S9i Server Installation Guide

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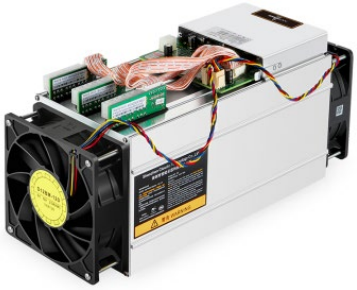
1. Overview

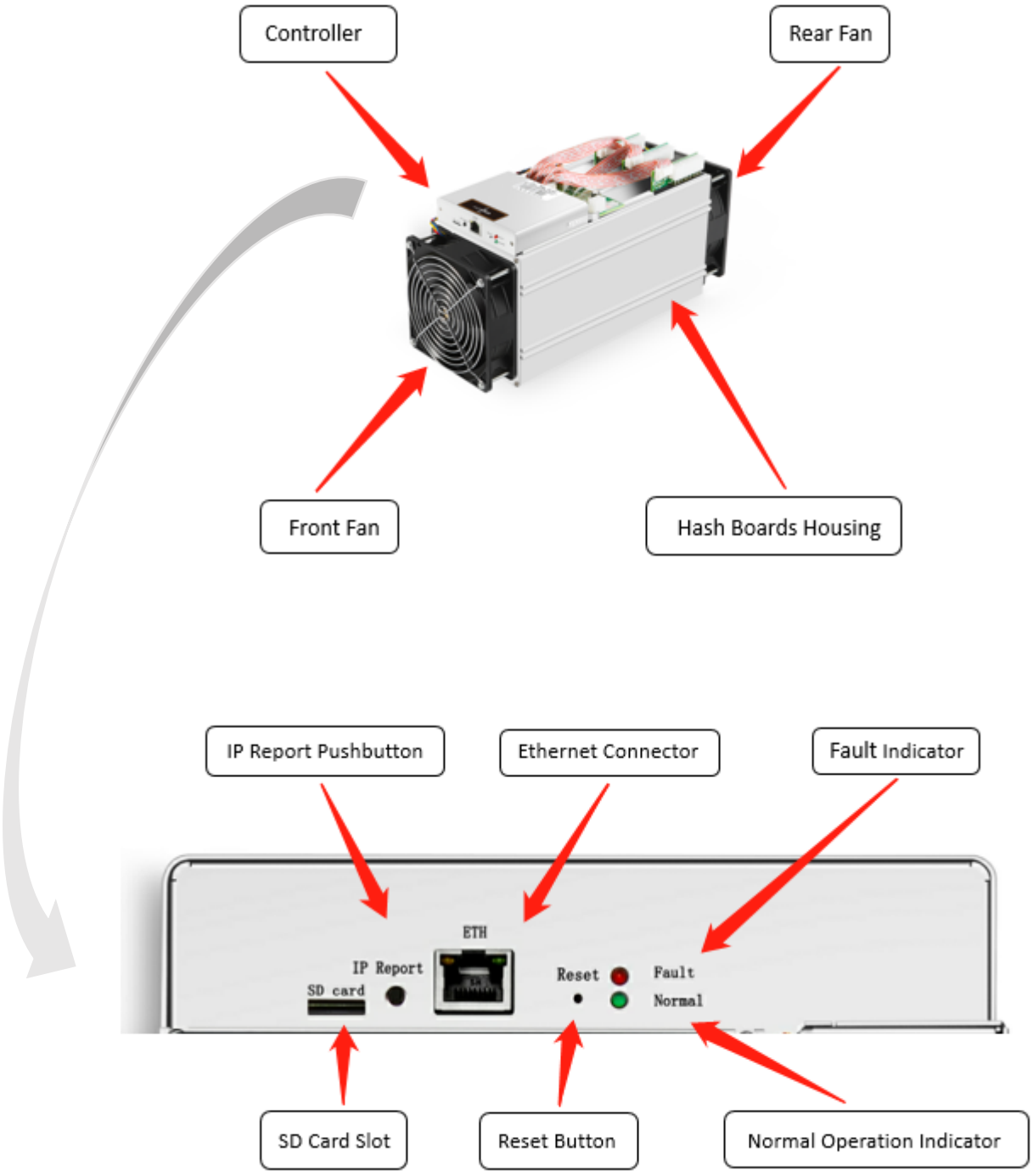
The S9i server is one of the products in Bitmain's S9 miner series. All S9i servers are tested and configured prior to shipping to ensure easy set up.



You must provide your own ATX power supply.

1.1 S9i Server Components

The S9i server main components and controller front panel are shown in the following figure:



1.2 Specifications

Hash Rate	S9i-13 TH/s, 13.5 TH/s, 14 TH/s, 14.5 TH/s
Power Consumption	1290 W (13 TH/s) 1310 W (13.5 TH/s) 1320 W (14 TH/s) 1365 W(14.5 TH/s)
Power Efficiency	99 J/TH (13 TH/s) 97 J/TH (13.5 TH/s) 94 J/TH (14 TH/s) 94.14 J/TH (14.5 TH/s)
Rated Voltage	11.60 ~13.00 V
Frequency	Auto-frequency
Network connection mode	Ethernet
Operating temperature	0 - 40 °C
Storage temperature	-40 - 85°C
Operating humidity	5%RH-95%RH, No condensation
Product weight (without package)	4.2 kg
Product dimensions	350mm(L) x 135mm(W) x 158mm(H)

2. Connecting to the Power Supply

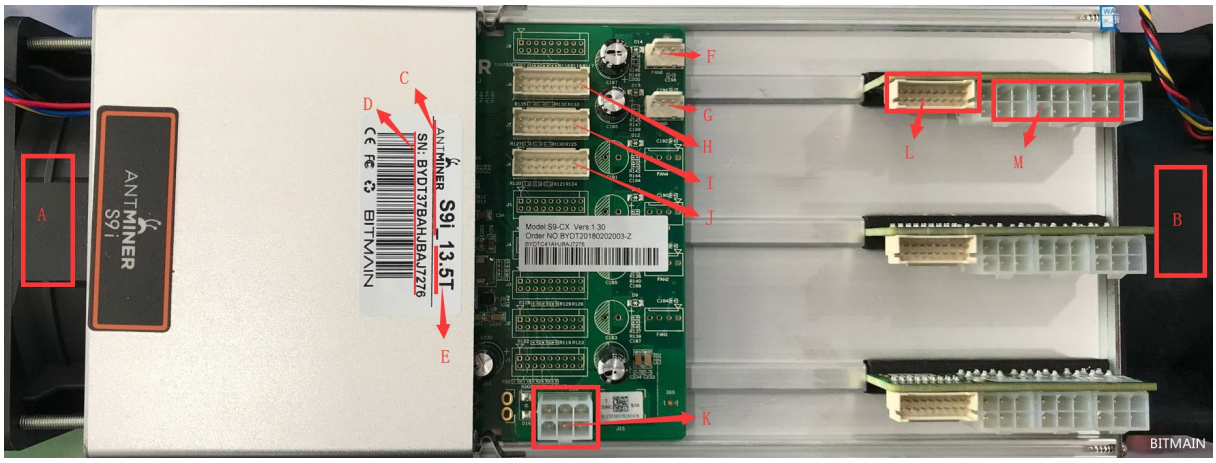
Ten PCI-e connectors are located at the top of the S9i server for connecting the PSU as follows:

- Nine PCI-e connectors for the hash boards. Each hash board has three PCI-e connectors.
- One PCI-e connector located on the controller.

Each hashboard must be powered by the same PSU to prevent possible damage and instability.

To connect the power supply:

1. Connect PSU power cable connectors to each of the nine PCI-e connectors on the top of the S9i server, ensuring that each hash board is powered by the same PSU.



A. Front fan (intake fans); B. Rear fan (exhaust fans); C. Miner model; D. Serial number (SN) of miner, to review warranty status; E. Estimated hash rate of miner model; F. Rear fan connector; G. Front fan connector; H. Chain #8 connector; I. Chain #7 connector; J. Chain #6 connector; K. 6-pin power connector; L. Control board chain connector; M. 6-pin power connector

2. Connect a PSU power cable connector to the S9i PCI-e connector on the controller.
3. Connect the network cable to the ETH port.
4. To power up your S9i server, connect the PSUs to the power wall outlet.

If you are using more than one PSU,power up the PSU connected to the controller AFTER you have Powered up the other PSU(s).

3. Setting Up the Server

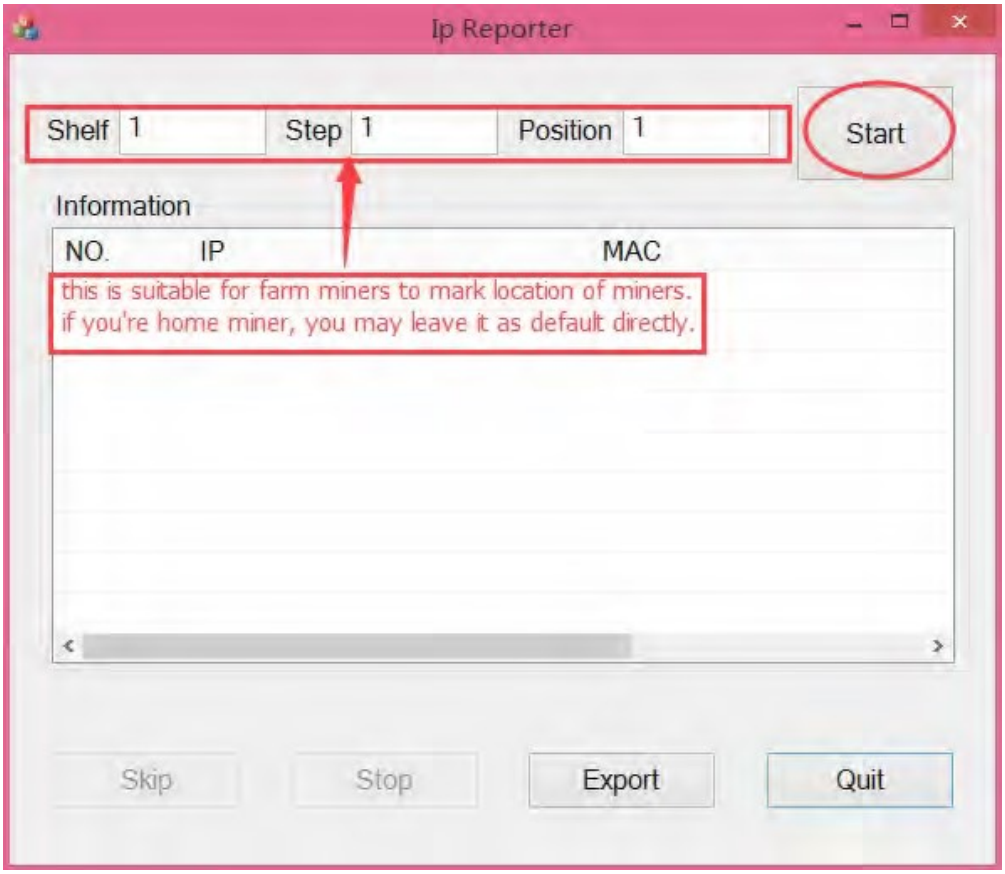
To set up the server:

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

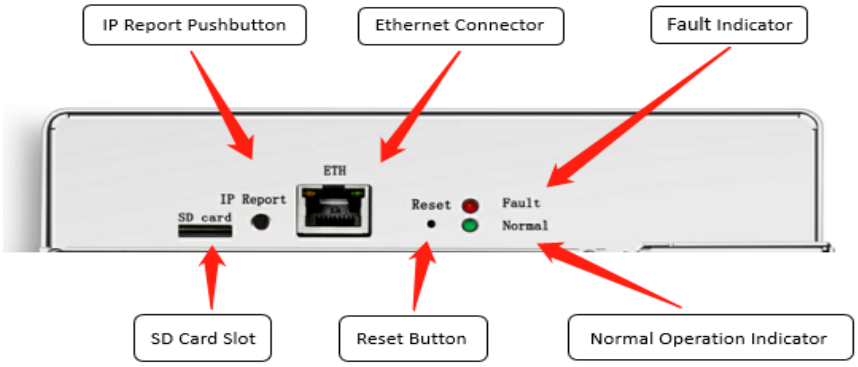
1. Go to the following site:
https://shop.bitmain.com/support.htm?pid=00720160906053730999PVD2K0vz0693
2. Download the following file: IPReporter.zip
3. Extract the file.

The default DHCP network protocol distributes IP addresses automatically.

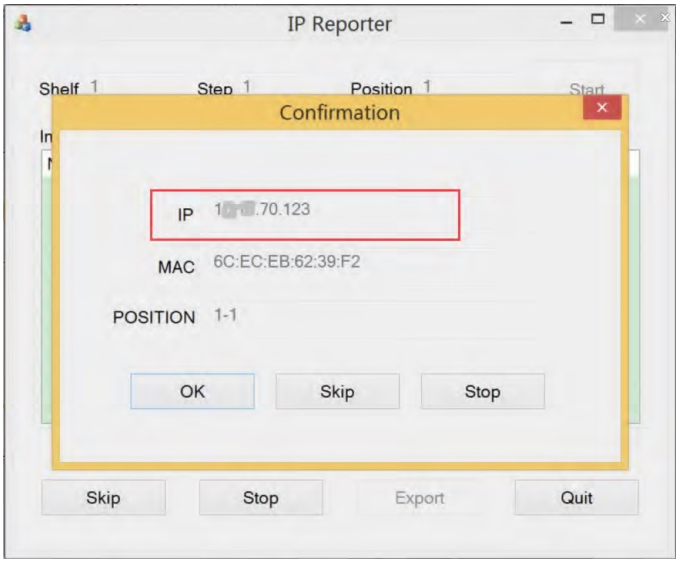
4. Right-click **IPReporter.exe** and run it as Administrator.
5. Select one of the following options:
   - Shelf, Step, Position – suitable for farm servers to mark the location of the servers.
   - Default – suitable for home servers.
6. Click **Start**.



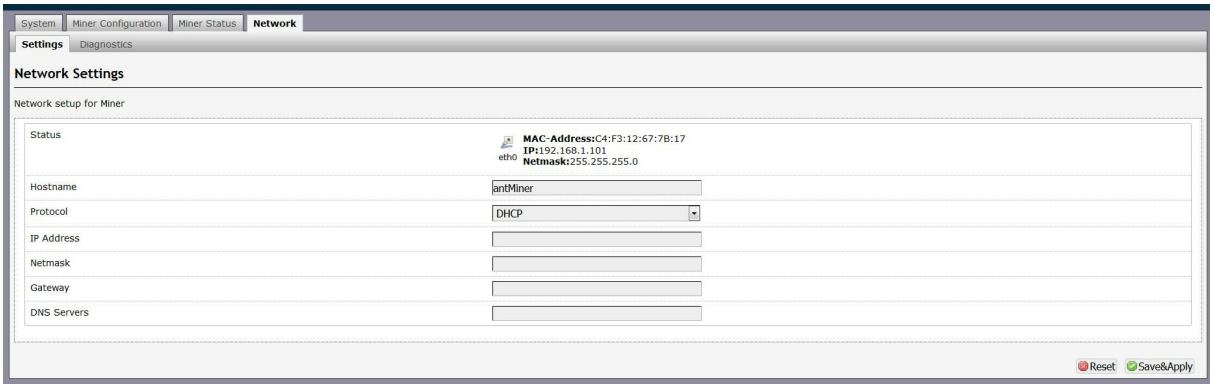
7. On the controller board, click the IP Report button. Hold it down until it beeps (about 5 seconds).



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**.

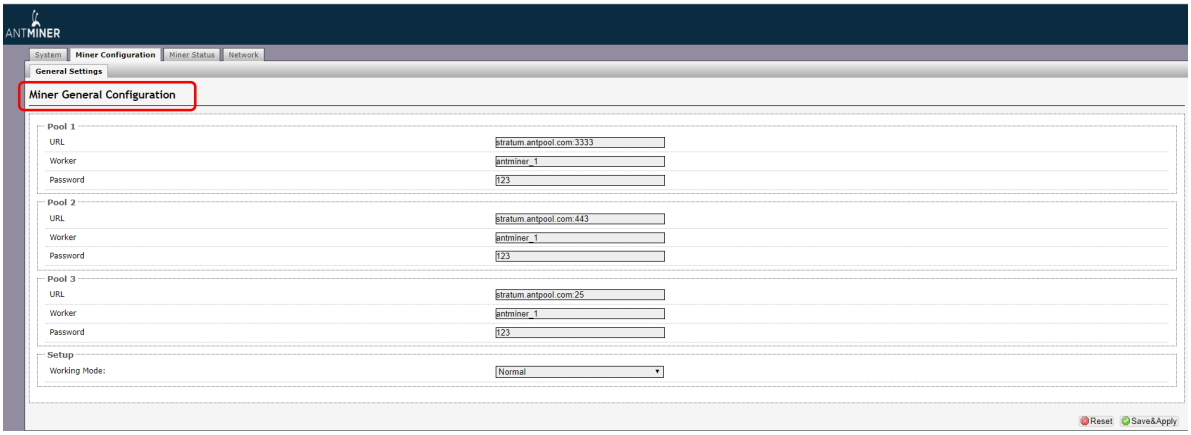


4. Configuring the Server

Setting Up the Pool

To configure the server:

1. click **General Settings**. (Here takes S9i-14T running under the firmware with “Normal” mode as an example)



2. Set the options according to the following table:

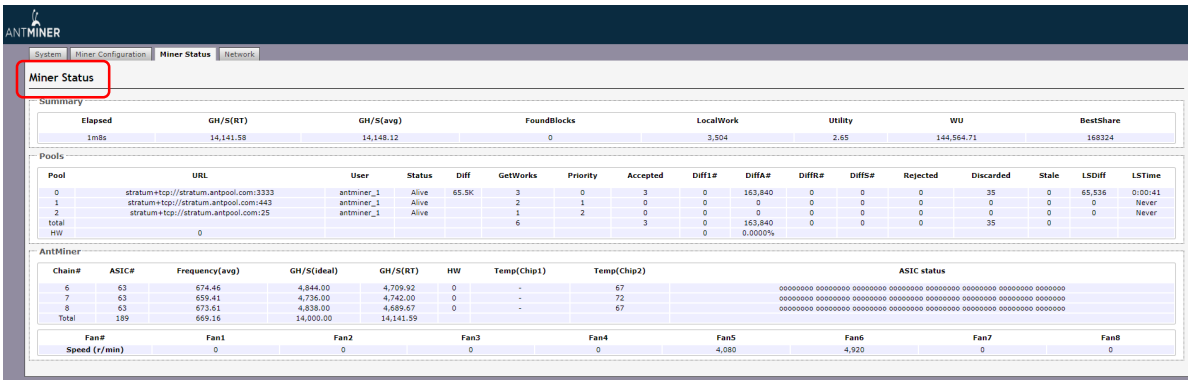
Option	Description
Pool URL	Enter the URL of your desired pool. The S9i server can be set up with three mining pools, with decreasing priority from the first pool (pool 1) to the third pool (pool 3). The pools with low priority will only be used if all higher priority pools are offline.
Worker	Your worker ID on the selected pool.
Password	The password for your selected worker.

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

5. Monitoring Your server

To check the operating status of your server:

1. Click the status marked below. (Here takes S9i-14T running under the firmware with “Normal” mode as an example)



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

Option	Description
ASIC#	Number of chips detected in the chain.
Frequency	ASIC frequency setting.
GH/S(RT)	Hash rate of each hash board (GH/s)
Temp(PCB)	Temperature of each hash board (°C).(Applied only to server with fixed frequency)
Temp(Chip)	Temperature of the chips on each hash board (°C).
ASIC status	One of the following statuses will appear: ● **O** - indicates OK ● **X** - indicates error ● **-** - indicates dead

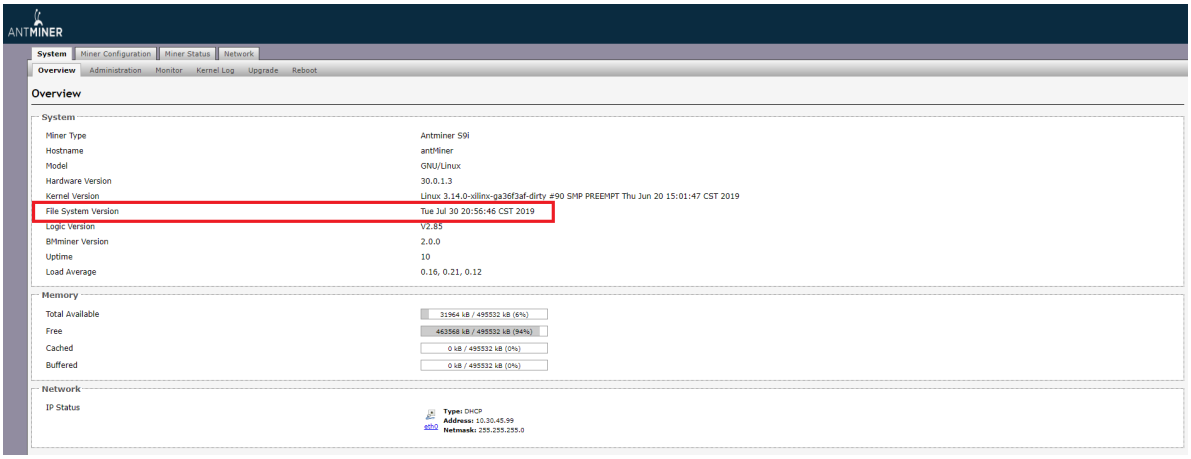
Note: The S9i server is with automatic frequency. Firmware will stop running when the Temp (PCB) reaches to 90℃， there will be an error message “Fatal Error: Temperature is too high!” shown in the bottom of kernel log page.

6. Administering Your Server

6.1 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 use. In the example below, the server is using firmware version 20190730.

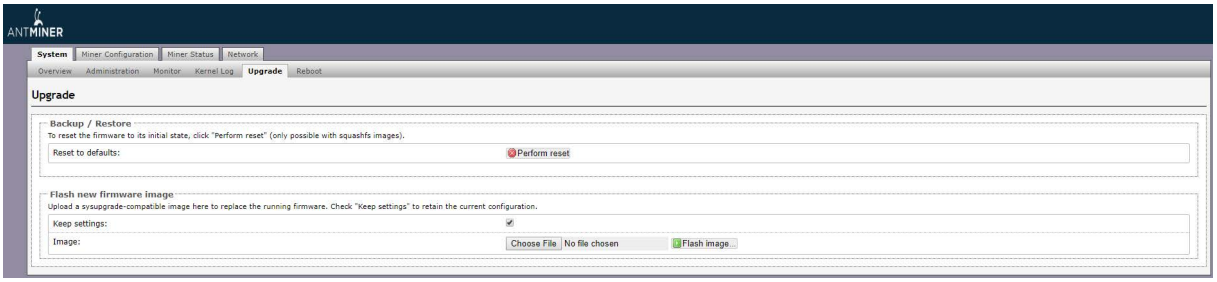


6.2 Upgrading Your System

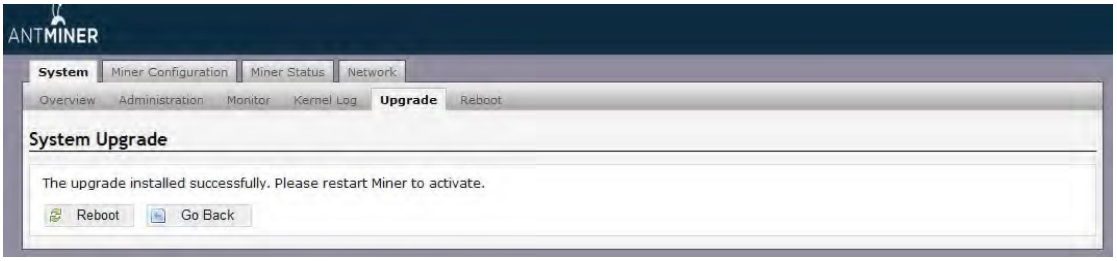
Make sure that the S9i server remains powered during the upgrade process. If power fails before the upgrade is completed, you will need to return it to Bitmain for repair.

To upgrade the server's firmware:

1. In System, click **Upgrade**.



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 选择文件 **(Browse)** button and navigate to the upgrade file. Select the upgrade file, then click **Flash image**. A message appears notifying you if the S9i firmware can be upgraded and if yes, will then proceed to flash the image.
4. When the upgrade is completed, the following message appears:

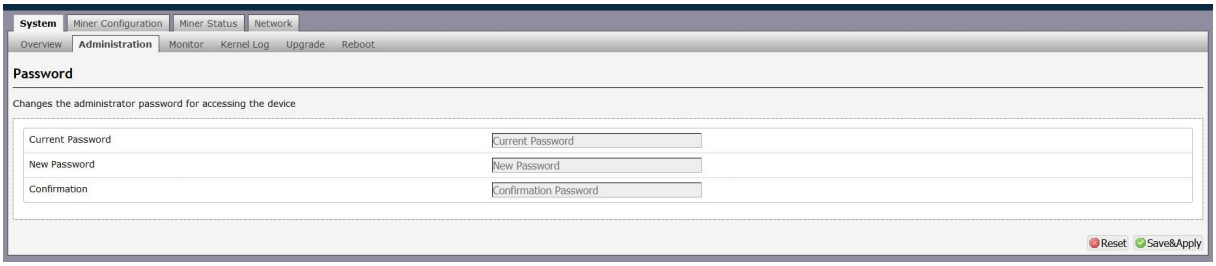


5. Click one of the following options:
   - **Reboot** - to restart the server with the new firmware.
   - **Go Back** - to continue mining with the current firmware. The server will load the new firmware next time it is restarted.

6.3 Modifying Your Password

To change your login password:

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



6.4 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	0-40℃
Operating Humidity	10-90%RH (non-condensing)
Storage Temperature	-20-70℃
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/m^3
Dust (suspended)	<= 0.2mg/m^3
Dust (deposited)	<=1.5mg/m^2h

2.2 Requirements of Corrosive Gas

Corrosive Gas	Unit	Concentration
H_2S	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.		

Regulation:

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 handling 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 your purchased the product.

台湾 ROHS:

設備名稱： S9i 服务器

單元	有害物质					
	鉛 (Pb)	汞 （Hg）	鎘 （Cd）	六價鉻 (Cr+6)	多溴聯苯 （PBB）	多溴二苯醚 （PBDE）
外殼	o	o	o	o	o	o
電路板組件	—	o	o	o	o	o
其他線材	—	o	o	o	o	o

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.〝o〞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