

BITMAIN CAYMAN

# S7 Server Manual

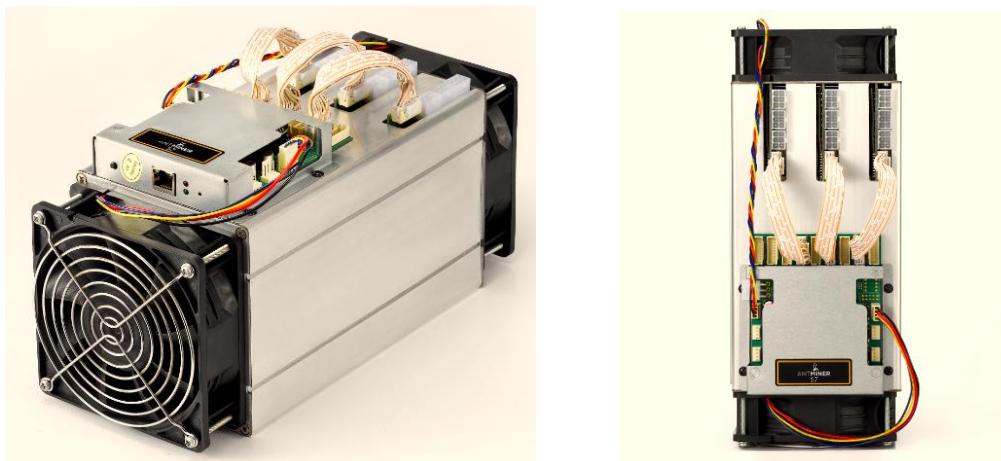
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## Contents

1	Overview .....	3
2	Features.....	4
3	Power Supply.....	4
4	Connect to server .....	6
5	Server Configuration.....	8
5.1	Pool Setting .....	8
5.2	Frequency Modification .....	8
6	Server Status.....	9
7	System Configuration and status.....	9
7.1	System Upgrading.....	9
7.2	Password Modification.....	10
7.3	Software Version Checking.....	11
7.4	Restore Initial Setting .....	11

## 1 Overview

The S7 Server with is Bitmain's newest iteration, using the new state of the art BM1385 chip with full-customs made, powered by ultra-low power 28nm technology. It's with several different hash rate and the final one is 4.73Th/s. S7s are tested and configured prior to shipping to make it easier for customers to set up.



Batch #	Hash Rate	Default Frequency	Comment
Batch 1	4.86Th/s	600M	some orders are shipped out with 4.66Th/s miner, we've contacted via email before shipment
Batch 2	4.66Th/s	575M	
Batch 3	4.86Th/s	600M	
Batch 4	4.66Th/s	575M	
Batch 5	4.86Th/s	600M	
Batch 6	4.05Th/s	600M	
Batch 7	5.06Th/s	625M	
Batch 8	4.73Th/s	700M	
Batch 9	4.73Th/s	700M	

**Please note:**

1. You must prepare your own ATX Power Supply

## 2 Features

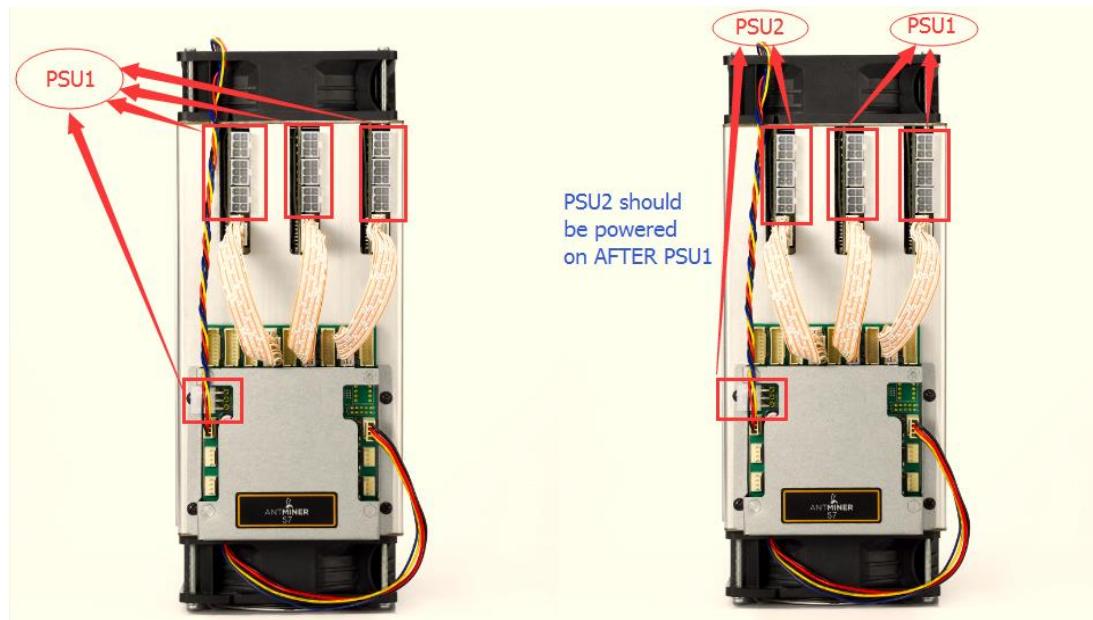
Ideal Hash Rate (GH/s)	4.73 GH/s
Default chip clock (M)	700
Input Voltage (V)	11.6~13.00
Estimate power on wall (W) -- assume with APW3, 93% efficiency, 25°C ambient temp)	1293W + 10%
Estimate efficiency on wall (J/GH)	0.25J/GH + 10%
Dimensions (mm)	301 mm x 123 mm x 155 mm
Net Weight (kg)	4
Operating ambient temperature (°C)	0 ~ 40

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

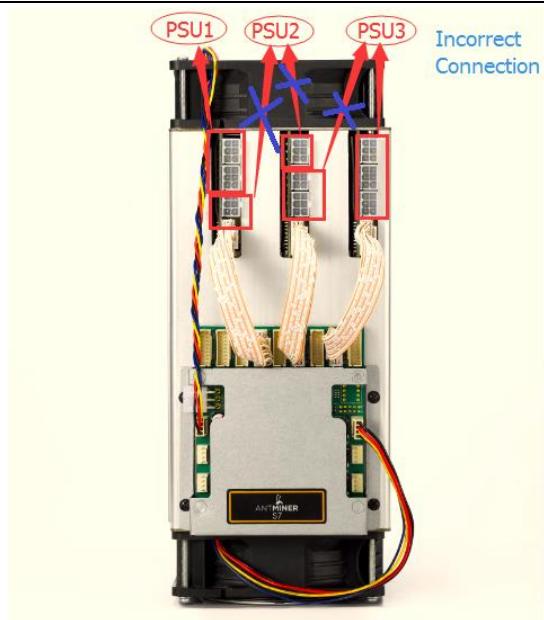
## 3 Power Supply

Each S7 Server has 9 PCI-e connectors for +12V/15A DC **STABLE** input on hash boards and 1 PCI-e connector on the controller, **all the 10 PCI-e connectors are required. Do not connect more than one PSU to the same hashing board to prevent possible damage and instability. After connecting all the hash boards and the controller to PSU, you can start it.** See below screenshot for the **CORRECT** and **INCORRECT** connection of the PCI-E connectors:

**Correct connection:**



**Incorrect connection:**



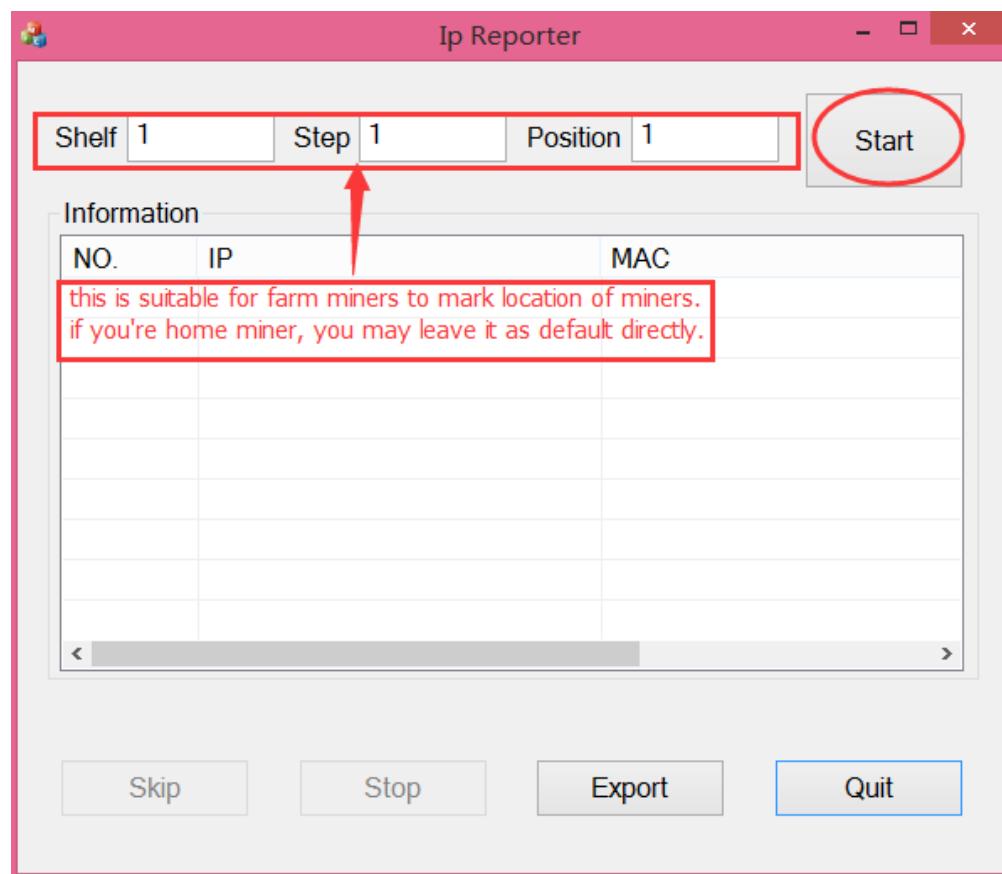
## 4 Connect to Server

Step 1. The default DHCP network protocol distributes IP addresses automatically. Please [download IPReporter.zip](#), then please follow below steps to find out the IP of the server.

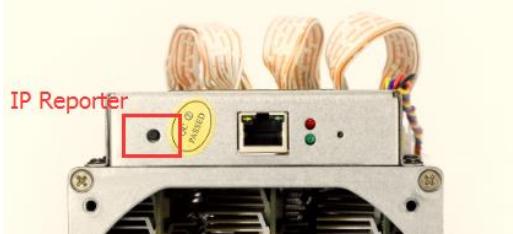
1. Extract the file and double click 'IPReporter.exe'.

The 'Shelf, Step, Position' options are suitable for farm servers to mark the location of the servers. For home servers, it can be left as default.

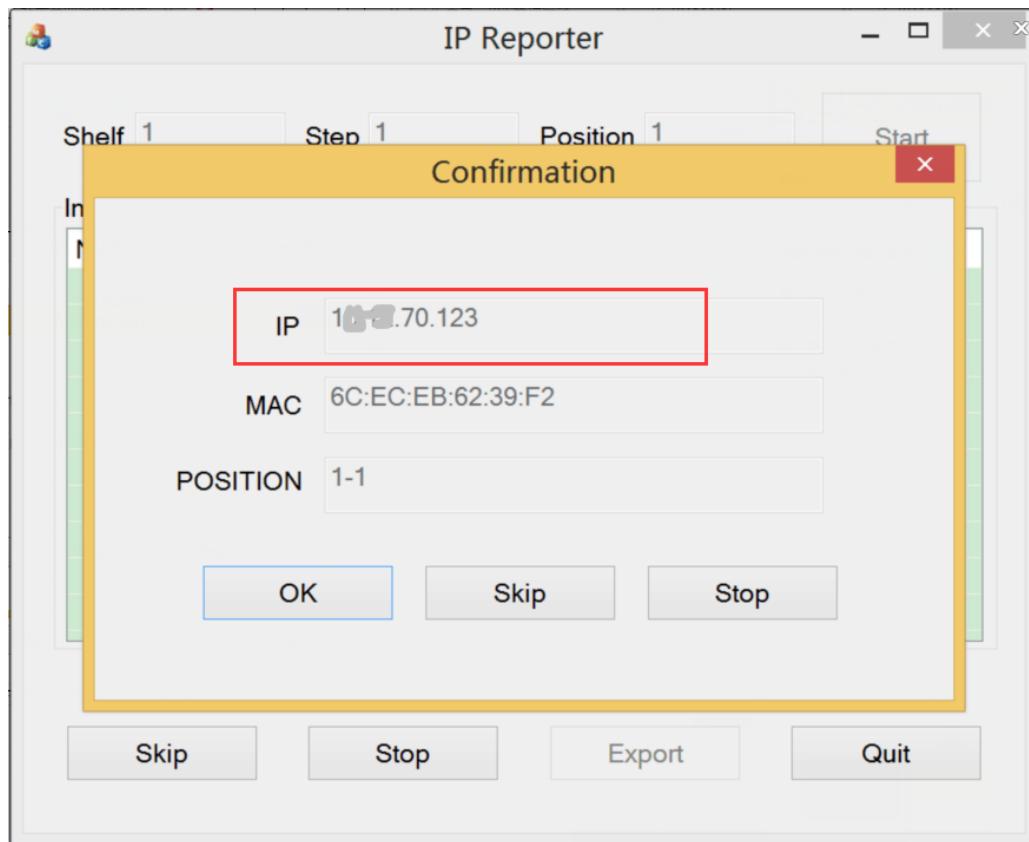
Then click 'Start'.



2. Press the IP Reporter button on IO board and you'll hear a beep sound:

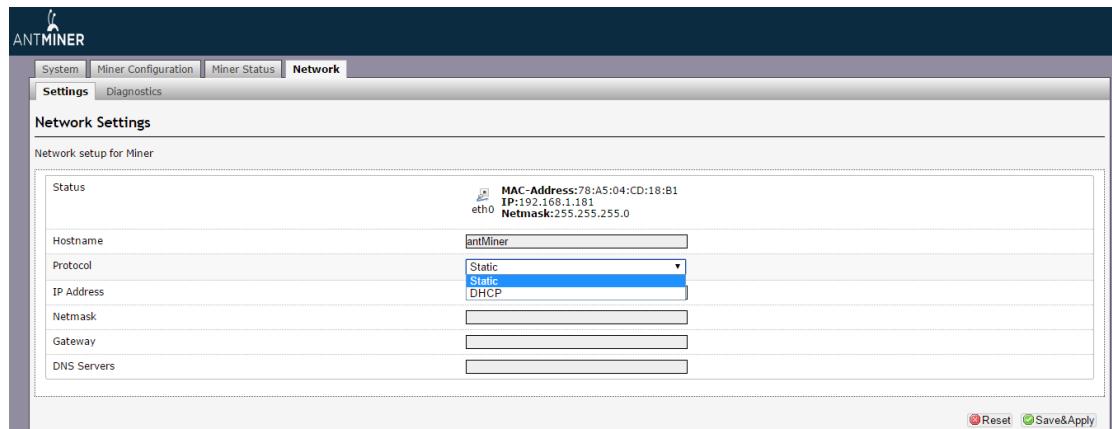


3. Check your PC, you'll see the IP address showing in the pop-up window.



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 Server Configuration

### 5.1 Pool Setting

You can configure your server through ‘ 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.

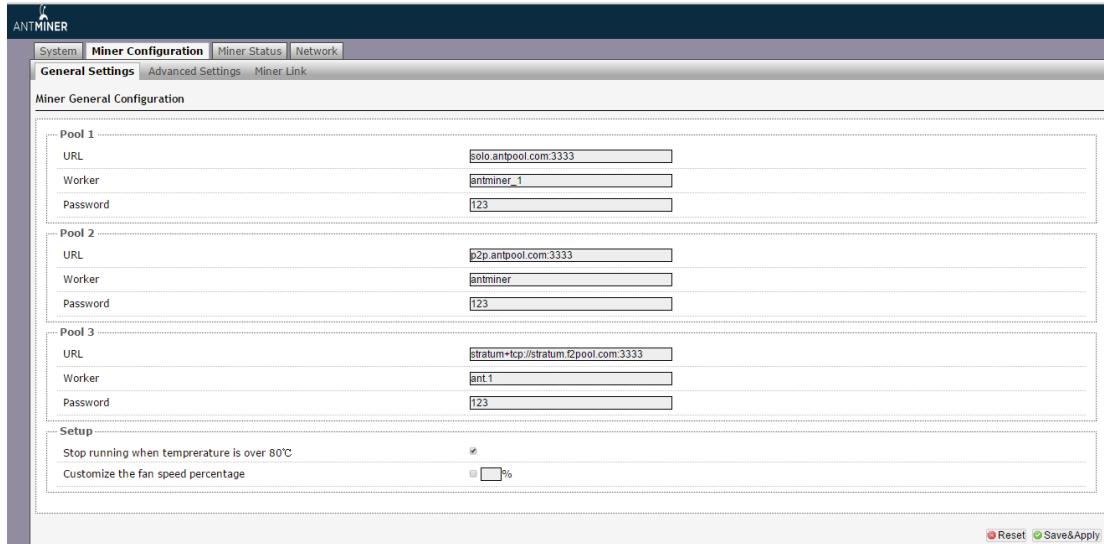
#### Comment:

4.1.1 The S7 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 have gone offline.**

4.1.2 When ‘Stop running when temperature is over 80 °C’ is checked, the server will stop running when the temperature exceeds 80 °C to protect the server. If it’s unchecked, the server will still run even in high temperature.

4.1.3 When “Customize the fan speed percentage” is checked, the fan speed can be controlled by customer. If it’s unchecked, the fan speed will depend on the temperature of the hash boards.

Click ‘Save & Apply’ to save and restart server.



The screenshot shows the 'Miner Configuration' tab selected in the top navigation bar. Under 'General Settings', the 'Miner General Configuration' section is displayed. It contains three pool configurations:

- Pool 1:** URL: solo.antpool.com:3333, Worker: antminer\_1, Password: 123
- Pool 2:** URL: p2p.antpool.com:3333, Worker: antminer, Password: 123
- Pool 3:** URL: stratum+tcp://stratum12pool.com:3333, Worker: ant.1, Password: 123

Below the pools, the 'Setup' section includes two checkboxes:
 

- Stop running when temperature is over 80°C
- Customize the fan speed percentage (with a percentage input field next to it)

At the bottom right of the form are 'Reset' and 'Save&Apply' buttons.

### 5.2 Frequency Modification

You are able to modify the frequency value through ‘Configuration->Advanced Settings’. The default frequency for the S7 Server is 600M.



## 6 Server Status

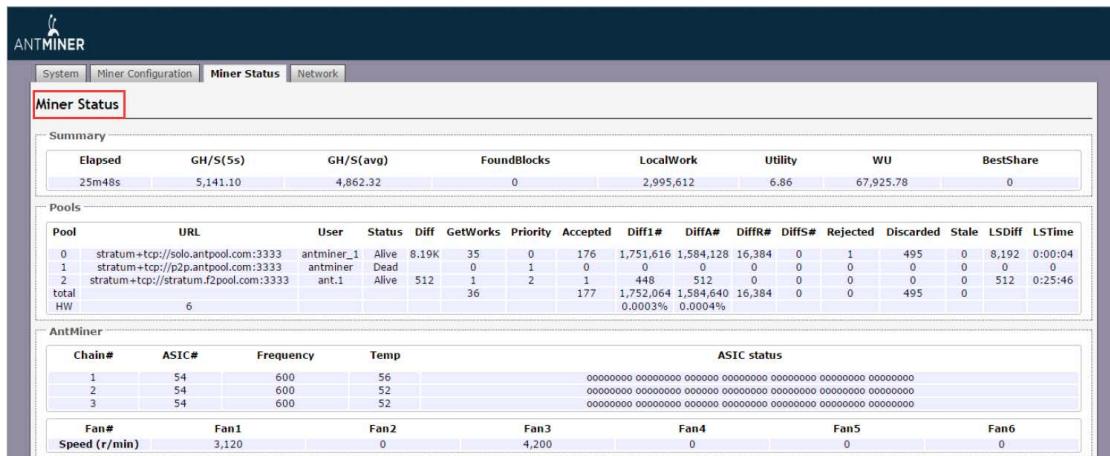
You can check the operating status of your server on the page marked below.

ASIC#: Number of chips detected in the chain

Frequency: ASIC frequency setting

Temp: Temperature, centigrade

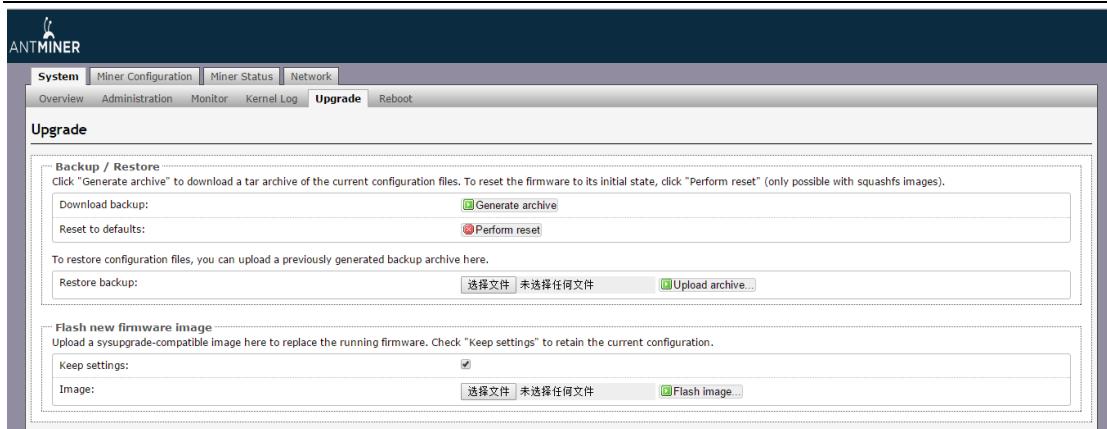
ASIC status: o stands for OK, x stands for error.



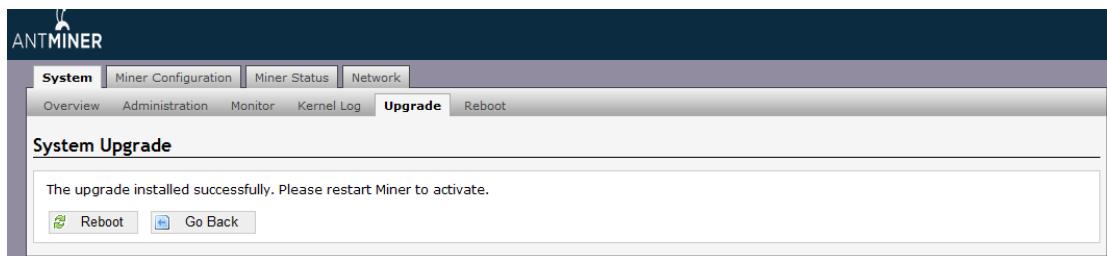
## 7 System Configuration and status

### 7.1 System Upgrading

You can upgrade the server's firmware on 'System->Upgrade' page.



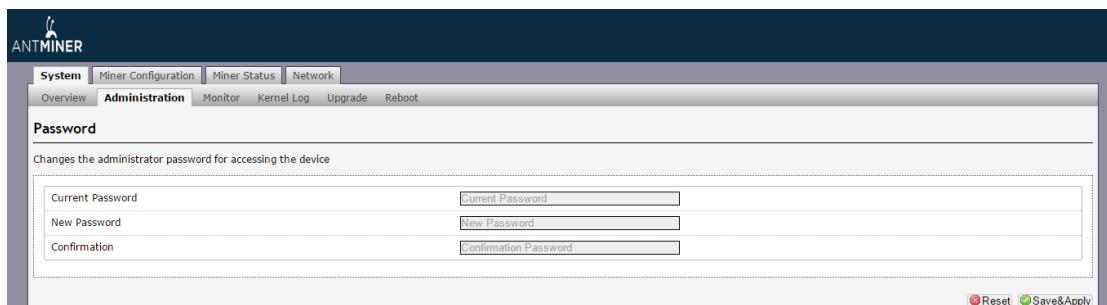
'Keep setting' is chosen by default and should be enabled if you want to keep your current settings. You should deselect this option if you are trying to return the server to default settings. Click 'Browse' button to choose upgrade file. Select the upgrade and click the 'Flash image...' button. The 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 server can only be fixed with returned to factory**. You will see below screenshot after upgrading successfully.



Clicking the 'Reboot' button will restart the server so it can load the new software. Clicking 'Go Back' will keep the server running, before switching to the new software when it is restarted next time or power cycled.

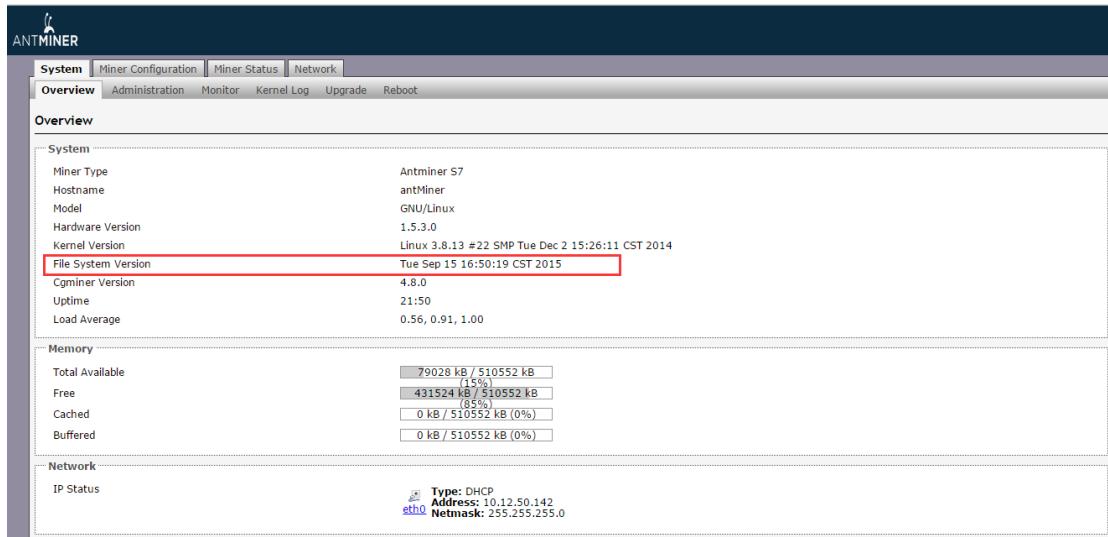
## 7.2 Password Modification

The S7 Server 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 Checking

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 server use. In the example below, the S7 Server is using 20150915 firmware.



System	File System Version
Miner Type	Antminer S7
Hostname	antminer
Model	GNU/Linux
Hardware Version	1.5.3.0
Kernel Version	Linux 3.8.13 #22 SMP Tue Dec 2 15:26:11 CST 2014
File System Version	Tue Sep 15 16:50:19 CST 2015
Cgminer Version	4.8.0
Uptime	21:50
Load Average	0.56, 0.91, 1.00

Memory	Total Available	Free	Cached	Buffered
	79028 kB / 510552 kB (15%)	431524 kB / 510552 kB (82%)	0 kB / 510552 kB (0%)	0 kB / 510552 kB (0%)

Network	IP Status
	eth0 Type: DHCP Address: 10.12.50.142 Netmask: 255.255.255.0

## 7.4 Restore Initial Setting

There is a 'Reset' button on the right hand side of the Ethernet port, next to the green and red LED light. Power on server 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.



**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	○	○	○	○	○	○
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