BITMAIN

# S5 Server Manual



# Contents

1	Overvi	ew	. 3			
2	Featur	es	. 3			
3	Power Supply					
4	Connect to Server					
5	Server	Configuration	7			
	5.1	Pool Setting	. 7			
	5.2	Frequency Modification	. 7			
	5.3	Server Link Connection	7			
6	Server	Status	8			
7	System	n Configuration and status	. 9			
	7.1	System Upgrading	. 9			
	7.2	Password Modification	. 9			
	7.3	Software Version Checking	10			
	7.4	Restore Initial Setting	10			



# **1** Overview

The S5 server is Bitmain's 5th generation of Bitcoin mining rig and uses the state-of-the-art BM1384 chip powered by ultra-low power 28nm technology. S5's are tested and configured prior to shipping to make it easier for customers to set up.



Please note:

1. You must prepare your own ATX Power Supply

# 2 Features

Ideal Hash Rate (GH/s)	1155	
Default chip clock (M)	350	
Input Voltage (V)	12.00 ~ 12.50	
Typical Input Current (A)	45	
Typical Input Power (W)	540	
Estimate power on wall (W) assume AC/DC	590	
efficiency is 90%		
Estimate efficiency on wall (W/GH)	0.51	
Dimensions (mm)	298 x 137 x 155	
Weight (kg)	3.5	
Operating ambient temperature (°C)	0~35	

Notes: Input voltage should not be less than 12.00V, since it is based on serial power solution and there is no DC/DC inside the server. Higher input voltage will cause higher mining efficiency.



# **3** Power Supply

Each S5 server has four PCI-e connectors for +12V/15A DC STABLE input and all four are required. Do not connect more than one PSU to the same hashing board to prevent possible damage and instability. 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 from serverlink.com, 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'.





Start
Start
>
Quit

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.



		IP	Reporter		
Shelf 1	5	itep 1 Co	Position nfirmation	1	Start ×
In 1					
	IP	10.70.123	3		
	MAC	6C:EC:EB:6			
POSITION		1-1			
	OK		Skip	Stop	
		2			
Skip		Stop	E	xport	Quit

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.

ANTMINER									
System N	liner Configuration Miner Status Network								
Settings	Settings Diagnostics								
Network S	Network Settings								
Network setu	Network setup for Miner								
Status		MAC-Address:78:45:04:CD:18:81 1P:192.168.1.181 eth0 Netmask:255.255.255.0							
Hostname		antMiner							
Protocol		Static T							
IP Address		Static DHCP							
Netmask									
Gateway									
DNS Serve	ers								
		Image: Image							



# **5** Server Configuration

### 5.1 Pool Setting

You can configure your server through General Settings marked below.

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 S5 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 'Beeper ringing' is checked, a beeper will ring when the server stops mining, otherwise it won't ring even if the server stops mining.

4.1.3 When 'Stop running when temperature is over 80  $^{\circ}$ C' is checked, the server will stop mining when the temperature exceeds 80  $^{\circ}$ C to protect the server. If it's unchecked, the server will still mine even in high temperature.

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

### 5.2 Frequency Modification

You are able to modify the frequency value through Advanced Settings marked below. The default frequency for the S5 server is 350M.

NTMINER	
System Miner Configuration Miner Status Network	
General Settings Advanced Settings Miner Link	
Miner Advanced Configuration	
Settings	
Frequency	350M V
	Save&App

### 5.3 Server Link Connection

4.3.1 Go to 'Configuration' tab, and the 'Link' tab in order to configure the relevant settings.
4.3.2 You can enable or disable 'Link' in the Off/On drop-down list provided. You can fill in your Bitmain username(your passport email registered on Bitmain platform) in the UID blank.
(Register here if you don' have an account yet: <u>http://passport.bitmain.com</u>)
4.3.3 After filling in your Bitmain username and enabling 'Link', click 'Save&Apply' tab. The



software will take approximately 10 seconds to connect to the server, and then the client software continues to run after settings are saved. If either the Off/On is selected to 'OFF' or the UID is left blank, 'Link' will remain disabled.

4.3.4 Once 'Link' is enabled, the 'Addr' will become fixed and cannot be updated by customers. This refers to Bitmain's monitoring server address.

System Miner Configuration Miner Status Network		
General Settings Advanced Settings Miner Link		
Configuration Link		
Settings Off/On	OFF	7
UID		
Server Addr	192.168.0.51	
L		Reset Save&Apply

## 6 Server Status

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

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.

System	R Miner Configu	ration Miner Status	Network		_									_			
liner	Status																
Sum	nary																
	Elapsed	GH/S(5s)	GH/	S(avg)		Fo	undBlock	5	Loca	lWork	ι	Itility		NU		BestSha	are
	7h16m21s	1,241.15	1,1	58.82			0		13,18	5,551	3	32.42	16,	188.49		0	
Pools																	
Pool		URL	User	Status	Diff	GetWorks	Priority	Accepted	Diff1#	DiffA#	DiffR#	DiffS#	Rejected	Discarded	Stale	LSDiff	LSTime
0	stratum+tcp	://	<b>This is an a</b>	Alive	512	627	0	14,147	7,063,648	7,101,872	11,312	0	63	13,858	0	512	0:00:0
1	stratum+tcp	o://u		Alive		1	1	0	0	0	0	0	0	0	0	0	0
2	stratum+tcp://			Alive	512	1	2	1	80	512	2,048	0	4	0	0	512	7:16:2
total HW		5				629		14,148	7,063,728 0.0001%	7,102,384 0.0001%	13,360	0	0	13,858	0		
AntM	iner																
	Chain#	ASIC#	Fr	equency			Temp					ASIC	status				
	1	30		350			49				000000 0	0000000	00000000 00	000000			
	2	30		350			52				000000 0	0000000	00000000 00	000000			
	Fan#	Fan1				Far	12	Fan3					Fan4				
Spe	ed (r/min)	3.720				0				0	)				0		



# **7** System Configuration and status

### 7.1 System Upgrading

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

stem Miner Configuration Miner Status Net	vork	
erview Administration Monitor Kernel Log	Upgrade Reboot	
rade		
Backup / Restore Lick "Generate archive" to download a tar archive o	the current configuration files. To reset the firmware to its initia	al state, click "Perform reset" (only possible with squashfs images).
Download backup:	Generate archive	
Reset to defaults:	Perform reset	
o restore configuration files, you can upload a previ	usly generated backup archive here.	
Restore backup:	选择文件】未选择任何文件	Upload archive
Flash new firmware image Jpload a sysupgrade-compatible image here to repla	e the running firmware. Check "Keep settings" to retain the cu	rent configuration.

'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.

ANTMINER								
	System Miner Configuration Miner Status Network							
	Overview Administration Monitor Kernel Log Upgrade Reboot							
	System Upgrade							
	The upgrade installed successfully. Please restart Miner to activate.							

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

### 7.2 Password Modification

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



stem Miner Contiguration Miner Status Network		
verview Administration Monitor Kernel Log Up	grade Bedicol	
ssword		
inges the administrator password for accessing the device	Current Pessovord	
New Password	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 server is using 20141218 firmware.

ANTMINER							
System Miner Configuration Miner Status Network							
Overview Administration Monitor Kernel Log Upgrade	Reboot						
Overview							
System							
Miner Type	Antminer S5						
Hostname	antMiner						
Model	GNU/Linux						
Hardware Version	3.4.3.0						
Kernel Version	Linux 3.8.13 #22 SMP Tue Dec 2 15:26:11 CST 2014						
File System Version	Thu Dec 18 20:21:28 CST 2014						
Cgminer Version	4.7.0						
Uptime	19:13						
Load Average	1.02, 1.06, 1.11						
Memory							
Total Available	77800 kB / 510552 kB (15%)						
Free	432752 kB / 510552 kB (85%)						
Cached	0 kB / 510552 kB (0%)						
Buffered	0 kB / 510552 kB (0%)						
Network							
IP Status	Etho BACP 55.25.25.0						

### 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, press and hold the button for 5 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 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.

	*******	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	0	0	0	0	0	0
電路板組 件	—	0	0	0	0	0
其他線材	_	0	0	0	0	0
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. "〇"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. "一"係指該項限用物質為排除項目						

#### 台湾 ROHS: