WhatsMiner M3 Operating Guide
V1.1

Shenzhen MicroBT Electronics Technology Co., Ltd.

Contents

1. Operational safety warning

1.1. Matters needing attention of the miner's wiring

WhatsMiner M3's 12V power cable, power control cable, fan cable, data cable must be properly connected, if the connection error, lead to control board, hash board, such as burn, the whole machine and board will not belong to the scope of warranty!

1.1.1. Control board 12V power cable connection precautions

When connecting the power cable of the control board, the buckle of the power cable plug and the socket of the control board must be corresponding. If the power cable is incorrectly plugged in, it may burn the control board and the signal cable.

The correct connection of the power cable plug and socket：
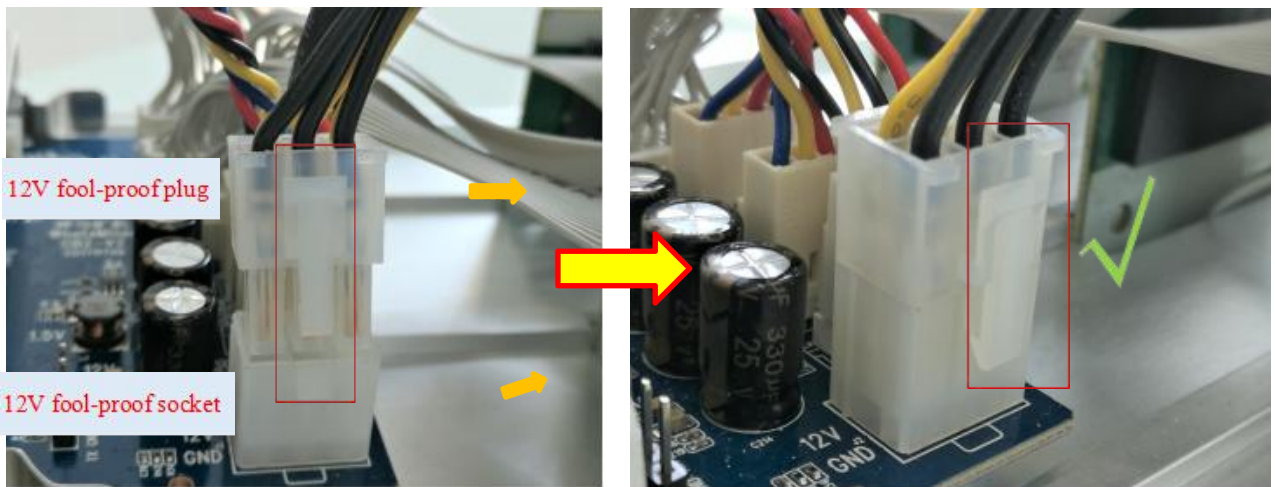
The incorrect connection of the power cable plug and socket：
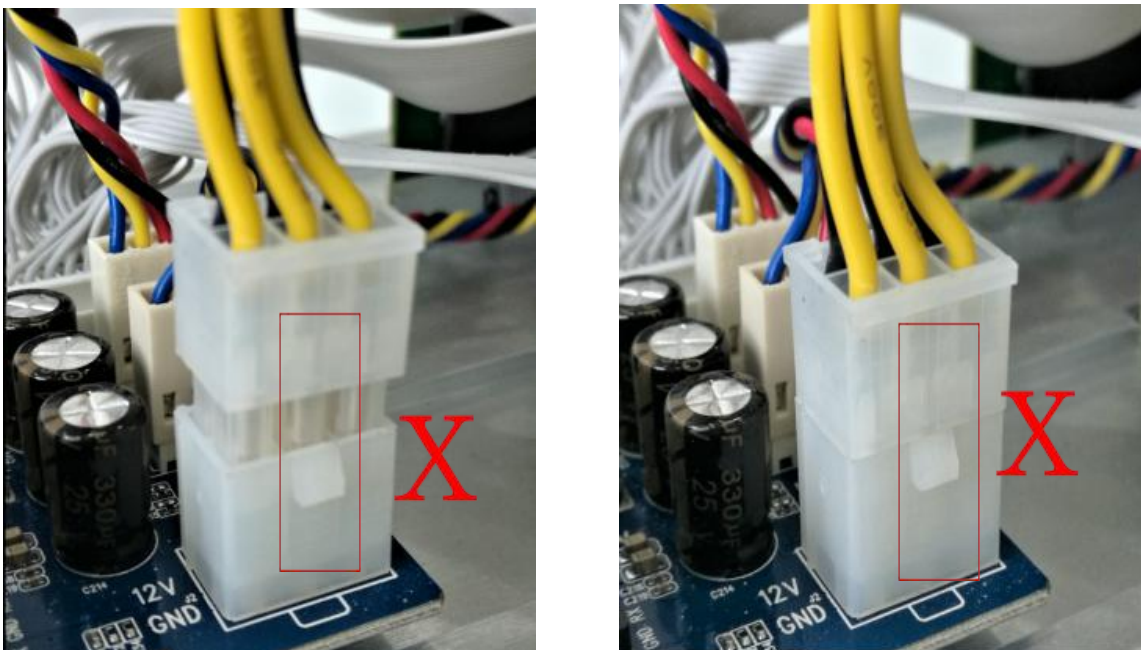
1.1.2. Connection of power control cable

The power control cable is 3pin red and black yellow line, 3 small orientations, and slot relative insertion:
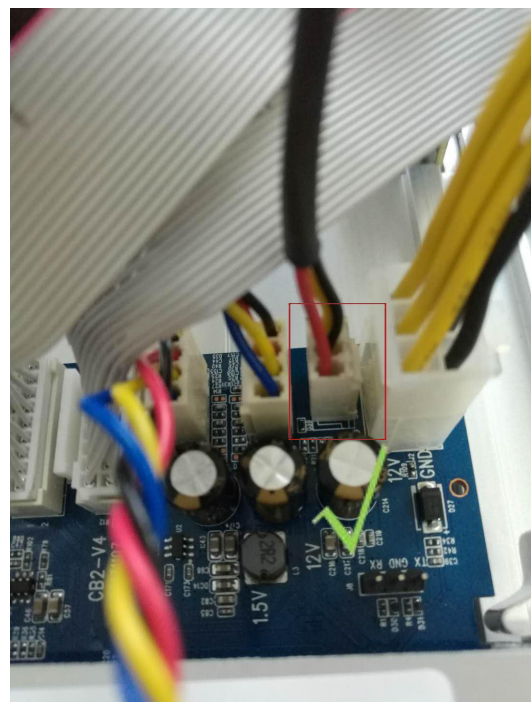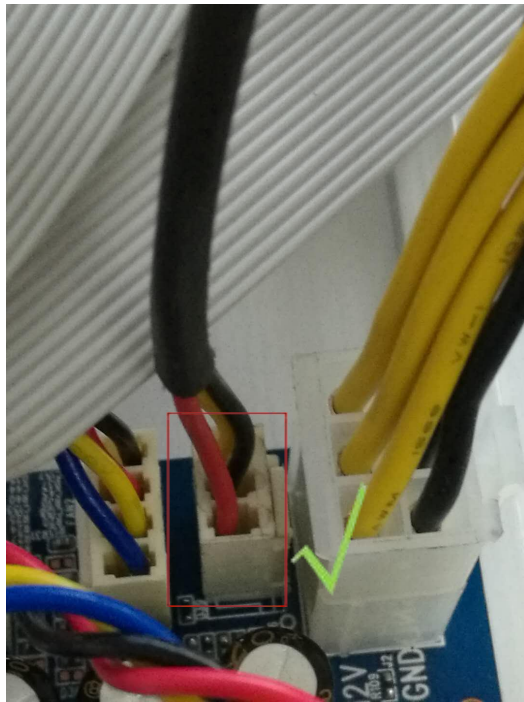
1.1.3. Fan cable connection check

The fan cable is 4pin blue and yellow red black line, with 4 small orientations, and the slot is inserted in relative position，and reliable connections。

1.1.4. Data cable connection check

The hash board data cable is connected with the control board, Connect the plug and socket correctly, and reliable connections.
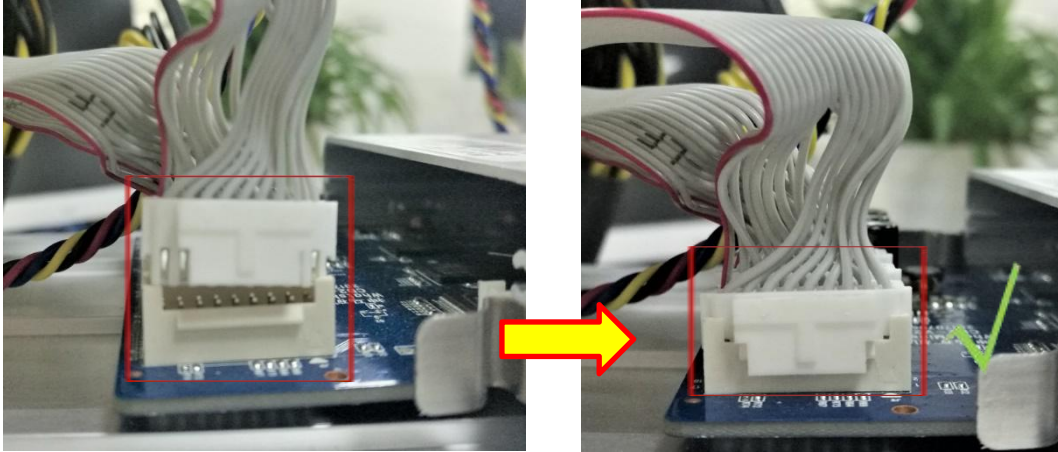
1.1.5. Connect the power cable of the hash board

When connecting the power cable of the hash board, the buckle of the power cable plug and the socket of the hash board must be corresponding. If the power cable is incorrectly plugged in, it may burn the hash board.

The correct connection of the power cable plug and socket:

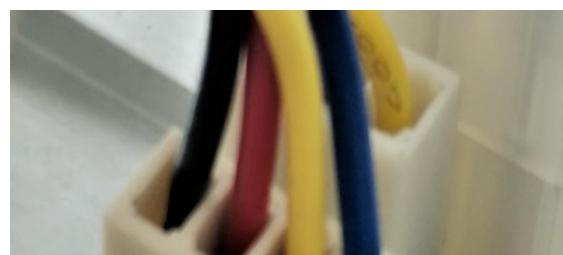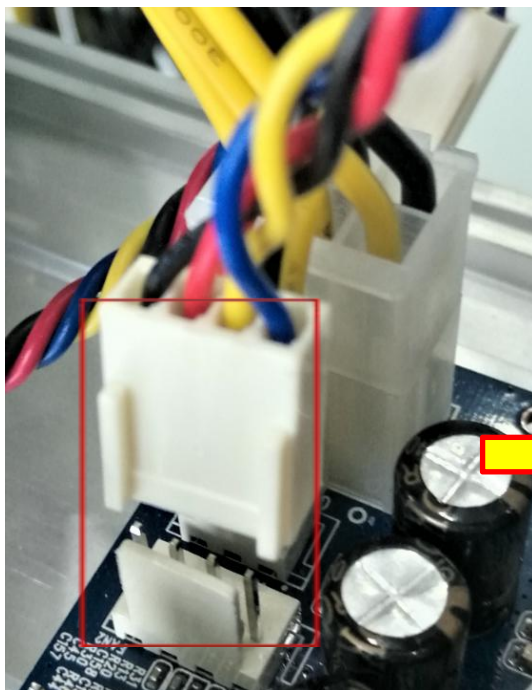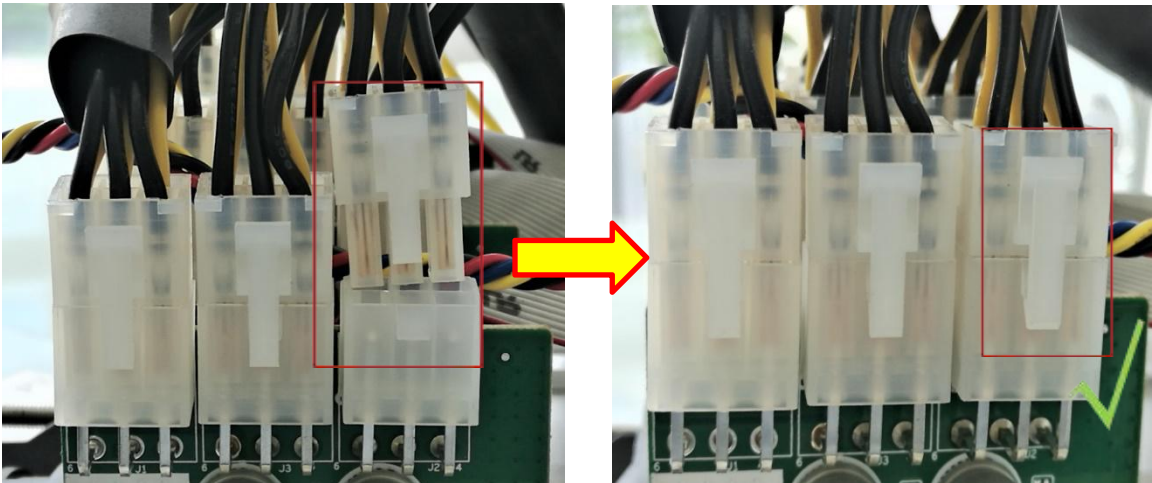The incorrect connection of the power cable plug and socket:

1.1.6. Final check

After all connections are completed, check again to make sure all connections are correct.

Notes:

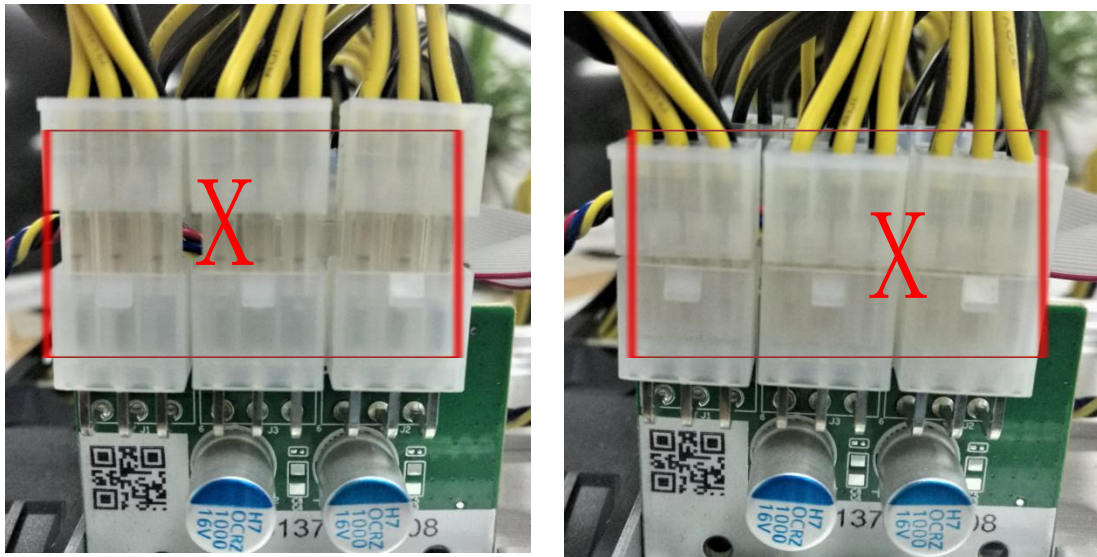(1) The miner before wiring and power up, according to the warning signs on the side of the miner, shake miner, make sure no heat sink or other devices off, Otherwise, it will burn the hash board and control board when it is on power. This situation also does not belong to the warranty scope!

(2) It is necessary to reliably connect the power control cable between the control board and the power supply, otherwise it may be unable to control the voltage output of power supply, resulting in low hash rate.

(3) The control board must be reliably connected to the fan cable. If the fan line is disconnected or the connection is not good, the miner may not be cooled down, resulting in low hash rate.

1.2. Notes for handling of the miner

It is strictly forbidden to carry the power cable, data cable, power control cable and fan cable as the load-carrying handle of the miner and power supply in the process of moving and installing the miner. Otherwise, the connection will be damaged, the cable is loose, and the control board is physically damaged beyond the endurance. The resulting hardware damage and failure will not belong to the warranty scope!
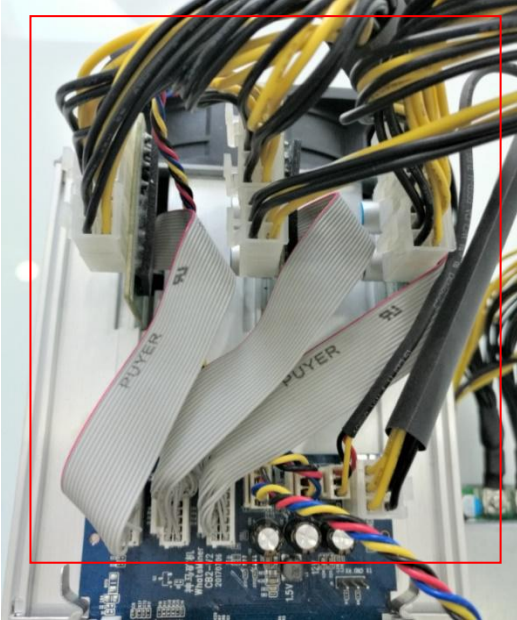
2. Preparation of miner configuration

2.1. List of miner configuration tools

The	names	num	use	note
1	computer	1	Configuration miner	
2	switch		Mining network data exchange.	
3	DHCP/NTP Server/router	1	1. Provide dynamic IP address 2. Provide NTP network time for the miner	The miner acquires dynamic IP address by default of DHCP.

2.2. Reference network diagram of miner

3. Miner data configuration (configuration on webpage)

4.1. Query the dynamic IP address obtained by the miner

4.1.1. Run the WhatsMinerTools software

First run whatsminertools software on the PC (PC and miner must be in the same network segment), choose "detect IP" tab in the software, set the miner's room number, shelf number, layer number and the position of the layer, then click on "start".

4.1.2. Check the IP address of the miner.

(1) The Miner is powered on after about 30s, the yellow light of the network port is always on and the green light is flashing under normal circumstances. Press the IPFOUND button on the panel of the control board (long button) for 5s or more, The two LEDs on the right side will flash several times to indicate that the miner has broadcast the IP and MAC addresses to the network.

(2) In whatsMinerTools software to view the miner reported dynamic IP, MAC address and position.
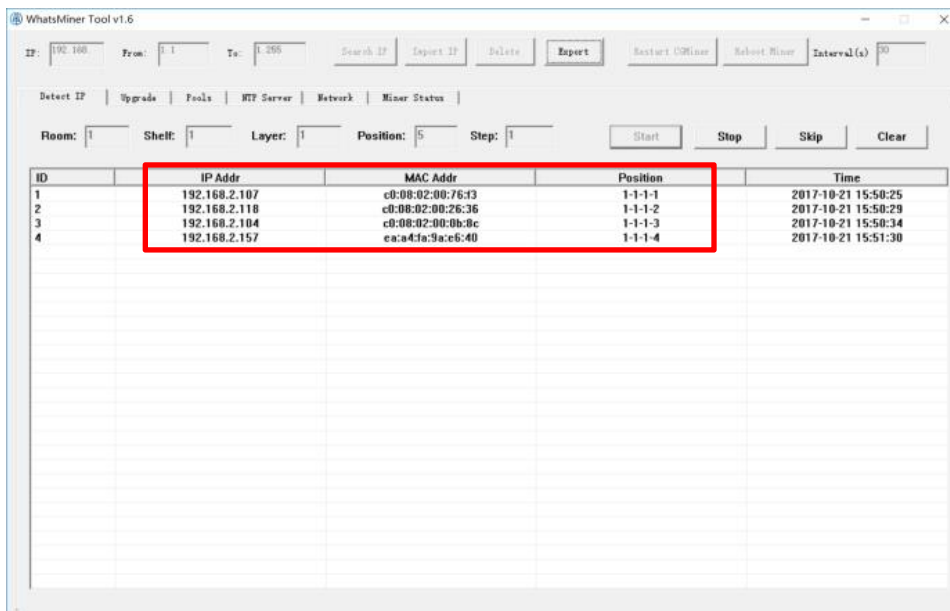
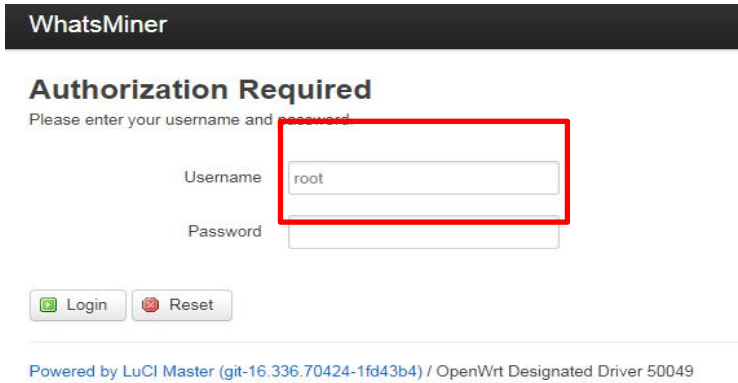Notes:
(1) If all the lights on the panel of the control board are not on, please check the power supply 220V power cable, 12V power cable connection is reliable, the connection is correct.
(2) If the indicator on the right side of the panel of the control board is on, but the network port light is off, or the green light does not flash, please check whether the switch is normal, whether the cable connection is reliable and the quality of the cable is faulty.
(3) PC running WhatsMinerTools and miner must be in the same network segment, otherwise it will cause the software not to receive ipfound button reported IP address and mac address.
(4) If the PC and miner in the same network segment, and the network has opened the DHCP service, but press the ipfound button, WhatsMinerTools can not find the miner's ip. Press the reset button on the control board for more than 5 seconds to restore the factory default configuration, and then power off the miner and power it on again. Press the ipfound button to check the miner's ip address after powering on for 30 seconds.
(5) If the PC is running WhatsMinerTools, press the "Start", did not press ipfound button, but the software automatically found the miner's IP address, mac address, the reason may be miner's ipfound button stuck panel, to find the software display mac address corresponding to the miner (control board

![MicroBT]

4.2. Configure static ip (optional)

Change the miner's dynamic IP address to a planned static IP address.
(1) Enter the miner's dynamic IP in the browser, and use the root user, the default password: root, login the miner.
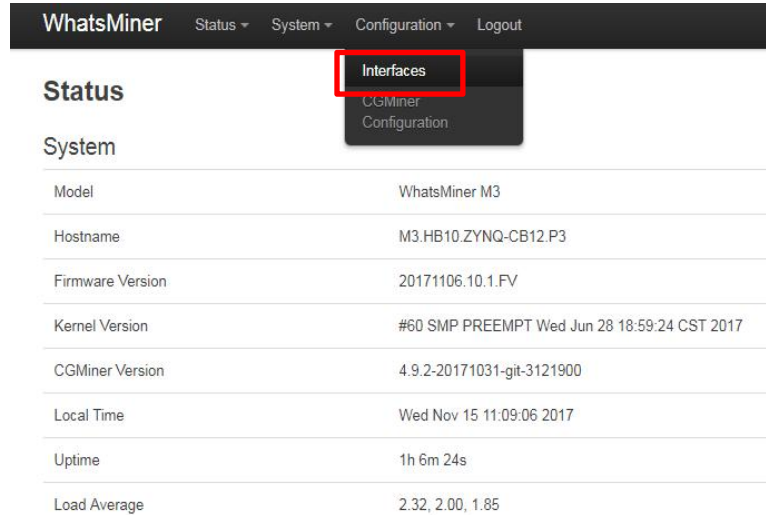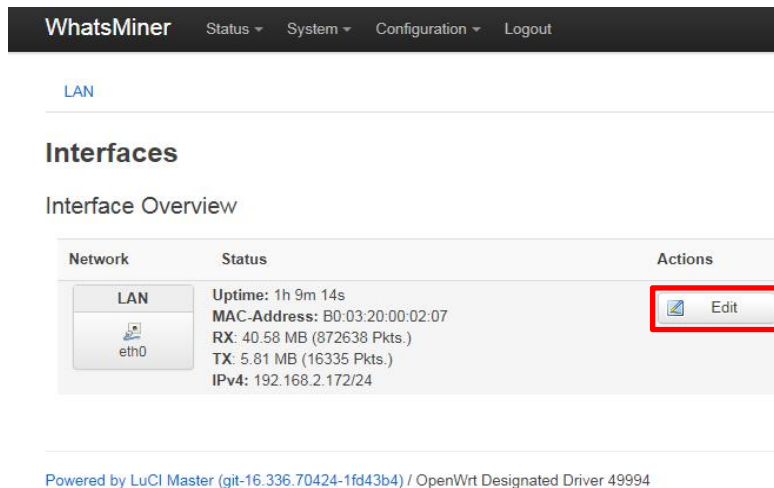
(2) After logging in the miner, select: Configuration-> interfaces, and into the network interface.
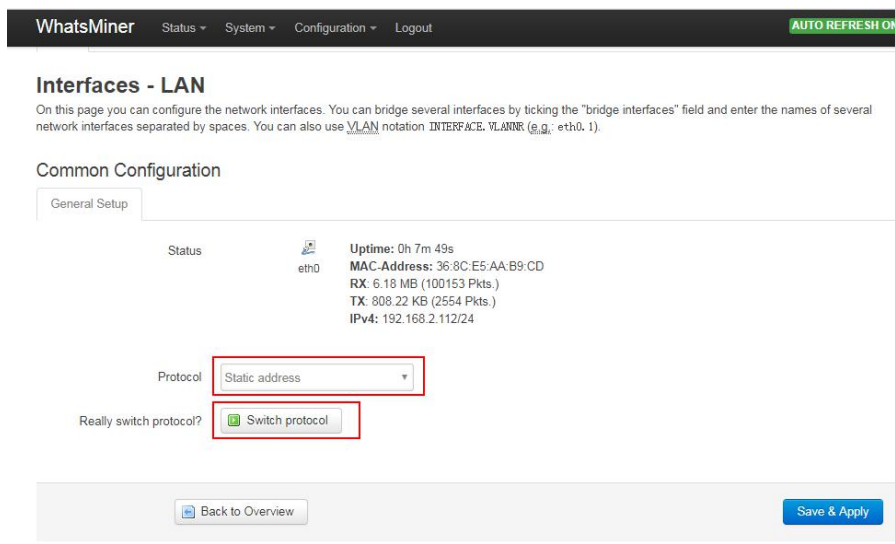
(3) In "Interfaces", click "Edit"
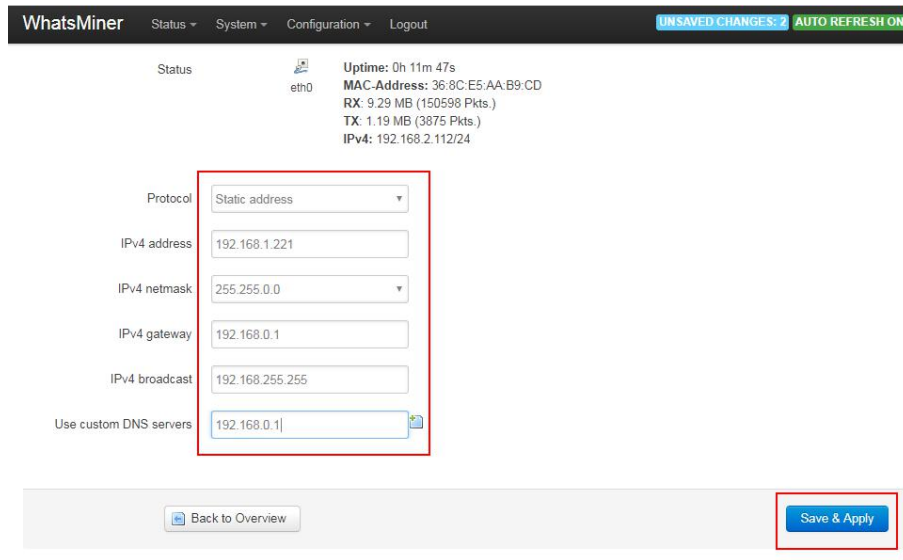
(4) In "Common Configuration", the protocol chooses "Static address", then click "Switch protocol".

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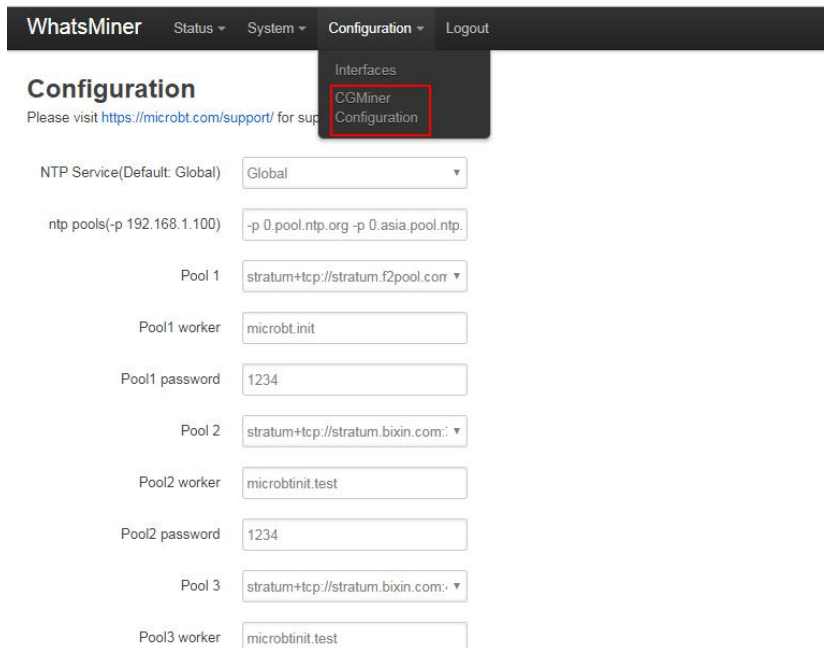

Note:
After save &apply, you need to enter the newly set static IP address to log in the miner.

# 4.3. Configure NTP server address and mine pool & miner data.

4.3.1. Modify NTP synchronization server address (optional)

(1) After login, select in the interface: Configuration- > CGMiner Configuration.

(2) In the cgminer configuration interface, miner factory default configuration of the four ntp server address, according to the mining farm situation, modify or add ntp server address for the local ntp server address.
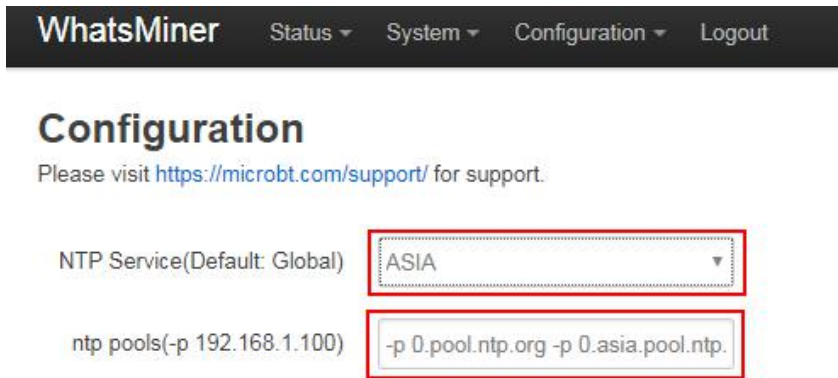
The default NTP server configuration is: -p 3.asia.pool.ntp.org -p 2.cn.pool.ntp.org -p 1.cn.pool.ntp.org -p0.cn.pool.ntp.org.
Each -p is followed by an NTP server domain name or IP address, which can be modified or added to the NTP Server address pool.
(3) after modifying the NTP server address, click "save & application" in the lower right corner.

Notes:
(1) The public NTP server in different countries may not be the same. If the miner is running, but it can't time synchronize with the configured NTP server, the miner will not work properly. Please check if the address of the public NTP server in the country is correctly configured.
(2) At http://www.pool.ntp.org/zone/@, you can find the public NTP server address for your region and country, in the miner configuration to increase your country's NTP server address.

4.3.2. Mine pools & miner configuration.

(1) After login miner, enter the Cgminer configuration interface.
(2) In the Cgminer configuration interface, modify the address of the mine pool, the miner's name, and then click "save & apply" on the right corner to save the modified configuration.
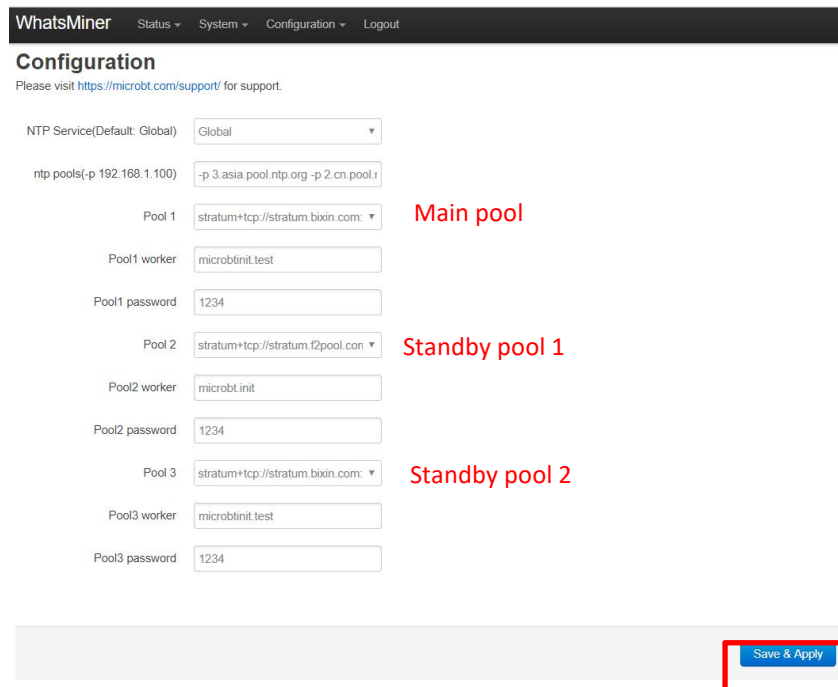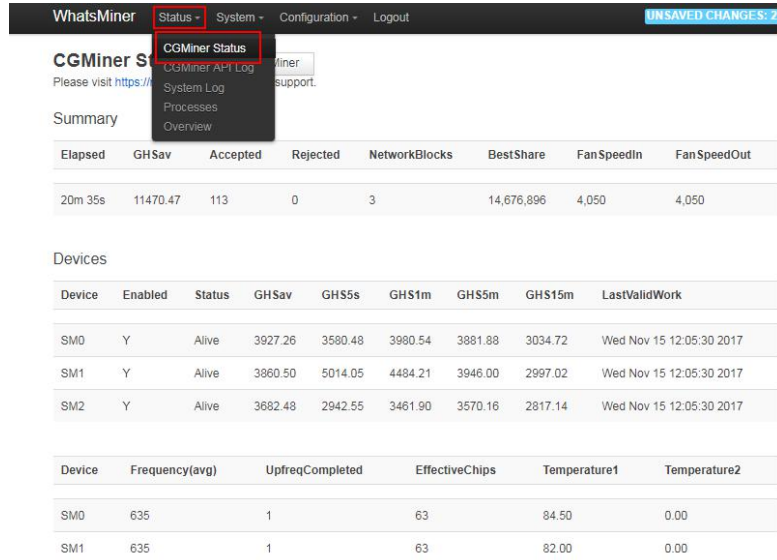
Note:

After the mine pool configuration is modified, the cgminer process must be restarted or the control board is restarted before the modified configuration becomes effective.

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

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

![MicroBT logo]

(4) After the configuration is saved, if cgminer is not restarted, you can reboot the control board to make the configuration take effect.

In the system interface, click "Reboot".

In the reboot interface, click "Perform reboot" to confirm reboot.

About half a minute after rebooting the miner, the miner system is running, the browser will automatically jump to the login screen.

5. Check the running status of the miner

After the miner is connected to the network and run, login the miner and check the running status of the miner.

(1) In the interface of the miner, select: status-> CGMiner Status, and enter the CGMiner running state interface.

(2) Check the running status of the overall hash rate, front and rear fan speed, mine pool connection, hash rate of each hash board, temperature of each hash board, etc.

WhatsMiner — Status ▾ System ▾ Configuration ▾ Logout
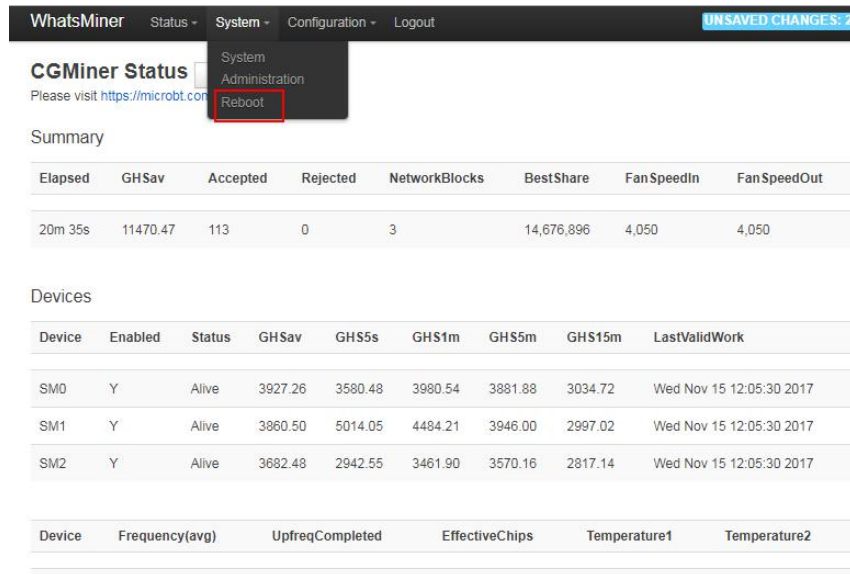
CGMiner Status [Restart CGMiner]

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

Total hash rate

In/Out fan speed

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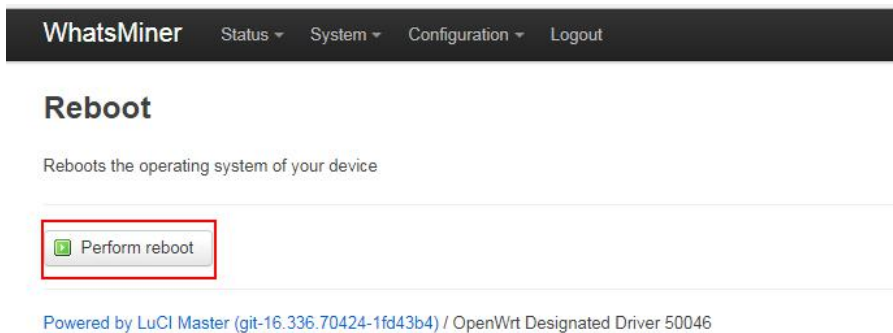
Elapsed	GHSav	Accepted	Rejected	NetworkBlocks	BestShare	FanSpeedIn	FanSpeedOut
22m 24s	11660.74	127	0	3	3,454,424	6,180	5,700

Hash rate of each hash board

Devices

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	4866.14	3979.61	3799.78	3048.78	Wed Oct 25 18:17:07 2017
SM2	Y	Alive	3929.40	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

Notes:

(1) The order of the fan and hash board in the miner.

In fan

SM2   SM1   SM0

Out fan
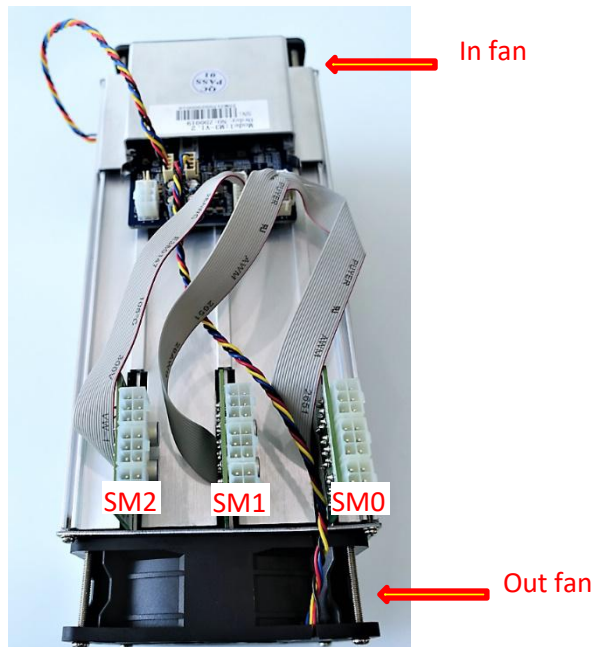
(2) When the miner's wiring is correct and the network is normal, after the miner's power is on, the miner will start to automatically search the frequency. The frequency search test takes about 15 minutes and the formal mining will be conducted, this time is normal hash rate. If the search is not over yet, the hash rate you see will be lower than the normal hash rate.

(3) If the hash board temperature is higher than 85 degrees, the fan speed exceeds 6100 rpm, then the miner will reduce the operating frequency, the hash rate will be lower than normal. Mine ventilation and cooling must be done measures to ensure that the air inlet temperature of the miner below 40°

(3) If the fan cable is not reliably connected to the control board, the corresponding fan speed is 0, which will cause the temperature of the miner to be over high and the hash board to down-frequency and hash rate to drop.

(4) If not detected the temperature of some hash boards, need to power off the miner, re-plug the power cable and data cable (one side of the control board, one side of the hash board) corresponding to the hash board, to ensure reliable connection.

6. Configure miner in batches, check status, upgrade firmware

You can use WhatsMinerTool software batch configuration, status checking, firmware upgrade, detailed operation, see "WhatsMinerTool Operating Guide"