BITMAIN

# AntMiner S5 Manual



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# **1** Overview

The AntMiner S5 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	500
efficiency is 90%	590
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 miner. Higher input voltage will cause higher mining efficiency.



# 3 Power Supply

Each AntMiner S5 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 Miner

Step 1. The default DHCP network protocol distributes IP addresses automatically. Please download <u>IPReporter.zip</u> from minerlink.com, then please follow below steps to find out the IP of the miner.

 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'.



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đ				Ip Re	porter		_ 🗆 ×
١.							
	Shelf	1	Step	1	Position	1	Start
	Inforr	nation					
	NO.	IP			М	IAC	
				ners to mark may leave it			
	ii you	Te nome m	iner, you	indy leave it		mecuy.	
	<u> </u>						
	<						>
		Ckip		Ctop	Eve	oort	Ouit
		Skip		Stop	Εxt	port	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.



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2		IP	Reporter			_ 🗆 🛛
Shelf 1	S	itep 1 Co	Position			Start ×
ln 1						
	IP	102.70.123	3			
	MAC	6C:EC:EB:6	2:39:F2			_
POS	SITION	1-1				
	OK		Skip		Stop	
Skip		Stop		Export		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 Miner Configuration Miner Status Network	
Settings Diagnostics	
Network Settings	
Network setup for Miner	
Status	MAC-Address:78:A5:04:CD:18:B1 P1:192.168.1.181 Netmask:255.255.25.0
Hostname	antMiner
Protocol	Static T
IP Address	Static DHCP
Netmask	
Gateway	
DNS Servers	
	(◎Reset (◎Save&Apply)
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# **5** Miner Configuration

#### 5.1 Pool Setting

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:

4.1.1 The AntMiner S5 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 miner stops mining, otherwise it won't ring even if the miner stops mining.

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

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

#### **5.2 Frequency Modification**

You are able to modify the frequency value through 'Miner Configuration->Advanced Settings'. The default frequency for the AntMiner S5 is 350M.

ANTMINER	
System Miner Configuration Miner Status Network	
General Settings Advanced Settings Miner Link	
Miner Advanced Configuration	
Settings	
Frequency	350M <b>v</b>
	Reset Save&Apply
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#### **5.3 Miner Link Connection**

4.3.1 Go to 'Miner Configuration' tab, and the 'Miner Link' tab in order to configure the relevant settings.

4.3.2 You can enable or disable Miner 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 Miner Link, click 'Save&Apply' tab. The



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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, Miner Link will remain disabled.

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

ANTMINER	
System Miner Configuration Miner Status Network	
General Settings Advanced Settings Miner Link	
Configuration Link	
Settings	
Off/On	OFF
UID	
Server Addr	192.168.0.51
	Reset Save&Apply
	Copyright © 2013-2014, Bitmain Technologies

# 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 Temp: Temperature, centigrade ASIC status: o stands for OK, x stands for error.

System	Miner Configur	ation Miner Status	Network				_	_	_	-			-				
iner !	status																
Sumr	1ary																
	Elapsed	GH/S(55)	GH/	S(avg)		Fo	undBlock	5	Loca	Work	ι	Itility	١	wu		BestSha	ire
	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	LSTin
0		//	Shaharada	Alive	512	627	0	14,147	7,063,648			0	63	13,858	0	512	0:00:0
1	stratum+tcp			Alive (		1	1	0	0	0	0	0	0	0	0	0	0
2	stratum+tcp://s			Alive	512	1	2	1	80	512	2,048	0	4	0	0	512	7:16:
total						629		14,148	7,063,728		13,360	0	0	13,858	0		
HW		5							0.0001%	0.0001%							
AntM																	
	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			Fa	n3				Fan4		
Spe	ed (r/min)	3,720				0				0	)				0		



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# 7 System Configuration and status

### 7.1 System Upgrading

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

tem Miner Configuration Miner Status N		
rview Administration Monitor Kernel Log	Upgrade Reboot	-
rade		
Backup / Restore lick "Generate archive" to download a tar archive	the current configuration files. To reset the firmware to its initial state, click "Perform reset" (only possible with squashfs images).	
Download backup:	C Generate archive	
Reset to defaults:	Perform reset	
o restore configuration files, you can upload a pre-	usly generated backup archive here.	
Restore backup:	选择文件 未选择任何文件 III Upload archive	
lash new firmware image		
	te the running firmware. Check "Keep settings" to retain the current configuration.	
Keep settings:	0	
Image:	选择文件 未选择任何文件 IIFlash image	

'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.

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 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.



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ANTMINER		
System Miner Configuration Miner Status Network		
Overview Administration Monitor Kernel Log Upgrade Reboot		
Password		
Changes the administrator password for accessing the device		
Current Password	Current Password	
New Password	New Password	
Confirmation	Confirmation Password	
		Reset Save&Apply
	Copyright @ 2013-2014, Bitmain Technologies	

### 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 miner use. In the example below, the miner is using 20141218 firmware.

System Miner Configuration Miner Statu	Network	
	nel Log Upgrade Reboot	
	a ang apgrand research	
verview		
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	Zype: DHCP Address: 192.168.1.181 eth0 themask: 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, 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.



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