

Z9 mini Server

Installation Guide

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1. Overview

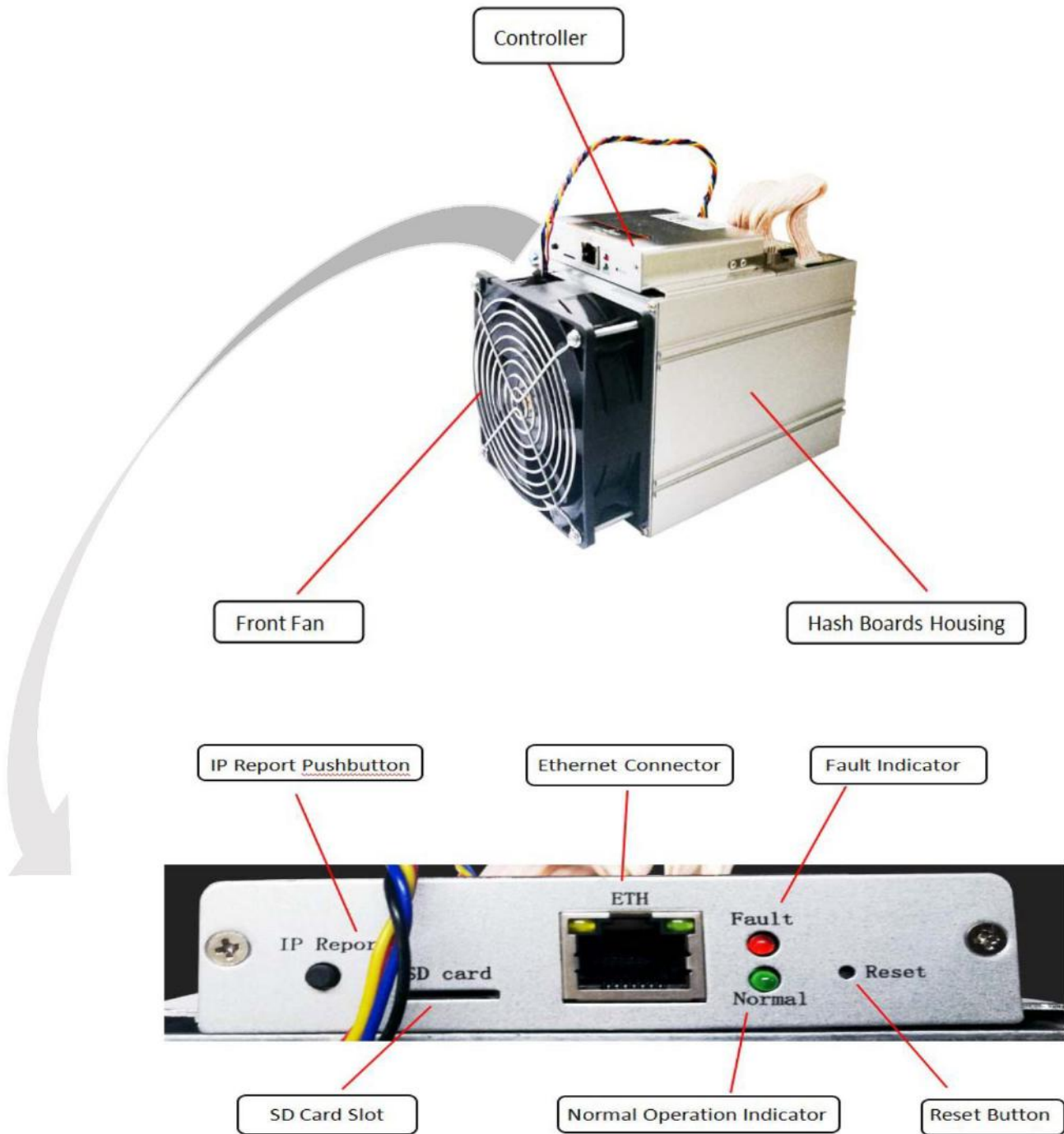
The Z9 mini server is Bitmain's newest version in the Z9 mini series. All Z9 mini servers are tested and configured prior to shipping to ensure easy set up.



You must provide your own ATX power supply.

1.1 Z9 mini Server Components

The Z9 mini server main components and controller front panel are shown in the following figure:



1.2 Specifications

Parameters of Z9 mini Server		
NO.	Parameters	Value
1	Product model	Z9 mini
2	Quantity of hash chips per server	12 PCS
3	Total quantity of hash boards	3 PCS
4	Total hash rate	10.0k Sol/s±5%
5	DC voltage input	11.60~13.00 V
6	DC current input @12V DC input @25 °C	20.6 A +5%
7	DC Power @12V DC input @25 °C	247 W +5%
8	220VAC Power @25 °C ,93% conversion efficiency of APW3	266 W +5%
9	220VAC Power efficiency @25 °C ,93% conversion efficiency of APW3++	26.6J/Ksol±5%
10	Weight (without package)	2.02kg
11	Operation temperature	0-40 °C
12	Storage temperature	-40-85 °C
13	Operation humidity	5%RH-95%RH, prevent condensation
14	Noise@25 °C	55dB
15	Networking connection mode	Ethernet Cable
16	Power connection mode	All PCI-E ports are required to power the board. You can use one PSU to power multiple boards. All cables must be connected before powering up the PSU.
17	Size (Length*Width*Hight)	206x124x155mm

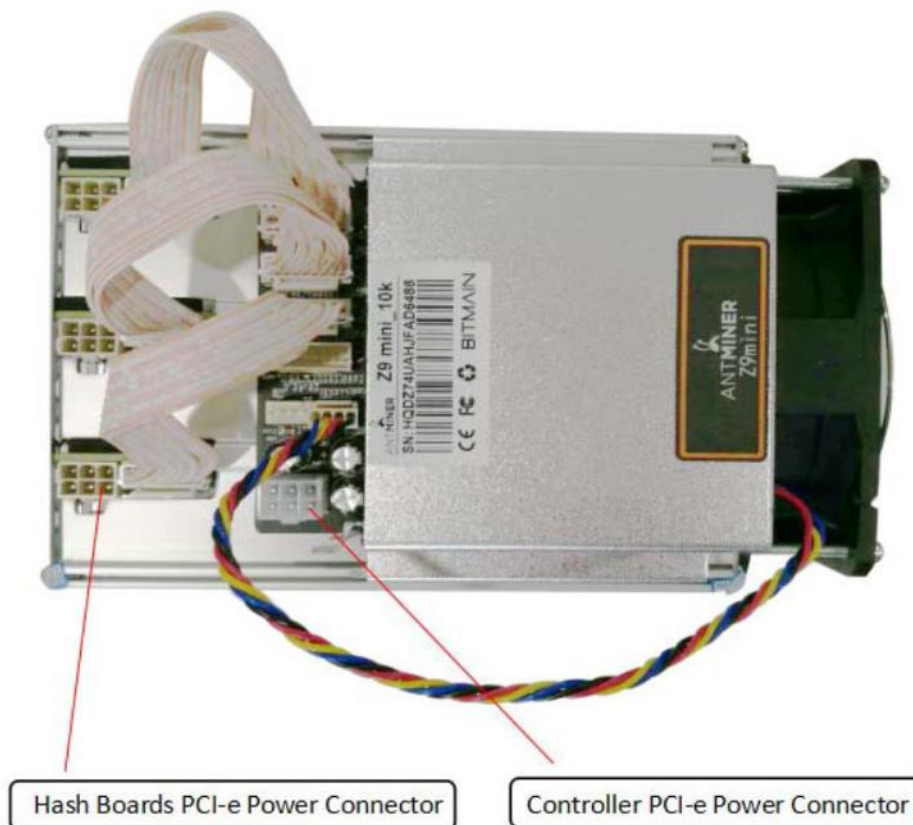
2. Connecting the Power Supply

Four PCI-e connectors are located at the top of the Z9 mini server for connecting the PSU as follows:

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

To connect the power supply:

1. Connect PSU power cable connectors to each of the three PCI-e connectors on the top of the Z9 mini server.



2. Connect a PSU power cable connector to the Z9 mini PCI-e connector on the controller.
3. Connect the network cable to the ETH port.
4. To power up your Z9 mini 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.



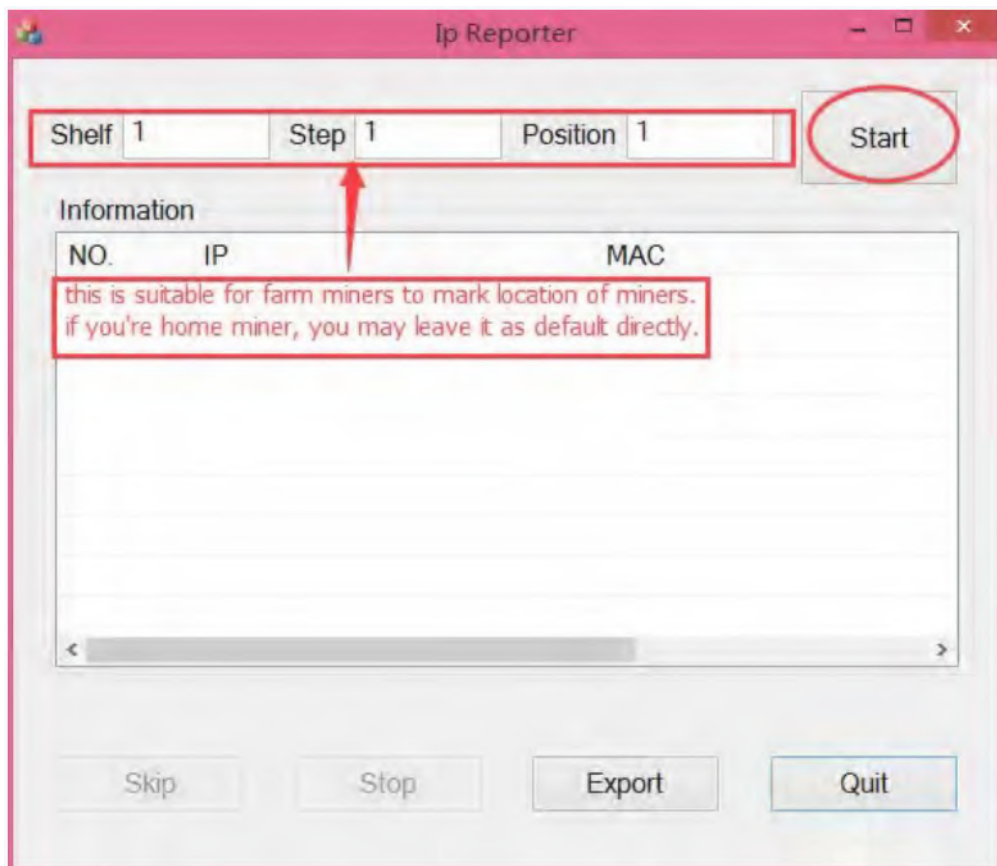
The default DHCP network protocol distributes IP addresses automatically.

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

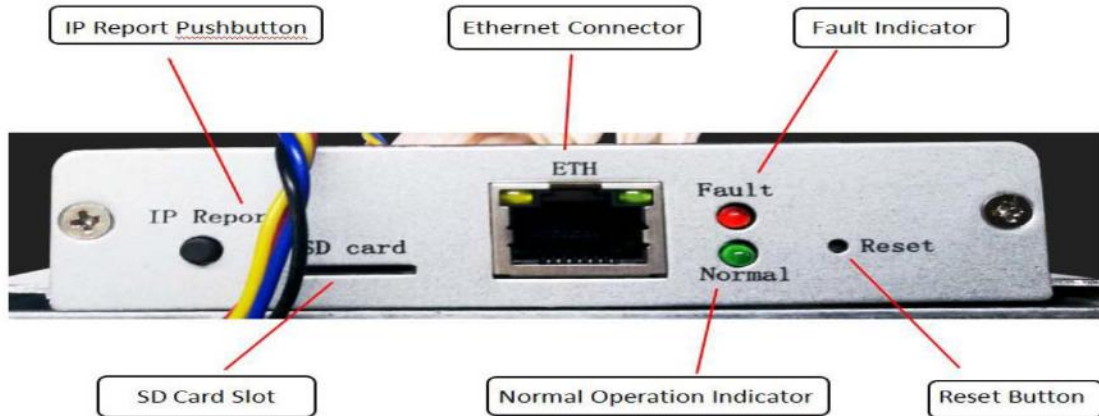
5. Select one of the following options:

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

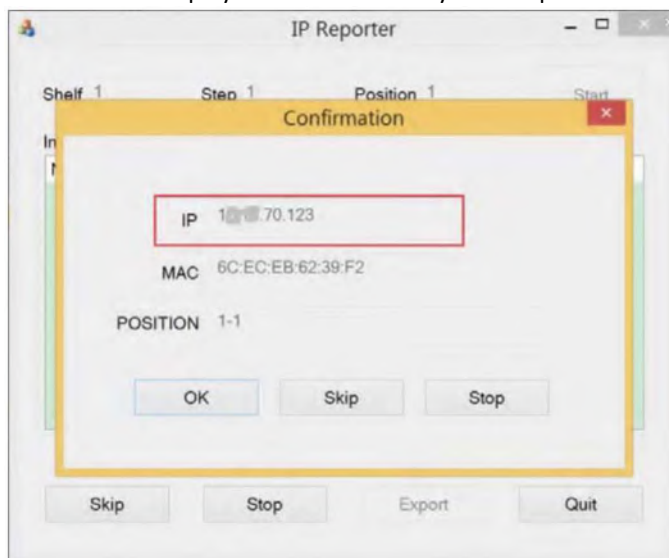
6. Click **Start**.



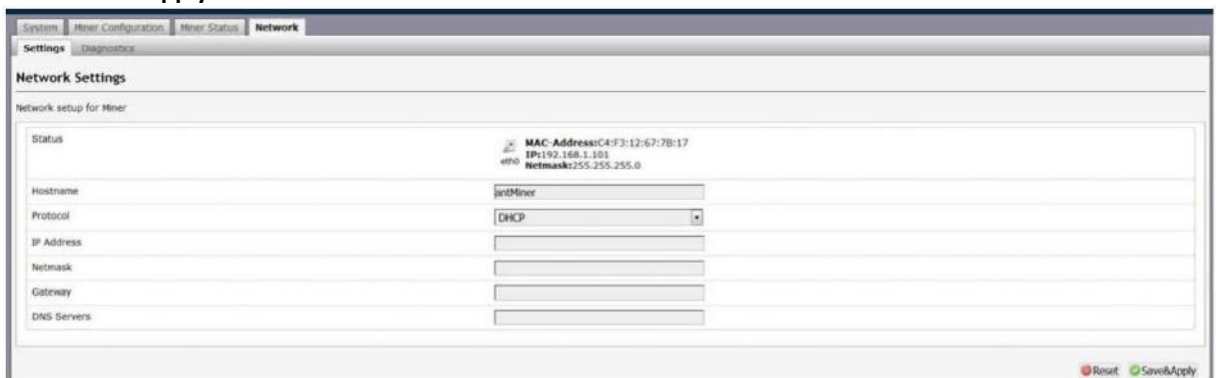
- On the controller board, click the IP Report button. Hold it down until it beeps (about 5 seconds).



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



- In your web browser, enter the IP address provided.
- Proceed to login using `root` for both the username and password.
- In the Network section, you can assign a DHCP IP address (optional).
- Click **Save & Apply**.




4. Configuring the Server

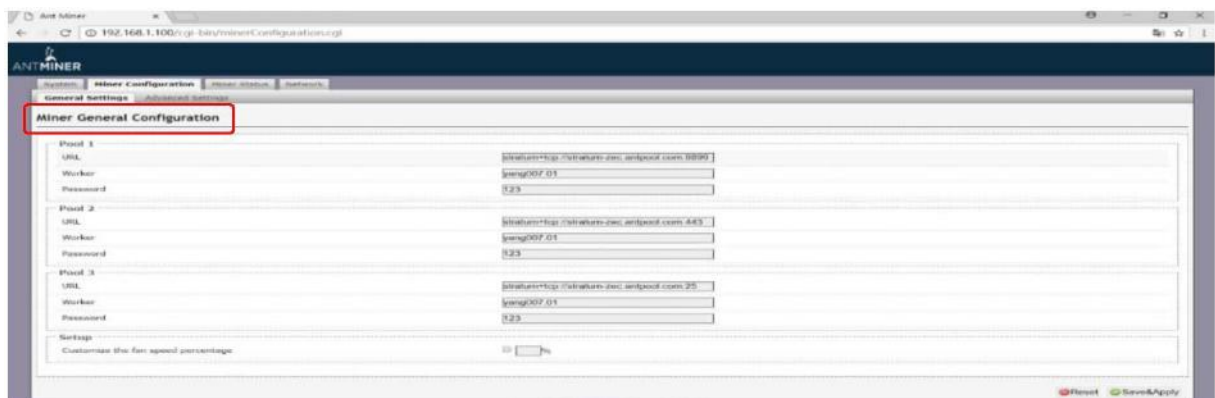
Setting Up the Pool

To configure the server:

1. click **General Settings**.
2. Set the options according to the following table:

Option	Description
Pool URL	Enter the URL of your desired pool.  The Z9 mini 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.



Note: Fan speed can be adjusted, but we recommend keeping the default setting.

5. Monitoring Your server

To check the operating status of your server:

1. Click the status marked below.
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: <ul style="list-style-type: none"> ● O - indicates OK ● X - indicates error ● - - indicates dead

The screenshot shows the AntMiner web interface with the 'Miner Status' tab selected. The interface displays several data tables:

- Summary:** Shows overall statistics like ASICs (11.38), GH/S (avg) (10.82), FoundBlocks (0), LocalWork (327), Uptime (4.14), WU (98), and BestShare (0).
- Pools:** A table listing active pools with columns for Pool, URL, Miner, Status, Diff, EstWorks, Priority, Accepted, Nonce#, Diff#, Diff#, Diff#, Rejected, Discarded, State, LSHW, and LSTime.
- AntMiner:** A table showing ASIC details with columns for Chain#, ASIC#, Frequency, GH/S(RT), HW, Temp(PCB), Temp(Chip), and ASIC status.
- Fans:** A table showing fan speeds with columns for Fan#, Speed (r/min), and Fan#.



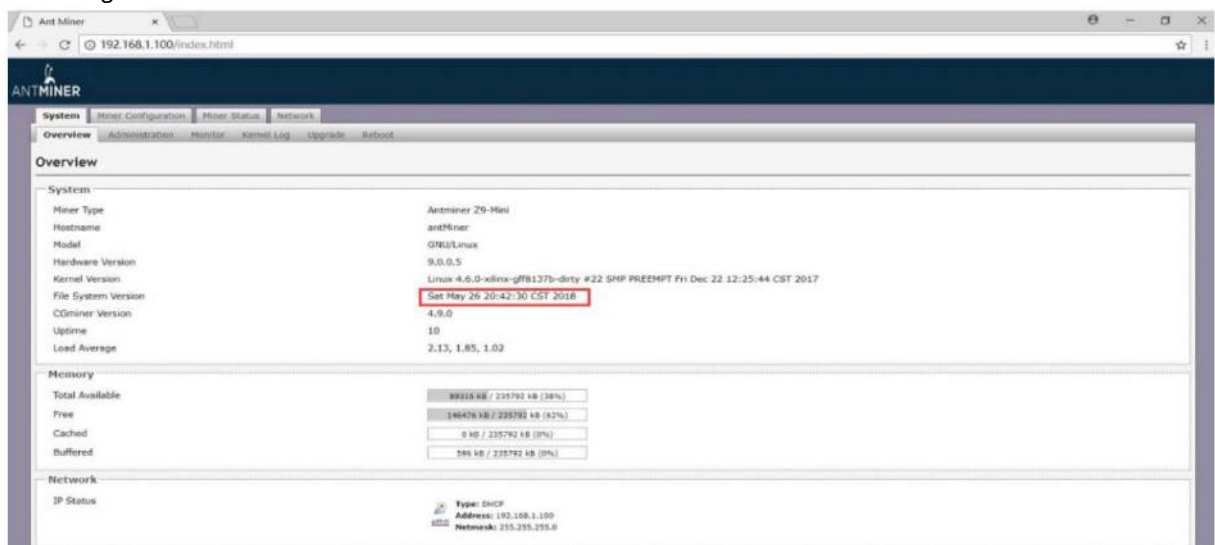
Note: The Z9 mini server is with fixed frequency 500 MHZ. Firmware will stop running when the Temp(PCB) reaches to 80 °C or the Temp(Chips) reaches to 125-135 °C, there will be an error message "Fatal Error: Temperature is too high!" shown in the bottom of kernel log page.

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 20180526.



The screenshot shows the AntMiner web interface. The 'System' tab is selected, and the 'Overview' sub-tab is active. The 'System' section displays the following information:

System	Value
Miner Type	Antminer Z9-Mini
Hostname	antminer
Model	GNU/Linux
Hardware Version	9.0.0.5
Kernel Version	Linux 4.6.0-xilinx-gf8137b-dirty #22 SMP PREEMPT Fri Dec 22 12:25:44 CST 2017
File System Version	Sat May 26 20:42:30 CST 2018
CGMiner Version	4.9.0
Uptime	10
Load Average	2.13, 1.85, 1.02

The 'Memory' section shows:

Memory	Value
Total Available	89316 KB / 235792 KB (38%)
Free	146476 KB / 235792 KB (62%)
Cached	0 KB / 235792 KB (0%)
Buffered	586 KB / 235792 KB (0%)

The 'Network' section shows:

Network	Value
IP Status	Type: DHCP Address: 192.168.1.100 Network: 255.255.255.0

6.2 Upgrading Your System



Make sure that the Z9 mini 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**.



The screenshot shows the 'Upgrade' page in the AntMiner web interface. The 'System' tab is selected, and the 'Upgrade' sub-tab is active. The page contains the following sections:

Backup / Restore
Click "Generate archive" to download a tar archive of the current configuration files. To reset the firmware to its initial state, click "Perform reset" (only possible with squashfs images).

Download backup:

Reset to defaults:

To restore configuration files, you can upload a previously generated backup archive here.

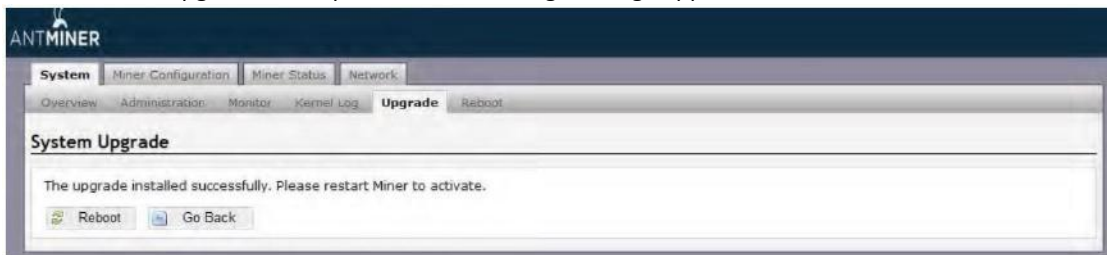
Restore backup:

Flash new firmware image
Upload a sysupgrade-compatible image here to replace the running firmware. Check "keep settings" to retain the current configuration.

Keep settings:

Image:

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 Z9 mini firmware can be upgraded and if yes, will then proceed to flash the image.
4. When the upgrade is completed, the following message appears:

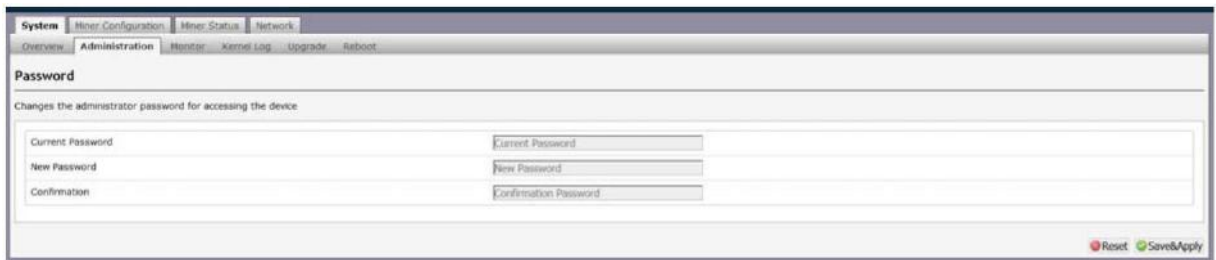


5. Click one of the following options:
 - **Reboot** - to restart the server with the new firmware.
 - **Go Back** - to continue mining with the current firmware. The server will load the new firmware next time it is restarted.

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.

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 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: _____, 型號: _____						
單元	有害物質					
	鉛 (Pb)	汞 (Hg)	鎘 (Cd)	六價鉻 (Cr+6)	多溴聯苯 (PBB)	多溴二苯 醚 (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