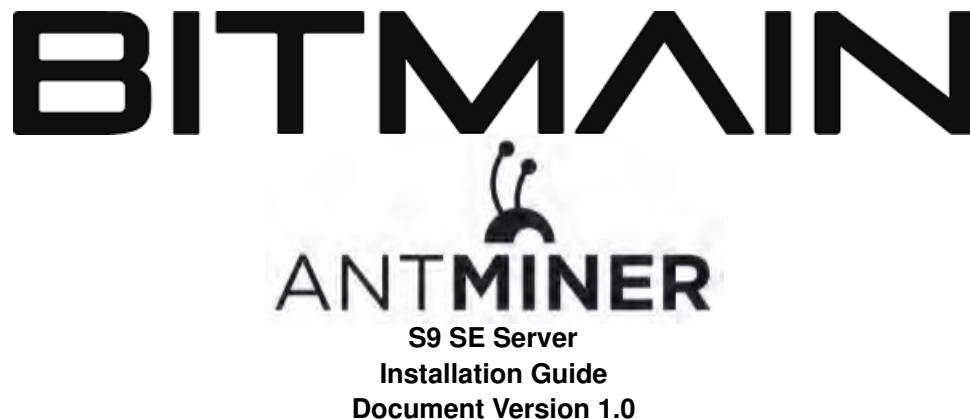




## **BITMAIN AntMiner S9 SE Server Installation Guide**

[Home](#) » [BITMAIN](#) » BITMAIN AntMiner S9 SE Server Installation Guide



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## Contents [ [hide](#)

### 1 Overview

#### 1.1 S9 SE Server Components

#### 1.2 Connecting to the Power Supply

#### 1.3 Specifications

### 2 Setting Up the Server

### 3 Configuring the Server

### 4 Monitoring Your server

### 5 Administering Your Server

#### 5.1 Checking Your Firmware Version

#### 5.2 Upgrading Your System

#### 5.3 Modifying Your Password

#### 5.4 Restoring Initial Settings

### 6 Basic Environmental Requirements:

#### 6.1 Climatic Conditions:

#### 6.2 Site Requirements of the Server Running Room:

#### 6.3 Electromagnetic Environmental Conditions:

### 7 Other Environmental Requirements

#### 7.1 Requirements of Mechanical Active Substances

#### 7.2 Requirements of Corrosive Gas

### 8 Documents / Resources

### 9 Related Posts

## Overview

The S9 SE server is Bitmain's newest version in the S9 SE server series. All S9 SE servers are tested and configured prior to shipping to ensure easy setup.



**Front View**



**Back View**



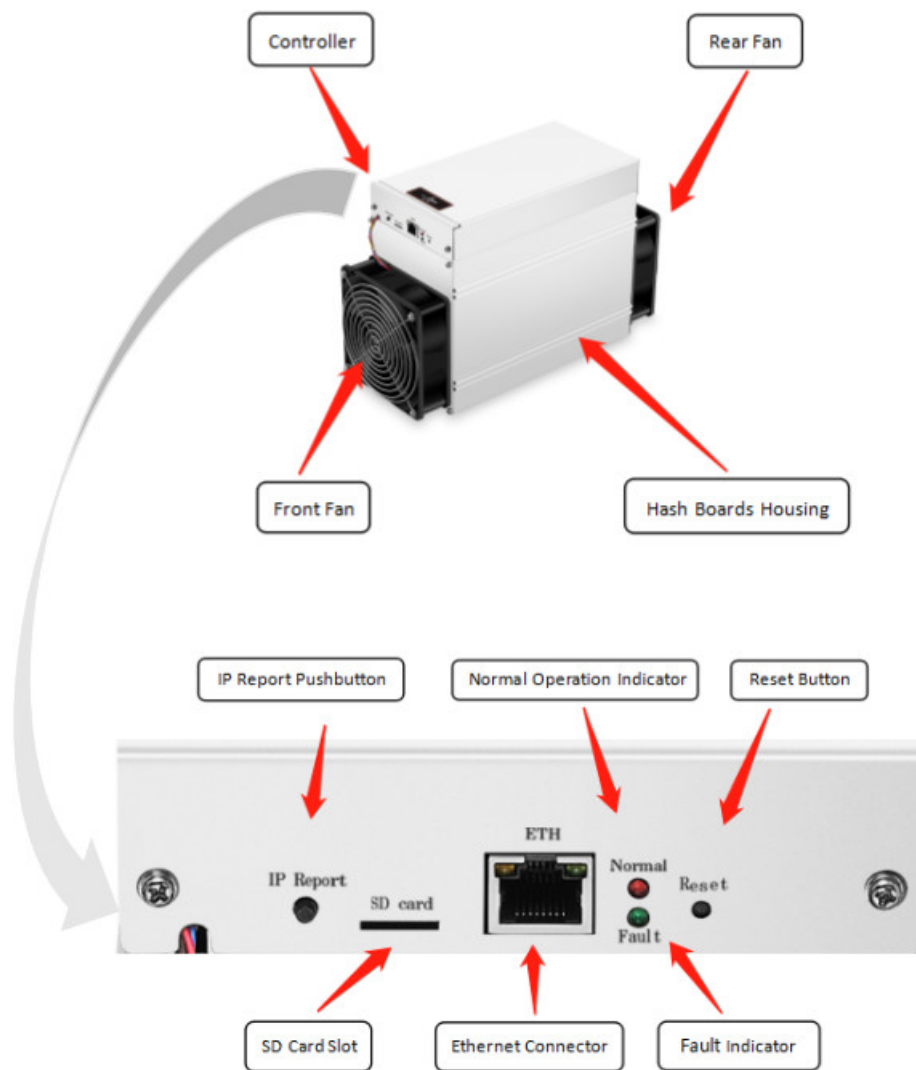
**Placement**



1. You must provide your own ATX power supply.
2. Please refer to the layout above to place your goods in usage in case of any damage.

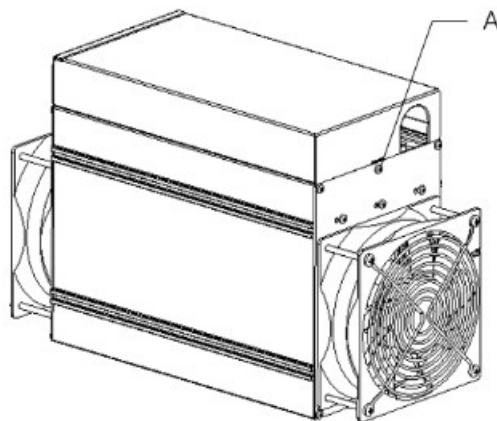
### **S9 SE Server Components**

The main components and controller front panel of S9 SE server are shown in the following figure:

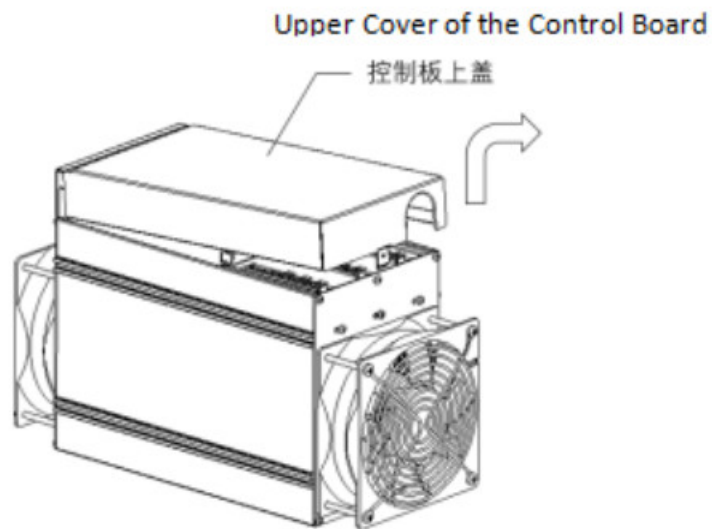


### Connecting to the Power Supply

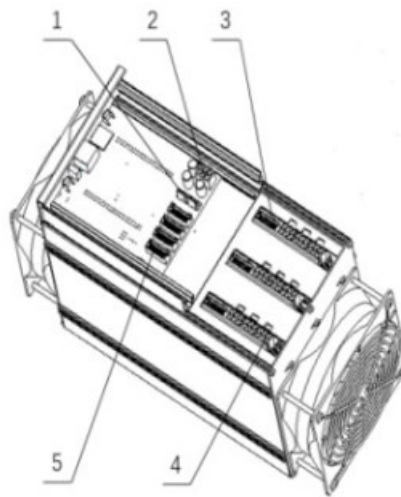
1. Remove the screw at the position indicated by A with a cross screwdriver.



2. Lift the upper cover of the control board upward at the direction indicated by the arrow shown in the figure and then pull it at the upper rear direction.

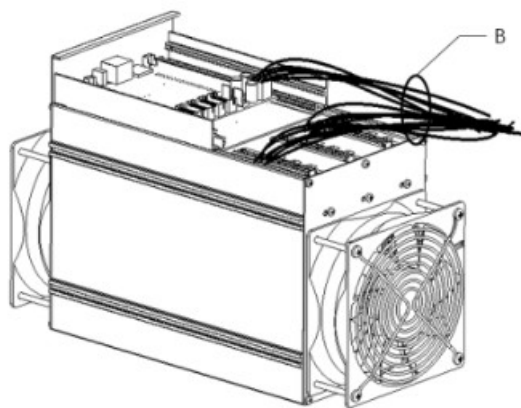


3. The position and name of the socket are shown in the figure below after removing the upper cover of the control board.

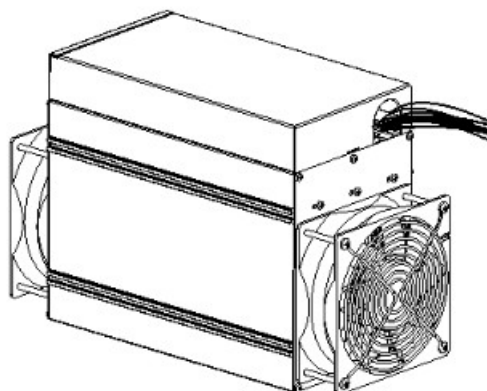


No.	Item	Quantity
1	FanSocket	2
2	Main Control PSU Socket	1
3	Dashboard Signal Socket	3
4	Dashboard PSU Socket	9
5	Main Control Board PSU Socket	4

4. Connecting the external power supply to the corresponding socket of the server and the bind the cable sat the position indicated by B.



5. Put the upper cover of the control board back in place and fix the screw at the position indicated by A. Note that the bundled cables shall be placed into the U-shaped hole.



### **Warning: Energy Hazards!**

Please be sure to follow the manual for installation.

Risk of injury due to energy hazard exists inside.

Be sure to close the metal cover before powering on the equipment, otherwise, there is a risk of injury.

Be sure to use an external power supply that was approved according to IEC 60950-1:2005 + A1 + A2 or IEC 62368-1:2014. The external power supply shall provide SELV output and be evaluated.

### **Specifications**

Model No.: 120-K

Version: S9 SE

Product Glance	Value
Crypto Algorithm/Coins	SHA256/BTC/BCH
Hashrate, TH/s	16
Reference power efficiency on wall @25°C, J/TH	80

Hardware Configuration	
Quantity of hash chips	180
Quantity of hash boards	3
Networking connection mode	RJ45 ethernet 10/100M
Server Size (Length*Width*Height, w/o package), mm	321.3*129.6*200
Net weight, kg	4.56
Noise, dBA @25°C(1-1)	76

Environment Requirements			
Operation temperature, °C	0	25	40
Storage temperature, °C	-40	25	85
Operation humidity, RH	5%	0	95%

**Notes:** (1-1) Max condition: Fan is under max RPM(rotation per minute).

The parameter table above is for reference only, full specifications of the S9 SE server will be updated later.

## Setting Up the Server

To set up the server:



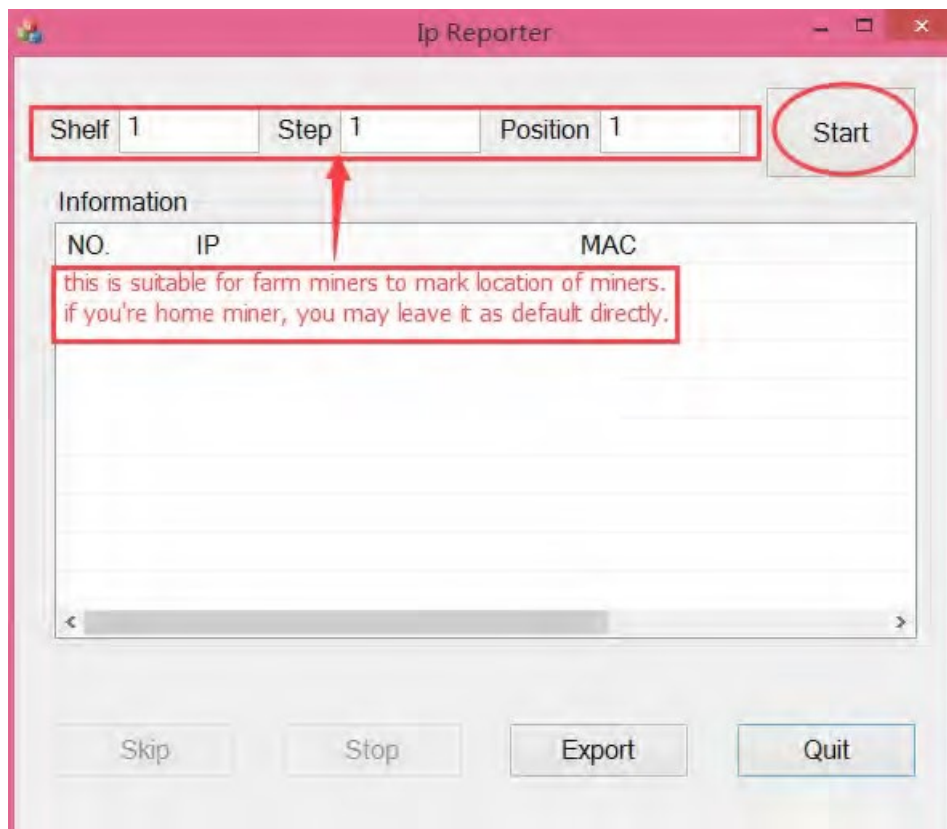
The file IPReporter.zip is supported by Microsoft Windows only.

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.

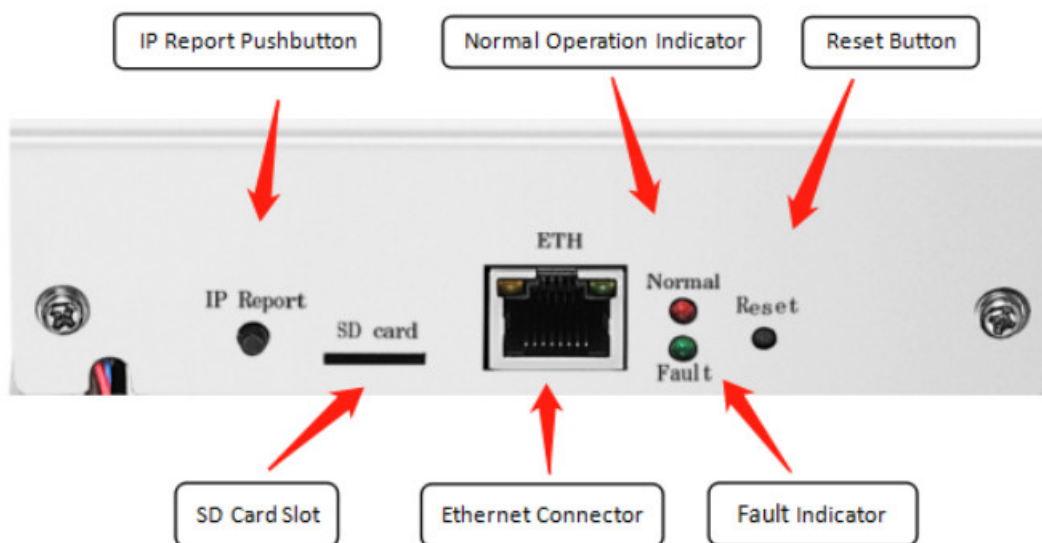


The default DHCP network protocol distributes IP addresses automatically.

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.

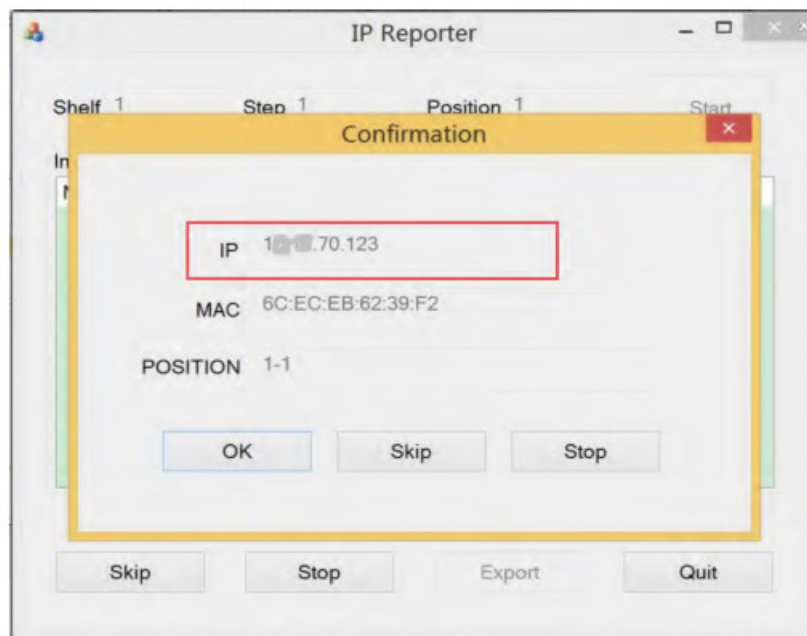


7. On the controller board, click the IP Report button. Hold it down until it beeps (about 5 seconds).

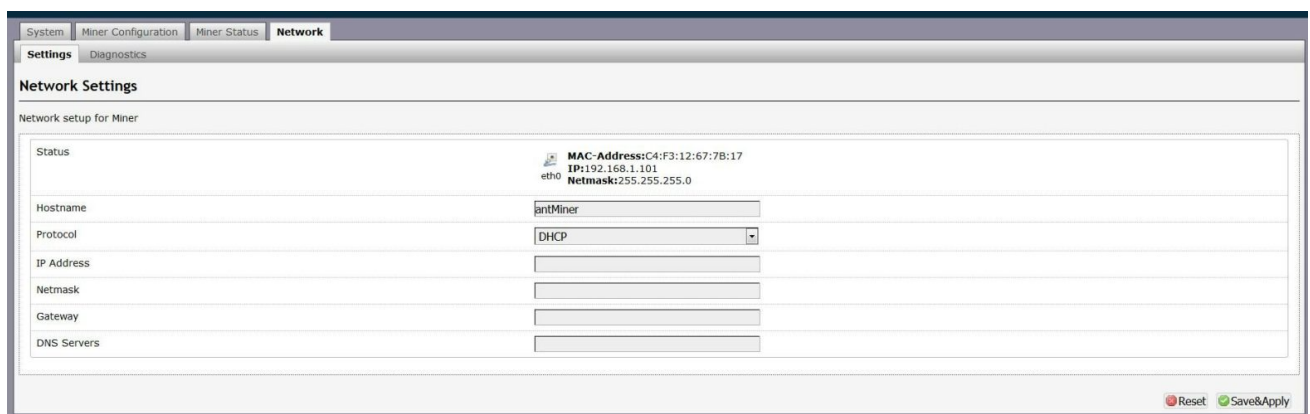


The IP address will be displayed in a window on your computer screen.





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 Network section, you can assign a DHCP IP address (optional).
11. Click Save & Apply.

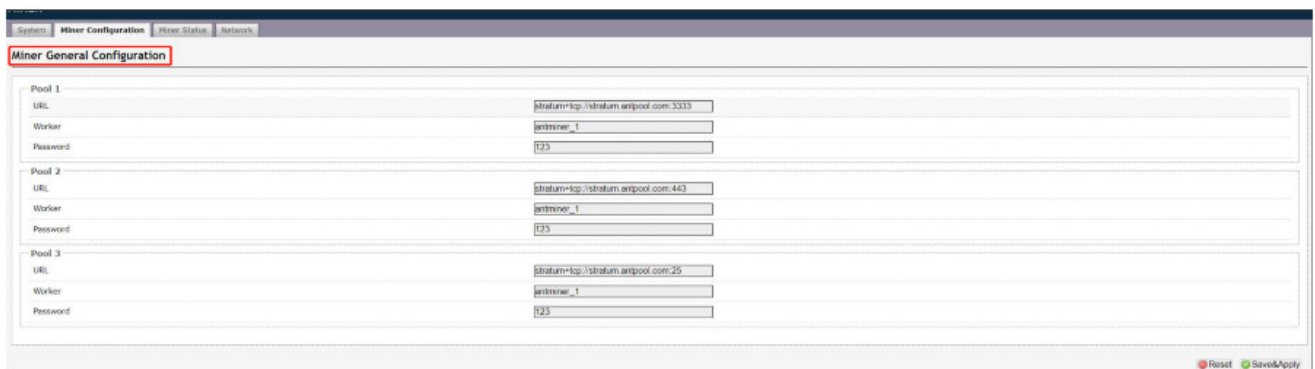


## Configuring the Server


### Setting Up the Pool

To configure the server:

1. Click General Settings.



2. Set the options according to the following table:

Option	Description
Pool URL	<p>Enter the URL of your desired pool.</p> <p> The S9 SE server 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.</p>
Worker	Your worker ID on the selected pool.
Password	The password for your selected worker.

3. Click Save & Apply to save and restart the server.

## Monitoring Your server

To check the operating status of your server:

1. Click the status marked below.

ANTMINER

System

Miner Configuration

Miner Status

Network

Miner Status

Summary


Elapsed	GH/S(RT)	GH/S(ave)	FoundBlocks	LocalWork	Utility	WU	BestShare
4d1h16m52s	16690.13	16151.84	0	20780355	3.47	227421.96	1777973263

Pools

Pool	URL	User	Status	Diff	GetWorks	Priority	Accepted	DIT1#	DIT2#	DIT3#	DIT4#	Rejected	Discarded	Stale	LSDiff	LSTime
0	stratum+tcp://stratum.antpool.com:3333	antminer_1	Alive	65.5K	9582	0	20256	0	1327431680	0	0	0	0	185092	0	65536 0:00:27
1	stratum+tcp://stratum.antpool.com:443	antminer_1	Alive		2	1	0	0	0	0	0	0	0	0	0	0
2	stratum+tcp://stratum.antpool.com:25	antminer_1	Alive		2	2	0	0	0	0	0	0	0	0	0	0
total					9586	3	20256	0	1327431680	0	0	0	0	185092	0	
HW	9593															

AntMiner

Chain#	ASIC#	Frequency	GH/S(RT)	HW	Temp(PCB)	Temp(Chip)	ASIC status
1	60	428	5343.48	3599	43-47	65-85	00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
2	60	433	6091.12	304	49-64	81-85	00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
3	60	430	5255.52	5070	42-63	62-82	00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
Fan#			Fan1			Fan2	
Speed (r/min)			4080			3600	

 **Note:** The S9 SE server is with automatic frequency. The firmware will stop running when the Temp(PCB) reaches 85°C or the Temp(Chips) reaches to 105°C there will be an error message “Fatal Error: Temperature is too high!” shown in the bottom of the kernel log page.

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

Option	Description
ASIC#	A number of chips were detected in the chain.
Frequency	ASIC frequency setting.
GH/S(RT)	Hash rate of each hash board (GH/s).
Temp(PCB)	The temperature of each hash board (°C). (Applied only to the server with fixed frequency).
Temp(Chip)	The temperature of the chips on each hash board (°C).
ASIC status	<p>One of the following statuses will appear:</p> <ul style="list-style-type: none"> <li>● O - indicates OK</li> <li>● X - indicates error</li> <li>● - - indicates dead</li> </ul>

## Administering Your Server

### Checking Your Firmware Version

#### To check your firmware version:

1. In System, click the overview tab.
2. File System Version displays the date of the firmware your server uses. In the example below, the server is using firm version 20190616.

ANTMINER

System

Miner Configuration

Miner Status

Network

Miner Status

Summary

Elapsed	GH/S(RT)	GH/S(ave)	FoundBlocks	LocalWork	Utility	WU	BestShare
4d3h16m52s	16890.13	16151.84	0	20780355	3.47	272421.86	1779873263

Pools

Pool	URL	User	Status	DHT	GetWorks	Priority	Accepted	DHT1#	DHTA#	DHTB#	DHTC#	Rejected	Discarded	Stale	LSDiff	LSTime
0	stratum+tcp://stratum.antpool.com:3333	antminer_1	Alive	65.5K	9582	0	20256	0	1327421680	0	0	0	0	185092	0	65536 0:00:27
1	stratum+tcp://stratum.antpool.com:443	antminer_1	Alive		2	1	0	0	0	0	0	0	0	0	0	0
2	stratum+tcp://stratum.antpool.com:25	antminer_1	Alive		2	2	0	0	0	0	0	0	0	0	0	0
total					9586	3	20256	0	1327421680	0	0	0	0	185092	0	
HW	9583								0.0007%							

AntMiner

Chain#	ASIC#	Frequency	GH/S(RT)	HW	Temp(PCB)	Temp(Chip)	ASIC status
1	60	438	5343.48	3599	43-67	65-85	00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
2	60	433	6091.12	924	49-64	81-85	00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000
3	60	430	5255.52	5070	42-63	62-82	00000000 00000000 00000000 00000000 00000000 00000000 00000000 00000000

Fan#

Fan#	Speed (rpm)
Fan1	4080
Fan2	3600

### Upgrading Your System



Make sure that the S9 SE 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 the System, click Upgrade.

The screenshot shows the 'System' tab in the Antminer web interface. The 'Upgrade' sub-tab is active. The page is titled 'Upgrade' and contains two main sections: 'Backup / Restore' and 'Flash new firmware image'. In the 'Backup / Restore' section, there are buttons for 'Generate archive' (green) and 'Perform reset' (red). Below these, there is a text input field for 'Restore backup:' with a '浏览...' (Browse) button and an 'Upload archive...' button. In the 'Flash new firmware image' section, there is a checkbox for 'Keep settings:' which is checked. Below it, there is a text input field for 'Image:' with a '浏览...' (Browse) button and a 'Flash image...' button.

2. For Keep Settings:
  - Select the check box to keep your current settings (default).
  - Clear the check box to reset the server to default settings.
3. Click the (Browse) button and navigate to the upgrade file. Select the upgrade file, then click Flash image. A message appears notifying you if the S9 SE firmware can be upgraded and if yes, will then proceed to flash the image.
4. When the upgrade is completed, the following message appears:

The screenshot shows the 'System' tab in the Antminer web interface. The 'Upgrade' sub-tab is active. The page is titled 'System Upgrade' and contains a message: 'The upgrade installed successfully. Please restart Miner to activate.' Below the message, there are two buttons: 'Reboot' (green) and 'Go Back' (blue).

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 when it is restarted.

## Modifying Your Password

To change your login password:

1. In System, click the Administration tab.
2. Set your new password, then click Save & Apply.

The screenshot shows the 'System' tab in the Antminer web interface. The 'Administration' sub-tab is active. The page is titled 'Password' and contains a message: 'Changes the administrator password for accessing the device'. Below the message, there are three text input fields: 'Current Password', 'New Password', and 'Confirmation'. At the bottom right, there are two buttons: 'Reset' (red) and 'Save&Apply' (green).

## 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

### Basic Environmental Requirements:

#### Climatic Conditions:

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

#### 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.

#### Documents / Resources

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