BITMAIN

# AntMiner S5+ Manual



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# **1** Overview

The AntMiner S5+ with 7.722Th/s is Bitmain's newest iteration, using the state of the art BM1384 chip powered by ultra-low power 28nm technology. S5+ are tested and configured prior to shipping to make it easier for customers to set up. This model is comprised of three hashing modules, each of which is approximately the same form factor as the S5, with the addition of an extra hashing board located in the middle.





#### Please note:

1. You must prepare your own ATX Power Supply

# 2 Features

Ideal Hash Rate (GH/s)	7722 GH/s ±5%	
Default chip clock (M)	325	
Input Voltage (V)	12.00	
Estimate power on wall (W) assume with	3436W	
AC/DC 93% efficiency, 25 $^\circ \!\! C$ ambient temp)	V*UC+C	
Estimate efficiency on wall (W/GH)	0.445	
Dimensions (mm)	275 mm x 372 mm x 155 mm	
Weight (kg)	11	
Operating ambient temperature (°C)	0~40	

Notes: Input voltage should not be less than 12.00V and all the 3 PCIE connectors are all required on each hash board, 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 27 PCI-e connectors for +12V/15A DC **STABLE** input on hash boards and 1 PCI-e connector on the controller, **all the 28 PCI-e connectors are required**. **Do not connect more than one PSU to the same hashing board to prevent possible damage and instability. And be sure to connect the hash boards to the PSU first and then connect the controller to PSU.** 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'.

4	Ι	p Reporter	- 🗆 ×
Shelf 1	Step 1	Position 1	Start
Information			
NO. IP		MAC	
		nark location of miners. ve it as default directly.	
<			>
Skip	Stop	Export	Quit

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





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

2		I	P Reporter		- 🗆 🛛
Shelf 1	5	Step 1	Position	1	Start ×
n 1					
	IP	1012.70.1	23		
	MAC	6C:EC:EB:	62:39:F2		
PC	SITION	1-1			
	OK		Skip	Stop	
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 Miner Configuration Miner Status Network Settings Network Settings	
Network setup for Miner	
Status	MAC-Address:78:A5:04:CD:18:B1 eth0 Retmask:25:25:5:5:0
Hostname	antMiner
Protocol	Static v
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 '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.

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 miner.

Reserved Settings More 2000		INER						
More General Configuration         Incl 1         URL       Incl national controls         URL       Incl national controls         Password       Incl national controls         Stop uning wint temperature is over storc       Incl national controls         Customee the fan speed percentage       Incl national controls	L.	System Hiner Configuration Hiner Status Network						
Pod 1     je1n mtypel.cm/3332       UK     je1n mtypel.cm/3332       Worker     jettimer_i       Pasavord     jettimer       Vorker     jettimer       Vorker     jettimer       Pasavord     jettimer       Pasavord     jettimer       Pasavord     jettimer       Step uning when temperature is over 80°C     jettimer       Gustimate that speed percentage     jettimer		General Settings Advanced Settings Miner Link						
Pod 1     js1a. astysei. cen 2332       UK     js1a. astysei. cen 2332       Worker     js1a.       Password     js2       Pod 2		liner General Configuration						
URL     for an speci 1, sen 3333       Worker     fattiser_i       Password     52       Pool 2	-							
Worker     httisser_i       Password     33       Pool 2		Pool 1						
Password     33       Pool 2		URL	polo.antpool.com/3333					
Pool 2     Image: Status in the speed percentage       URL     Image: Speed percentage       Password     Image: Speed percentage		Worker	antminer_1					
UR     bp: samped.ces: 333       Vorker     katiser       Password     32       Pool 3     1       UR     fractor(g)//tratise, f2pool.ces: 323       Vorker     kat.1       Password     32       Stepu     32       Stepu     52       Stepu     52       Stepu     52       Stepu     52       Stepu noning when temperature is over 40°C.     52       Costinize the fan speed percentage     %		Password	23					
Worker     Intrinser       Password     523       Pod 3		Pool 2						
Parword     33       Pod J -     -       URL     frataettp://ratain.f2poil.cm.333       Worker     an.1       Parword     b2.3       Stop unning when temperature is over 80°C     SC       Customize the fan speed percentage		URL	p2p.mtpool.com:3333					
Pool 3 - UR NELSON NET STATUS (2017)/2224108, f2001.0001222 Woke AL 1 Passend AL 2 Stopung what tamperature is over 80°C Costonize the fan speed percentage NELSON NELSON AL 2017 NELSON NELSON AL 2017 NELSON AL 2017		Worker	antminer					
URL     frtstatiet(p)//tratas.f2pel.ces/333       Woker     isi.1       Paseword     izi.2       Setup		Password	223					
Worker     Jast 1       Password     527       Setup     Stor running when temperature is over 80°C     Image: Setup Se		Pool 3						
Pasaword 52 Setup Setup Customize the fan speed percentage 5%		URL	stratum+tcp://stratum.f2pool.com:3333					
Setup Stop running when temprerature is over 80°C  Customize the fan speed percentage		Worker	ant. 1					
Stop running when temperature is over 80°C     Image: Constant of the fan speed percentage       Customize the fan speed percentage     Image: Mage: Constant of the fan speed percentage		Password	123					
Costonize the fan speed percentage		Setup						
		Stop running when temprerature is over 80°C	2					
		Customize the fan speed percentage						
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## **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 325M.

eneral Settings Advanced Settings Miner Link		
ner Advanced Configuration		
Settings		
Frequency	325M(default)	
		🕲 Reset 🛛 🖾 Saveð
	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.



# 7 System Configuration and status

## 7.1 System Upgrading

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

Miner		
System Miner Configuration Miner Status Network		
Overview Administration Monitor Kernel Log Upgrade Rebo	ot .	
Upgrade		
Backup / Restore Click "Generate archive" to download a tar archive of the current configu	uration files. To reset the firmware to its initial state, click "Perform reset" (only possible with squashfs images).	
Download backup:	I Generate archive	
Reset to defaults:	Perform reset	
To restore configuration files, you can upload a previously generated ba	tkup archive here.	
Restore backup:	減荒…」未送路文件。 🗱 Upload archive	
Flash new firmware image Upload a sysupgrade-compatible image here to replace the running firm	ware. Check 'Keep settings' to retain the current configuration.	
Keep settings:	Z	
Image:	減四*** 未送释文件。 I Flash image	
4 	Capyright © 2013-2014, Bitmain Technologies	

'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.					
Reboot 💿 Go Back					

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.

System Miner Configuration Miner Status Network Overview Administration Monitor Kernel Log Upgrade	Rebot	
Password hanges the administrator password for accessing the device		
Current Password	Current Password	
New Password	New Password	
Confirmation	Confirmation 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 miner use. In the example below, the miner is using 20150724 firmware.

ystem Miner Configuration Miner Status Network		
Verview Administration Monitor Kernel Log Upgrade	Reboot	
verview		
System		
Miner Type	Antminer S5+	
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	Fri Jul 24 13:54:27 CST 2015	
Cgminer Version	4.8.0	
Uptime	10	
Load Average	0.84, 1.03, 0.61	
Memory		
Total Available	74472 kB / 510552 kB (15%)	
Free	426080 kB / 510552 kB (85%)	
Cached	0 kB / 510552 kB (0%)	
Buffered	0 kB / 510552 kB (0%)	
Network		
IP Status	Type: DHCP	



### 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 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.

