



AntMiner S9 Installation Guide

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1. Overview

The AntMiner S9 is Bitmain's newest version in the AntMiner S9 series. It boasts a state-of-the-art BM1387 custom-made chip using 16nm technology. All AntMiner S9s are tested and configured prior to shipping to ensure easy set up.



You must provide your own ATX power supply.

1.1 AntMiner S9 Components

The AntMiner S9 main components and controller front panel are shown in the following figure:



1.Overview

1.2 Specifications

Feature	Description			
Hash Rate	12± 5%Th/s	12.5± 5%Th/s	13± 5%Th/s	13.5± 5%Th/s
Estimated wall outlet power consumption (with APW3, 93% efficiency, 25°C ambient temperature)	1176W+10%	1225W+10%	1274W+10%	1323W+10%
Rated voltage	11.60~13.00V			
Estimated wall outlet power efficiency (with APW3, 93% efficiency, 25°C ambient temperature)	0098J/GH+10%			
Dimensions (L x W x H)	350mm x 135mm x 158mm			
Net weight	4.2kg			
Operating ambient temperature	0 - 40° C			



The miner does not contain a DC/DC converter; therefore, higher input voltage will cause higher Mining efficiency .

2. Connecting the Power Supply

Ten PCI-e connectors are located at the top of the AntMiner S9 for connecting the PSU as follows:

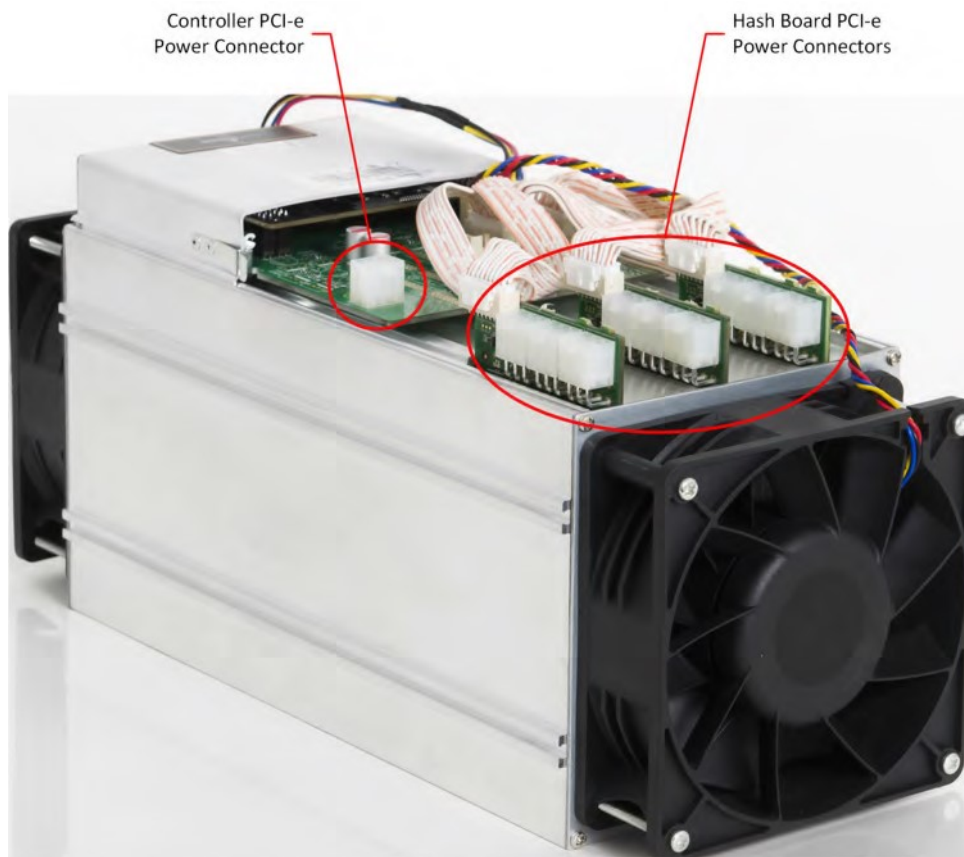
- Nine PCI-e connectors for the hash boards. Each hash board has a set of three PCI-e connectors.
- One PCI-e connector located on the controller.



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 AntMiner S9, ensuring that each hash board is powered by the same PSU.



2. Connect a PSU power cable connector to the AntMiner S9 PCI-e connector on the controller.
3. Connect the network cable to the ETH port.
4. To power up your AntMiner S9, 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).

2. Connecting the Power Supply

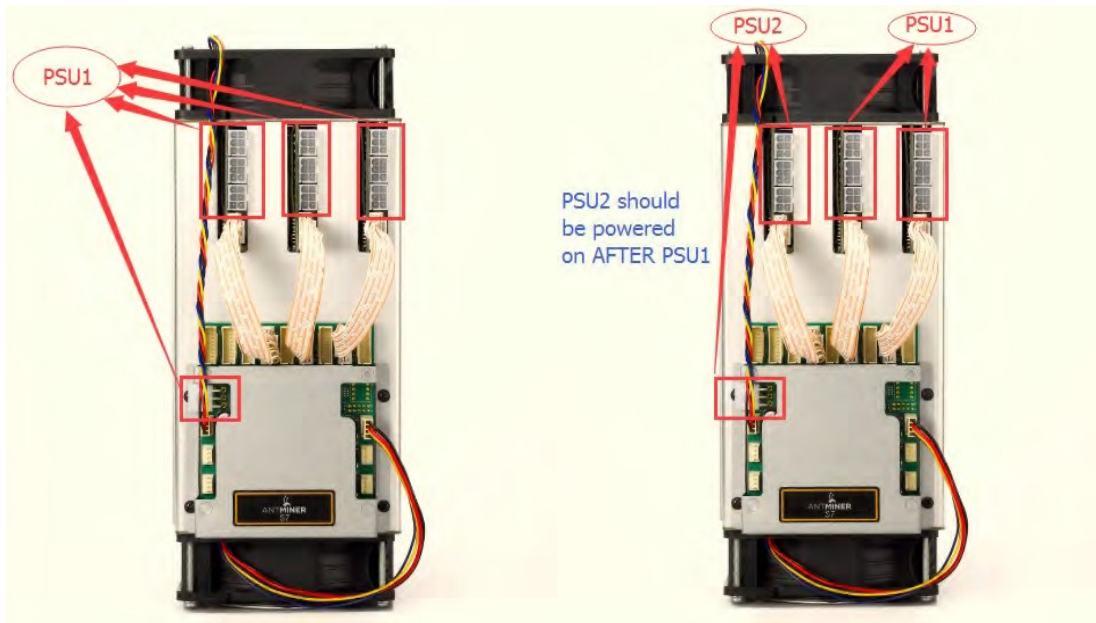


Figure 2-1. PCI-E Connectors - Correct Connection

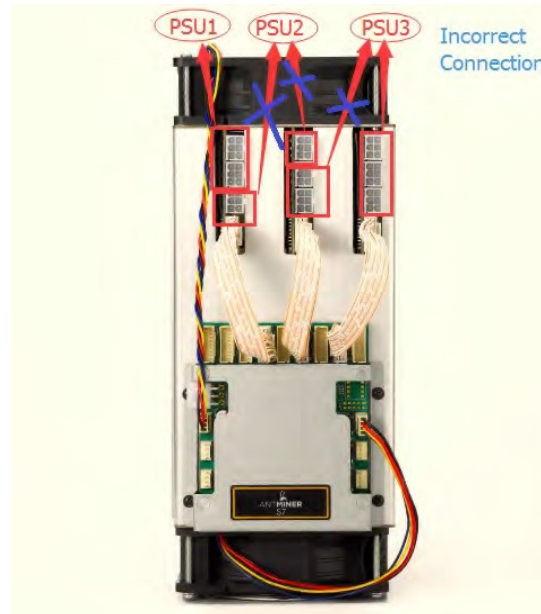


Figure 2-2. PCI-E Connectors - Incorrect Connection

3. Setting Up the Miner

To set up the miner:



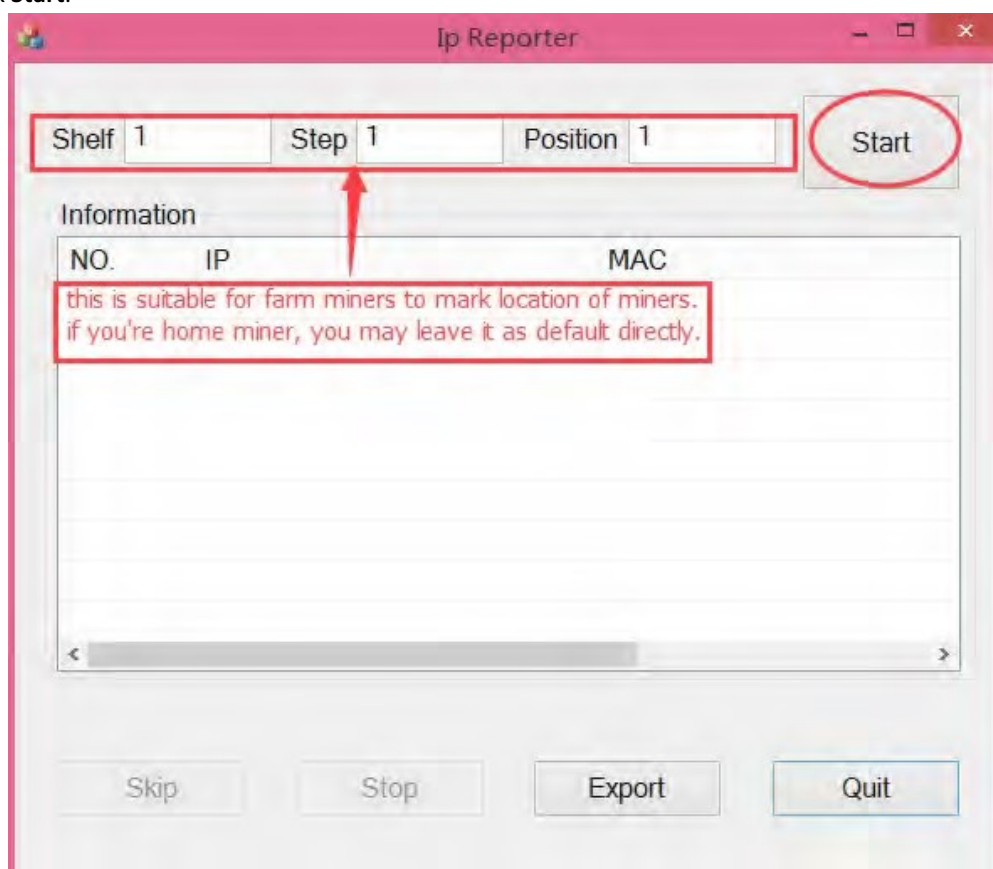
The file IPReporter.zip is supported by Microsoft Windows only.

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.



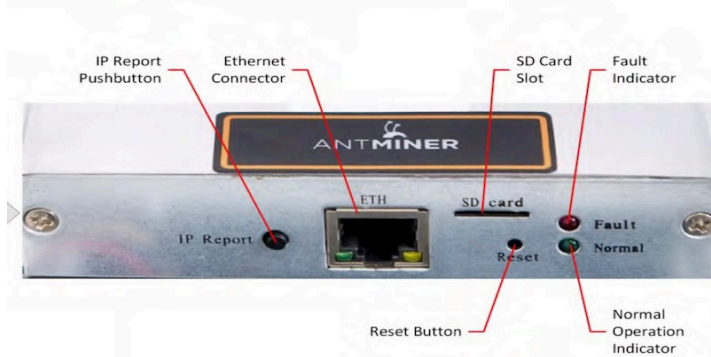
The default DHCP network protocol distributes IP addresses automatically.

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

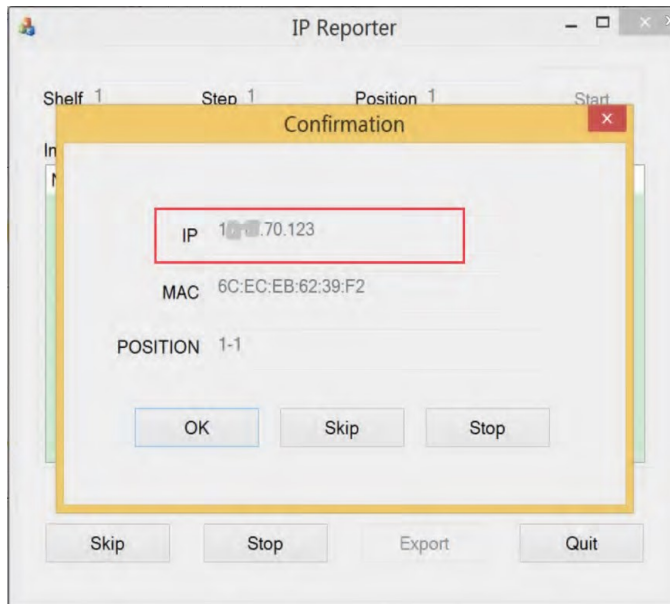


3. Setting Up the Miner

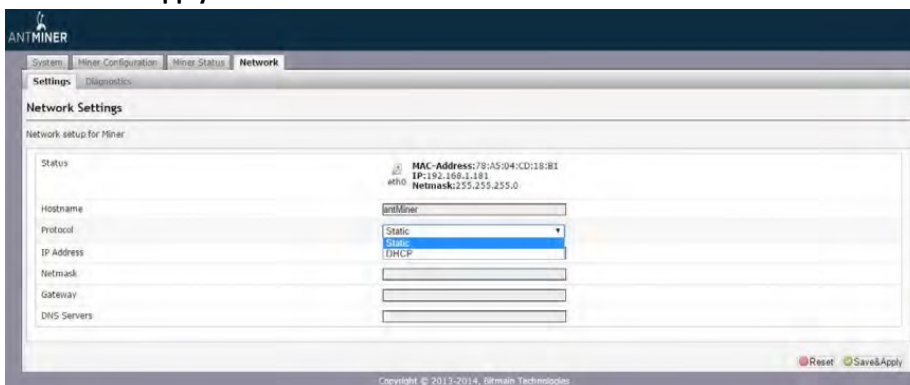
- On the controller board, click the IP Report button. Hold it down until it beeps (about 5 seconds).



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 Static IP address (optional).
- Click **Save & Apply**.




4. Configuring the Miner

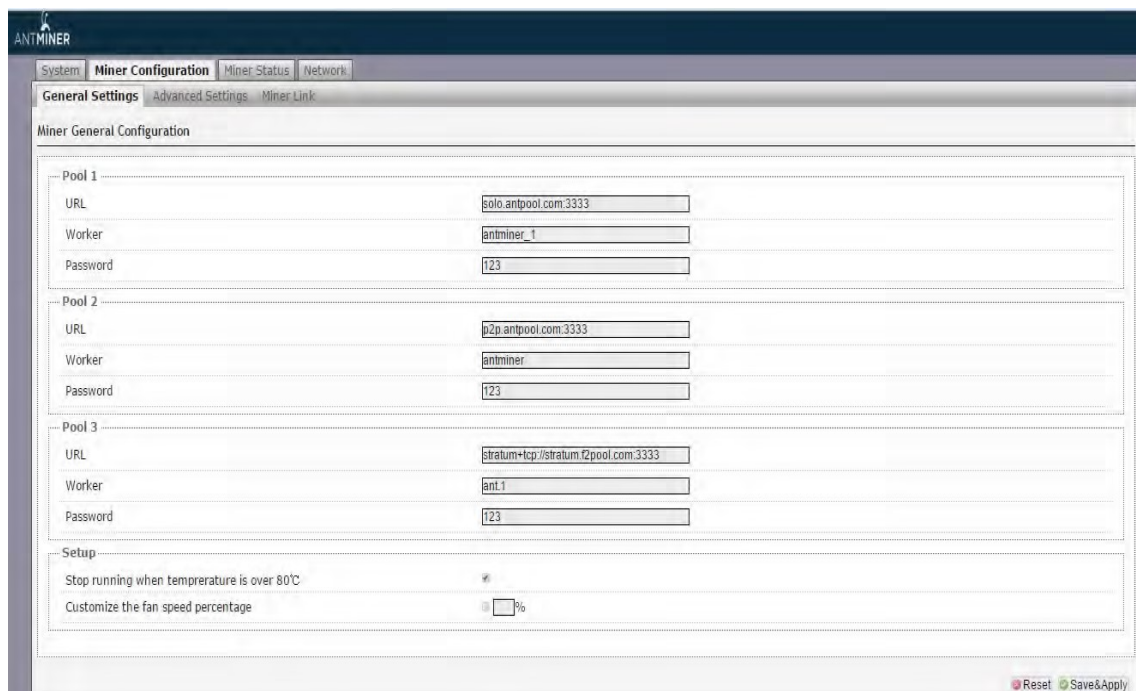
Setting Up the Pool

To configure the miner:

1. In Miner Configuration, 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> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p> The AntMiner S9 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> </div>
Worker	Your worker ID on the selected pool.
Password	The password for your selected worker.

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



5. Monitoring Your Miner

5. Monitoring Your Miner

To check the operating status of your miner:

1. Click **Miner Status**.
2. Under AntMiner, monitor your miner 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 miner 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

Miner Status																
Summary																
Elapsed	GH/S(RT)	GH/S(avg)	FoundBlocks	LocalWork	Utility	WU	BestShare									
1h26m	11,646.47	11,688.20	0	222,356	4.99	163,637.58	98084019									
Pools																
Pool	URL	User	Status	Diff	GetWorks	Priority	Accepted	Diff1#	DiffA#	DiffR#	DiffS#	Rejected	Discarded	Stale	LSDiff	LSTime
0	stratum+tcp://solo.antpool.com:3333	antminer_1	Alive	32.8K	106	0	429	0	14,057,472	15,360	0	15	2,677	0	32,768	0:00:05
1	stratum+tcp://stratum.antpool.com:3333	antminer_1	Alive		2	1	0	0	0	0	0	0	0	0	0	Never
2	stratum+tcp://cn.ss.btc.com:3333	antminer.1	Dead		0	2	0	0	0	0	0	0	0	0	0	Never
total					108		429	0	14,057,472	15,360	0	15	2,677	0		
HW	101							0	0.0007%							
AntMiner																
Chain#	ASIC#	Frequency(avg)	GH/S(ideal)	GH/S(RT)	HW	Temp(Chip1)	Temp(Chip2)	ASIC status								
6	57	591.56	3,833.56	3,852.60	0	83	72	00000000 00000000 00000000 00000000 00000000 00000000 00000000 0								
7	57	590.36	3,833.29	3,899.80	1	80	77	00000000 00000000 00000000 00000000 00000000 00000000 00000000 0								
8	57	591.50	3,834.36	3,894.07	100	83	71	00000000 00000000 00000000 00000000 00000000 00000000 00000000 0								
Total	171	591.14	11,501.22	11,646.47												
Fan#	Fan1	Fan2	Fan3	Fan4	Fan5	Fan6	Fan7	Fan8								
Speed (r/min)	0	0	3,600	0	0	3,840	0	0								

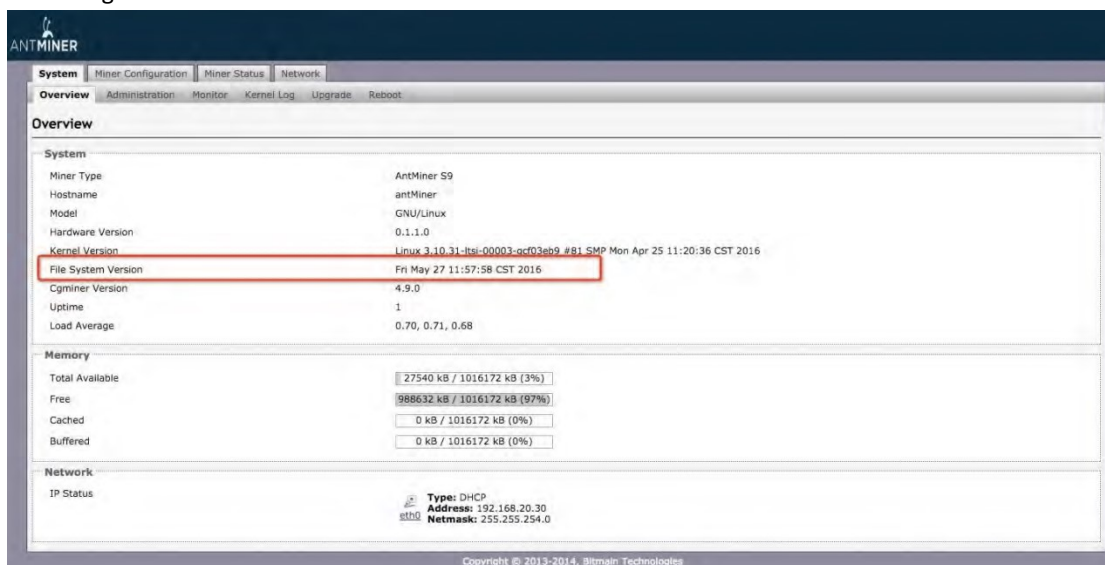
Note:The S9 miner with automatic frequency adjustment firmware will stop running when the Temp(Chips) reach to 125-135°C,there will be a error message "Fatal Error: Temperature is too high!" shown in the bottom of kernel log page.

6. Administering Your Miner

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 miner use. In the example below, the miner is using firmware version 20170108.



6.2 Upgrading Your System



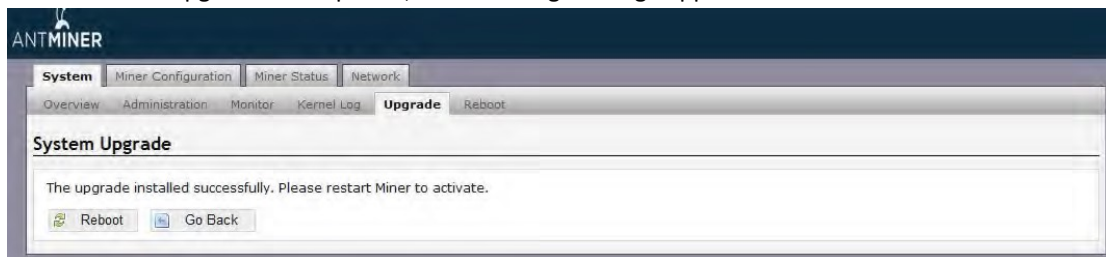
Make sure that the AntMiner S9 remains powered during the upgrade process. If power fails before the upgrade is completed, you will need to return it to Bitmain for repair.

To upgrade the miner'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 miner 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 AntMiner S9 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 miner with the new firmware.
 - **Go Back** - to continue mining with the current firmware. The miner 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 miner and let it run for 5 minutes.
2. On the controller front panel, press and hold the **Reset** button for 10 seconds.



Resetting your miner will reboot it and restore its default settings. The red LED will automatically flash once every 15 seconds if the reset is operated successfully.