BITMAIN

ANTMINER

Z9 Server Installation

Guide

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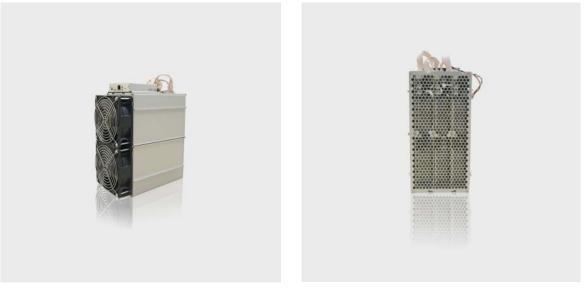
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1.0verview

1. Overview

The Z9 server is one of the products in Bitmain's Z9 server series. All Z9 servers are tested and configured prior to shipping to ensure easy set up.





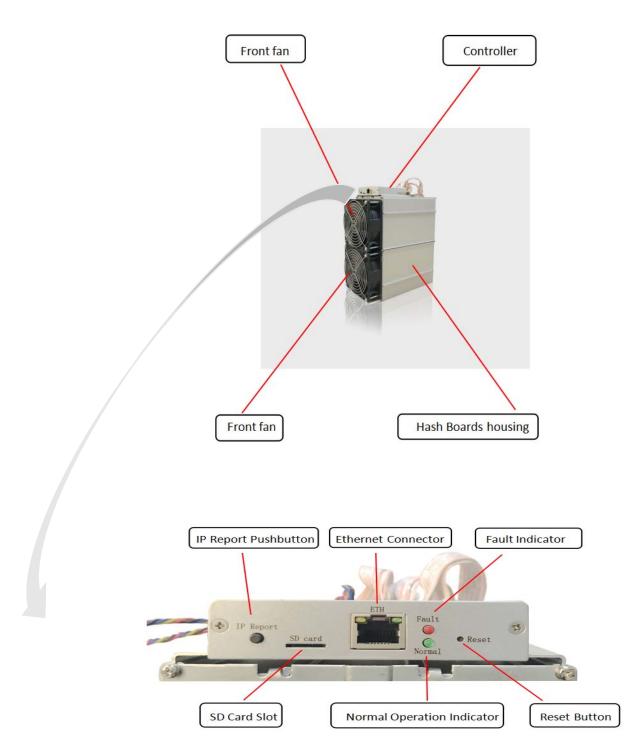
You must provide your own ATX power supply.





1.1 Z9 Server Components

The Z9 server main components and controller front panel are shown in the following figure:





1.0verview

1.2 Specifications

Product Glance	Value
Product model	Z9
Hashrate, KSol/s	42
Reference power on wall, Watt	970
Reference power efficiency on wall @25°C, J/KSol	23.1
Adapted AC/DC output requirement, Watt / Volt	1201/ 12.00

Detailed Characteristics		Value	
Detaneu characteristics	Min	Тур	Max
Hashrate & Power			1
Hashrate, KSol/s		42	44
Power efficiency on wall @25°C, J/KSol ⁽¹⁻¹⁾	23.1		24.7
Power efficiency on wall @40°C, J/KSol ⁽¹⁻²⁾	24.7		26.4
Reference power on wall, Watt ⁽¹⁻³⁾	970		1162
DC input voltage range, Volt ⁽¹⁻⁴⁾	11.60	12.00	13.00
DC input current range, Amp ⁽¹⁻⁵⁾		80.8	100
Adapted AC/DC output power requirement, Watt ⁽¹⁻⁶⁾	1081	1201	
Hardware Configuration			
Quantity of hash chips		48	
Quantity of hash boards		3	
Networking connection mode	RJ45 e	ethernet 10,	/100M
Server Size (Length*Width*Height, w/o package), mm	2	26*134*27	7
Net weight, kg		4.7	
Noise, dBA @25°C ⁽²⁻¹⁾			70
Environment Requirements			
Operation temperature, °C	0	25	40
Storage temperature, °C	-40	25	85
Operation humidity, RH	5%		95%



1.0verview

Notes:

- (1-1) Refers PSU power conversion efficiency of 93%
- (1-2) Refers PSU power conversion efficiency of 93%
- (1-3) Min condition: 25 °C, min J/TH, typical hashrate Max condition: 40 °C, max J/TH, max hashrate Refers PSU power conversion efficiency of 93%
- (1-4) Caution: Wrong input voltage may probably cause miner damaged
- (1-5) Typ condition: min reference power, typical DC input voltage Max condition: max reference power, min DC input voltage
- (1-6) Min condition: 40 °C, max J/TH, max hashrate,

PSU output power should be no less than the min value to make sure mining stable. Typical condition: (typical power) = (min power)/90%, leave power output margin for PSU. **Caution: It is strongly recommended that using typical power can make sure your server can** work well. You can use one PSU to power multiple boards. Do not attempt to power one board with more than one PSU. All PCI-E ports are required to plug in while powering up the board.

(2-1) Max condition: Fan is under max RPM(rotation per minute).



2. Connecting the Power Supply

2. Connecting the Power Supply

Seven PCI-e connectors are located at the top of the Z9 server for connecting the PSU as follows:

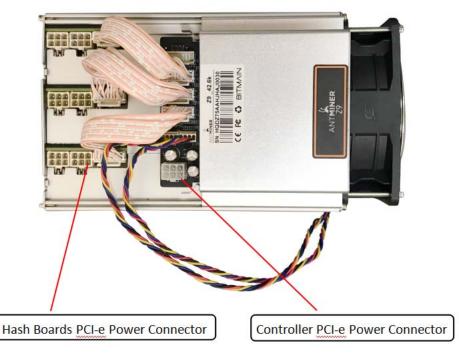
- Six PCI-e connectors for the hash boards. Each hash board has two PCI-e connectors.
- One PCI-e connector located on the controller.

1

Each hashboard must be powered by the same PSU to prevent possible damage and instability.

To connect the power supply:

1. Connect PSU power cable connectors to each of the two PCI-e connectors on the top of the Z9 server, ensuring that each hash board is powered by the same PSU.



- 2. Connect a PSU power cable connector to the Z9 PCI-e connector on the controller.
- 3. Connect the network cable to the ETH port.
- 4. To power up your Z9 server, connect the PSUs to the power wall outlet.

If you are using more than one PSU, power up the PSU connected to the controller AFTER you have Powered up the other PSU(s).



3.Setting Up the Server

3. Setting Up the Server

To set up the server:



The file IPReporter.zip is supported by Microsoft Windows only.

1. Go to the following site:

https://shop.bitmain.com/support.htm?pid=00720160906053730999PVD2K0vz0693

2. Download the following file: IPReporter.zip

3. Extract the file.

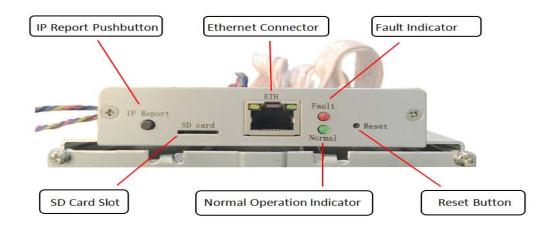


The default DHCP network protocol distributes IP addresses automatically.

- 4. Right-click IPReporter.exe and run it as Administrator.
- 5. Select one of the following options:
 - Shelf, Step, Position suitable for farm servers to mark the location of the servers.
 - Default suitable for home servers.
- 6. Click Start.

Shelf 1	Step 1	Position 1	Start
Information			
NO. IF	1	MAC	
this is suitable	for farm miners to n	nark location of miners. we it as default directly.	
IL VIII IE INITIP			
in you're norne	inter, you may ico		1
in you're norne	in the product of the		1
a you're norne			
in youre nome	initially feet that ited		
a youre nome			
a youre nome			
«			





7. On the controller board, click the IP Report button. Hold it down until it beeps (about 5 seconds).

The IP address will be displayed in a window on your computer screen.

helf 1	Step 1	Position	1	Start
		onfirmation		×
	IP 100.70.1	23		
	MAC 6C:EC:EB:	62:39:F2		
PC	DSITION 1-1			
	ок	Skip	Stop	
Skip	Stop		kport	Quit

- 8. In your web browser, enter the IP address provided.
- 9. Proceed to login using root for both the username and password.
- 10. In the Network section, you can assign a DHCP IP address (optional).
- 11. Click Save & Apply.

		Settings Diagnostics
		Network Settings
		Network setup for Miner
1:F3:12:67:78:17 5.255.0	MAC-Address:C4: IP:192.168.1.101 ethio Netmask:255.255.3	Status
	antMiner	Hostname
	DHCP	Protocol
		IP Address
		Netmask
		Gateway
		DNS Servers
		DNS Servers



4. Configuring the Server

4. Configuring the Server Setting Up the Pool

To configure the server:

1. click General Settings.

C 0 不安全 10.77.52.133/cgi-bin/minerConfiguration				ļ
INER				
ystem Miner Configuration Miner Status Network				l
eneral Settings Advanced Settings			_	ĺ
ner General Configuration				
Pool 1				
URL	stratum+tcp://stratum-zec.antpool.com/8899			
Worker	antminer_1			
Password	123			
Pool 2				
URL.	stratum+tcp://stratum-zec.antpool.com/443			
Worker	antminer_1			
Password	123			
Pool 3				
URL.	stratum+tcp://stratum-zec.antpool.com/25			
Worker	antminer_1			
Password	123			
Setup				
Customize the fan speed percentage	□ %			

Note: Fan speed can be adjusted, but we recommend keeping the default setting.

2. Set the options according to the following table:

Option	Description
Pool URL	Enter the URL of your desired pool. The Z9 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 are offline.
Worker	Your worker ID on the selected pool.
Password	The password for your selected worker.

3. Click Save & Apply to save and restart the server.

5. Monitoring Your Server

5. Monitoring Your server

To check the operating status of your server:

1. Click the status marked below.

	Miner State	A Network	_		_	_	_	_		_			_				_	
iner Status																		
Summary																		
Elapsed	KSol/S			/S(avg)			FoundBlo	cks		LocalWork		Utili		WU		BestShar	e	
44m21s	43.9		4	3.51			0			1,645		5.2	5	104.19		0		
Pools																		
Pool	URL		User	Status	Diff	GetWorks	Priority	Accepted	Nonce#	DiffA#	DiffR#	Diffs#	Rejected	Discarded	Stale	LSDiff	LSTim	e
0 stra 1 stra	tum+tcp://stratum-zec.antp atum+tcp://stratum-zec.antp	ool.com:8899	antminer_1 antminer_1	Alive Alive	19 19	57	0	233	0	4,412	19	190	1	1,421	10	19	0:00:2	1
2 str	atum+tcp://stratum-zec.ant	pool.com:25	antminer_1	Alive	19	2	2	0	0	0	0	0	0	0	0	0	0	
Total HW	0					61		233	0 NaN%	4,412	19	190	1	1,421	10			
AntMiner																		
Chain#	ASIC#	Frequency		KS	ol/S(R)	0	HW	Ter	np(PCB)		Ter	np(Chip)			ASIC stat	tus		
1	16	500			14.82		0		48			68		000	00000 000	000000		
2	16 16	500 500			15,48		0		48			66 67			00000 000			
Fan#			Fai		\$2122				20				Fan2					
Speed (r/mi	n)		3,6										3,600					

2. monitor your server according to the descriptions in the following table:

Option	Description
ASIC#	Number of chips detected in the chain.
Frequency	ASIC frequency setting.
GH/S(RT)	Hash rate of each hash board (GH/s)
Temp(PCB)	Temperature of each hash board (°C).(Applied only to server with fixed frequency)
Temp(Chip)	Temperature of the chips on each hash board (°C).
ASIC status	One of the following statuses will appear:
	• O - indicates OK
	• X - indicates error
	• indicates dead

Note: The Z9 server is with fixed frequency 500 MHz. Firmware will stop running when the Temp(PCB) reaches to 80°C, there will be an error message "Fatal Error: Temperature is too high!" shown in the bottom of kernel log page.



6. Administering Your Server

6. Administering Your Server

6.1 Checking Your Firmware Version

To check your firmware version:

- 1. In System, click the Overview tab.
- 2. **File System Version** displays the date of the firmware your server use. In the example below, the server is using firmware version 20180812.

- C O 不安全 10.77.52.133/index.html			3
MINER			
System Miner Configuration Miner Status N	stwork		
Overview Administration Monitor Kernel Lo	g Upgrade Reboot		
Overview			
System			
Miner Type	Antminer 29		
Hostname	antMiner		
Model	GNU/Linux		
Hardware Version	9.0.0.5		
Kernel Version	Linux 4.6.0-xilinx-gff8137b-dirty #22 SMP PREEMPT Fri Dec 22 12:25:44 CST 2017		
File System Version	Sun Aug 12 18:09:59 CST 2018		
CGminer Version	4.9.0		
Uptime	43		
Load Average	2.23, 2.02, 1.85		
Memory			
Total Available	99764 kB / 225792 kB (42%)		
Free	136008 kB / 235792 kB (50%)		
Cached	0 kB / 235792 kB (0%)		
Buffered	680 kB / 235792 kB (0%)		
Network			
IP Status	Type: DHCP Address: 192.358.1.09 mbb Hermanki: 253.253.0		

6.2 Upgrading Your System

Make sure that the Z9 server remains powered during the upgrade process. If power fails before the upgrade is completed, you will need to return it to Bitmain for repair.

To upgrade the server's firmware:

1. In System, click Upgrade.

System Miner Configuration Miner Status Network		
Overview Administration Monitor Kernel Log Upgrad	Reboot	
Backup / Restore Click "Generate archive" to download a tar archive of 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	
To restore configuration files, you can upload a previously genera	ed backup archive here.	
Restore backup:	到版	
Flash new firmware image Upload a sysupgrade-compatible image here to replace the runnin	firmware. Check "Keep settings" to retain the current configuration.	
Keep settings:	N.	
Image:	調呃 未选择文件。 SFlash Image	



6. Administering Your Server

- 2. For Keep Settings:
 - Select the check box to keep your current settings (default).
 - Clear the check box to reset the server to default settings.
- 3. Click the 通择文件 (Browse) button and navigate to the upgrade file. Select the upgrade file, then click Flash image. A message appears notifying you if the Z9 firmware can be upgraded and if yes, will then proceed to flash the image.
- 4. When the upgrade is completed, the following message appears:

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	

- 5. Click one of the following options:
 - **Reboot** to restart the server with the new firmware.
 - **Go Back** to continue mining with the current firmware. The server will load the new firmware next time it is restarted.

6.3 Modifying Your Password

To change your login password:

- 1. In System, click the Administration tab.
- 2. Set your new password, then click **Save & Apply**.

System Miner Configuration Miner Status Network		
Overview Administration Monitor Kernel Log Upgrade Reboot		
Password		
Changes the administrator password for accessing the device		
Current Password	Clarrent Pastword	
New Password	New Password	
Confirmation	Confirmation Password	
		Reset Save&Apply

6.4 Restoring Initial Settings

To restore your initial settings

- 1. Turn on the server and let it run for 5 minutes.
- 2. On the controller front panel, press and hold the **Reset** button for 10 seconds.



Resetting your server will reboot it and restore its default settings. The red LED will automatically flash once every 15 seconds 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:				
	有害物质							
單元	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: