

BITMAIN AntMiner S9 Pro+ Hydro Server Installation Guide

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BITMAIN



**S19 Pro+ Hydro Server
Installation Guide
Document Version 1.0
Feb. 2022**

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Bitmain

Tel: +86-400-890-8855

www.bitmain.com

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Overview

The S19 Pro+ Hydro server is one of the Bitmain's newest versions in the 19 hydro server series. Power supply APW11 is part of S19 Pro+ Hydro server. All S19 Pro+ Hydro servers are tested and configured prior to shipping to ensure easy set up.

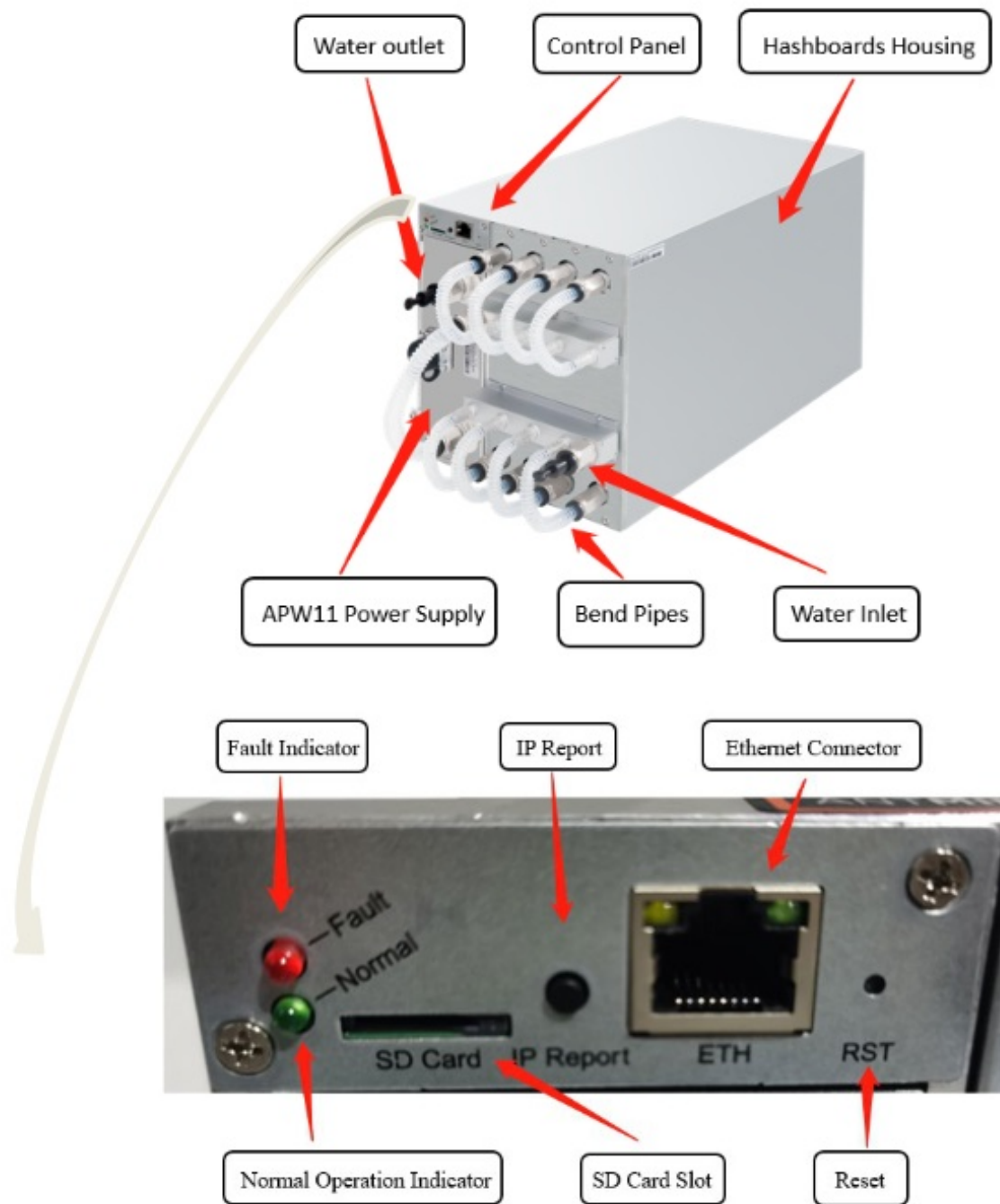


Caution:

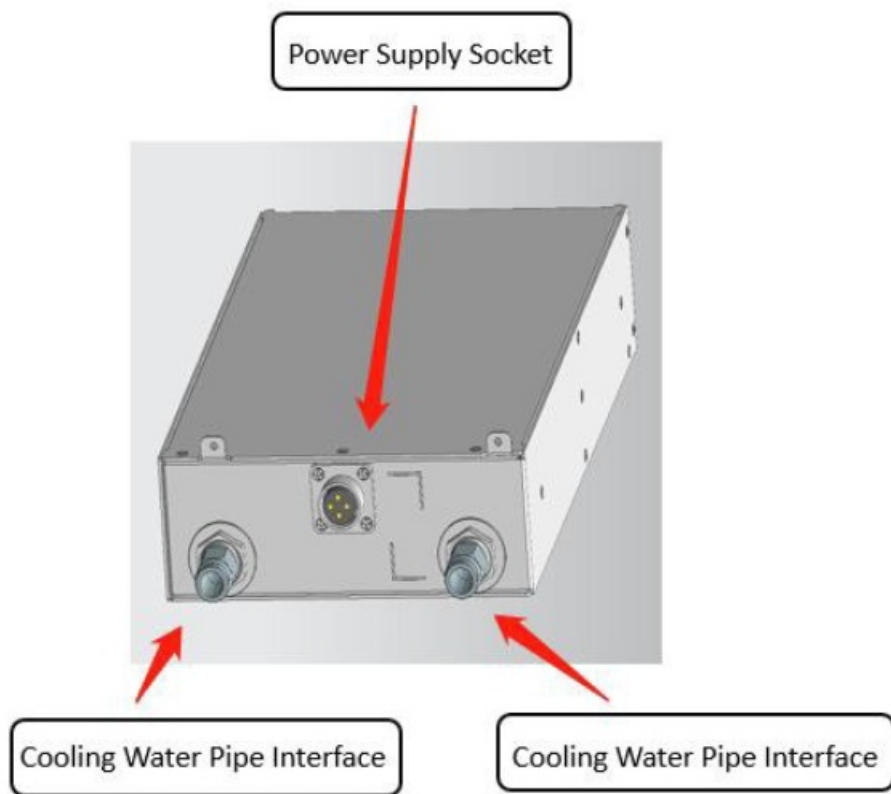
1. Please refer to the layout above to place your goods in usage in case of any damage.
2. DO NOT remove any screws and cables tied on the product.
3. Please note that the actual server shall prevail.
4. There must be an external specific Surge Protection device complying with IEC/EN 61643-11 either in front of the power supply or outside the end system (in a separate distribution box or as part of the building installation).
5. Do not plug or remove the device when it is powered on.
6. The external of the power supply shall have a disconnecting device, which can disconnect L1&L2&L3 simultaneously.
7. The S19 Pro+ Hydro server shall be used simultaneously with the ANTSPACE HK3. Please [click here](#) for more details of ANTSPACE HK3.

S19 Pro+ Hydro Server Components

The main components and control panel of S19 Pro+ Hydro servers are shown in the following figure:



APW11 Power Supply:



Note:

Power supply APW11 is part of S19 Pro+ Hydro server. For detailed parameters, please refer to the specifications below.

Specifications

Product Glance	Value				
Version	S19Pro+ Hydro				
Model	j0-10				
Crypto Algorithm/Coins	HA256/BTC/BCH				
Hashrate,TH/s	198 ± 3%	191 ± 3%	184 ± 3%	177 ± 3%	170 ± 3%
Power on wall@Tj65°C , Watt (1-1)	5445 ± 5%	5253 ± 5%	5060 ± 5%	4868 ± 5%	4675 ± 5%
Power efficiency on wall @Tj65°C, J/TH (1-1)	27.5 ± 5%	27.5 ± 5%	27.5 ± 5%	27.5 ± 5%	27.5 ± 5%

Detailed Characteristics	Value
Power Supply	
Power supply AC input voltage, Volt (24)	342-418
Power supply AC Input Frequency Range, Hz	47-63
Power supply AC Input current, Amp(2-2)	30
Hardware Configuration	
Network connection mode	RJ45 Ethernet 10/100M
Server Size (Length*Width*Height, w/o package), mm	410*196*209
Server Size (Length*Width*Height, with package), mm	570*316*430
Net weight, kg	15.
Gross weight, kg	18.
Environment Requirements	
Operation temperature, °C (2-3)	0-40
Inlet water temperature, °C	20-40
Water flow L/min	8±10%
Water pressure bar	4.
Storage temperature, °C	-20-70
Operation humidity(non-condensing), RH	10-90%

Notes:

(1-1) Inlet water temperature

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

(2-2) Three-phase AC input, 10A per wire

(2-3) Operation altitude is recommended below 2000m

Setting up the Server

To set up the server:



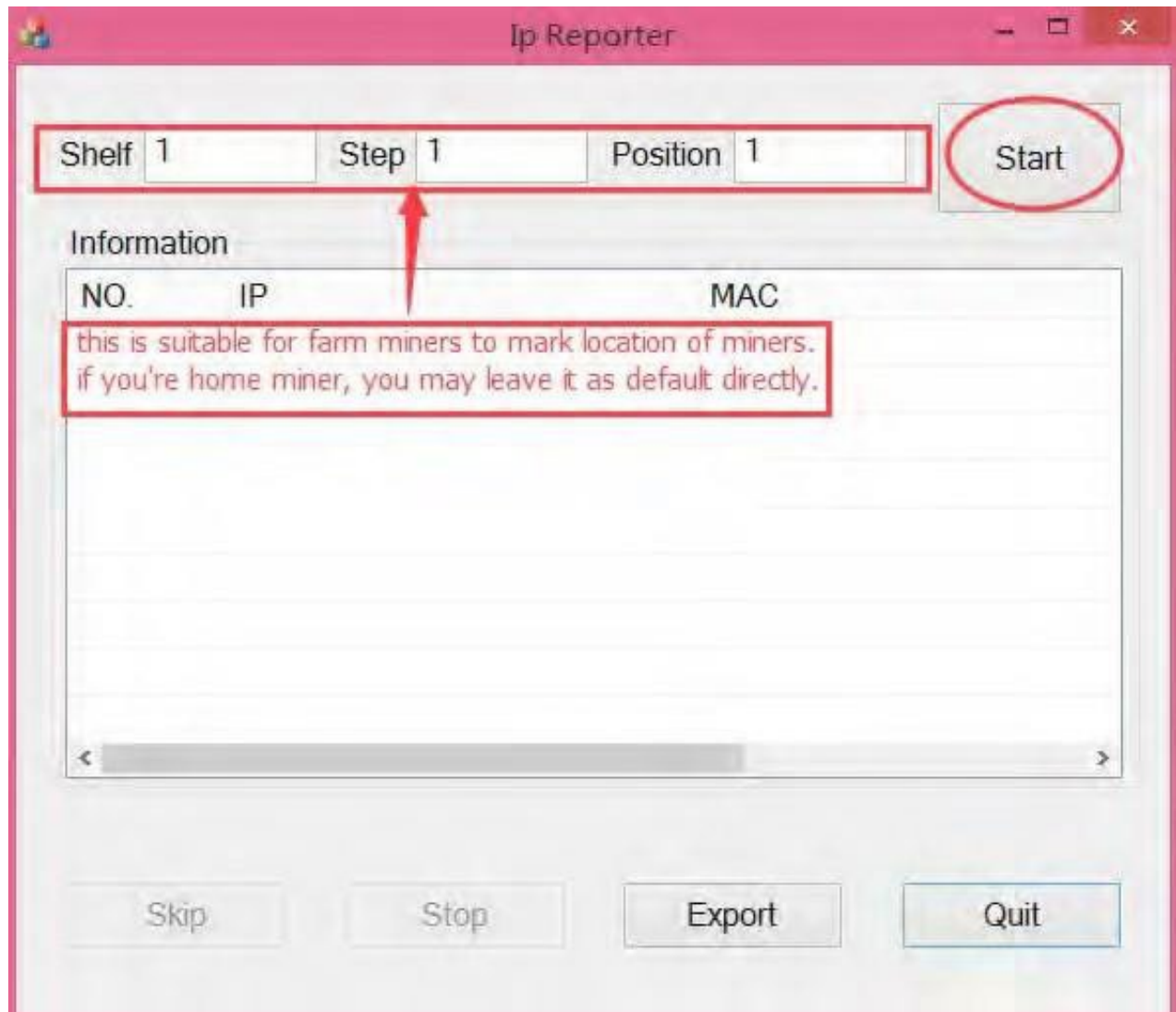
The file IPReporter.zip is supported by Microsoft Windows only.

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.

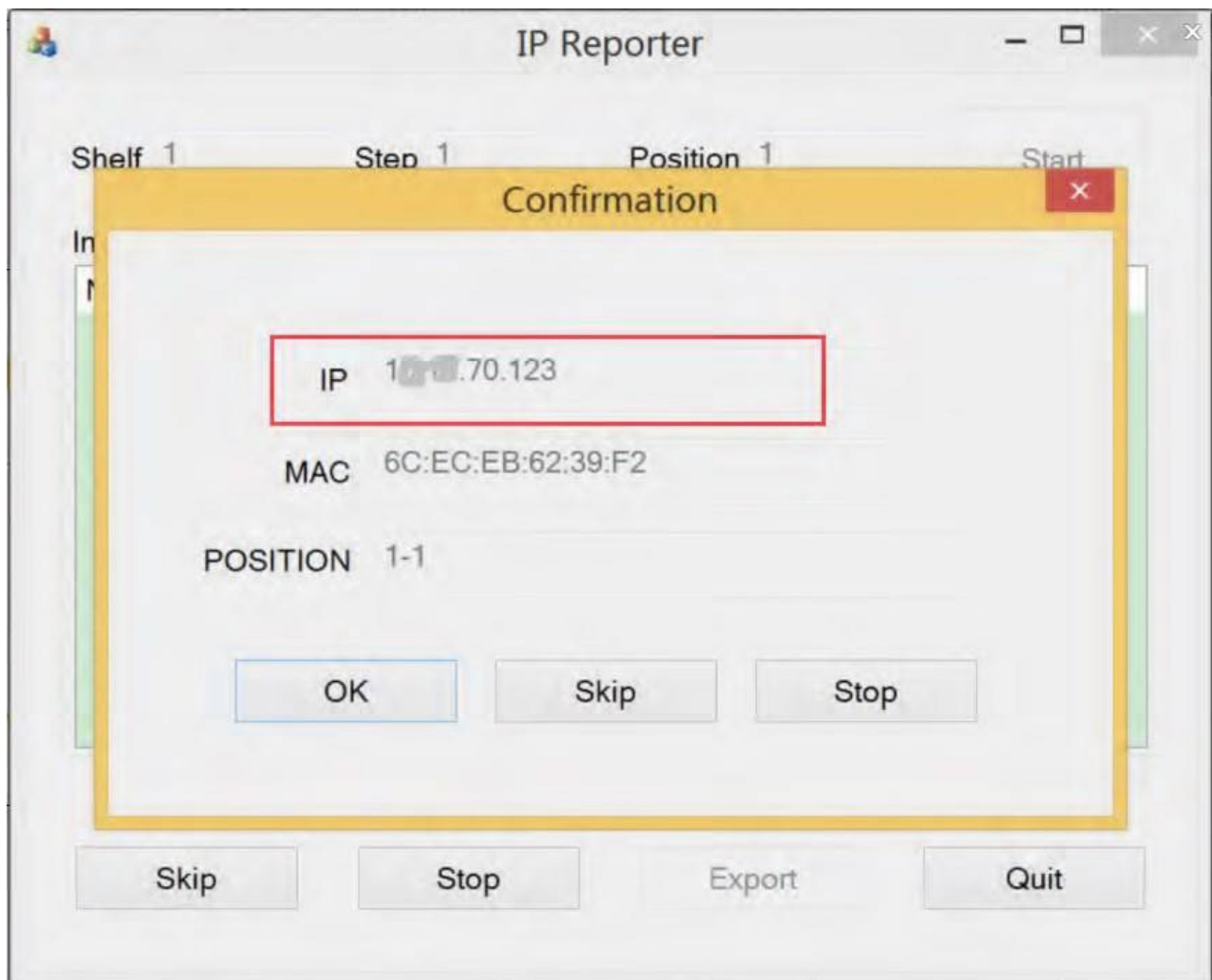


The default DHCP network protocol distributes IP addresses automatically.

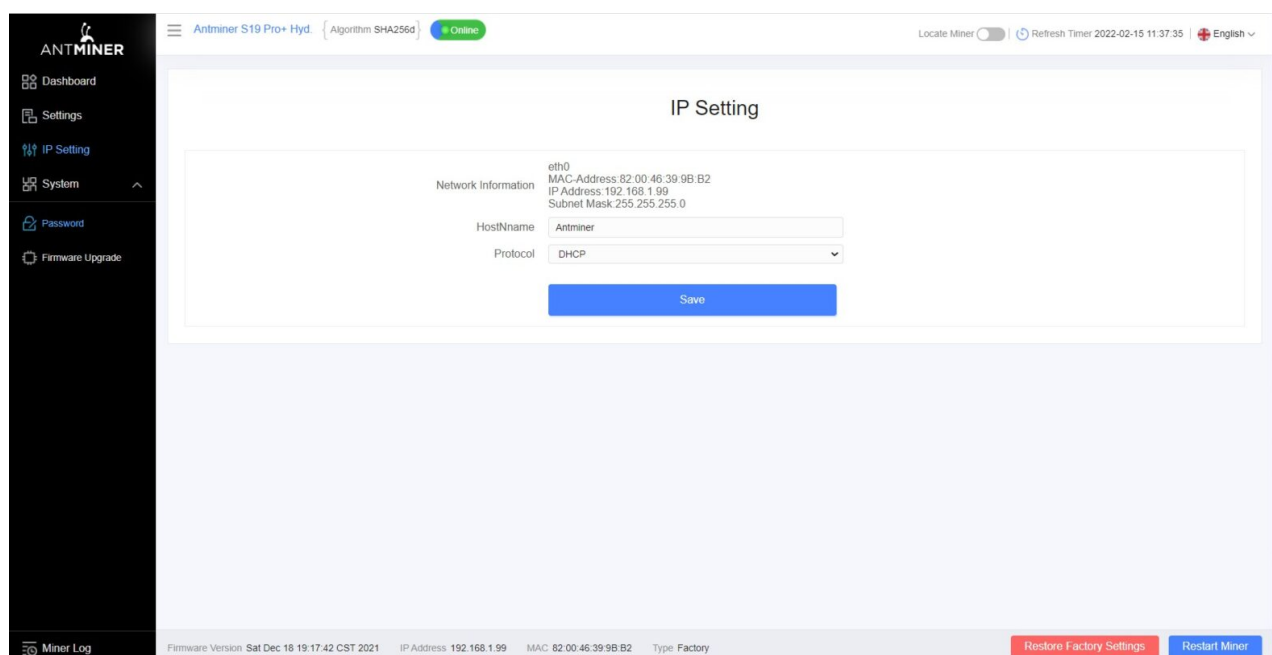
4. Right-click IPReporter.exe and run it as Administrator.
5. Select one of the following options:
 - Shelf, Step, Position suitable for farm servers to mark the location of the servers.
 - Default suitable for home servers.
6. Click Start.



7. On the control panel, 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.

The screenshot shows the Antminer S19 Pro+ Hyd. web interface. The sidebar on the left contains navigation links: Dashboard, Settings, IP Setting, System, Password, and Firmware Upgrade. The main content area is titled 'Pools' and contains three input fields for Mining Address, Miner Name, and Password (optional) for Pool1, Pool2, and Pool3. Below this is a 'Setup' section with a 'Mode' dropdown set to 'Normal'. A blue 'Save' button is at the bottom. The footer shows system information: Firmware Version, Sat Dec 18 19:17:42 CST 2021, IP Address 192.168.1.99, MAC 82:00:46:39:9B:B2, Type Factory, and buttons for 'Restore Factory Settings' and 'Restart Miner'.

2. Set the options according to the following table.

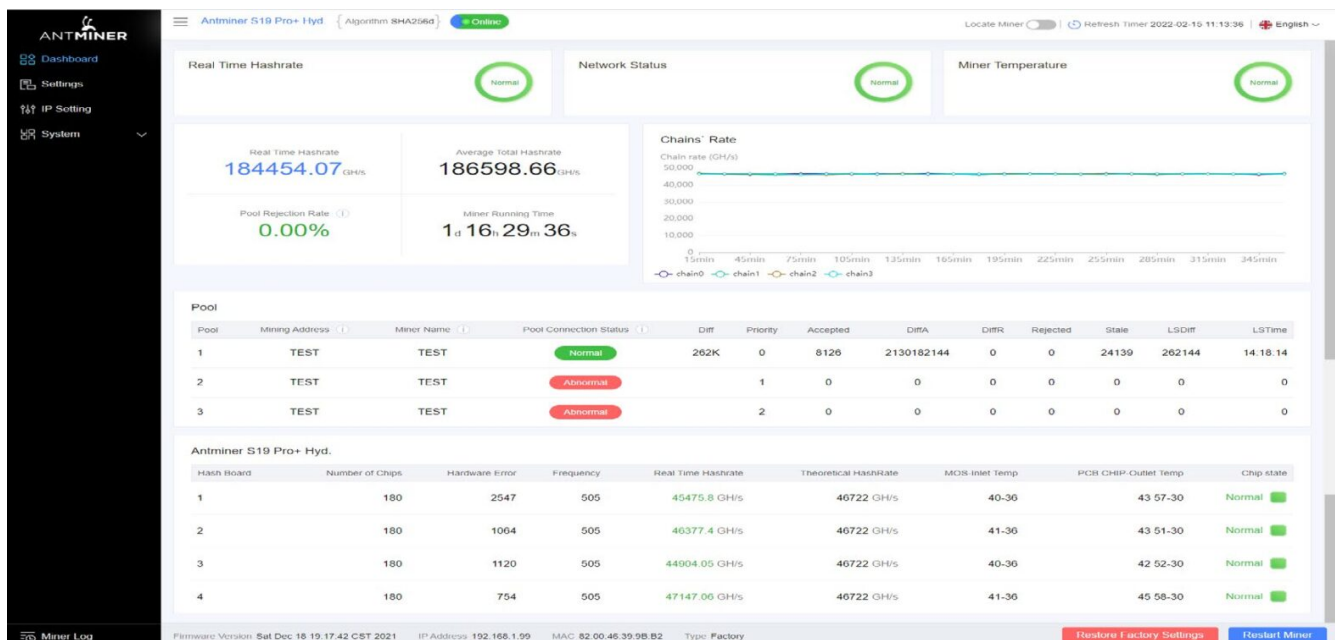
Option	Description
Mining address	Enter the address of your desired pool.  The S19 Pro+ Hydro servers can be set up with three mining pools, with decreasing priority from the first pool (pool 1) to the third pool (pool 3). The pools with low priority will only be used if all higher priority pools are 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 (taking S19 Pro+ Hydro 184T as an example):

1. Click dashboard marked below to check the server status.



Note: The frequency of S19 Pro+ Hydro server is fixed with the value 505 MHz. Firmware will stop running when the Temp (PCB) reaches to 75 or the water temperature is either greater than 45 or lower than 20 there will be an error message "Fatal Error: Temperature is too high!" shown on the Bottom of the Kernel log page.

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"> ● 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. **File System Version** displays the date of the firmware your server use. In the example below, the server is using firmware version 20211218.

ANTMINER

Antminer S19 Pro+ Hyd. Algorithm SHA256d Online

Locate Miner Refresh Timer 2022-02-15 11:37:35 English

IP Setting

Network Information

eth0
MAC-Address: 82:00:46:39:9B:B2
IP Address: 192.168.1.99
Subnet Mask: 255.255.255.0

HostName: Antminer

Protocol: DHCP

Save

Miner Log Firmware Version: Sat Dec 18 19:17:42 CST 2021 IP Address: 192.168.1.99 MAC: 82:00:46:39:9B:B2 Type: Factory Restore Factory Settings Restart Miner

Upgrading Your System



Make sure that the S19 Pro+ Hydro 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**.

ANTMINER

Antminer S19 Pro+ Hyd. Algorithm SHA256d Online

Locate Miner Refresh Timer 2022-02-15 11:37:35 English

IP Setting

Network Information

eth0
MAC-Address: 82:00:46:39:9B:B2
IP Address: 192.168.1.99
Subnet Mask: 255.255.255.0

HostName: Antminer


Protocol: DHCP

Save

Miner Log Firmware Version: Sat Dec 18 19:17:42 CST 2021 IP Address: 192.168.1.99 MAC: 82:00:46:39:9B:B2 Type: Factory Restore Factory Settings Restart Miner

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.

ANTMINER

Antminer S19 Pro+ Hyd. Algorithm SHA256d Online

Locate Miner Refresh Timer 2022-02-15 11:37:35 English

IP Setting

Network Information

eth0
MAC-Address: 82:00:46:39:9B:B2
IP Address: 192.168.1.99
Subnet Mask: 255.255.255.0

HostName: Antminer

Protocol: DHCP

Save

Miner Log Firmware Version: Sat Dec 18 19:17:42 CST 2021 IP Address: 192.168.1.99 MAC: 82:00:46:39:9B:B2 Type: Factory Restore Factory Settings Restart Miner

5. Click one of the following options:

- **Reboot** – to restart the server with the new firmware.
- **Go Back** – to continue mining with the current firmware. The server will load the new firmware next time it is restarted.

Modifying Your Password

To change your login password:

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

Dashboard Settings IP Setting System Password Firmware Upgrade

Reset Password

Current Password

New Password

Confirm Password

Save

Restoring Initial Settings

To restore your initial settings

1. Turn on the server and let it run for 5 minutes.
2. On the control 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. **Climatic Conditions:**

Description	Requirement
Operating Temperature	-20-50 °C
Operating Humidity	20-90%RH (non-condensing)
Storage Temperature	-20-70 °C
Storage Humidity	5-95%RH non-condensing
Altitude	<2000m

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.

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:

1. **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)	$\leq 1.5\text{mg/m}^2\text{h}$

2. **Requirements of Corrosive Gas**

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.

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:

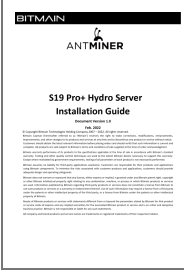
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, 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.

Documents / Resources

	<p>BITMAIN AntMiner S9 Pro+ Hydro Server [pdf] Installation Guide AntMiner S9, Pro Hydro Server, AntMiner S9 Pro Hydro Server</p>
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References

-  [BITMAIN](#)
-  [BITMAIN](#)