



AvalonMiner104X Series User Manual

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Overview

Thank you for choosing our products. Please read through this user manual carefully before operation as to ensure the correct use and installation of the products, and keep the manual properly for future reference.

Safety Regulation

Warning: In order to prevent human safety accidents, such as ore machine and power damage, fall, electric shock and fire, please install and use the machine strictly in accordance with the instructions. It's prohibited to modify the ore machine and power, and replace the components personally.

- Don't use the power supply beyond the rated voltage range.
- Don't put the ore machine in unstable places.
- When inspecting and repairing the ore machine or the power supply, please entrust professional personnel for the operation.
- When abnormal phenomena of ore machine or power supply occurs, cut off the power immediately and contact the after-sale personnel.

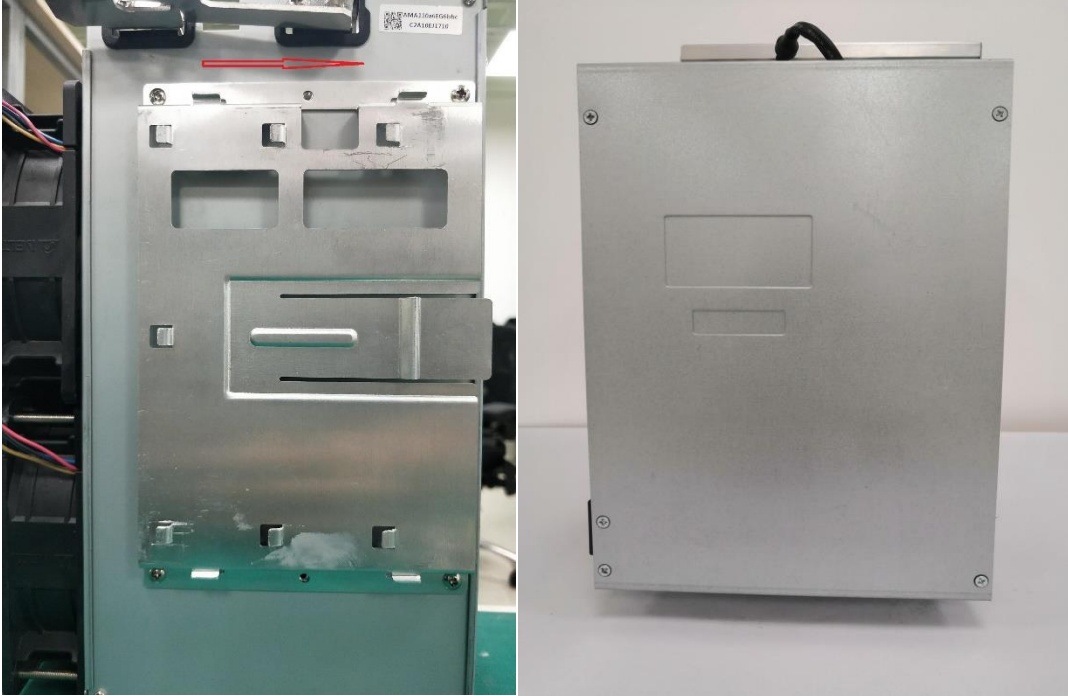
Hardware Connection

Connect the power supply and products as below Figs.



Power Connection

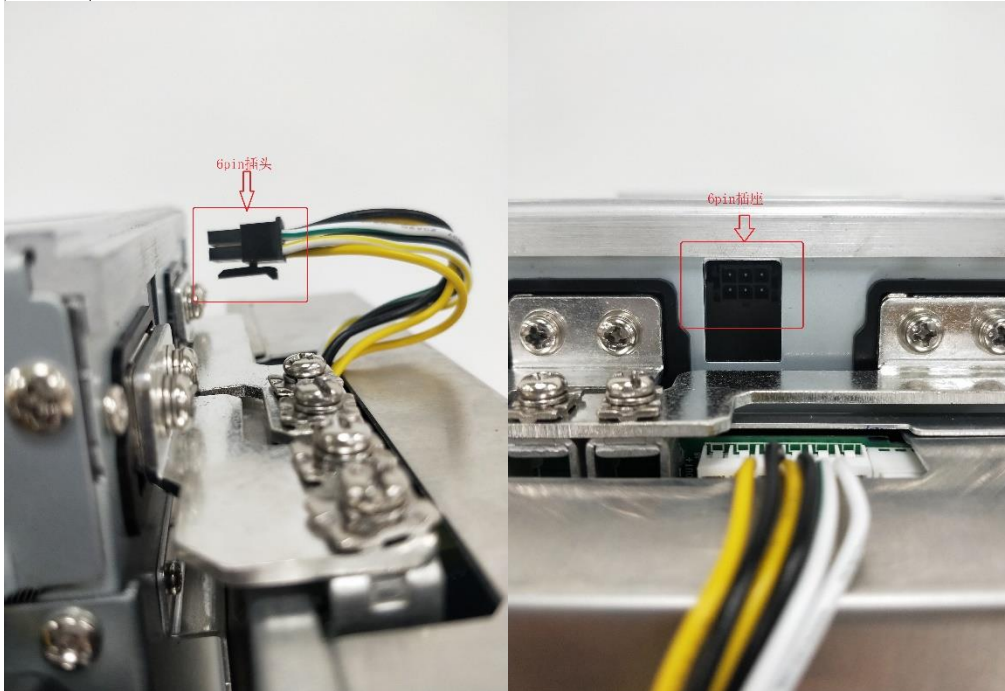
Insert the PSU into the slot as below Figs



Please stretch the output copper wire to connect the PSU with the miner via 8 M4*8 screws as the below Fig.



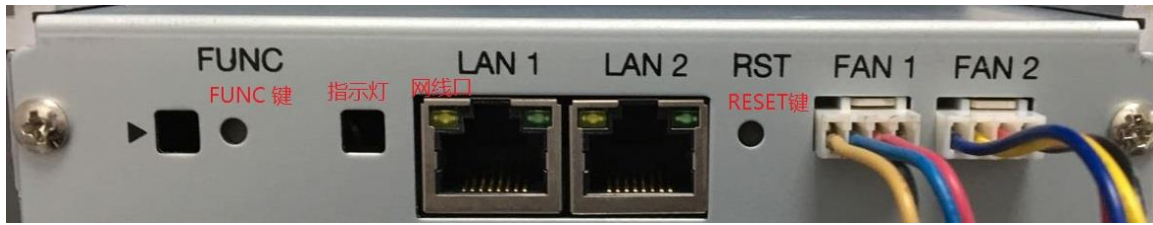
Please insert the 6-pin wire into the matching socket.



Each unit is born with 2 RJ45 ports available for a daisy-chain (suggestion: better to be 12 units at most as one group). Let's take an example as follow, RJ45 cable relates to the switchboard at one end while the other one linking with the first machine that goes with the second miner and so on so forth, to form a multiple connection.



Keys and Indicator Lamps



Keys

RESET: System reset key, and system reset will not affect network series connection

FUNC: Functional keys can be used to restore the factory setting, enter the configuration mode, and switch lighting status in operation, etc.

Indicator Lamps

- The indicator lamp flashes in red several times after power-on
- After device startup, the indicator lamp turns white for about three secs. During this period, press the FUNC key, it will enter the configuration mode.
- The indicator lamp is green under normal mining condition.
- The indicator is yellow during system preparation.
- The indicator lamp is red when the system is overheated.
- During system operation, the indicator lamp turns white by FMS software or manually pressing the FUNC key, and the lamp reset to original color after press the Key again.

Restore to factory settings: Press the FUNC function key when power on for five seconds till the white lamp flickers that means the success., and then press the RESET or power to restart.

Work Mode

The device has two work modes: “normal mode” and “configuration mode”.

Normal Mode

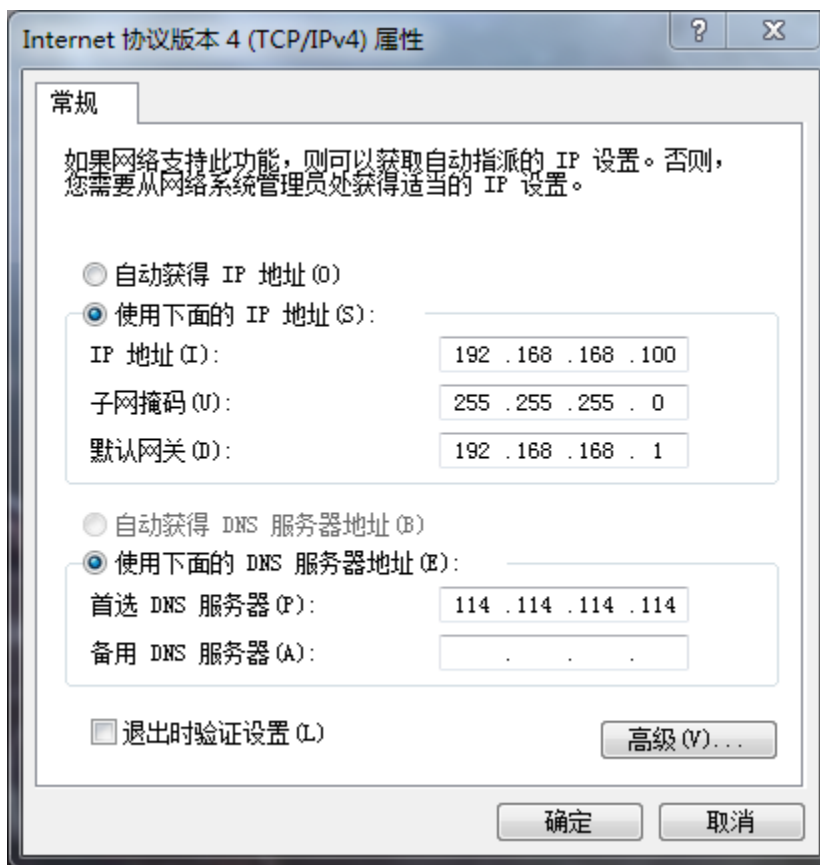
In normal mining mode, the device runs in this mode most of its life cycle, which network can use DHCP (dynamic acquisition) or static IP, and the default is set to DHCP.

Configuration Mode

Press the FUNC key when the lamp is white (about three secs.) after startup, and the device will enter this mode.

In this mode, the IP address is static (address: 192.168.168.168, subnet mask: 255.255.255.0), which can't process the mining function. The built-in Web service of the device can be accessed through PC browser to configure network, ore pool, password and other information.

Set PC to static IP address: 192.168.168.100 (or any other non-conflicting address with the same segment), subnet mask: 255.255.255.0, connect to the same network with the device (under the same exchanger or router, or directly connect PC to the device network).



1. Please right click  to "open network and internet settings";
2. Go to "change adapter options" to disable WLAN and enable Ethernet.

Then use browser to access <http://192.168.168/> to configure the device. (Modify static IP, etc)

After configuration, nothing will take effect unless machine rebooted. Users are free to either click Reboot key on the left part of the interface or power off manually. Note: please do remember to switch internet connection, otherwise there won't be access to internet for miners.



Please input the ip address modified into the browser. The indicator lamp will turn green under correct operations.

System Setting

Access the device's built-in Web service through browser, and enter the device console after login.

User Login

Default username: root, default password: root, it can enter the Overview page after login.



Network Setting

Click on the left Network of the console to set it to DHCP (dynamic acquisition) or IP(Static).

Note: Network settings must be restarted after saving. Click Reboot on the left side of the console, or press RESET key to restart, and it also can cut off the power supply to restart.

Ore Pool Setting



The following Fig. is the default of factory settings. WorkMode has Normal Mode or High Performance mode. When using the High Performance mode, please be noted to use high voltage power supply for output to avoid hardware damage.

Note: Ore pool configuration must be restarted after saving. Click Reboot on the left side of the console, or press RESET key to restart, and it also can cut off the power supply to restart.

The screenshot shows the 'Avalon Miner' web interface. On the left is a dark sidebar with a menu: '> Overview', '> Pool' (highlighted in red), '> Network', '> System', '>> Administrator', '>> Logout', '>> Reboot', and '> Log'. At the bottom of the sidebar is the text 'Canaan Creative Co., Ltd.' with a left-pointing arrow below it. The main content area is titled 'Avalon Miner' and contains two sections. The 'Pool Configure' section has three input fields: 'Pool' with the value 'stratum-tcp://btc.ss.poolin.com:443', 'Worker' with 'cctrix.001', and 'Password' with '123'. The 'Advanced Configure' section has two input fields: 'More Option' with 'More Option' and 'Work Mode' with a dropdown menu showing 'Normal Mode'. A 'Save' button is located at the bottom right of the main content area.

User Password

Default username: root, default password: root

Click Administrator on the left side of the console to set a new password and save it.

Management Software FMS

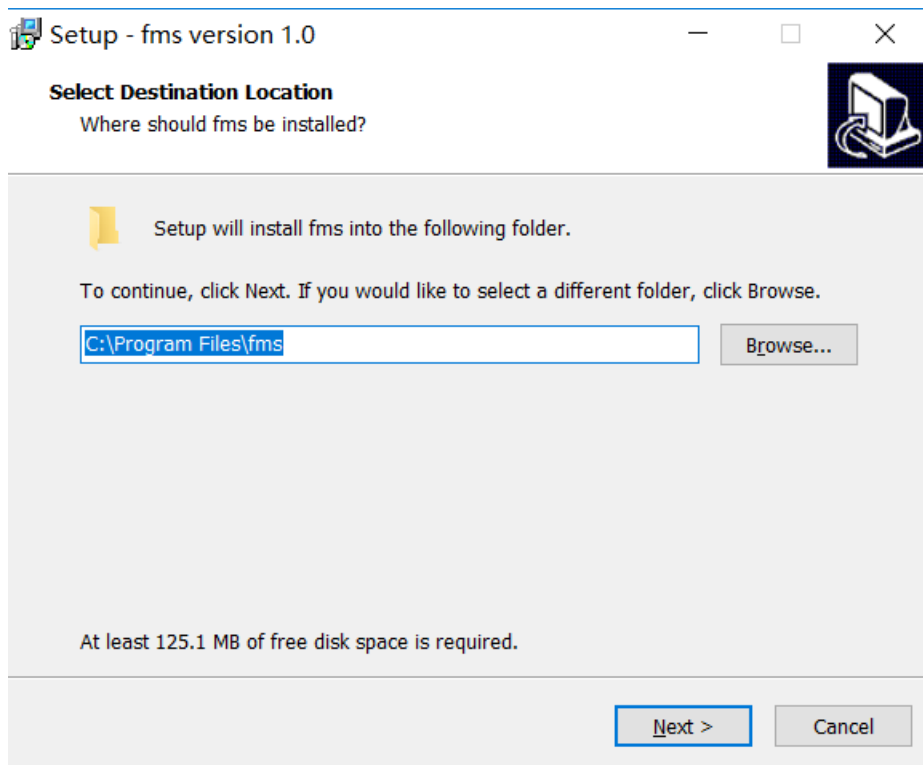
FMS User Guide

- Installation

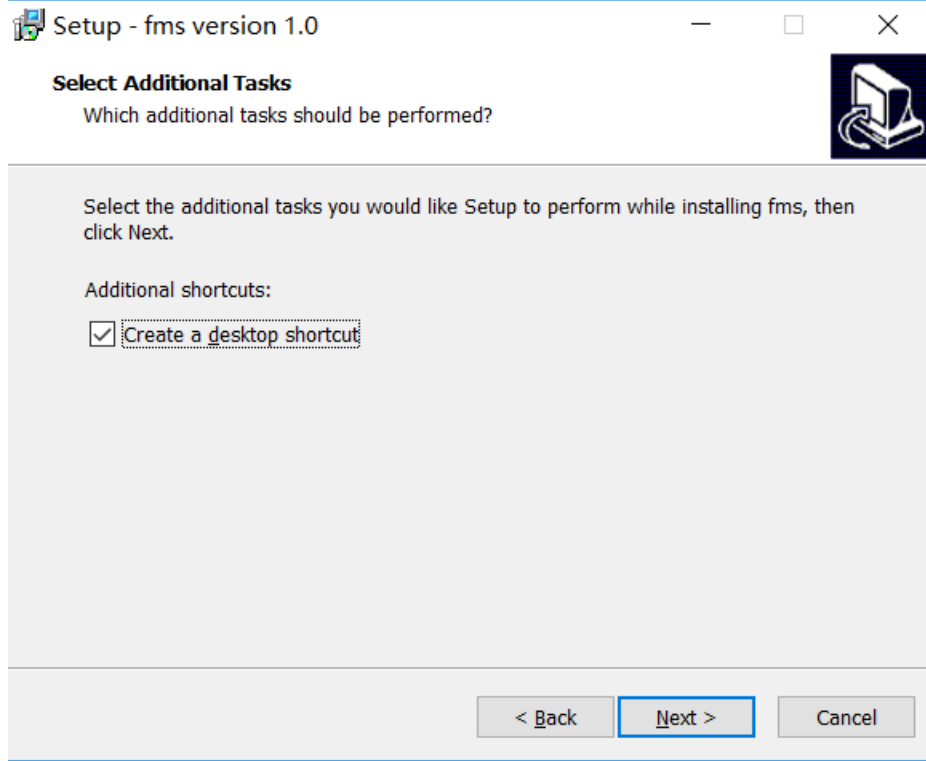
- 1 . Double click fms.exe icon to start the installer.



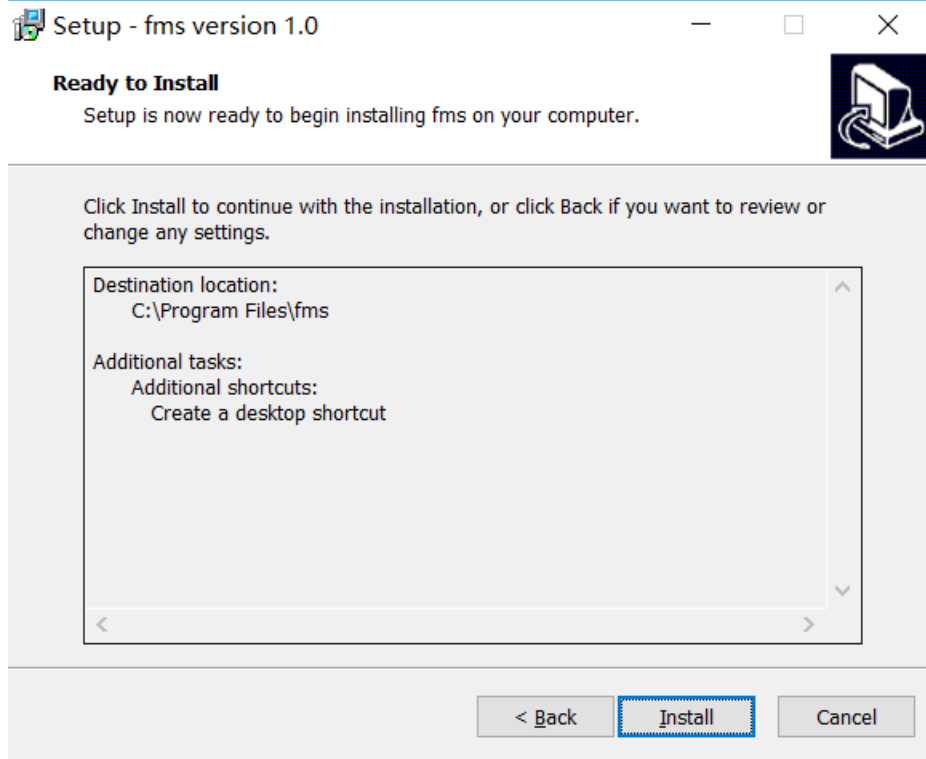
2. Specify the installation directory in the following installer window:



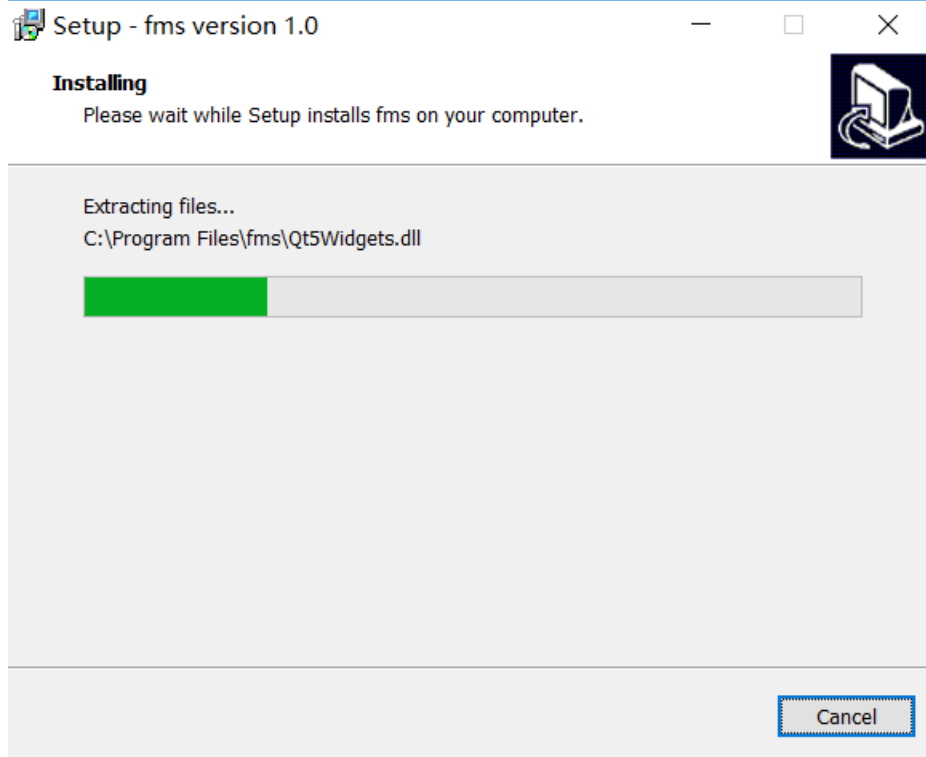
3. Click Next:



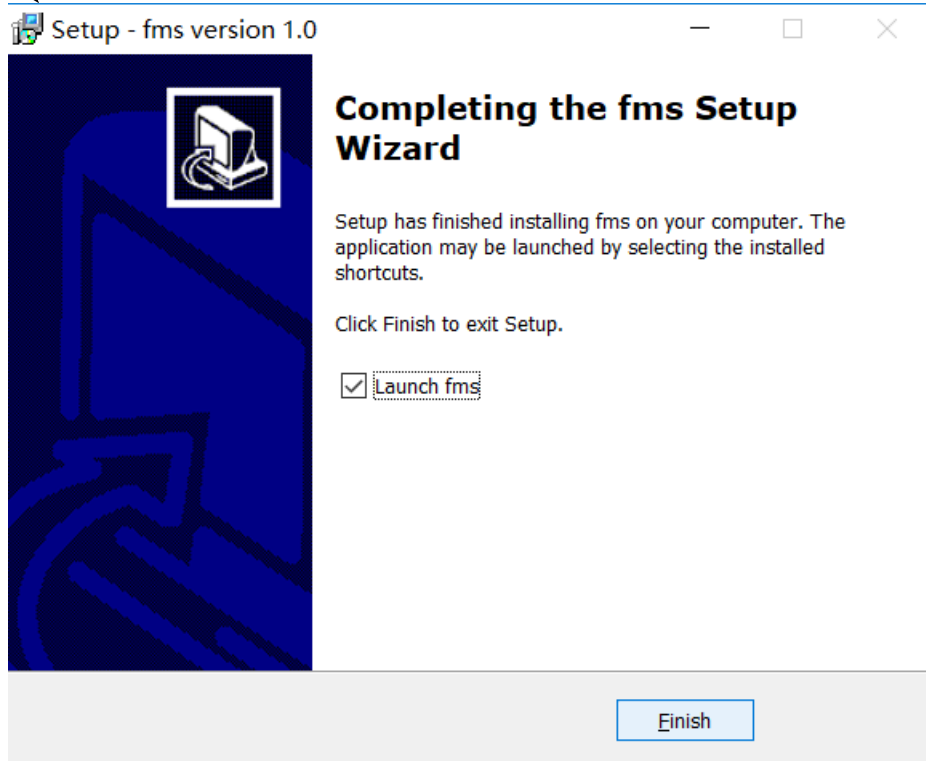
4. Click Next:



5. Click Install to start installation:



Once the progress is completed:

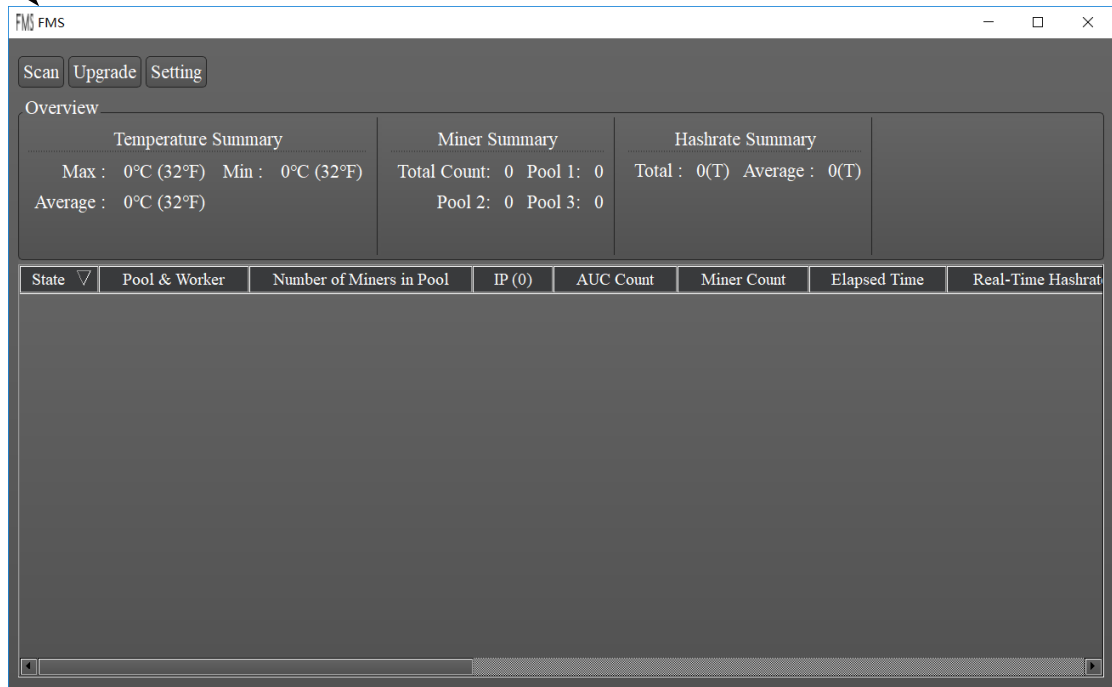


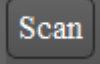
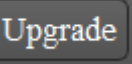
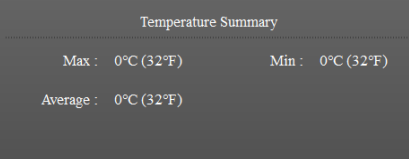
Click finish to finish the installation.

- User interface Introduction

1. Double click the desktop icon  to enter FMS:





		manual scanning
		firmware upgrade
		change settings
		temperature monitoring
		miner monitoring
		hash rate monitoring

state: current status, marked or normal

Pool&Worker:, pool & worker: pool configured and miner operator No.

Number of Miner in Pool: Number of Miner in Pool: how many miners in pool

IP address: miner ip address

AUC count: number of AUC

Miner Count: number of miners

Elapsed Time: current operating time

Real-Time Hashrate(T),

Average Hashrate(T),

Min Ambient Temperature(°C)

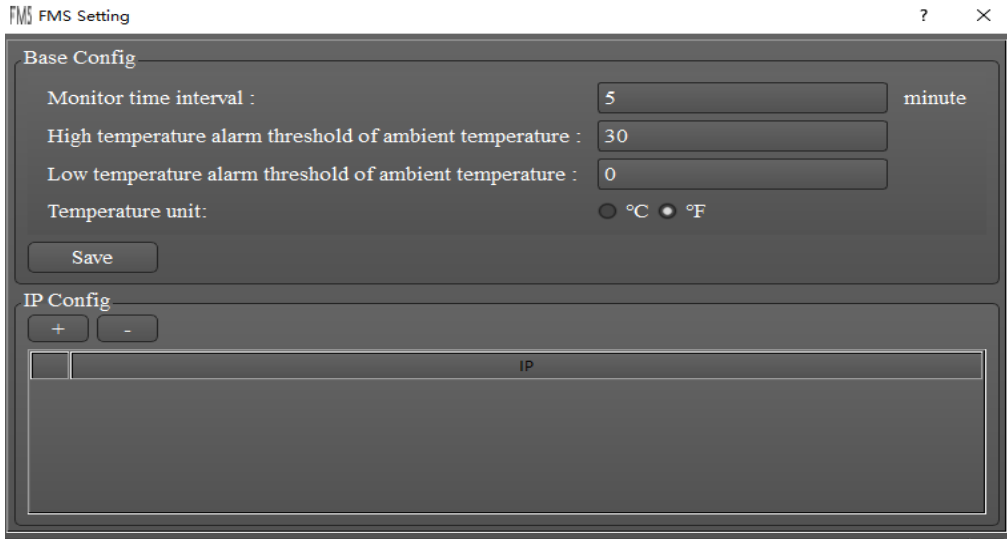
Max Ambient Temperature(°C)

Miner: code number

- Usage

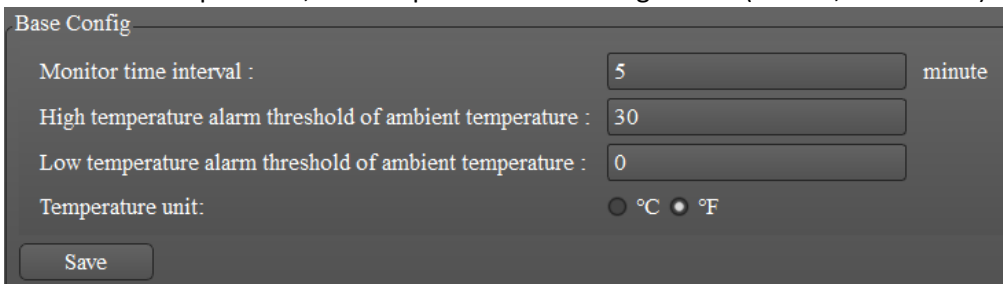
1. Miner Discovery

If the miners and the management PC are in the same network, use the following procedure to discover the miners. Click Settings to bring up the Base Config window:



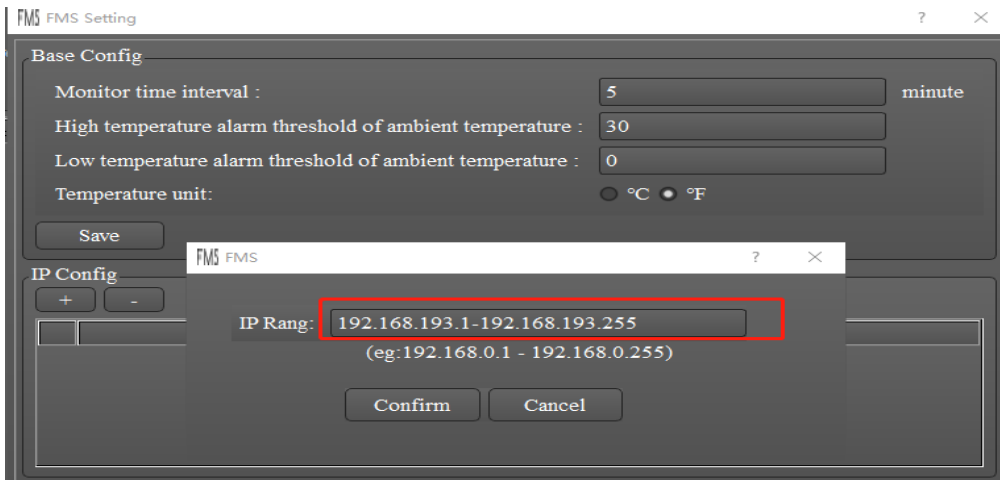
The screenshot shows the 'FMS Setting' window. The 'Base Config' section includes fields for 'Monitor time interval' (set to 5), 'High temperature alarm threshold of ambient temperature' (set to 30), 'Low temperature alarm threshold of ambient temperature' (set to 0), and 'Temperature unit' (radio buttons for °C and °F, with °F selected). A 'Save' button is present. The 'IP Config' section has '+' and '-' buttons and a large empty text area for IP addresses.

The following figures represent the monitoring time interval (minutes); the high temperature alarm threshold for ambient temperature; the low temperature alarm threshold for ambient temperature; the temperature unit configuration (Celsius, Fahrenheit)



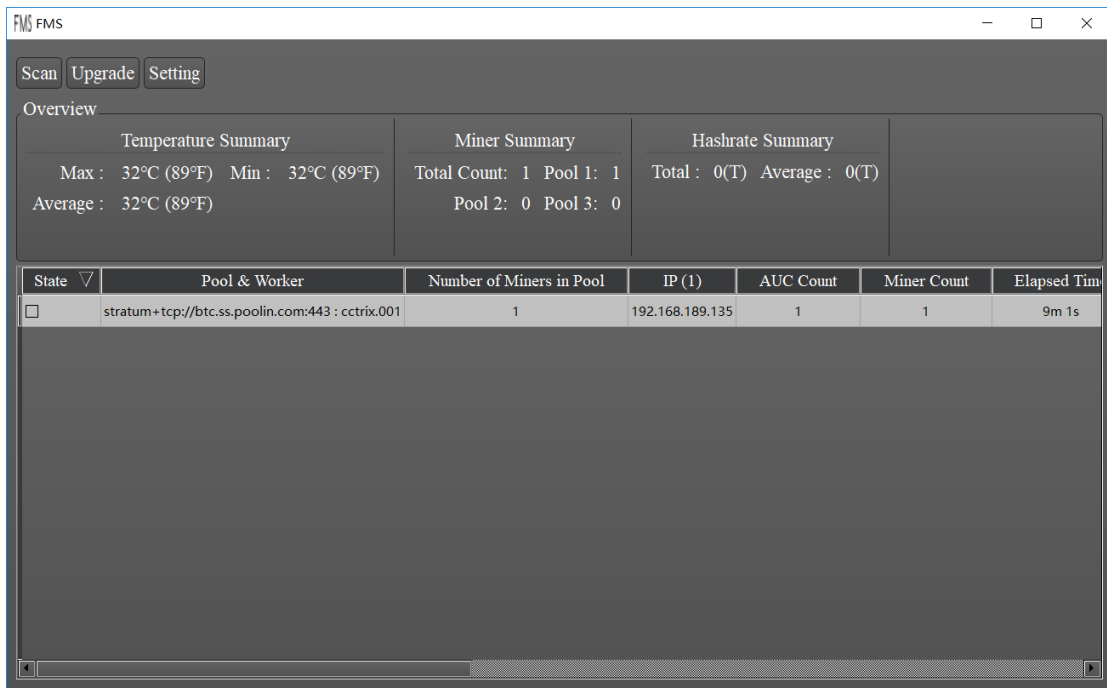
This close-up shows the 'Base Config' section. The 'Monitor time interval' is 5 minutes. The 'High temperature alarm threshold of ambient temperature' is 30. The 'Low temperature alarm threshold of ambient temperature' is 0. The 'Temperature unit' is set to °F. A 'Save' button is at the bottom.

Click “+” button and enter the subnet IP range for the miners (e.g. 192.168.193.1-192.168.193.255), and click Confirm to auto-discover the miners.



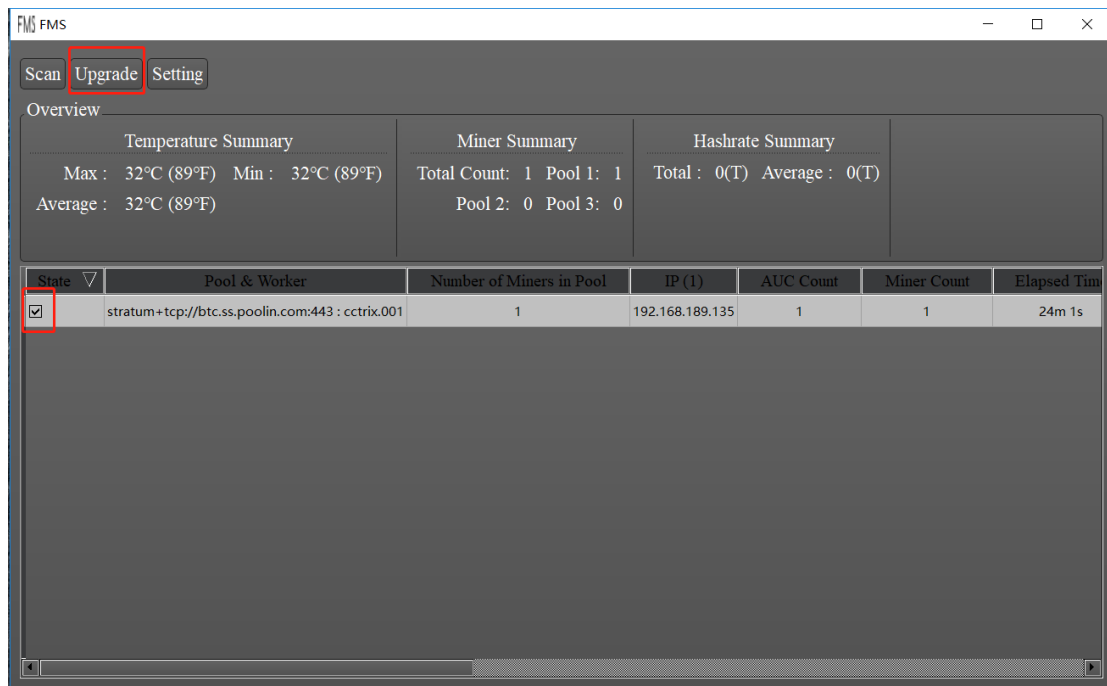
The screenshot shows the 'FMS Setting' window with the 'IP Config' dialog box open. The dialog box has a title bar 'FMS FMS' and contains the text 'IP Rang: 192.168.193.1-192.168.193.255' with a red box around the input field. Below the input field is the example '(eg:192.168.0.1 - 192.168.0.255)'. At the bottom are 'Confirm' and 'Cancel' buttons.

Select miners and click Save, the discovered miner IP addresses will be shown in the main window:

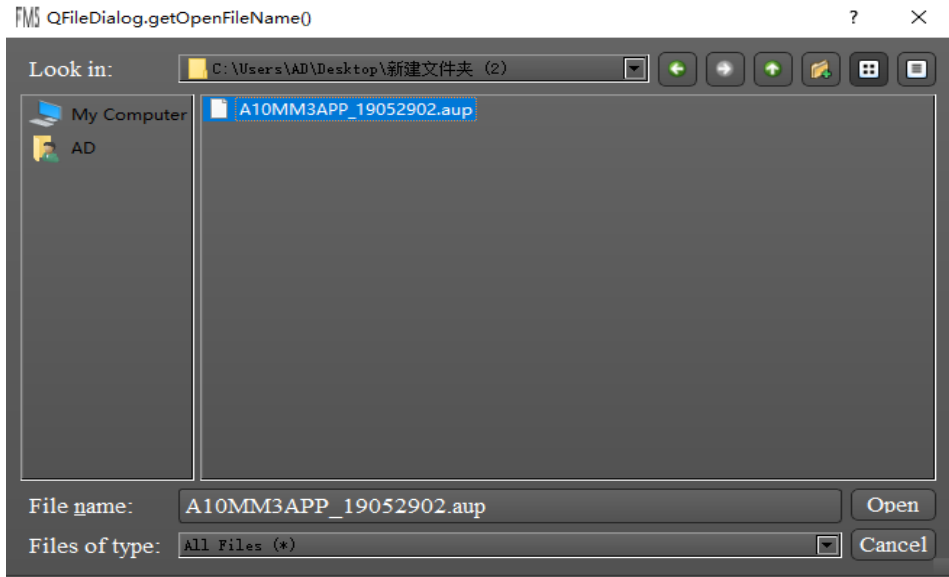


2. Firmware Upgrade

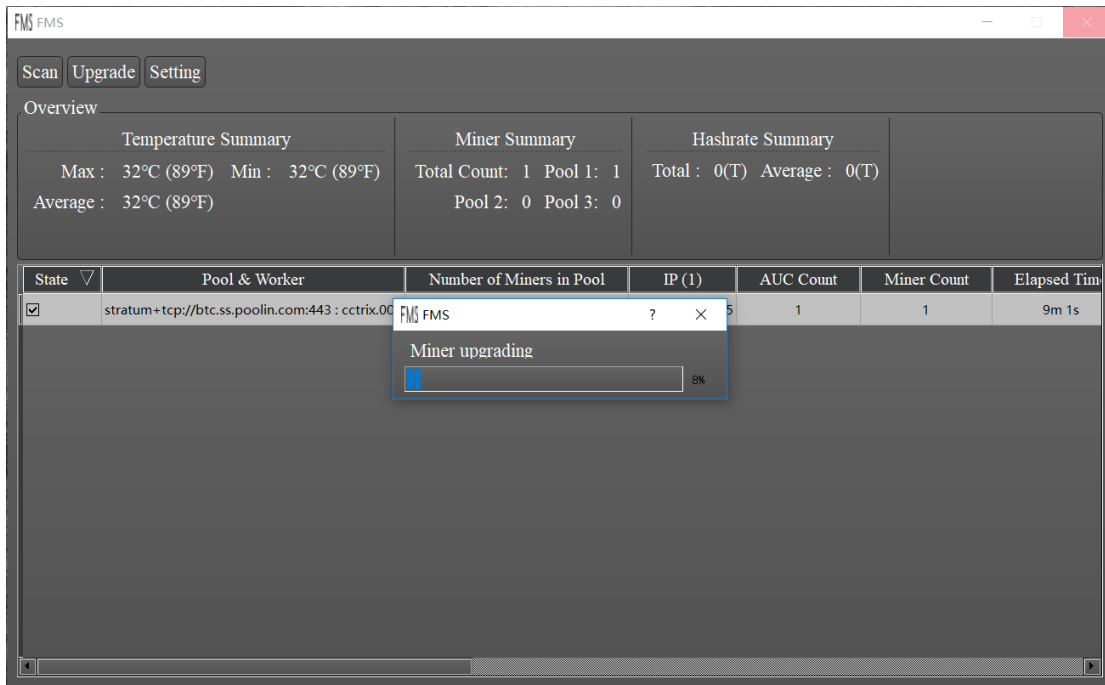
Select the miner to be upgraded in the main window, and click Upgrade



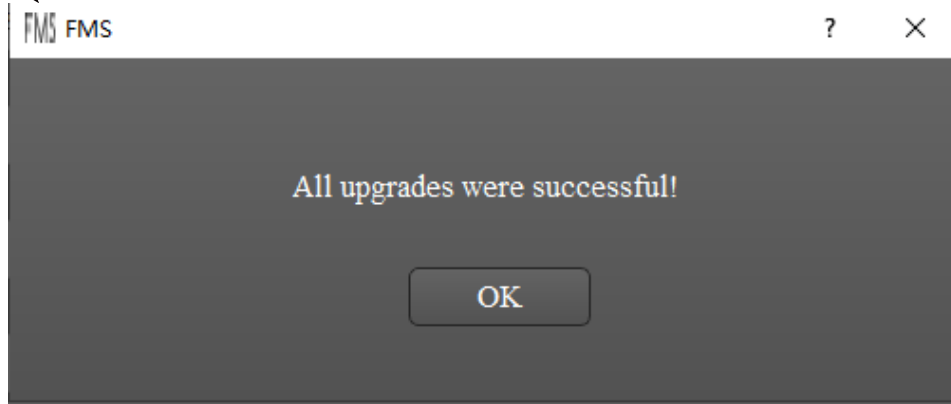
Select the firmware file in the popup window:



Click Open to begin the upgrade process.



The following dialog will be shown if the upgrade is successful:



Firmware Upgrade

The upgrade package file's format of this device is *. aup, which can be downloaded through the official website or via customer service.

The device's firmware upgrade can only be carried out by FMS software.

Restore to Factory Setting

Press the FUNC key for five to ten secs (Before the indicator lamp turning red). when the power is on, and the system will automatically clear the saved configuration, including network, ore pool, password and other information. After the configuration is cleared, the while indicator lamp flashes frequently, indicating that the recovery configuration is successful. After loosening the FUNC key, press the RESET key to restart, or cut off the power supply to restart, and the system will use the default factory configuration to work.

Warranty

When using the machine, the wiring connection may be loosened or has abnormal damage and other conditions which cause the abnormal operation, and you can check and troubleshoot by personally. If the device is damaged within the scope of warranty, contact our after-sales personnel for quick repairs.



We guarantee a 180-day warranty of the product since the date the customer receives the goods, but the following will invalidate the warranty:

1. Any physical damage caused by self-disassembly of the product or other causes (including but not limited to: breakage, fragmentation, angle missing, element missing, etc.)
2. Damage caused by lightning, voltage surge, etc.
3. Burn marks on the circuit board or the chip burnt down.
4. Damage caused by water intake and immersion
5. Circuit boards are damped and corroded
6. Over the warranty period

Unfortunately, if the above circumstances occur, we can still provide fee-based maintenance services for your device, and you can also contact after-sales personnel to purchase the parts to repair by yourself.