BITMAIN

AntMiner S7 Manual



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1 Overview

The AntMiner S7 with 4.86Th/s 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. S7 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)	4860 GH/s
Default chip clock (M)	600
Input Voltage (V)	12.00
Estimate power on wall (W) assume with	1210W
APW3, 93% efficiency, 25 $^\circ\!\mathrm{C}$ ambient temp)	1210W
Estimate efficiency on wall (J/GH)	0.25
Dimensions (mm)	301 mm x 123 mm x 155 mm
Weight (kg)	4
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.



PSU1

3 Power Supply

Each AntMiner S7 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. 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:



PSU2 should be powered on AFTER PSU1 PSU2





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		Ip Reporter	- 🗆 🗙
Shelf 1	Step 1	Position 1	Start
Information	- 1		
NO. IP		MAC	
		o mark location of miners. leave it as default directly.	
in you're norne min	er, you may	leave it as default directly.	
<			>
Skip	Stop	Export	Quit
Зкір	Stop	Export	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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Step 1	Position Confirmation	1	Start
	commation		X
		4.57	1.000
IP 10-0.70.	123		
AC 6C:EC:EI	B:62:39:F2		
ON 1-1			
ОК	Skip	Stop	
Stop	Ex	port	Quit
	IAC 6C:EC:EI	AC 6C:EC:EB:62:39:F2 ON 1-1 OK Skip	IAC 6C:EC:EB:62:39:F2 ON 1-1 OK Skip Stop

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 IP:192:168.1.181 webs:255.252.50.						
Hostname	antMiner						
Protocol	Static T						
IP Address	Static DHCP						
Netmask							
Gateway							
DNS Servers							
	Image: 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 S7 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.

System Miner Configuration Miner Status Network						
General Settings Advanced Settings Miner Link						
Miner General Configuration						
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://stratum.t2pool.com:3333					
Worker	ant.1					
Password	123					
Setup						
Stop running when temprerature is over 80°C	8					
Customize the fan speed percentage	©%					
	@ Reset @ Save&App					

5.2 Frequency Modification

You are able to modify the frequency value through 'Miner Configuration->Advanced Settings'. The default frequency for the AntMiner S7 is 600M.



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ANTMINER							
System Miner Configuration Miner Status Network							
General Settings Advanced Settings Miner Link							
Miner Advanced Configuration							
Frequency	600.00M •						
	Reset Save&Apply						
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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.

	onfiguration M	liner Status	Network														
iner Status																	
Summary Elapsed	GH/S	5(5s)	GH/S	avg)		Four	ndBlocks		LocalV	Vork	U	tility	v	/U		BestSha	re
25m48s	5,14	1.10	4,86	2.32			0		2,995	,612	6	.86	67,9	25.78		0	
Pools																	
Pool	URL		User	Status	Diff	GetWorks	Priority	Accepted	Diff1#	DiffA#	DiffR#	DiffS#	Rejected	Discarded	Stale	LSDiff	LSTim
0 stratum	+tcp://solo.antpo	ool.com:33333	antminer_1	Alive	8.19K	35	0	176	1,751,616	1,584,128	16,384	0	1	495	0	8,192	0:00:0
	+tcp://p2p.antpo		antminer	Dead		0	1	0	0	0	0	0	0	0	0	0	0
	-tcp://stratum.f2	pool.com:3333	ant.1	Alive	512	1	2	1	448	512	0	0	0	0	0	512	0:25:4
total HW	6					36		177	0.0003%	1,584,640 0.0004%	16,384	0	0	495	0		
AntMiner																	
Chain#	ASIC#	Freque	ncy	Temp						AS	IC statu	s					
1	54	600		56				00000	000 0000000	0 000000 00	0000000	0000000	00000000 00	000000			
2	54	600		52				00000	000 0000000	00 000000 00	0000000 0	0000000	00000000 00	000000			
3	54	600		52				00000	000 000000	00 000000 00	0000000	0000000	00000000 00	000000			
Fan#	F	an1		Fan2			Fan3			Fan4			Fan5			Fan6	
Speed (r/min) 3	1,120		0			4,200			0			0			0	

7 System Configuration and status

7.1 System Upgrading

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



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tem Miner Configuration Miner Status Ne	twork				
view Administration Monitor Kernel Log	Upgrade Reboot				
ade					
Backup / Restore					
	of the current configuration files. To reset the firmware to its in	itial state, click "Perform reset" (only possible with squashfs images).			
Download backup:	Generate archive				
Reset to defaults:	Perform reset				
To restore configuration files, you can upload a previously generated backup archive here.					
Restore backup:	选择文件 未选择任何文件	Dpload archive			
lash new firmware image					
pload a sysupgrade-compatible image here to repl	ace the running firmware. Check "Keep settings" to retain the	current configuration.			
Keep settings:	2				
Image:	选择文件 未选择任何文件	Flash 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 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.

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				
	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 20150915 firmware.

ANT	ANTMINER					
9	System Miner Configuration Miner Status Network					
E-	Overview Administration Monitor Kernel Log Upgrade R	eboot				
н.						
0	verview					
	System					
	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	79028 kB / 510552 kB				
	Free	79028 kB / 510552 kB (15%) 431524 kB / 510552 kB				
	Cached	(85%) 0 kB / 510552 kB (0%)				
	Buffered	0 kB / 510552 kB (0%)				
	Network					
	IP Status	Type: DHCP Address: 10.12.50.142 stb0 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 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.

