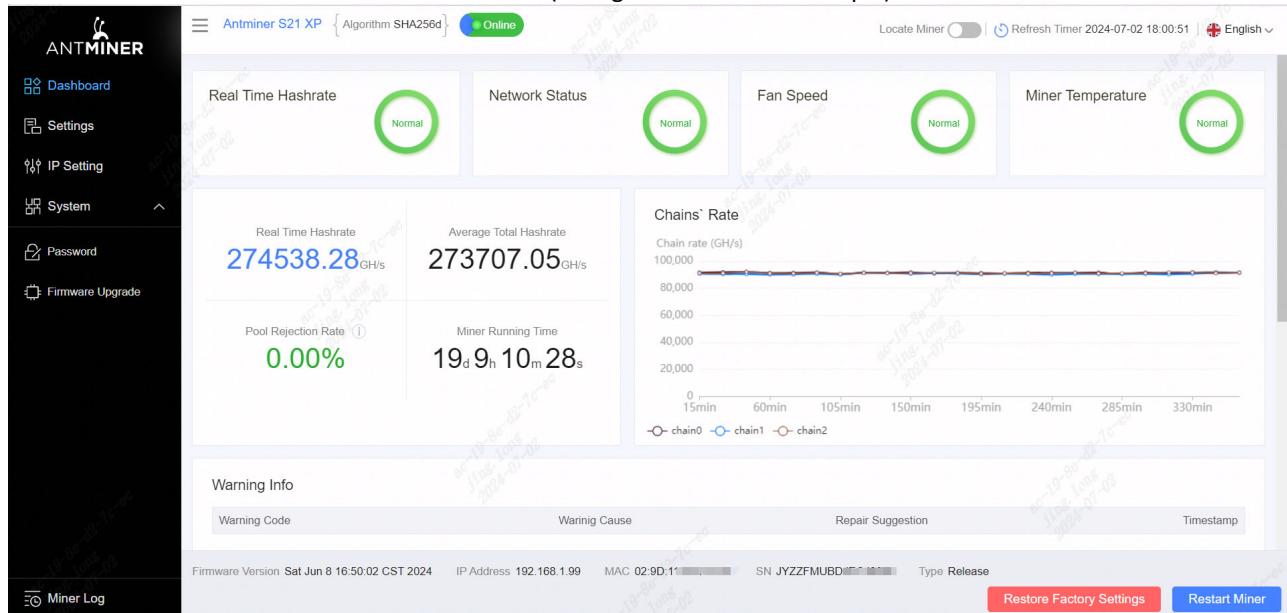


## 4. Monitoring Your Server

## 4. Monitoring Your Server

To check the operating status of your server:

1. Click dashboard marked below to check the server status (taking S21 XP 270T as example).



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      | One of the following statuses will appear: <ul style="list-style-type: none"> <li>● <b>The Green Icon</b> - indicates normal</li> <li>● <b>The Red Icon</b> - indicates abnormal</li> </ul> |



## 5. Administering Your Server

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### 5.1 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 examples below, the server is using firmware version 20240608.

### 5.2 Upgrading Your System



Make sure that the S21 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 S21 XP web interface. On the left is a dark sidebar with navigation links: Dashboard, Settings, IP Setting, System (selected), Password, and Firmware Upgrade. The main content area has a header "Firmware Upgrade". It contains a "Firmware File" input field with a browse button, a checked checkbox for "Keep The Same Settings", and a large blue "Update" button. At the bottom of the page, there is footer information: Firmware Version Sat Jun 8 16:50:02 CST 2024, IP Address 192.168.1.99, MAC 02:9D:11:A0:F3:CD, SN JYZZFMUBDJECJ0008, Type Release, and two buttons: "Restore Factory Settings" and "Restart Miner".



## 5. Administering Your Server

### 2. For Keep Settings:

- Select “keep settings” to keep your current settings (default).
  - 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.

### 5.3 Modifying Your Password

To change your login password:

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

### 5.4 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.



## Environmental Requirements

**Please run your server in accordance with the following requirements**

### 1. Basic Environmental Requirements:

#### 1.1 Climatic Conditions:

| Description           | Requirement               |
|-----------------------|---------------------------|
| Operating Temperature | -20-45°C                  |
| Operating Humidity    | 10-90%RH (non-condensing) |
| Storage Temperature   | -20-70°C                  |
| Storage Humidity      | 5-95%RH (non-condensing)  |
| Altitude              | ≤2000m                    |

#### 1.2 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.

#### 1.3 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.

### 2. 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:

#### 2.1 Requirements of Mechanical Active Substances

| Mechanical Active Substance | Requirement |
|-----------------------------|-------------|
| Sand                        | <= 30mg/m³  |
| Dust (suspended)            | <= 0.2mg/m³ |
| Dust (deposited)            | <=1.5mg/m²h |



## 2.2 Requirements of Corrosive Gas

| Corrosive Gas    | Unit | Concentration |
|------------------|------|---------------|
| H <sub>2</sub> S | ppb  | < 3           |
| SO <sub>2</sub>  | ppb  | < 10          |
| Cl <sub>2</sub>  | ppb  | < 1           |
| NO <sub>2</sub>  | ppb  | < 50          |
| HF               | ppb  | < 1           |
| NH <sub>3</sub>  | ppb  | < 500         |
| O <sub>3</sub>   | ppb  | < 2           |

Note: ppb (part per billion) refers to the unit of concentration, 1ppb stands for the volume ratio of part per billion.

**Regulations:****FCC Notice (FOR FCC CERTIFIED MODELS):**

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 Household 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.

**台灣ROHS:**

設備名稱: S21 XP 服務器型號: L1-10

| 單元    | 有害物質      |           |           |               |               |                 |
|-------|-----------|-----------|-----------|---------------|---------------|-----------------|
|       | 鉛<br>(Pb) | 汞<br>(Hg) | 鎘<br>(Cd) | 六價鉻<br>(Cr+6) | 多溴聯苯<br>(PBB) | 多溴二苯醚<br>(PBDE) |
| 外殼    | ○         | ○         | ○         | ○             | ○             | ○               |
| 電路板組件 | —         | ○         | ○         | ○             | ○             | ○               |
| 其他線材  | —         | ○         | ○         | ○             | ○             | ○               |

備考 1. “超出 0.1 wt %” 及 “超出 0.01 wt %” 係指限用物質之百分比含量超出百分比含量基準值。

備考 2. “○” 係指該項限用物質之百分比含量未超出百分比含量基準值。

備考 3. “—” 係指該項限用物質為排除項目。