



# Whats Miner All-in-one machine operation instruction

(Lite version)

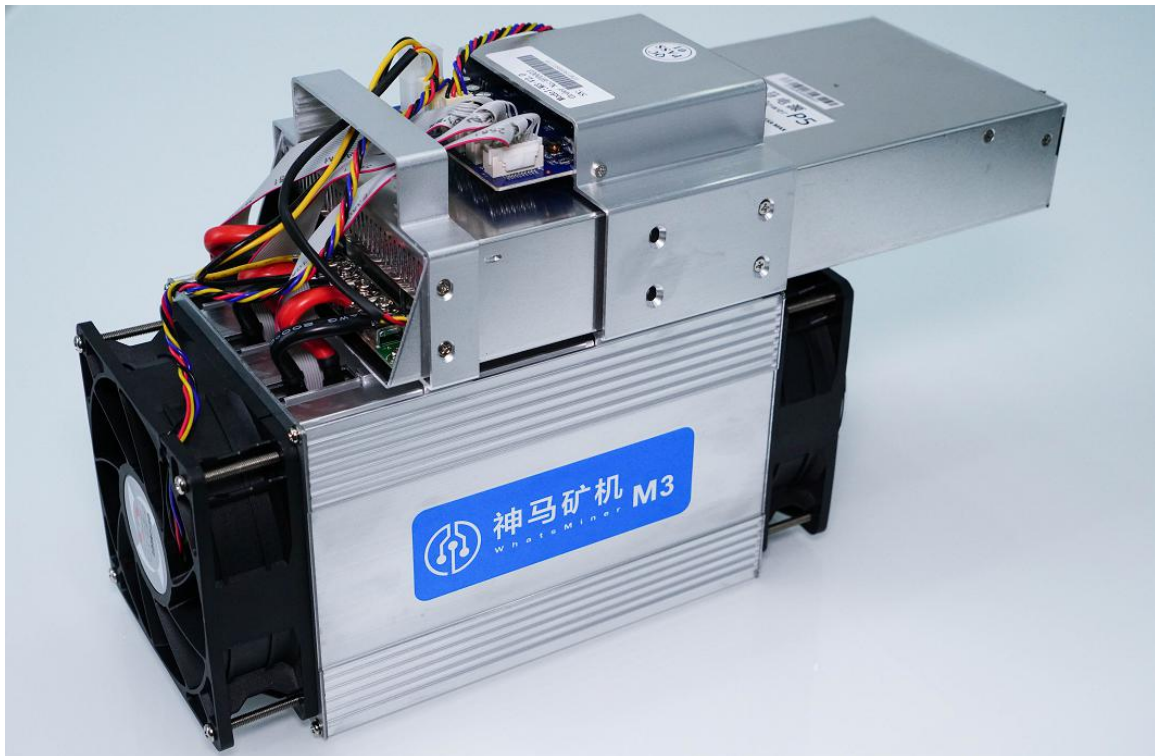
V1.2(H3 platform)



Shenzhen MicroBT Electronics Technology Co., Ltd.

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## 1. Introduction of M3 Integrated Miner



### Whatsminer M3 integrated miner

Bitcoin miner

The product parameters are as follows:

Computational power: 12TH/S

Chip: 189 28nm ASIC

Power consumption: 0.18~0.19kw/TH

Supporting Power supply: Shenma Power supply P5 (220vU 2250W)

Control board: with ambient

temperature: -5 °C ~ 40 °C whole

miner size: 375mm\*130mm\*225mm

## 2. Mine wiring, safety warning for operation on the shelf

### 2.1. Matters needing attention in connection of Miner

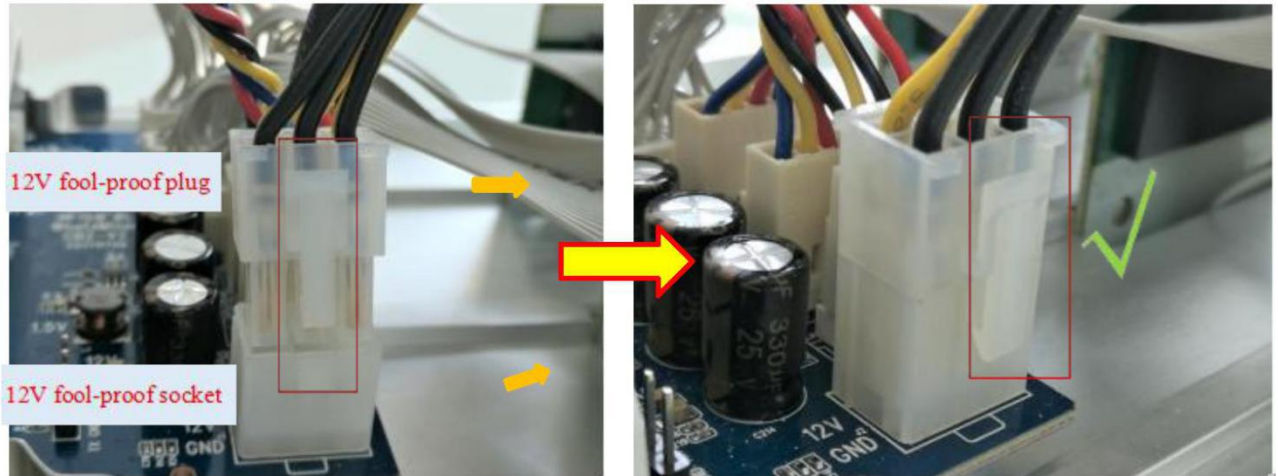
Mine machine 12V power line, power supply control line, fan line must be correctly connected, if due to the connection error, resulting in control board,

force board burning, the whole miner and veneer will not belong to the scope of warranty!

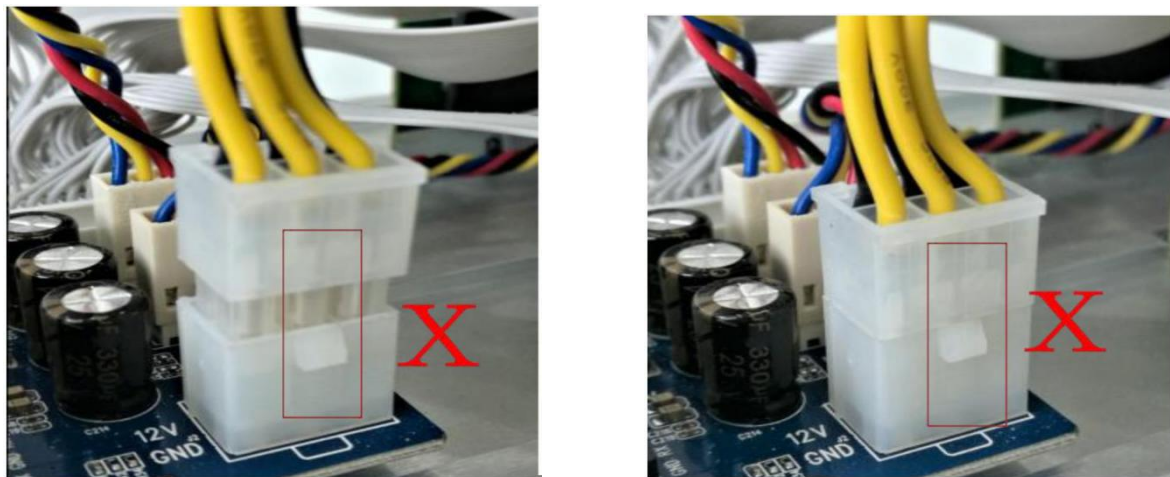
### 2.1.1. Points for attention in connection of Control Panel 12V Power Line

When connecting the power cord of the control board, the plug of the power cord and the clasp at the two ends of the power outlet of the control board must correspond to each other, and the plug of the power cord cannot be inserted into the control board socket by force. If backplugged, power on could burn down the control board and burn out the signal wiring

Correct connection of power cord plugs and sockets:



Wrong connection of power cord plugs and sockets:



### 2.1.2. Matters needing attention in connection of Power supply Control Line

The power supply control line is 3pin red, black and yellow wire, 3 small ports face out, the slot is inserted relative bit:



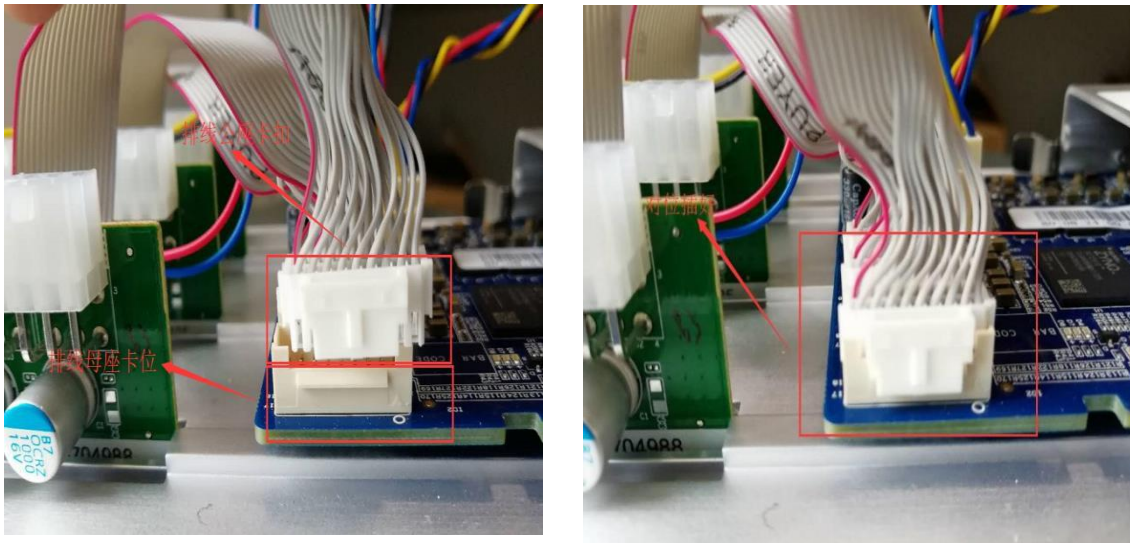


### 2.1.3. Matters needing attention in connection of Fan Line

Fan line is 4pin blue, yellow and red black line, 4 small mouth outside, card slot relative bit insert:



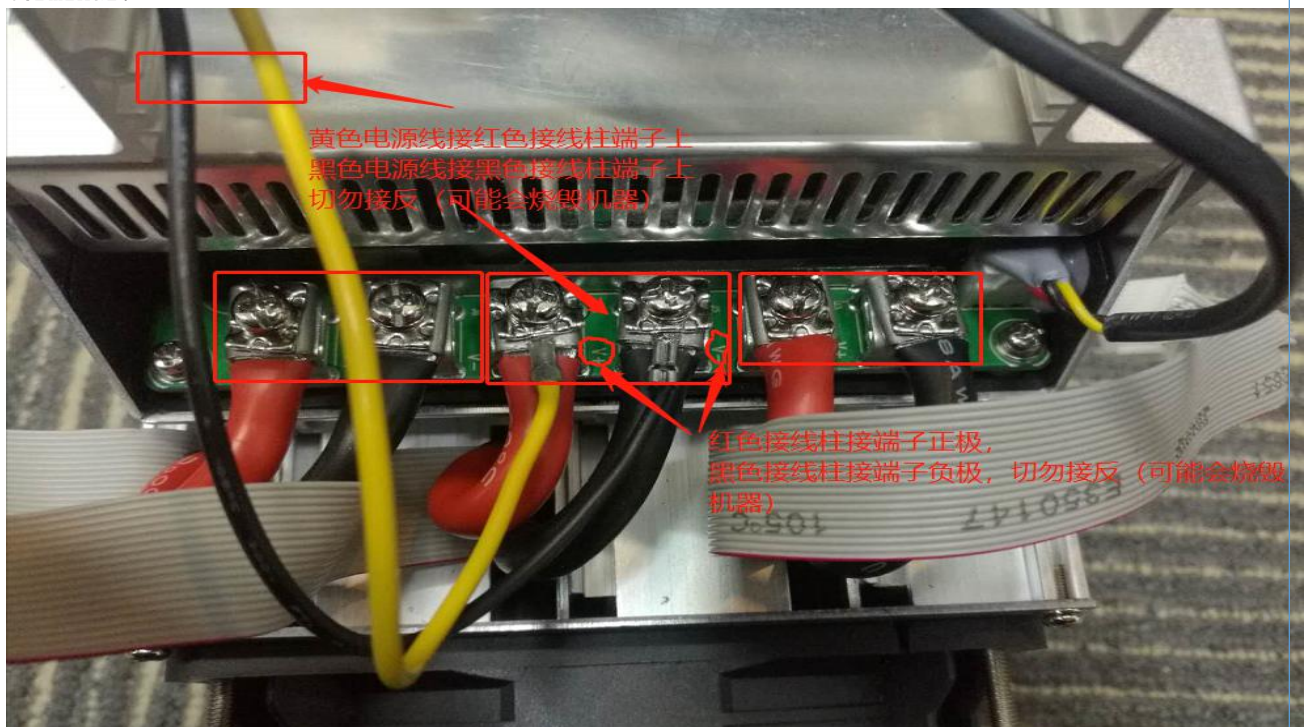
### 2.1.4. Matters needing attention in data wiring connection of Force Plate



### 2.1.5. Matters needing attention in connection of 12V Power Line with Power Plate

When connecting the power cord of the force board, the power cord connecting post and terminal must correspond to each other (yellow power cord is connected to the red cable, and the red pole is connected to the positive pole (V+)). The black power cord is connected to the black pole, and the black pole is connected to the negative pole (V-), which is tightened with screws. If the connection is reversed, the power supply may burn down the miner.

Correct connection method of power cord connecting post and terminal:





### 2.1.6. Miner wiring inspection

After all miner onnections are connected, check again to confirm that the connection is correct.



### 2.2. Miner handling, on the shelf operation points for attention

In the process of ore miner handling and loading, data wire arrangement, power control line, fan wire are strictly prohibited as lifting handle, lifting miner and power supply. By connecting the teena miner and the power supply, the connection will be damaged, the connection will be loosened, and the control board will be physically damaged over the carrying capacity. The resulting hardware damage and failure will not belong to the scope of warranty!

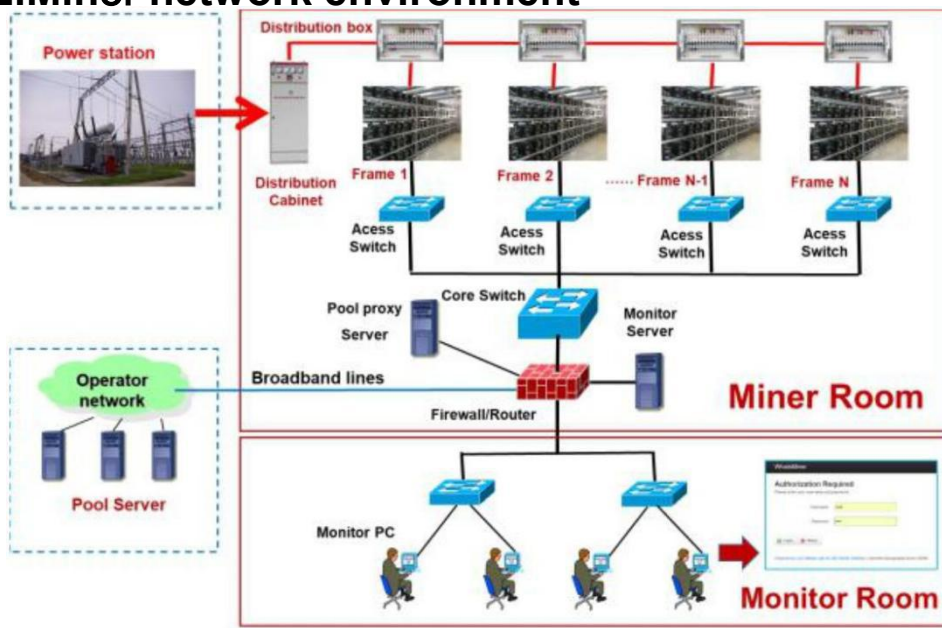


### 3. Miner configuration environment preparation

#### 3.1. Miner configuration equipment list

Serial	Serial number	Serial	Serial number tool name	Serial number tool
1	1 computer 1	1	1 computer 1 mine	
2	mine mach mine power	1	Configuration of miner	
3	network switch	1	Configuration of miner and	Network switches can connect to
4	DHCP/NTP server / router 1, provides dynamic IP address 2 for initial power	DHCP/ NTP server / router	DHCP/NTP server / router 1, provides dynamic IP address 2 for initial power on the miner machine, and ntp network time miner	DHCP/NTP server / router 1, provides dynamic IP address 2 for initial power on the miner,

#### 3.2. Miner network environment



By default, DHCP acquires dynamic ip, by default, so DHCP servers must be configured in the mine network, or the dhcp dynamic ip address service must be turned on by the router. The running time of miner and the correctness of calculation force statistics depend on the network ntp time. By default, the miner has multiple ntp server addresses of public network. In order to speed up the speed of obtaining network time by ntp and improve the time precision, It is recommended that a local ntp server be configured in the mine network.

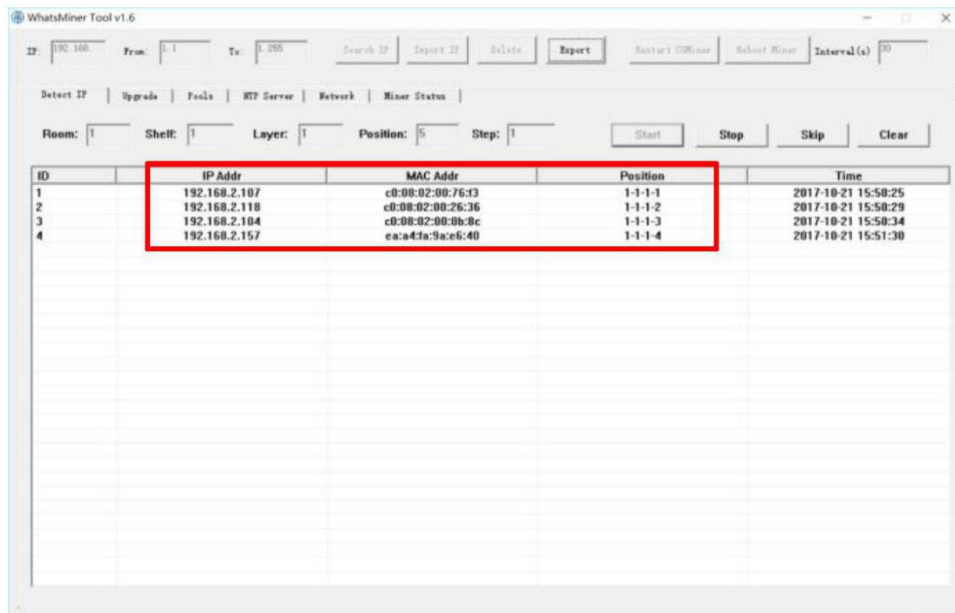








(2) In the WhatsMinerTools software to view the dynamic access to the miner reported IP,MAC address, miner location.



Note: (1) if all the lights in the control panel of the miner are not on after the power is turned on, please check the 220V power supply line, the 12V power cord connection is reliable and the connection is correct. (2) if the indicator light on the right side of the miner control panel is not on, or the green light does not flash, please check whether the switch is normal, whether the connection is reliable, and whether the quality of the wire is defective. (3) the computer and miner running WhatsMinerTools software must be under the same net segment, otherwise it is possible that the software can not receive the broadcast message from the miner, so that the miner cannot be queried. Ipfound key reported ip address and mac address information. (4) if the computer and the miner are under the same network segment, and the dhcp service is turned on in the network, after pressing the ipfound button of the miner, the WhatsMinerTools software does not inquire about the ip, length of the miner and presses the reset button on the miner panel for more than 5s, so that the default configuration of the factory is restored. Then reboot the miner, then press the ipfound button to detect the ip address of the miner after 30 s. (5) if the computer is running WhatsMinerTools software, click "start", not manually press the ipfound button, the software automatically found the miner's ip address, mac address, at this time, the miner's ipfound key may be stuck by the surface plate, Find the miner that shows the mac address in the software (the miner panel has mac address bar code), then reinstall the control panel to make sure that the control panel button and indicator light reveal the installation hole, and there is no jam.



## 5.2. Mining Pool & Miner data and configuration NTP

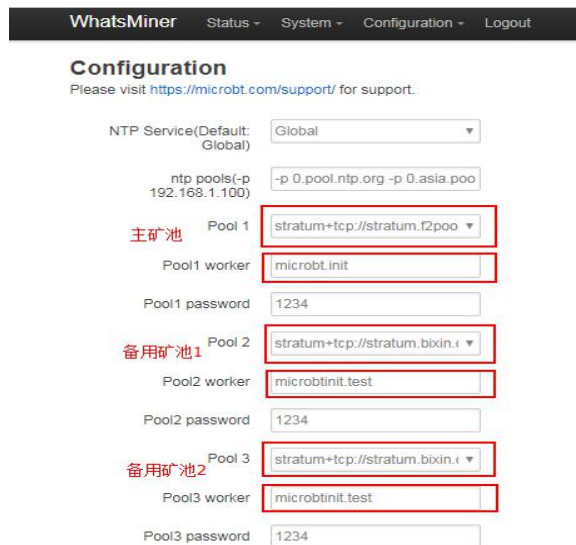
### Server address

#### 5.2.1. Mining Pool & miner disposition

(1) after logging in, go to the Cgminer configuration page. (2) in the Cgminer configuration interface, modify mining pool address, miner name, and after modification, click "Save & Application" in the lower right corner to save the modified configuration.

The name of the miner.

Mine number



Configuration

Please visit <https://microbt.com/support/> for support.

NTP Service(Default: Global)

ntp pools(-p 192.168.1.100)

主矿池 Pool 1

Pool1 worker

Pool1 password

备用矿池1 Pool 2

Pool2 worker

Pool2 password

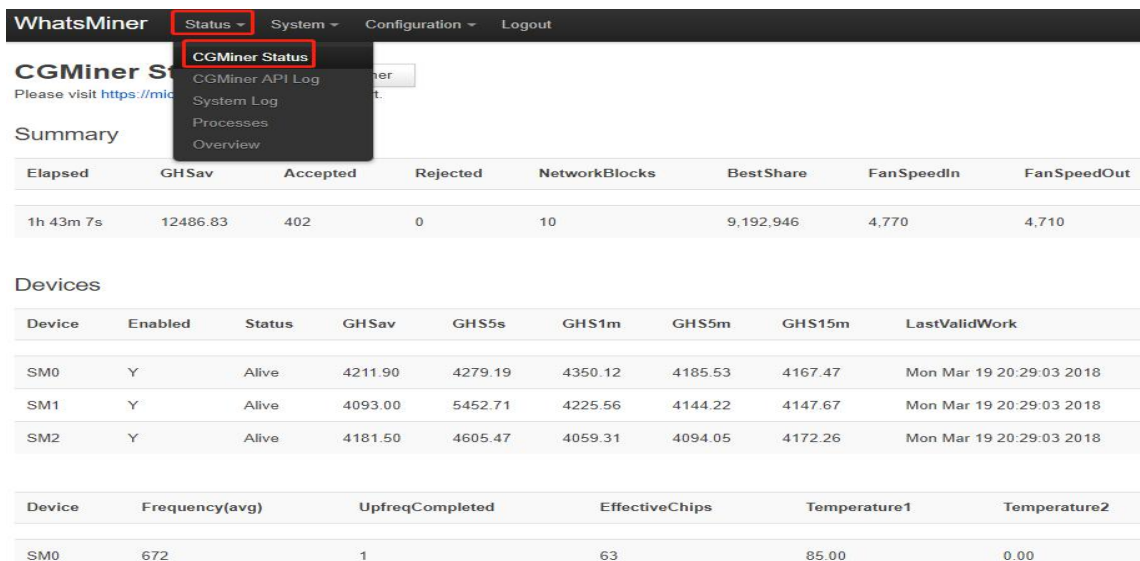
备用矿池2 Pool 3

Pool3 worker

Pool3 password

After the mine pool configuration is modified, the modified configuration must restart the cgminer program or the control panel before the modified configuration can take effect.

(3) Restart cgminer, to check that configuration changes take effect. In the miner interface, select: Status- > CGMinerStatus, into the CGMiner running state interface.



CGMiner Status

Please visit <https://microbt.com/support/> for support.

Summary

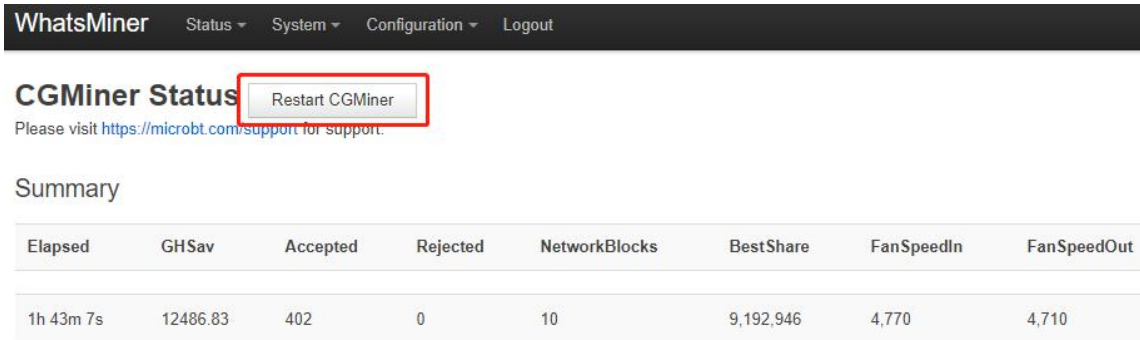
Elapsed	GHSav	Accepted	Rejected	NetworkBlocks	BestShare	FanSpeedIn	FanSpeedOut
1h 43m 7s	12486.83	402	0	10	9,192,946	4,770	4,710

Devices

Device	Enabled	Status	GHSav	GHS5s	GHS1m	GHS5m	GHS15m	LastValidWork
SM0	Y	Alive	4211.90	4279.19	4350.12	4185.53	4167.47	Mon Mar 19 20:29:03 2018
SM1	Y	Alive	4093.00	5452.71	4225.56	4144.22	4147.67	Mon Mar 19 20:29:03 2018
SM2	Y	Alive	4181.50	4605.47	4059.31	4094.05	4172.26	Mon Mar 19 20:29:03 2018

Device	Frequency(avg)	UpfreqCompleted	EffectiveChips	Temperature1	Temperature2
SM0	672	1	63	85.00	0.00

In the cgminer status interface, click RestartCGMiner to restart the cgminer process.



WhatsMiner Status System Configuration Logout

### CGMiner Status

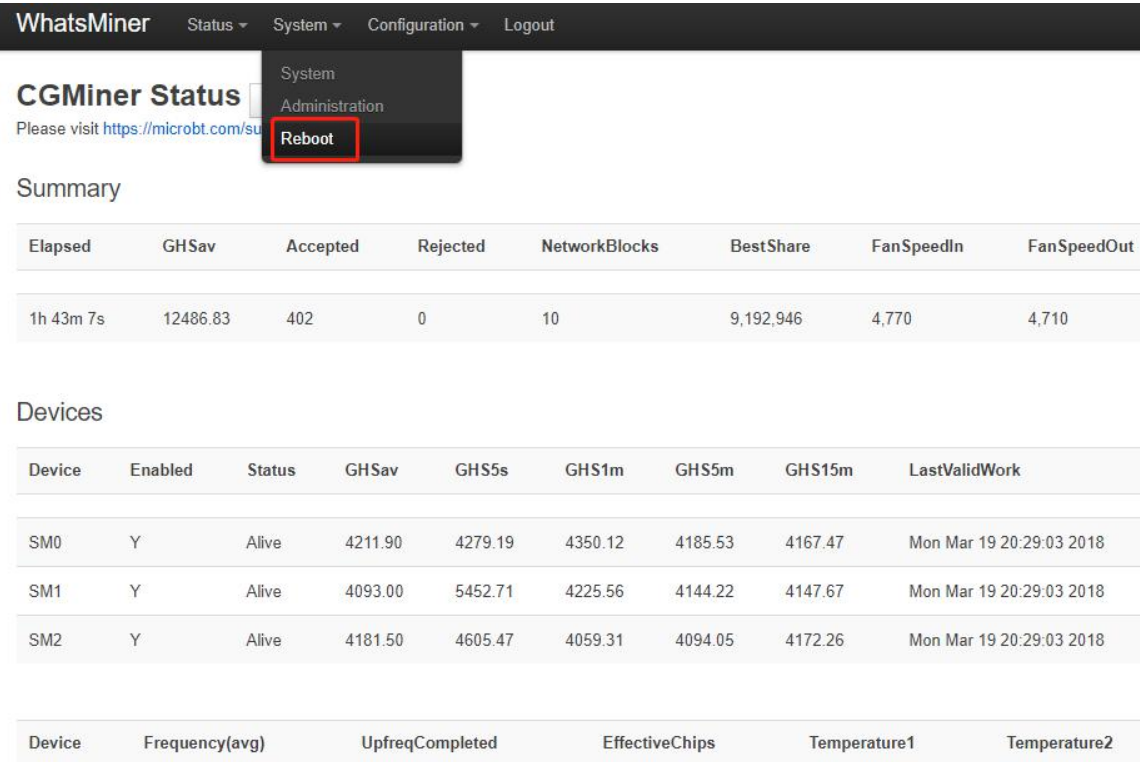
Please visit <https://microbt.com/support> for support.

Restart CGMiner

#### Summary

Elapsed	GHSav	Accepted	Rejected	NetworkBlocks	BestShare	FanSpeedIn	FanSpeedOut
1h 43m 7s	12486.83	402	0	10	9,192,946	4,770	4,710

(4) restart the control panel and check whether the configuration changes are effective. (if you do not choose to restart cgminer, configuration changes saved, you can also restart the control panel, so that the configuration takes effect) in the system interface, click "Reboot".



WhatsMiner Status System Configuration Logout

### CGMiner Status

Please visit <https://microbt.com/support> for support.

- System
- Administration
- Reboot

#### Summary

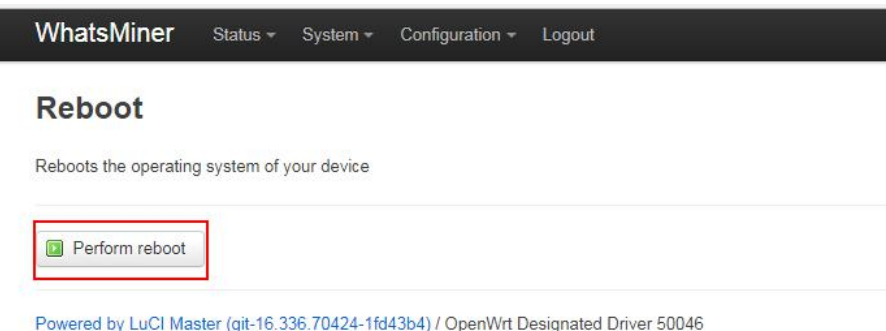
Elapsed	GHSav	Accepted	Rejected	NetworkBlocks	BestShare	FanSpeedIn	FanSpeedOut
1h 43m 7s	12486.83	402	0	10	9,192,946	4,770	4,710

#### Devices

Device	Enabled	Status	GHSav	GHS5s	GHS1m	GHS5m	GHS15m	LastValidWork
SM0	Y	Alive	4211.90	4279.19	4350.12	4185.53	4167.47	Mon Mar 19 20:29:03 2018
SM1	Y	Alive	4093.00	5452.71	4225.56	4144.22	4147.67	Mon Mar 19 20:29:03 2018
SM2	Y	Alive	4181.50	4605.47	4059.31	4094.05	4172.26	Mon Mar 19 20:29:03 2018

Device	Frequency(avg)	UpfreqCompleted	EffectiveChips	Temperature1	Temperature2
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In the restart screen, click Perform reboot for restart confirmation.



WhatsMiner Status System Configuration Logout

## Reboot

Reboots the operating system of your device

Perform reboot

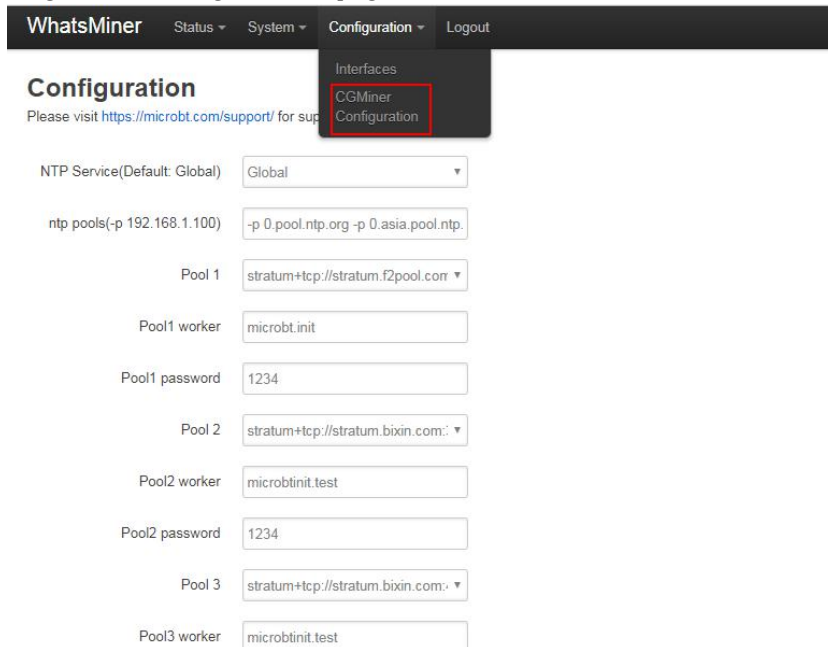
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After restarting about half a minute, the miner system will automatically jump to the

login interface.

## 5.2.2.Modify the address of the ntp synchronization server (optional)

(1) after login, select: Configuration- > CGMiner Configuration, in the interface to enter the Cgminer configuration page.



The screenshot shows the WhatsMiner Configuration page. The top navigation bar includes 'WhatsMiner', 'Status', 'System', 'Configuration', and 'Logout'. The 'Configuration' menu is open, showing 'Interfaces', 'CGMiner', and 'Configuration' options. The 'CGMiner' option is highlighted with a red box. Below the navigation, the 'Configuration' page title is displayed, followed by a support link. The main content area shows the 'NTP Service' dropdown set to 'Global'. The 'ntp pools' field contains '-p 0.pool.ntp.org -p 0.asia.pool.ntp.'. Below this, there are three pool configurations: Pool 1 (stratum+tcp://stratum.f2pool.com), Pool 2 (stratum+tcp://stratum.bixin.com), and Pool 3 (stratum+tcp://stratum.bixin.com). Each pool has a worker name and a password field.

(2) in the cgminer configuration interface, the address of four ntp servers has been configured by default when the ntp server address is added or modified, and the address of the ntp server can be modified or added to the local ntp server address according to the situation of the mine.



The screenshot shows the WhatsMiner Configuration page. The top navigation bar includes 'WhatsMiner', 'Status', 'System', 'Configuration', and 'Logout'. The 'Configuration' page title is displayed, followed by a support link. The main content area shows the 'NTP Service' dropdown set to 'ASIA'. The 'ntp pools' field contains '-p 0.pool.ntp.org -p 0.asia.pool.ntp.'. Both the dropdown and the text input field are highlighted with red boxes.

Default ntp server configuration: -p 3.asia.pool.ntp.org -p 2.cn.pool.ntp.org -p 1.cn.pool.ntp.org -p0.cn.pool.ntp.org followed by the ntp server domain name or ip address, The ntp server address can be modified or added according to the situation of the mine.

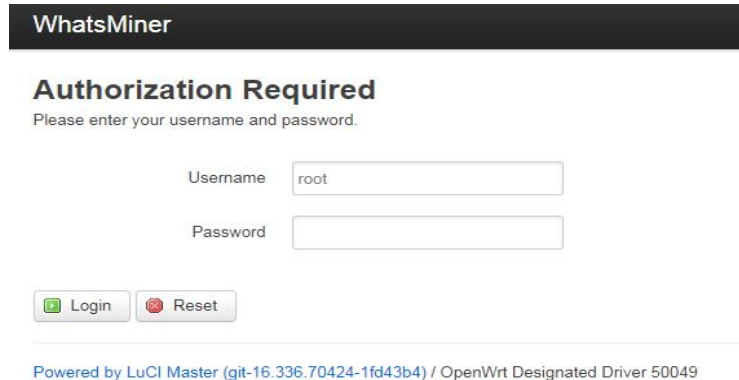
(3) after modifying the address of the ntp server, click "Save & Application" in the lower right corner.



## 5.3. Configure miner static IP address (optional)

The IP address obtained by miner DHCP is modified to static IP address of miner operation network planning.

(1) input the queried miner dynamic ip, in the browser with root user, default password: root, login miner interface.



**WhatsMiner**

### Authorization Required

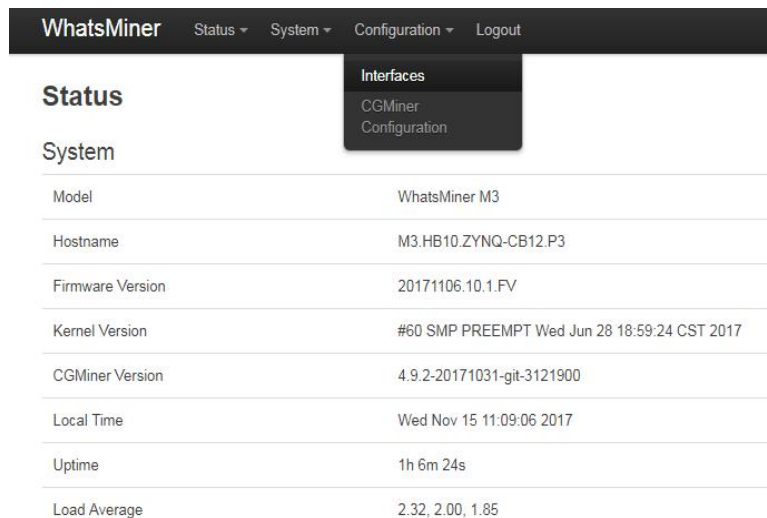
Please enter your username and password.

Username

Password

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(2) after logging into the miner, select: Configuration- > Interfaces, to enter the configuration interface of the network interface in the miner interface.



**WhatsMiner** Status System Configuration Logout

**Status**

System



Model	WhatsMiner M3
Hostname	M3.HB10.ZYNQ-CB12.P3
Firmware Version	20171106.10.1.FV
Kernel Version	#60 SMP PREEMPT Wed Jun 28 18:59:24 CST 2017
CGMiner Version	4.9.2-20171031-git-3121900
Local Time	Wed Nov 15 11:09:06 2017
Uptime	1h 6m 24s
Load Average	2.32, 2.00, 1.85

(3) in the "Configuration" interface, click "Edit"

LAN

## Interfaces

### Interface Overview

Network	Status	Actions
<div style="border: 1px solid #ccc; padding: 5px; text-align: center;"> <b>LAN</b>   eth0         </div>	Uptime: 1h 9m 14s <b>MAC-Address:</b> B0:03:20:00:02:07 <b>RX:</b> 40.58 MB (872638 Pkts.) <b>TX:</b> 5.81 MB (16335 Pkts.) <b>IPv4:</b> 192.168.2.172/24	<div style="border: 1px solid #ccc; padding: 5px; display: inline-block;">  Edit         </div>

Powered by LuCI Master (git-16.336.70424-1fd43b4) / OpenWrt Designated Driver 49994

(4) in the interface modification interface, the protocol (protocol) selects "Static address" and then clicks "Switch protocol".

### Interfaces - LAN

On this page you can configure the network interfaces. You can bridge several interfaces by ticking the "bridge interfaces" field and enter the names of several network interfaces separated by spaces. You can also use VLAN notation `INTERFACE.VLANID` (e.g., eth0.1).

#### Common Configuration


General Setup

Status	 eth0	Uptime: 0h 7m 49s <b>MAC-Address:</b> 36:8C:E5:AA:B9:CD <b>RX:</b> 6.18 MB (100153 Pkts.) <b>TX:</b> 808.22 KB (2554 Pkts.) <b>IPv4:</b> 192.168.2.112/24
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 Protocol Static address ▾

 Really switch protocol? Switch protocol
Back to Overview
Save & Apply

(5) in the static address configuration interface, the IP address, mask, gateway, broadcast address and DNS address are changed to the actual planned address of the miner. Click "Save & Apply" in the lower right corner after modification.

Status	 eth0	Uptime: 0h 11m 47s <b>MAC-Address:</b> 36:8C:E5:AA:B9:CD <b>RX:</b> 9.29 MB (150598 Pkts.) <b>TX:</b> 1.19 MB (3875 Pkts.) <b>IPv4:</b> 192.168.2.112/24
--------	--	--

 Protocol Static address ▾

 IPv4 address 192.168.1.221

 IPv4 netmask 255.255.0.0 ▾

 IPv4 gateway 192.168.0.1

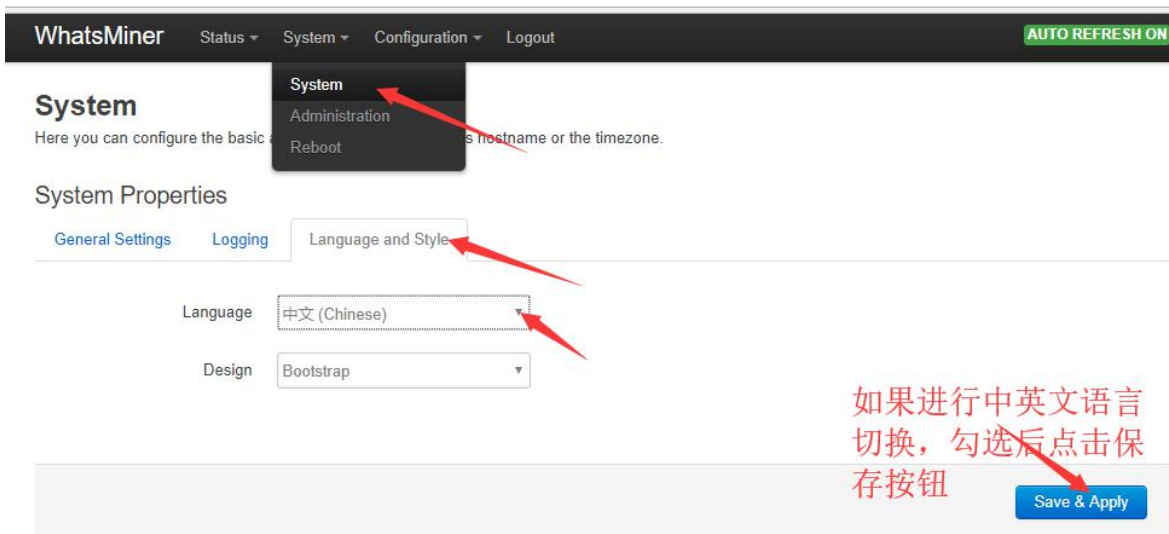
 IPv4 broadcast 192.168.255.255

 Use custom DNS servers 192.168.0.1
Back to Overview
Save & Apply

保存应用后，需要重新用新设置的静态 IP 地址才能登录矿机（否则一直页面显示加载中直到加载失败）。

After saving the application, you need to re-use the newly set static IP address to log in to the miner (otherwise, the page appears loaded until the load fails).

## 5.4. English and Chinese language switching of Miner Page



The screenshot shows the 'System' configuration page in the WhatsMiner interface. The 'System' menu is open, and the 'Language and Style' tab is selected. The 'Language' dropdown menu is set to '中文 (Chinese)'. A red arrow points to the 'Save & Apply' button. A red text box with an arrow pointing to the button contains the Chinese text: '如果进行中英文语言切换，勾选后点击保存按钮' (If switching between Chinese and English language, check the box and click the save button).

## 6. Miner running condition check

After the ore miner is connected to the running network, log in the miner and check the running state of the miner.

- (1) in the miner interface, choose: Status- > CGMiner Status, to enter the cgminer running state interface.
- (2) check the whole calculation force of miner, the speed of fan before and after, connect mining pool, single board calculation force, single board temperature and so on.



WhatsMiner Status System Configuration Logout

**CGMiner Status**

Please visit <https://microbt.com/support> for support.

Summe: **Total hash rate** **In/Out fan speed**

Elapsed	GHSav	Accepted	Rejected	NetworkBlocks	BestShare	FanSpeedIn	FanSpeedOut
22m 24s	11660.74	127	0	3	3,454,424	6,180	5,700

Devices **Hash rate of each hash board**

Device	Enabled	Status	GHSav	GHS5s	GHS1m	GHS5m	GHS15m	LastValidWork
SM0	Y	Alive	3894.24	4641.29	3634.71	3725.55	3076.84	Wed Oct 25 18:17:07 2017
SM1	Y	Alive	3836.17	4986.14	3979.61	3799.78	3048.78	Wed Oct 25 18:17:07 2017
SM2	Y	Alive	3829.40	3727.72	3987.42	3940.95	3145.07	Wed Oct 25 18:17:07 2017

Device	Frequency(avg)	UpfreqCompleted	EffectiveChips	Temperature1	Temperature2
SM0	635	1	63	86.50	0.00
SM1	635	1	63	85.00	0.00
SM2	635	1	63	85.50	0.00

**Effective chips of each hash board**      **The highest temperature of each hash board**

Pools

Pool	URL	Active	User	Status	Difficulty	GetWorks	Accepted	Rejected	Stale	LST	LSD
0	stratum+tcp://stratum.f2pool.com:3333	true	microbt.init	Alive	65536	106	127	0	0	Wed Oct 25 18:16:49 2017	65536
1	stratum+tcp://stratum.bixin.com:3333	false	microbtinit.test	Alive	0	0	0	0	0	Never	0
2	stratum+tcp://stratum.bixin.com:443	false	microbtinit.test	Alive	0	0	0	0	0	Never	0

**Mine pool connection status**

Events

EventCode	EventCause	EventAction	EventCount	LastTime	EventSource
This section contains no values yet					

Note: (1) if the connection of the miner is correct and the network is normal, the frequency search test will begin automatically after the miner is powered on. The frequency search test phase will take about 15 minutes. After the frequency search is over, it will only enter the formal mining stage. What is shown here is the calculation force of normal operation. If the search frequency is not over, see the calculation force will be lower than the normal operation of the calculation force.

(2) if the temperature of the outlet is above 85 degrees and the speed of the fan is more than 6100 revolutions, the miner will run at a lower frequency and the calculating force will be lower than the normal one. Ventilation and cooling measures should be done to ensure the mine operation environment. The ambient temperature of the miner is below 40.

(3) if the fan line is not reliably connected to the control board, the corresponding fan rotation speed in the miner interface is 0, which leads to the excessive temperature of the miner, the reduction of the frequency of the force plate and the decrease of the calculating

force.

(4) If the temperature is not detected in the state interface and the temperature is not detected, it is necessary to lower the electric power line of the miner and reinsert the power line of the corresponding force plate, and the two ends of the data wire arrangement (one end of the control board and one end of the force board) to ensure the reliability of the connection.

## **7. Batch data configuration, status check, firmware upgrade**

WhatsMinerTool software can be used for batch data configuration, status check, firmware upgrade, detailed operation see "Shenma miner WhatsMinerTool operation guide".

## **8. Disassembly and installation of integrated miner**

### **8.1. Disassembly and installation of Power supply**

#### **8.1.1. Power disassembly miner**

1) .Unplug three load board connections (see figure 1 / 2 / 3), two fan lines (see figure 4 / 5) and one power line (see figure 6) before removing the power supply

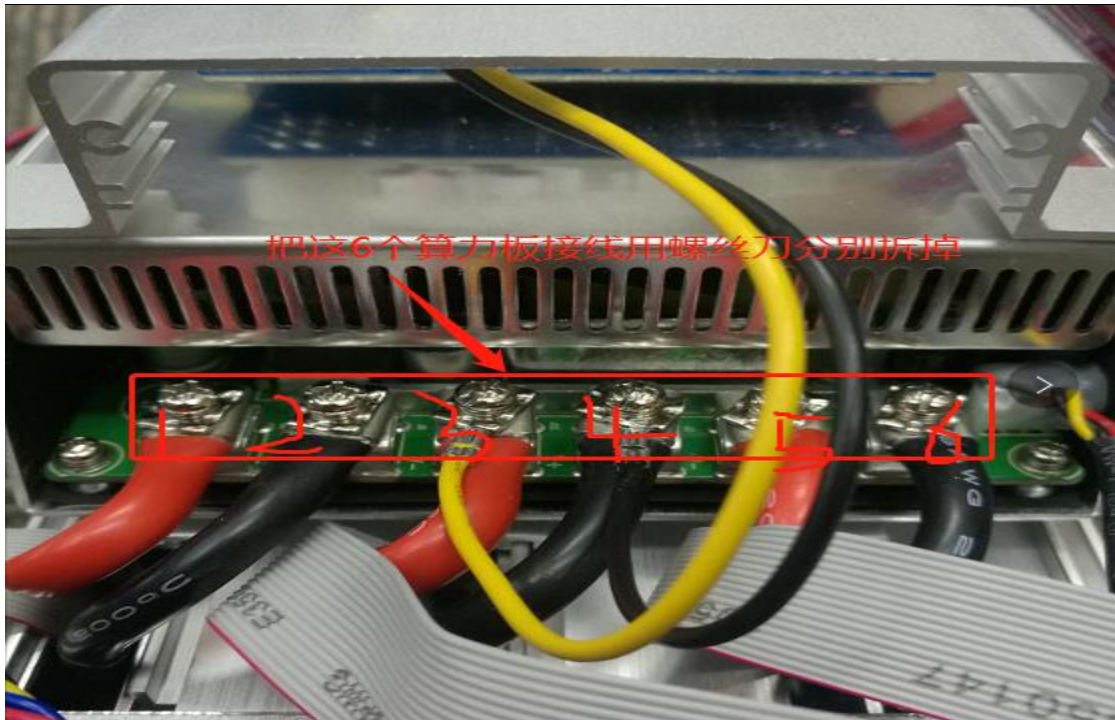


After drawing, as shown in the figure:



2) Separate load plate connection columns are removed (at the outlet side) in turn, as shown in the figure:

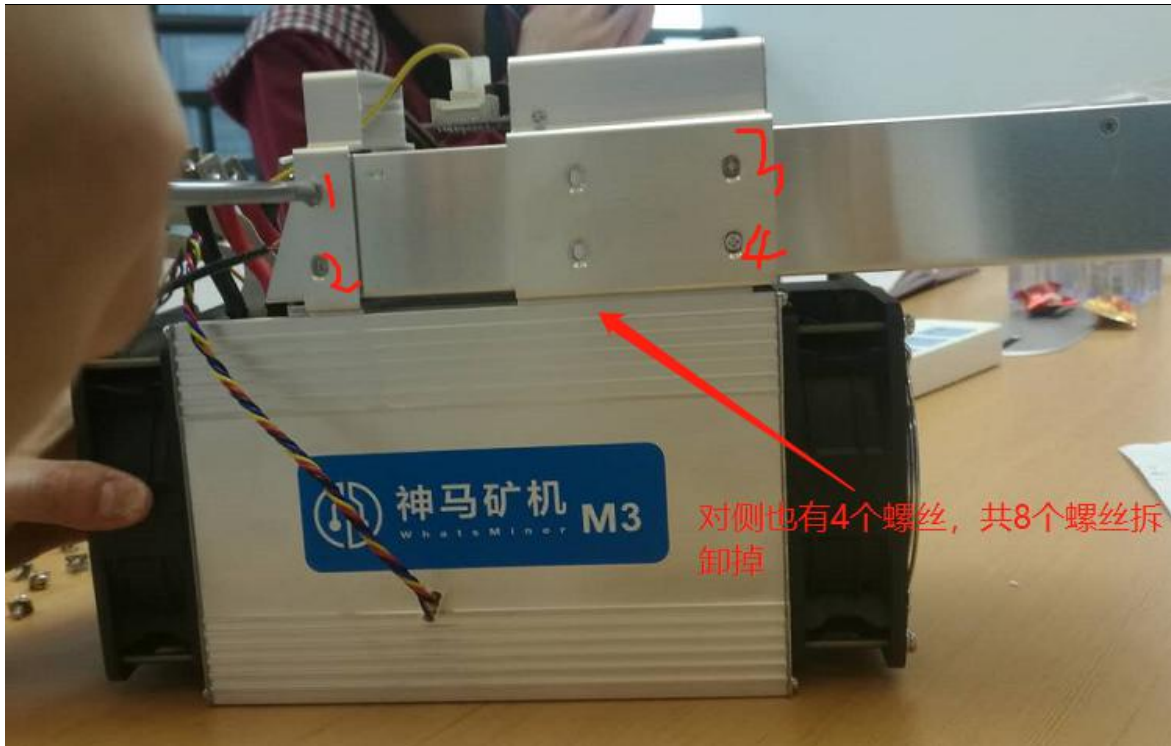




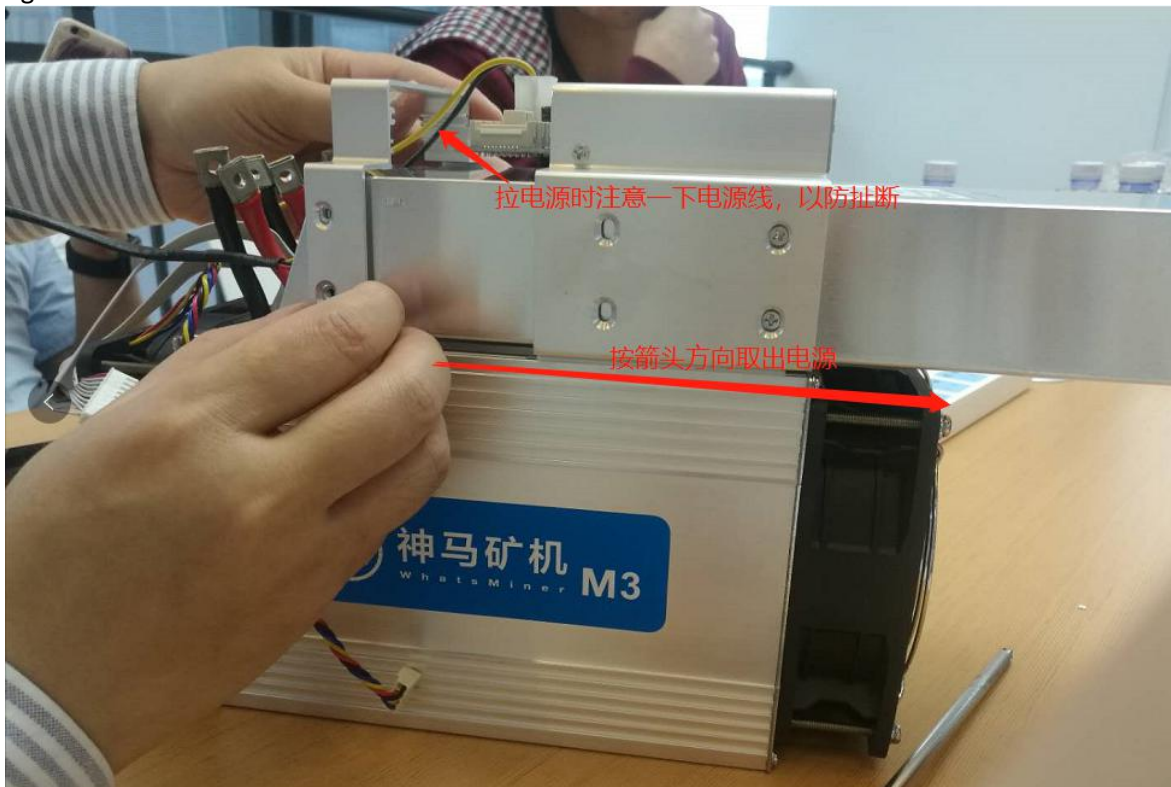
After disassembly, as shown in the figure:



2) The third step is to remove the eight screws on both sides of the fixed power supply, as shown in the figure:

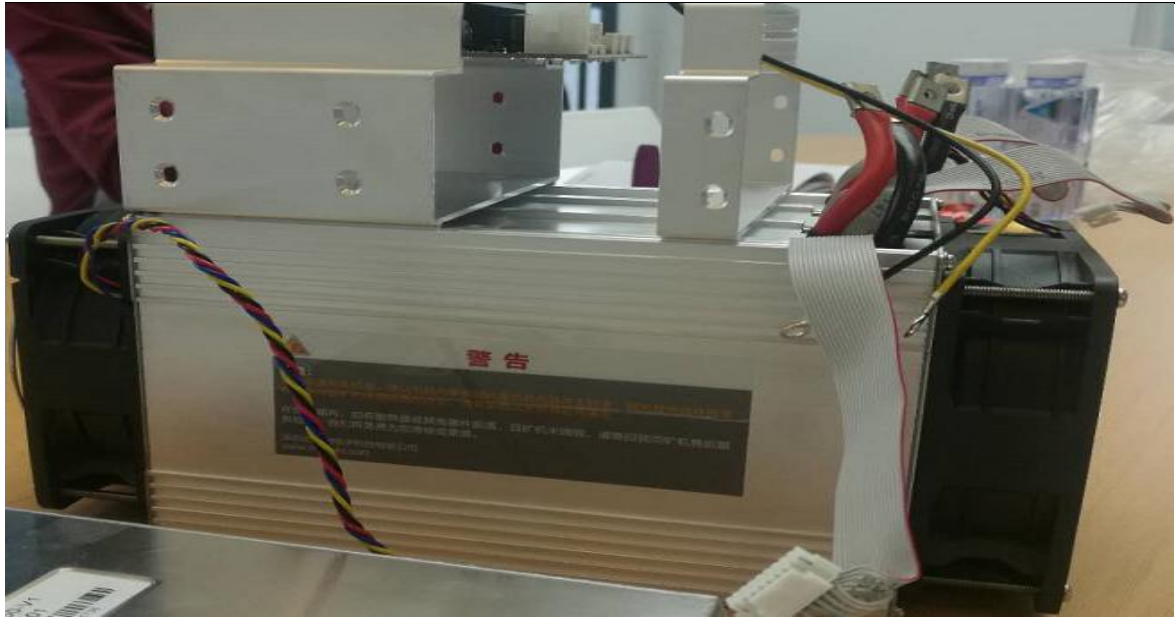


2) .Pull out the power supply from left to right (note that the power cord is not broken), as shown in the figure:



After the power supply is removed, the figure is as follows:



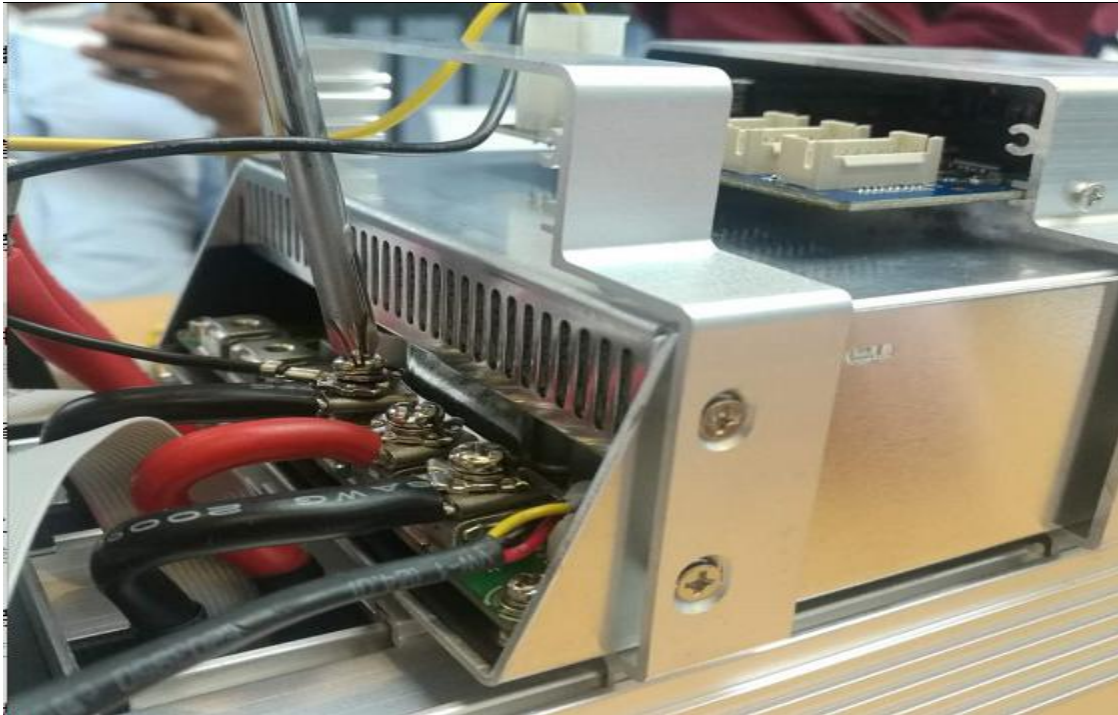


### 8.1.2. Installation of power supply

1) .1) when installing the power supply, fix the 4 screws of the control panel cover bracket first, then adjust the position of the armrest support and then tighten the screw, as shown in figure:



2) make sure to tighten the screws when connecting the bar with the terminal, otherwise it will affect the calculation force, as shown in figure:



3) .The control board of the line corresponding to plug-in, the power installation is complete.

## 8.2.Disassembly and installation of Control Panel

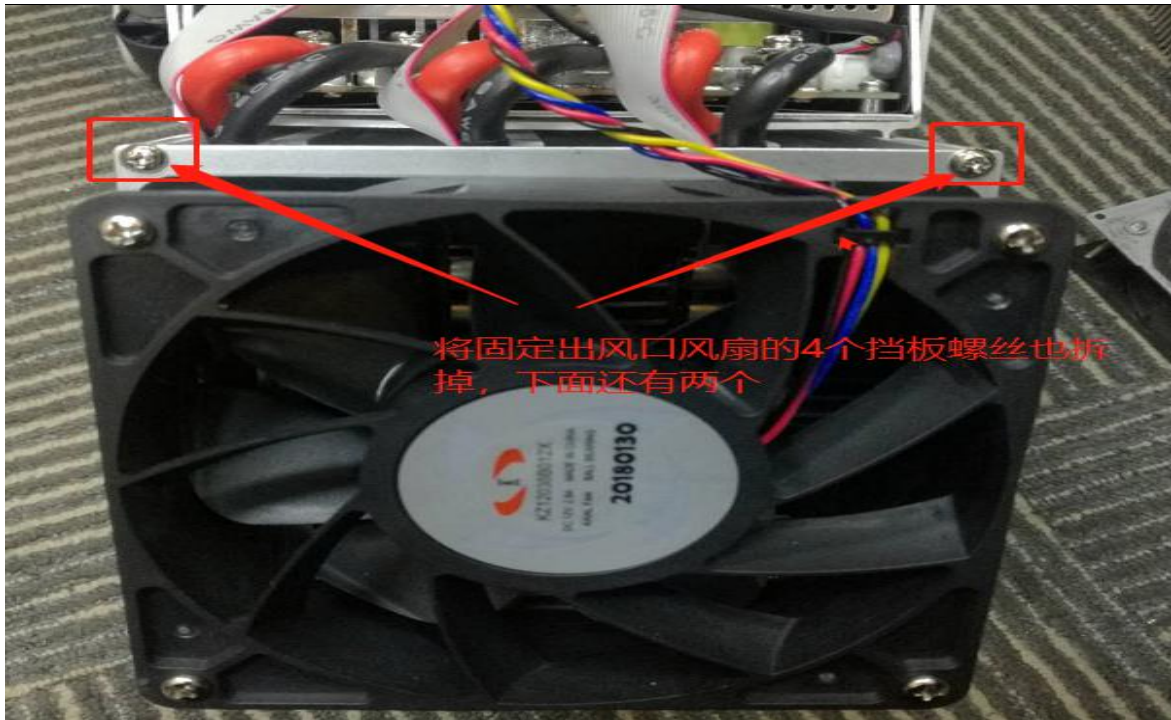
### 8.2.1.Disassembly of control panel

1) .1) remove the 2 screws of the fixed control and the 4 screws of the support of the fixed control plate respectively, as shown in the figure:

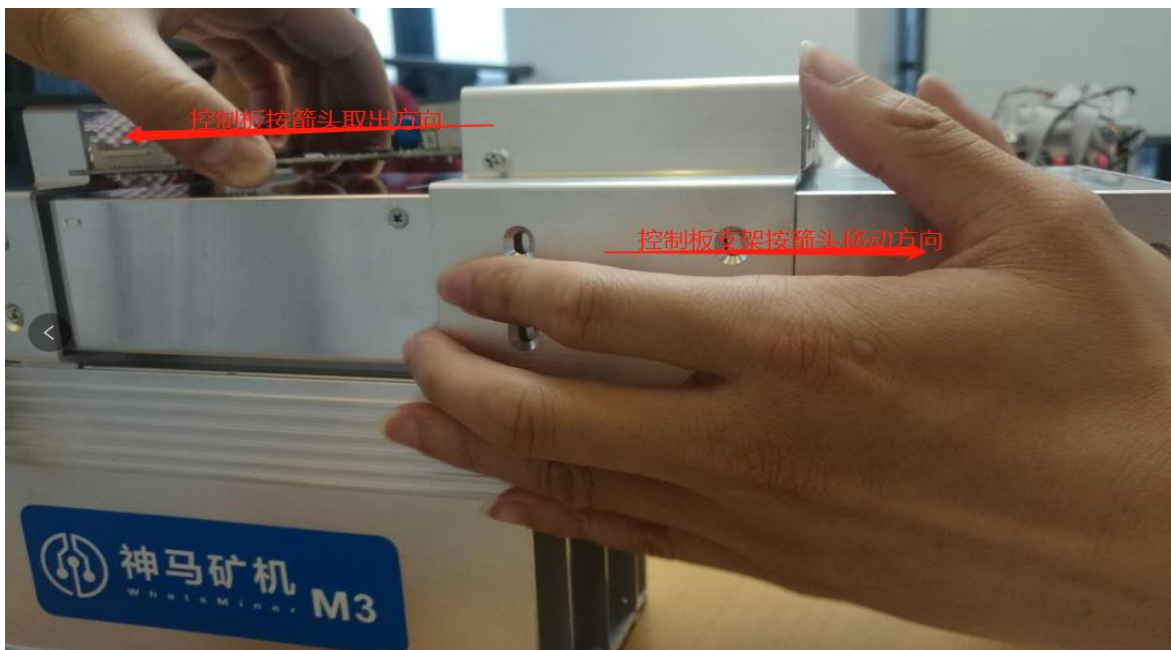


2) Remove the four baffle screws from the outlet of the fixed power supply, as shown in the figure:





2) Then move the control panel support from left to right, and the control panel is removed from right to left, as shown below:



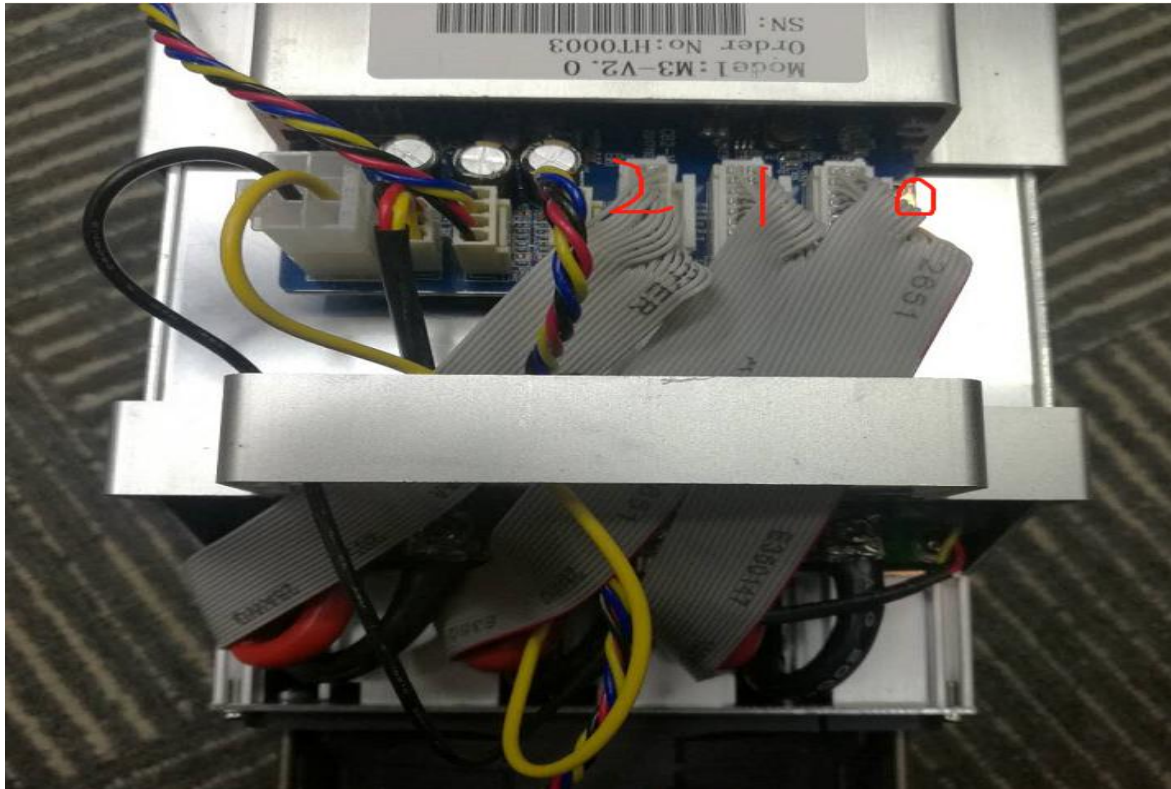
### 8.2.2. Installation of control panel

The mounting direction of the control panel is arranged in reverse order according to the control board removal, and the screws are tightened accordingly to prevent the control board from loosening.

## 8.3. Disassembly and installation of Force Plate

### 8.3.1. Disassembly of force plate

1) .There are three force plates on each miner, and the corresponding relationship between the control board and the control board is shown in the figure.:



2) .To remove the problematic force plate, the four baffle screws and the corresponding connecting posts for the fixed outlet fan need to be removed, as shown in the figure:





3) .After the connection column corresponding to the fan and the force plate is removed, the faulty force plate is extracted, as shown in the

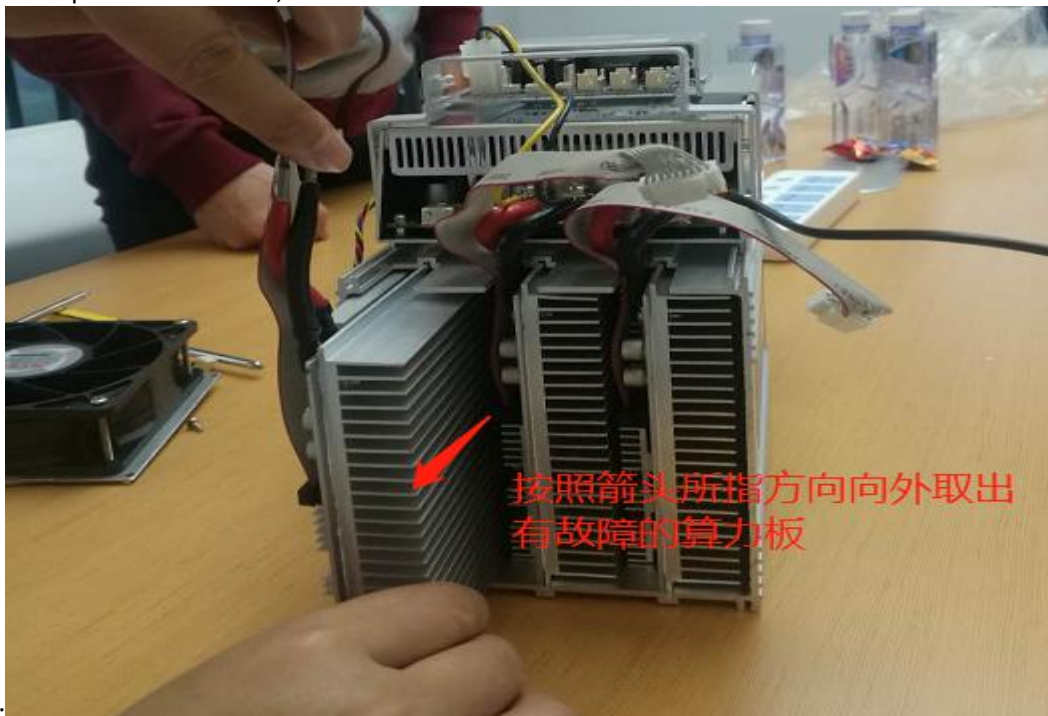
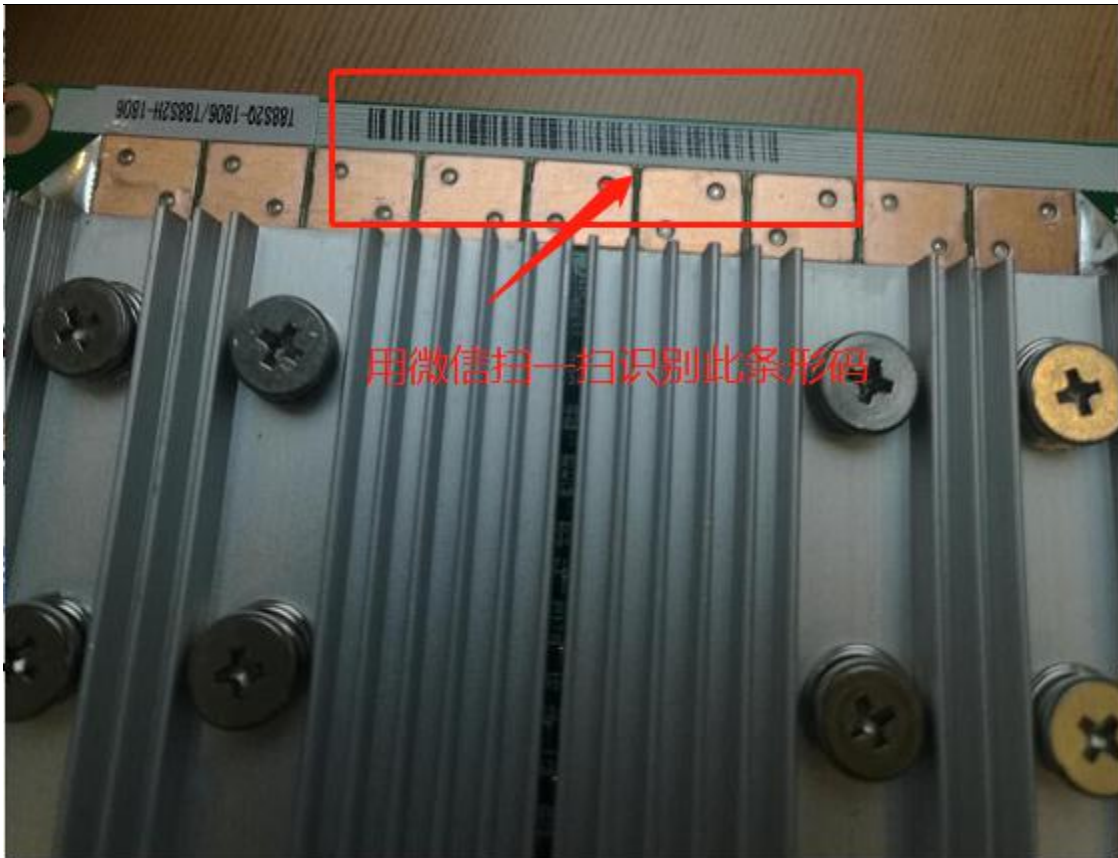


figure:

4) .After taking out the force plate, use WeChat to scan the serial number of the force plate and provide it to the relevant after-sales technicians, as shown in the figure:





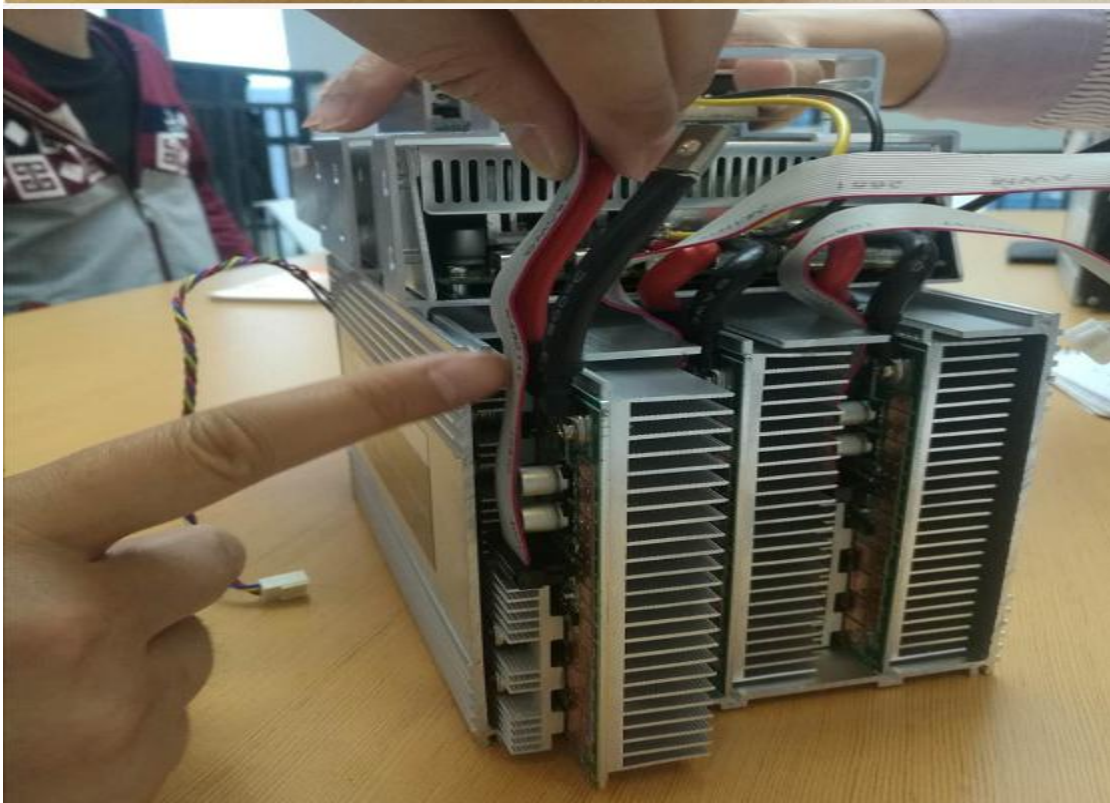
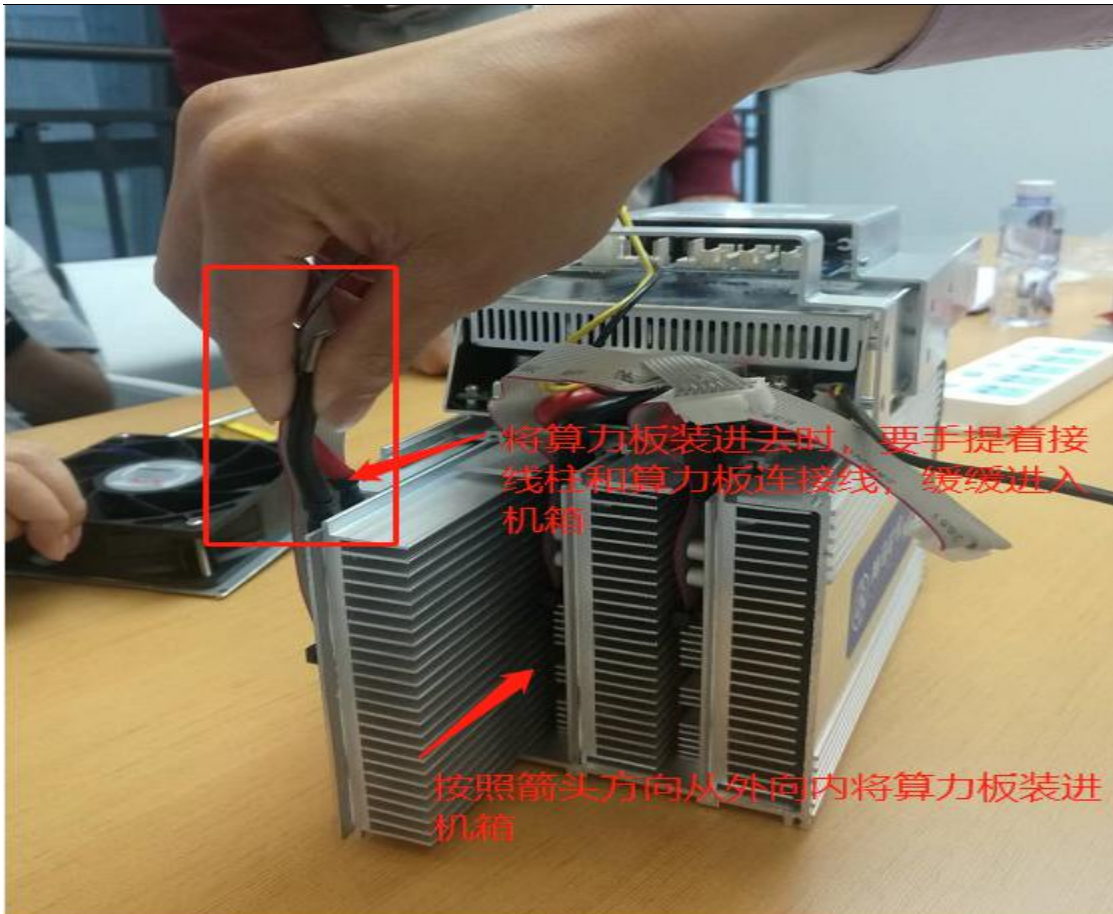
用微信扫一扫识别此条形码





### 8.3.2. Installation of force plate

1) .1) when the force plate is loaded into the chassis, one hand holds the force board into the force board slot, a portable starting force board connecting column and the force board connection line, and the sequence enters the chassis, as shown in figure:



2) .2) after the installation of the force plate, install the fan. When installing the fan, pay attention to the fan connection line on the right, be careful of the wrong direction, or you will need to reinstall, as shown in the figure:



