BITMAIN

AntMiner R4 Manual

Contents

1 Overview

The AntMiner R4 with 8.6th/s is Bitmin's newest iteration. The Antminer R4 uses the fully custom made, state of the art BM1387 chip powered by ultra-low power 16nm technology. The R4 is tested and configured prior to shipping to make your setup as easy and seamless as possible.

Please note:

1. **You must prepare your own ATX Power Supply**

2 Features

Ideal Hash Rate (GH/s)	8.6TH/S ±5%
Default chip clock (M)	600
Input Voltage (V)	11.6~13.00
Estimate power on wall (W) - assume with APW3, 93% efficiency, 25℃ ambient temp	845W + 9%
Estimate efficiency on wall (J/GH)	0.1J/GH + 9%
Dimensions (mm)	515*100*222
Net Weight (kg)	5
Operating ambient temperature (℃)	0 ~ 40
Noise	52dB@ambient temperature of 35℃
Networking connection mode	Ethernet cable

Notes: All the 3 PCIE connectors are required on each hash board and there is no DC/DC inside the miner. Higher input voltage will cause higher mining efficiency.

3 Power Supply

Each AntMiner R4 has 6 PCI-e connectors for +12V/15A DC **STABLE** input on hash boards and 1 PCI-e connector on the controller, **all the 7 PCI-e connectors are required**. <mark>Do not connect more than one PSU to the same hash board to prevent possible damage and instability. After connecting all the hash boards and the controller to PSU and the wire cable to the ETHERNET port, you can start the miner.</mark> See the screen shot below for the CORRECT and INCORRECT connection of the PCI-E connectors:

Correct connection:
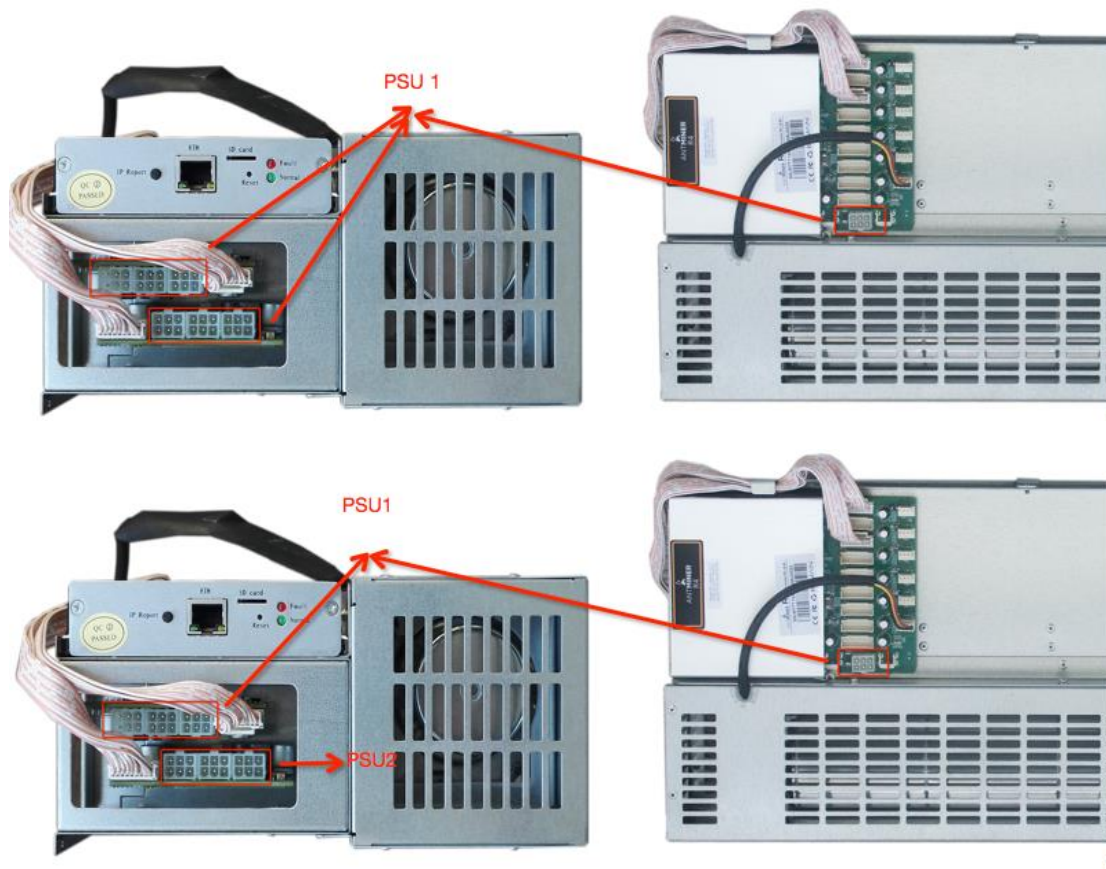
Incorrect connection:
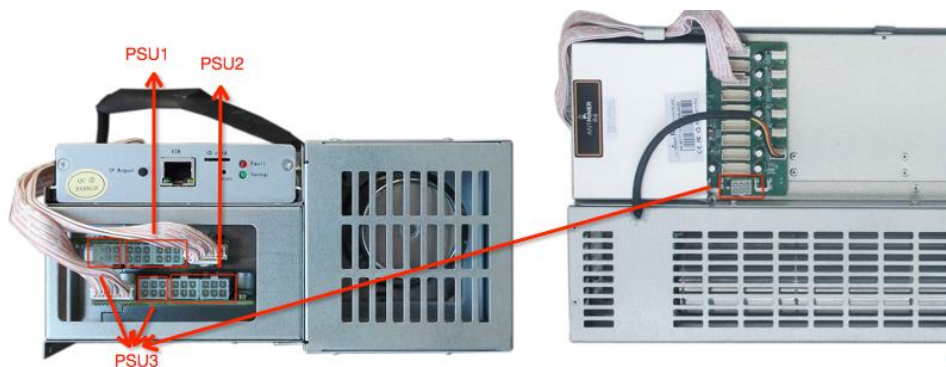
4 Connect to Miner

Step 1. The default DHCP network protocol distributes IP addresses automatically. Please download IPReporter.zip (only supported by Windows) from minerlink.com, then please follow the below steps to find out the IP of the miner.

1. Extract the file and double click 'IPReporter.exe'.
   The 'Shelf, Step, Position' options are suitable for farm miners to mark the location of the miners. For home miners, it can be left as default.
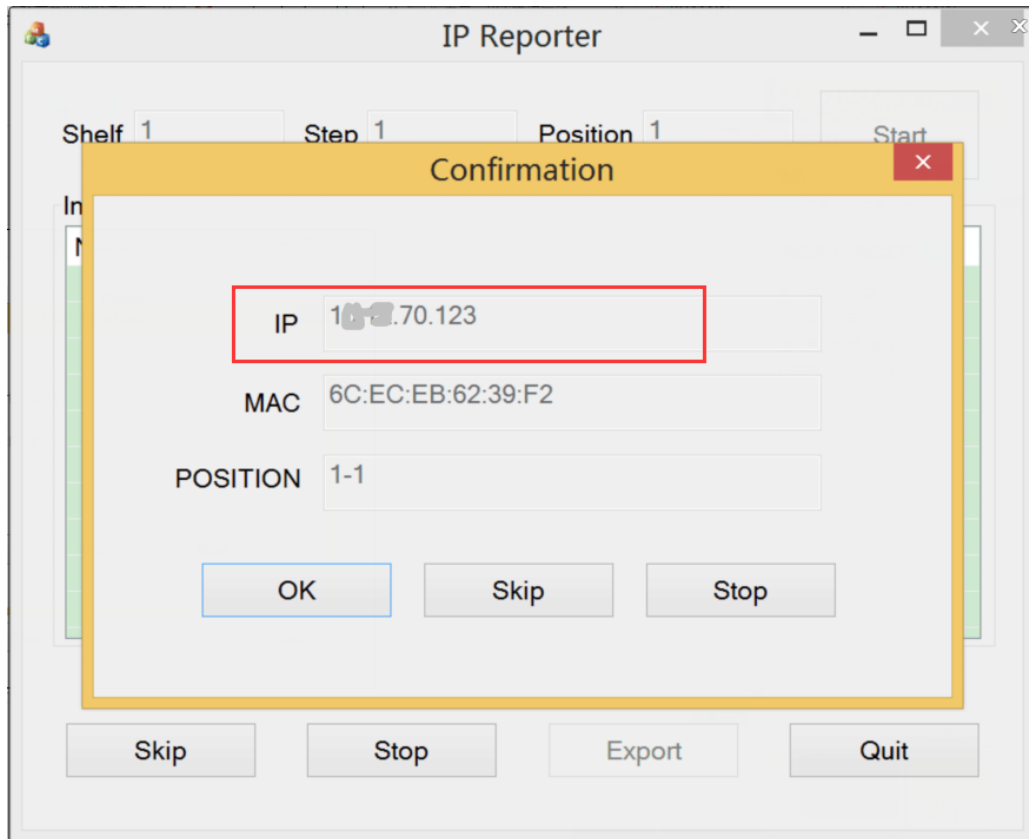   Then click 'Start'.
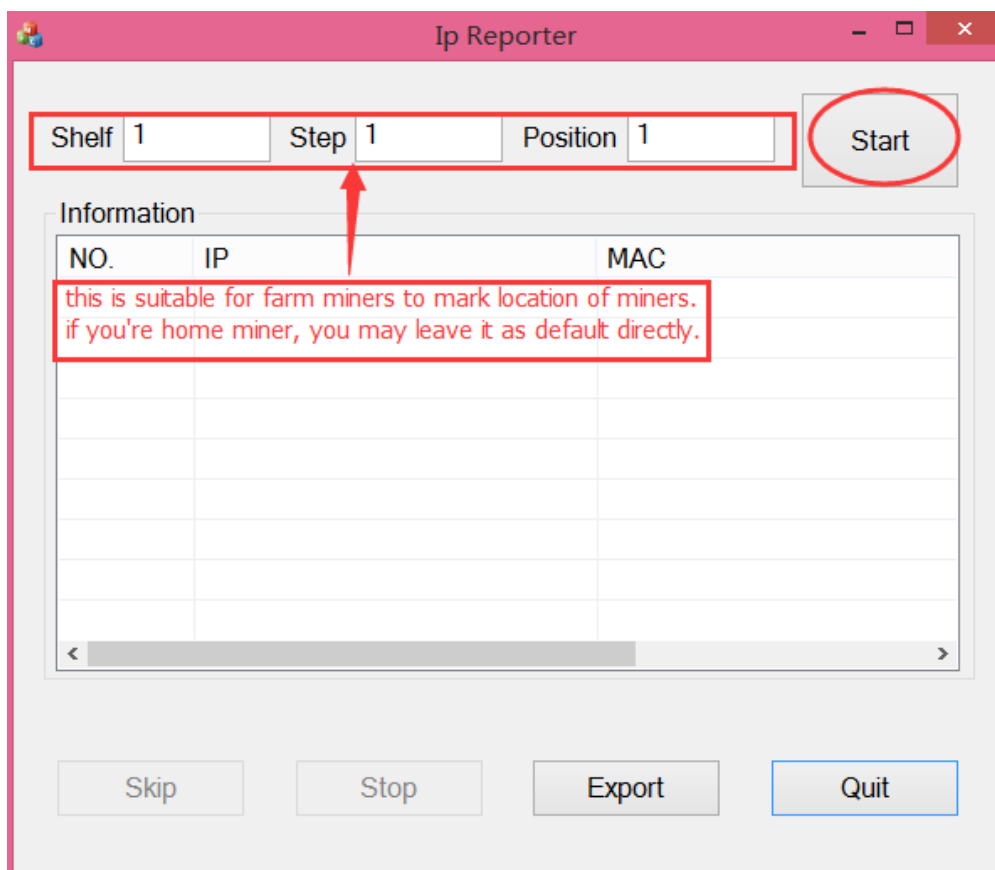
2. Press the IP Reporter button on the controller board for about 5 seconds and you'll hear a beep sound:
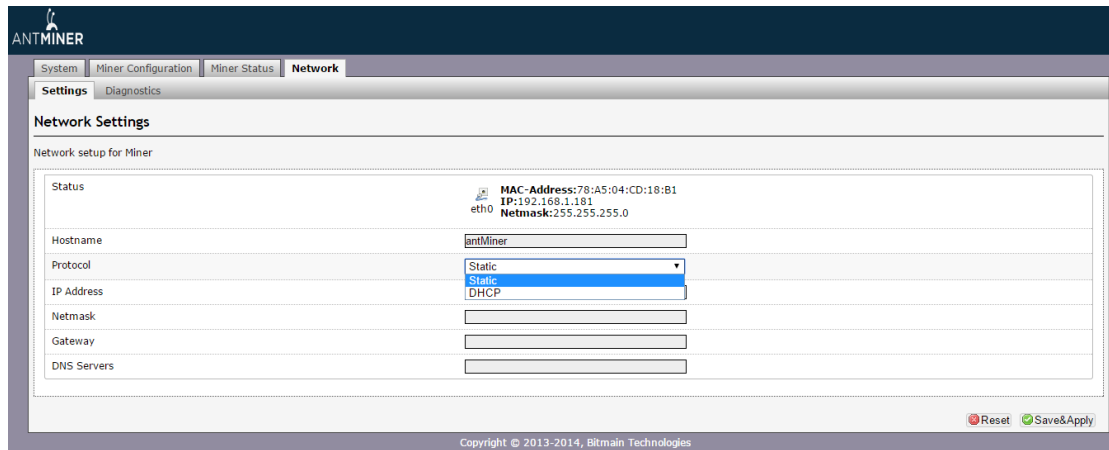
3. Check your PC, you'll see the IP address showing in the pop-up window.

Step 2. Enter the IP address provided into your WEB browser and proceed to login using 'root' for both the username and password.

In the 'Network' section, you can assign a 'Static' IP address if you like. Click 'Save & Apply' after modifying it.

5 Miner Configuration

5.1 General Settings

You can configure your miner through 'Miner Configuration->General Settings'.

Pool URL- Enter the URL of your desired pool in this column.

Worker- This is your worker ID on the selected pool.

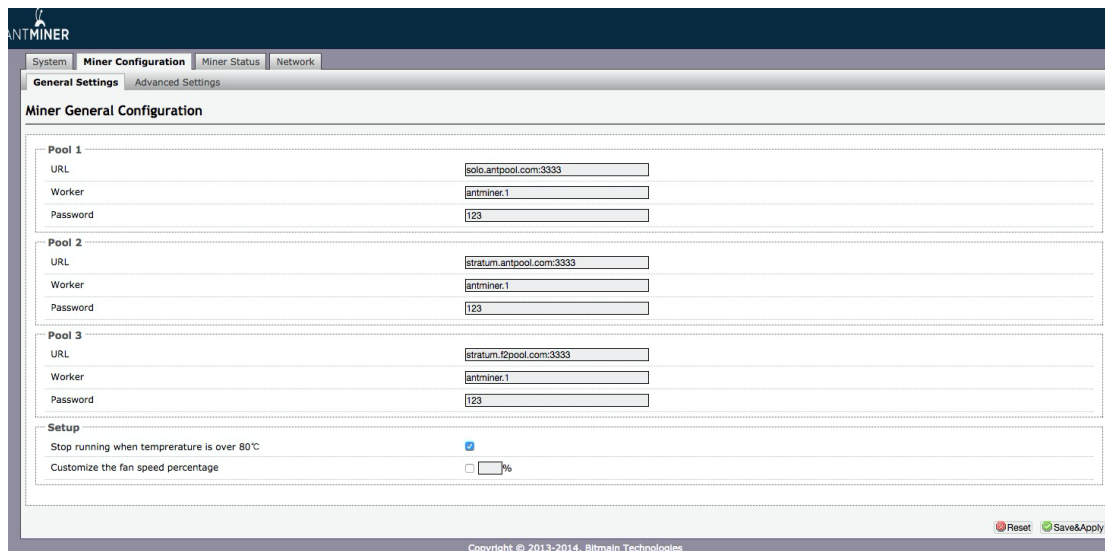Password- This is the password for your selected worker.

Comment:

5.1.1 The AntMiner R4 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 have gone offline.**

5.1.2 When 'Stop running when temperature is over 80℃' is checked, the miner will stop mining when the temperature(PCB) exceeds 90℃ to protect the miner. If it is unchecked, the miner will still mine even at high temperatures. Note that while the interface says 80℃ the PCB temperature will actually go to 90℃ before the machine stops mining.

5.1.3 When "Customize the fan speed percentage" is checked, the fan speed can be controlled by the user. If it is unchecked, the fan speed will depend on the temperature of the hash boards.

Click 'Save & Apply' to save and restart miner.

Kindly reminder: Please set the fan speed above 80% to keep the temp(PCB) below 90 degrees and the temp(chip) below 115 degrees.

5.2 Frequency Modification

You are able to modify the frequency value through 'Miner Configuration->Advanced Settings'. The default frequency for the AntMiner R4 is 600M.
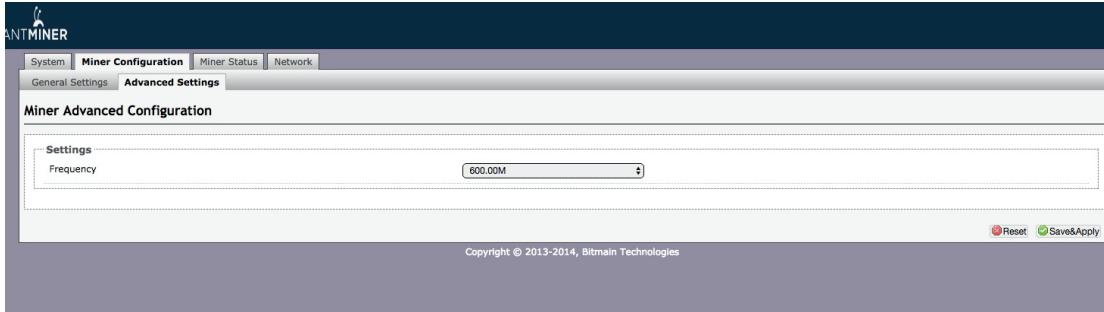
6 Miner Status

You can check the operating status of your miner on 'Miner Status' page.

ASIC#: Number of chips detected in the chain

Frequency: ASIC frequency setting
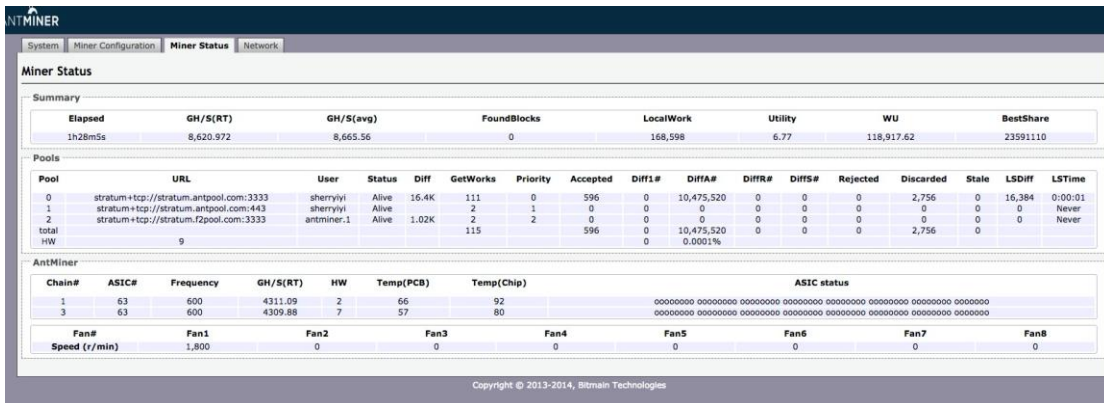
GH/S(RT): Hash rate of each hash board

Temp(PCB): Temperature of the hash board, centigrade

Temp(Chip): Temperature of the chips on the hash board, centigrade

ASIC status: 'o' denotes OK, 'x' denotes error '-' denotes   dead.

Miner Status

Summary

Elapsed	GH/S(RT)	GH/S(avg)	FoundBlocks	LocalWork	Utility	WU	BestShare
1h28m5s	8,620.972	8,665.56	0	168,598	6.77	118,917.62	23591110

Pools

Pool	URL	User	Status	Diff	GetWorks	Priority	Accepted	Diff1#	DiffA#	DiffR#	DiffS#	Rejected	Discarded	Stale	LSDiff	LSTime
0	stratum+tcp://stratum.antpool.com:3333	sherryiyi	Alive	16.4K	111	0	596	0	10,475,520	0	0	0	2,756	0	16,384	0:00:01
1	stratum+tcp://stratum.antpool.com:443	sherryiyi	Alive		2	1	0	0	0	0	0	0	0	0	0	Never
2	stratum+tcp://stratum.f2pool.com:3333	antminer.1	Alive	1.02K	2	2	0	0	0	0	0	0	0	0	0	Never
total					115		596	0	10,475,520	0	0	0	2,756	0		
HW		9						0	0.0001%							

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Chain#	ASIC#	Frequency	GH/S(RT)	HW	Temp(PCB)	Temp(Chip)	ASIC status
1	63	600	4311.09	2	66	92	oooooooo oooooooo oooooooo oooooooo oooooooo oooooooo oooooooo oooooooo
3	63	600	4309.88	7	57	80	oooooooo oooooooo oooooooo oooooooo oooooooo oooooooo oooooooo oooooooo

Fan#	Fan1	Fan2	Fan3	Fan4	Fan5	Fan6	Fan7	Fan8
Speed (r/min)	1,800	0	0	0	0	0	0	0

7 System Configuration and status

7.1 System Upgrading

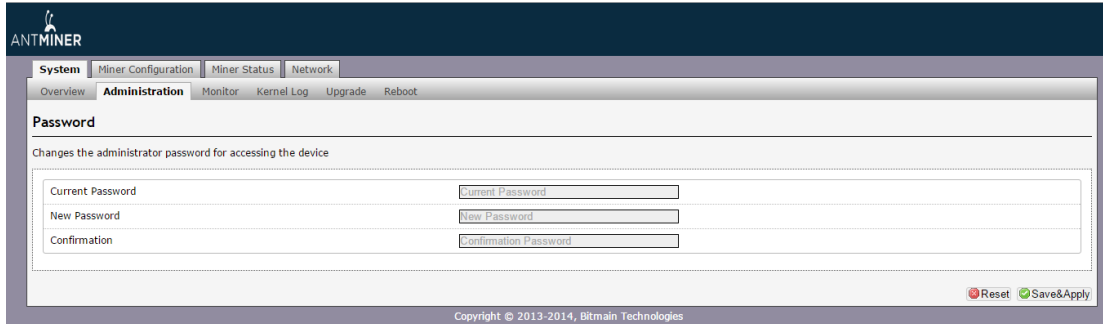You can upgrade the miner's firmware on the 'System > Upgrade' page.
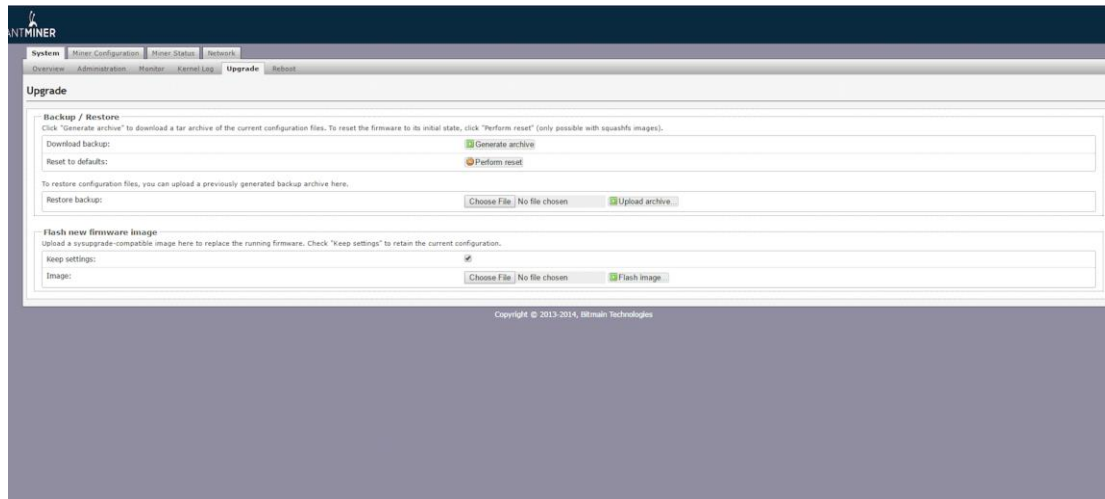
'Keep setting' is chosen by default and should be enabled if you want to keep your current settings. You should deselect this option if you are trying to return the miner to default settings.

Click 'Browse' button to choose upgrade file. Select the upgrade and click the 'Flash image' button. The interface will display if the firmware can be upgraded and download the software. During the upgrade process, you need to **wait patiently, and must keep power on, otherwise, the AntMiner can only be fixed with returned to factory.** You will see below screenshot after upgrading successfully.
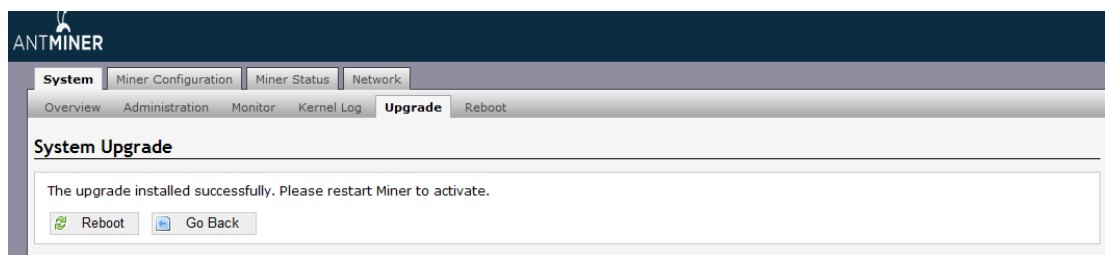
Clicking the 'Reboot' button will restart the miner so it can load the new software. Clicking 'Go Back' will keep the AntMiner mining before switching to the new software when it is restarted next time or power cycled.

7.2 Password Modification
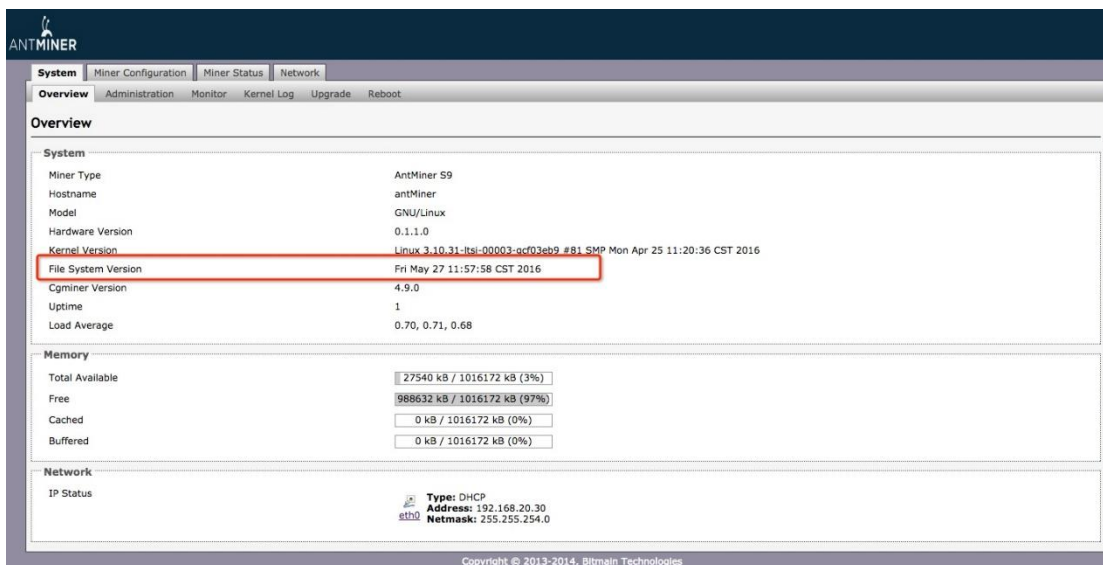
The AntMiner login password can be changed on the 'System->Administration' page. Once modified, press 'Save and Apply' to save the new password.

7.3 Software Version

You can check which version of the software you are currently running on the 'System > Overview' page. 'File System version' displays the date of the firmware your miner use. In the example below, the miner is using 20160527 firmware.

7.4 Restore Initial Setting

There is a 'Reset' button on the right hand side of the ETH port, next to the green and red LED light. Power on miner and let it run for 5 minutes, then press and hold the reset button for 10 seconds in order to restore to the default settings and reboot. The red LED will flash once every 15 seconds automatically if the reset is operated successfully.