# BITMAIN

# ANTMINER

# **Z9 mini Server**

# **Installation Guide**

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Z9 mini Server Installation Guide

1.0verview

# 1. Overview

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





You must provide your own ATX power supply.



Z9 mini Server Installation Guide

1.0verview

## 1.1 Z9 mini Server Components

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





1.0verview

# 1.2 Specifications

	Parameters of Z9 mini Server						
NO.	Parameters	Value					
1	Product model	Z9 mini					
2	Quantity of hash chips per server	12 PCS					
3	Total quantity of hash boards	3 PCS					
4	Total hash rate	10.0k Sol/s±5%					
5	DC voltage input	11.60~13.00 V					
6	DC current input @12V DC input @25℃	20.6 A +5%					
7	DC Power @12V DC input @25 $^\circ \!$	247 W +5%					
8	220VAC Power @25˚C ,93% conversion efficiency of APW3	266 W +5%					
9	220VAC Power efficiency @25℃ ,93% conversion efficiency of APW3++	26.6J/Ksol±5%					
10	Weight (without package)	2.02kg					
11	Operation temperature	0-40 ℃					
12	Storage temperature	-40-85 ℃					
13	Operation humidity	5%RH-95%RH, prevent condensation					
14	Noise@25℃	55dB					
15	Networking connection mode	Ethernet Cable					
16	Power connection mode	All PCI-E ports are required to power the board. You can use one PSU to power multiple boards. All cables must be connected before powering up the PSU.					
17	Size (Length*Width*Hight)	206x124x155mm					



2. Connecting the Power Supply

# 2. Connecting the Power Supply

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

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

#### To connect the power supply:

1. Connect PSU power cable connectors to each of the three PCI-e connectors on the top of the Z9 mini server.



- 2. Connect a PSU power cable connector to the Z9 mini PCI-e connector on the controller.
- 3. Connect the network cable to the ETH port.
- 4. To power up your Z9 mini 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	1		
NO. II	1	MAC	-
this is suitable if you're home	for farm miners to n e miner, you may lea	nark location of miners ve it as default directly	
		and the second se	
	-		
<			>
<			>





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.

	I	P Reporter		
Shelf 1	Step 1	Position	1	Start
In	C	oninnation		
	IP 10 0.70.12	23		
	MAC 6C:EC:EB:	62:39:F2		
POS	ITION 1-1			
	ок	Skip	Stop	
Skip	Stop	Ð	port	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.

System         Miner Configuration         Miner Status         Network           Settings         Diagnostics		
Network Settings		
Network setup for Miner		
Status	MAC-Address:(4:F3:12:67:78:17 eth) [19:2,166.1.101 Netmasiz:5.253.25.35.0	
Hostname	antMiner	
Protocol	DHCP	
IP Address		
Netmask		
Gateway		
DNS Servers		
		Reset. Save&Apply



4. Configuring the Server

# 4. Configuring the Server Setting Up the Pool

#### To configure the server:

- 1. click General Settings.
- 2. Set the options according to the following table:

Option	Description
Pool URL	Enter the URL of your desired pool. The Z9 mini 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.

() MINER		
System Miner Configuration Miner Status Network		
General Settings Advanced Settings		
- Pool 1		
URL	stratum+tcp.//stratum-zec.antpool.com.8899	
Worker	yang007.01	
Pasaweord	123	
Pool 2		
URL	stratum+tcp://stratum-zsc.antpool.com/443	
Worker	yang007.01	
Password	123	
Pool 3		
URL	stratum+tcp://stratum-zec.antpool.com/25	
Worker	yang007.01	
Password	123	
Setup		
Customize the fan speed percentage		

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



5. Monitoring Your Server

# 5. Monitoring Your server

#### To check the operating status of your server:

1. Click the status marked below.

#### 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)	ash rate of each hash board ( GH/s)				
Temp(PCB)	emperature of each hash board (°C).(Applied only to server with fixed frequency)				
Temp(Chip)	emperature of the chips on each hash board (°C).				
ASIC status	ne of the following statuses will appear:				
	• <b>O</b> - indicates OK				
	• X - indicates error				
	• indicates dead				

#### Ant Miner ×

mma 1	lapsed	KSol/S(RT)	KS	at/s(avg)			Founds	locks		LocalWe	ork		Utility	wu	12	BestShare	
	8m28s	11.38		10.82			0			327			6.14	98		0	
ols		URL	User	Status	Diff	GetWorks	Priority	Accepted	Nonce#	DITTA	Diffe	Diffs#	Rejected	Discarded	State	LSDIFF	LSTime
0 1 2 stal	stratum+t	p://stratum-zec.antpool.com/8899 cp://stratum-zec.antpool.com/443 tcp://stratum-zec.antpool.com/25 0	antminer_1 antminer_1 antminer_1	Alive Alive Alive	16 15 15	13 2 2 17	0 1 2	52 0 0 52	0 0 0 0	830 0 830 830	0000	0000	00000	275 0 0 275	0 0 0	16 0 0	0:00:05
tHin	er																
•	hain#	ASIC#	requency			4/5(RT)		w	Temp(	РСВ)		Ter	mp(Chip)		ASI	C status	
	1 2 3	1	500 500 500			2.95 3.85 3.58		3	44				57 58 56			0000 0000	
	fan# d (r/min)		Fa 2.3										Fan2 0				

Note: The Z9 mini server is with fixed frequency 500 MHZ. Firmware will stop running when the Temp(PCB) reaches to 80 °C or the Temp(Chips) reaches to 125-135 °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 20180526.

Ant Miner ×		Θ - σ
→ C ③ 192.168.1.100/index.html		
System Miner Configuration Miner Status Netwo	rk	
Overview Administration Monitor Kernel Log	Upgrade Reboot	
Overview		
System		
Miner Type	Antminer Z9-Mini	
Hostname	antMiner	
Model	GNU/Linux	
Hardware Version	9.0.05	
Kernel Version	Linux 4.6.0-xilinx-gff8137b-dirty #22 SMP PREEMPT Fri Dec 22 12:25:44 CST 2017	
File System Version	Sat May 26 20:42:30 CST 2018	
CGminer Version	4.9.0	
Uptime	10	
Load Average	2.13, 1.85, 1.02	
Memory		
Total Available	80216 kB/ / 235702 kB (38%)	
Free	146476 kB / 235792 kB (62%)	
Cached	0 kB / 235792 kB (0%)	
Buffered	595 km / 235792 km (0%)	
Network		
IP Status	20 Type: 54(7) Address: 19, 11, 100 Address: 25, 25, 55, 55, 0	

#### 6.2 Upgrading Your System

Make sure that the Z9 mini 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 Mner Configuration Miner Status Network		
Overview Administration Monitor Kernel Log Upgrade Reboot		
Upgrade		
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	th squashfs images),
Download backup:	Generate archive	
Reset to defaults:	Perform reset.	
To restore configuration files, you can upload a previously generated backup archiv	e here.	
Restore backup:	词流 未选择文件。 Upload arch	ve
Flash new firmware image Upload a sysupgrade-compatble image here to replace the running firmware. Checl	"Keep settings" to retain the current configuration.	
Keep settings:	N.	
Image:	調酒 未选择文件。 IFlash 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 mini firmware can be upgraded and if yes, will then proceed to flash the image.
- 4. When the upgrade is completed, the following message appears:

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

- 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	Current Pastword	
New Password	New Password	
Confirmation	Confirmation Password	
1		
		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.

	ŕ	設備名稱	5424 5424	<b>,</b> 型號:			
單元 (P	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	
基準 值。 備考 2. "〇	"係指該項附	及 "超出 0.( 夏用物質之百分 夏用物質為排除	◆比含量未超出		「分比含量超出」 基準值。	百分比含量	

#### 台湾 ROHS: