

PowerRay

miniBTC User Manual

Model name : PR-0818

HWVersion : V1.5

Date : 2024/11/27

(Signature)

(Date)

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VERSION CONTROL

Revision

Version	Date	Name	Remarks
Version 1.0	15 th May. 2024	Mark Liao	The first version
Version 1.1	3 rd Jun. 2024	Mark Liao	After reviewed by engineers and then correction.
Version 1.2	19 th Jun. 2024	Mark Liao	Modify some characteristics after testing.
Version 1.3	21 st Jun, 2024	Amy Huang	Wording correction
Version 1.4	7 th Aug, 2024	Amy Huang	Correct model number, add ROHS table
Version 1.5	27 th Nov, 2024	Amy Huang	Add Web UI password

CHAPTER 1 PRODUCT INTRODUCTION

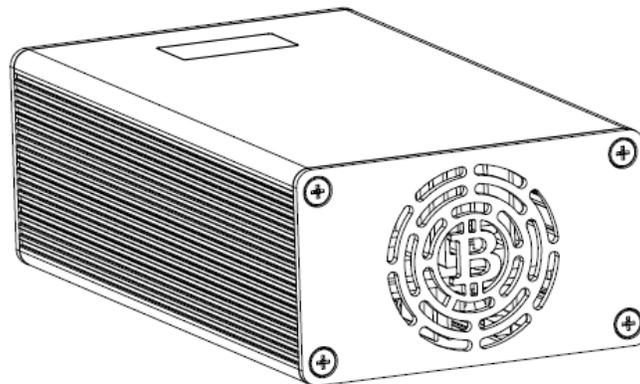
1.1 PRODUCT INTRODUCTION

miniBTC is a BTC mining machine with 4 ASICs of multi-cores of SHA256 CPU inside. This product is designed to mine the BTC by connecting to PPLNS or Solo mining pools. It is very easy to setup and start to mine any time.

The network connection of this device is via WIFI (802.11 bgn) to connect the internet. User can also use WIFI to browse this device setting and status. However, when the device first connects, it will be in WIFI router mode. User could connect to the device via WIFI, then use browser to set up the device network setting. After the network is set up, user could use the browser UI to set up the preferred mining pools, wallet and other settings. You will see the details on the following sections.

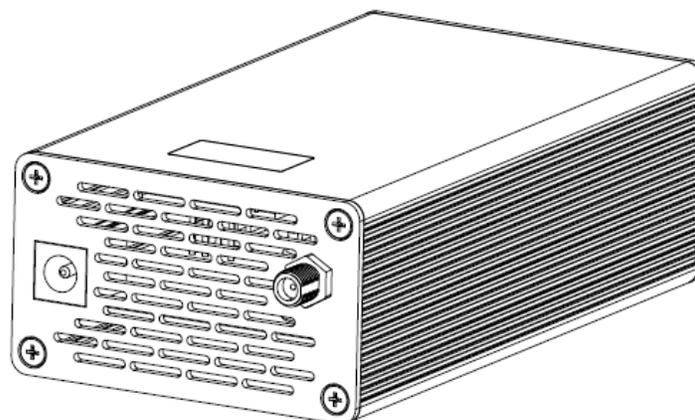
1.2 DEVICE OUTLOOK

1.2.1 FRONT VIEW



Front Side

1.2.2 REAR VIEW



Rear Panel

CHAPTER 2 INSTALLATION

2.1 PRODUCT INSPECTION

- Unpacking the package. Open the box and take out the device and accessories.
- In the box, there are one device, one antenna and one power adapter.
- Please notice the antenna is separated packed in the box.
- Inspect equipment: check the device appearance, display, socket, connector, NO contamination, and deformation should be found.
- Checking accessories according to below shipping list.
 - ◆ Please contact the distributor if damages or lack of accessories are found.

Shipping list (except the device itself):

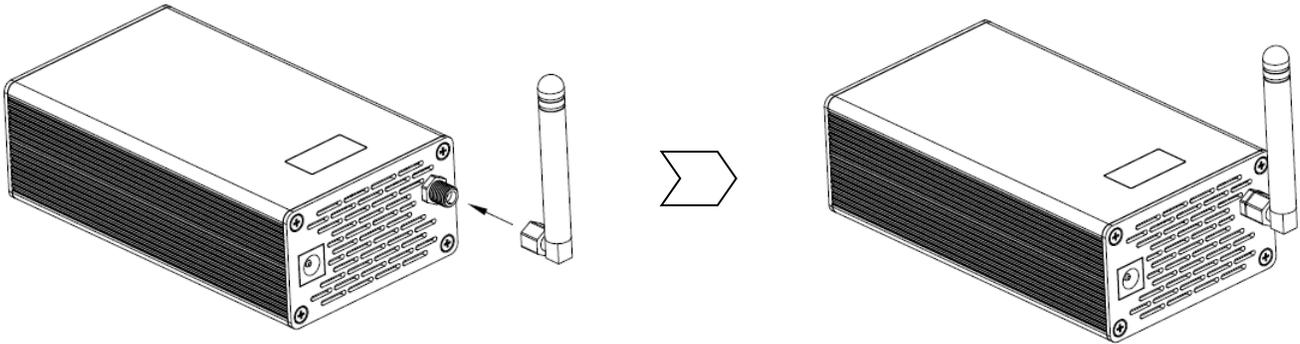
Accessory	Quantity	Unit
Power adapter	1	PCS
Antenna	1	PCS

2.2 INSTALLATION

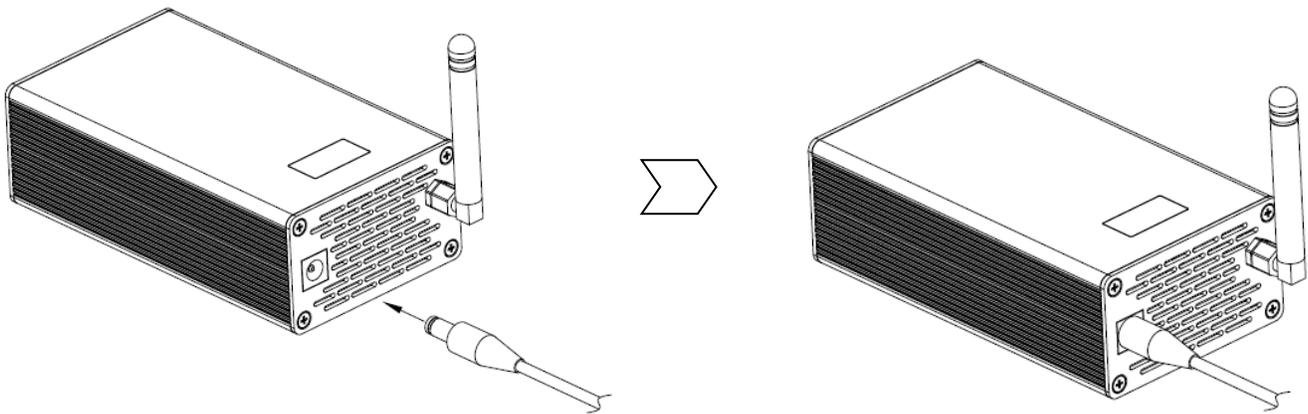
Before install the mining device, you should prepare WIFI connection (Only available for 2.4G) account/password and one device (it may be your laptop/desktop or tablet / cell phone) that can be connected to the WIFI router.

Prepare the mining pool you want to connect (no matter PPLNS or SOLO mining pools), and the account /password of the pool. Please notice that every mining pool has its own independent way for mining. Some will need to create an account, some are just to fill your wallet address, please check with the mining pool that you want to use for how to set up.

STEP1 : Screw the antenna into the device.



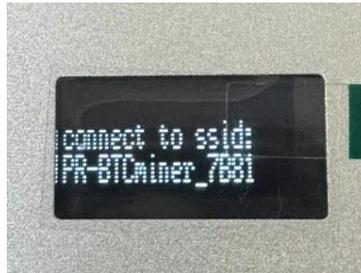
STEP2 : Plug the power adapter into the device.



CHAPTER 3 SET UP THE DEVICE

When the device is first time power on, it will be on AP mode to let user to use the browser to set up the device.

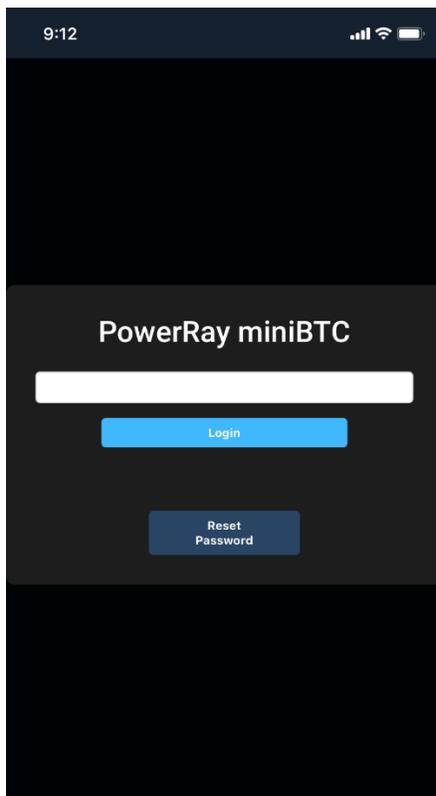
You will see the device showing the following screen (SSID Name will be different on each device):



Then you could use your laptop/desktop/cell phone to connect the device, the UI will guide you to setup your WIFI SSID by your account/password. (Please notice the device is only available to connect to 2.4G 802.11bgn router)

3.1 DEFAULT PASSWORD

When you first time connect to the device by the SSID, the browser will be opened automatically. The UI is requested to enter the password to get login as shown below. If the login page is not automatically pop up, you can open your browser and key in the IP address "192.168.4.1" to open the login page.

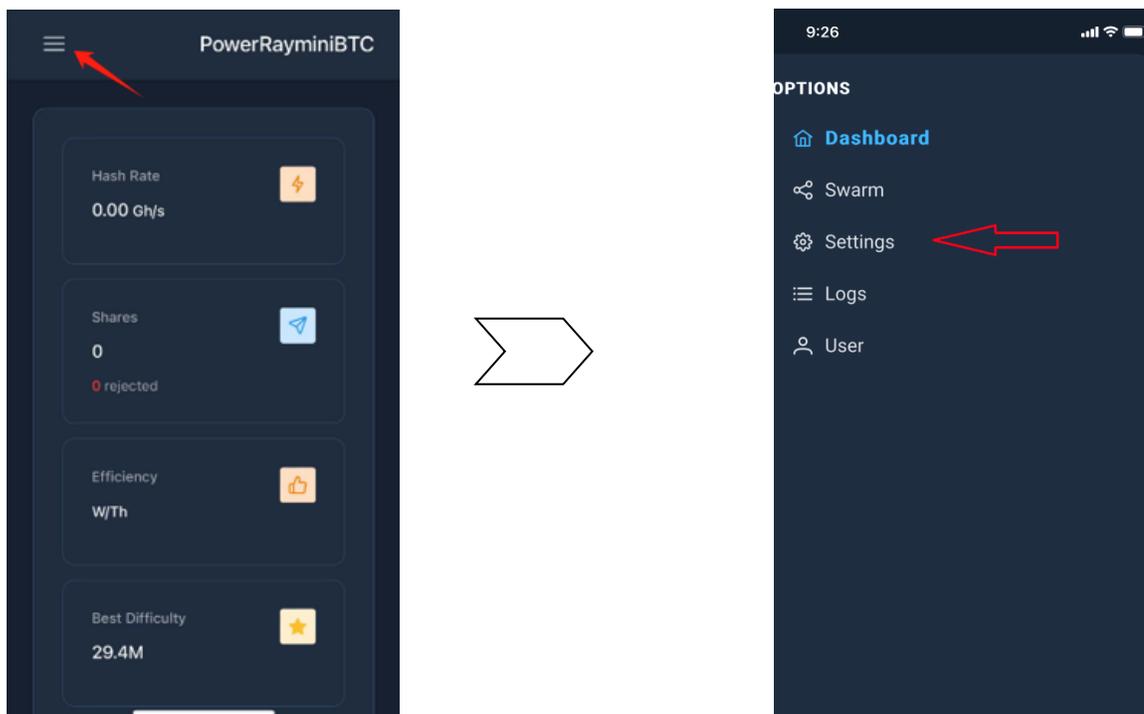


The default password is the device serial number on the label shown below. Enter the device serial number to login the Web UI. After you login the UI, you can follow the section 3.5 to change the password.

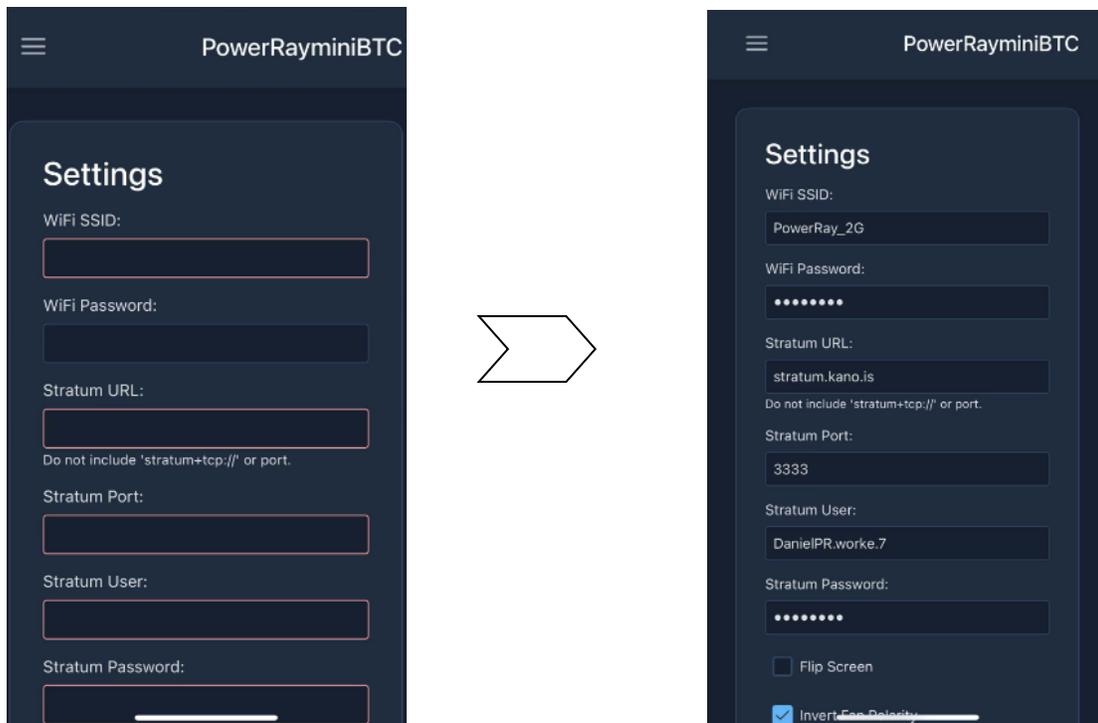


3.2 SETUP WIFI CONNECTION & MINING POOL

After you connect to the device by the SSID, the browser will be opened automatically and going to the setup page, then you can see the following on the web page.



Please press the TOP Menu button (pointed by the red arrow) and go to set up page as following



Fill in your WIFI router account/password to the device, here is an example by setting up the SOLO mining in KANO mining pool. (You can see more available pools in Section 3.3. You can also try to look for different mining pools on the internet. Please notice that KANO pool default mining is PPLNS not SOLO. If user wants to mine SOLO mode, please refer to KANO help/solo (<https://kano.is/index.php?k=soloinfo>))

3.3 ABOUT MINING POOLS

Please notice that every mining pool has different mining account setting ways. Most of the BTC mining pools need to go to their web site to create account, and setup the account/password on the mining device locally. Some mining pools only need to setup the wallet address on the local device, the wallet address will be account for these mining pools.

Please check the details on the mining pool that you like to mine.

Here is the example of KANO mining pools setting.

Stratum URL:
stratum.kano.is
Do not include 'stratum+tcp://' or port.

Stratum Port:
3333

Stratum User:
DanielPR.worke.7

Stratum Password:
••••••••

Stratum URL : Please fill the mining pool link URL on the row.

Stratum Port :Depends on the mining pool ,KANO pool is assigned by port 3333

Stratum User : The name of this device , you can also use “.” to add more device as the same account name with different works.

Stratum Password : As KANO pool requests, you can put anything but NO blank for the password.

3.4 MINING POOLS URL REFERENCE

Here are the reference mining pools for SOLO mining pools

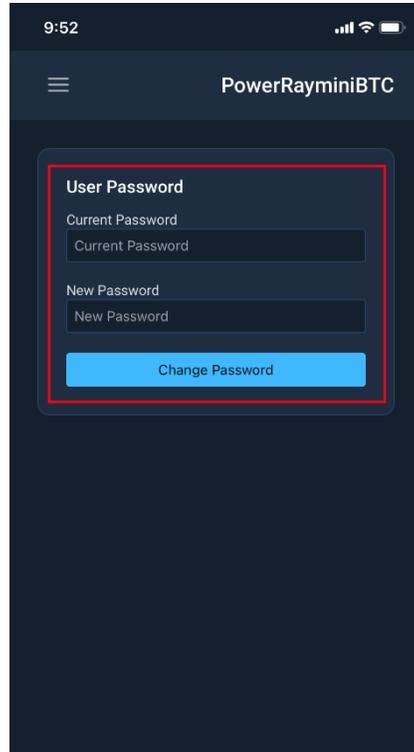
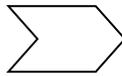
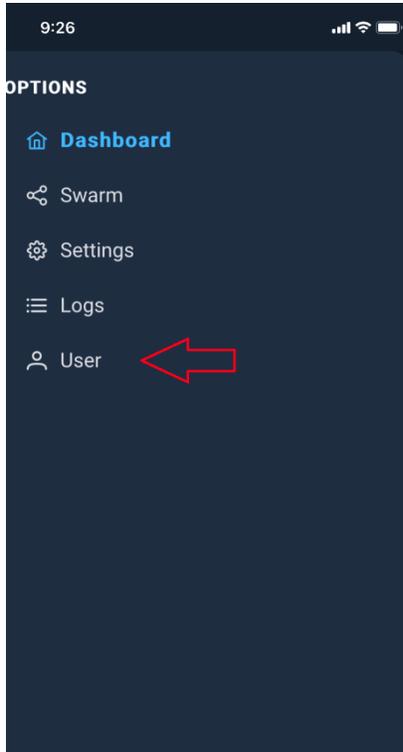
No	Pool URL	Port	Website
1	Stratum.kano.is	3333	https://kano.is/index.php
2	Pool.vkbit.com	21496	https://web.public-pool.io
3	Pool.tazmining.ch	33333	https://tazmining.ch/#btc2
4	Solo.ckpool.org	3333	https://solo.ckpool.org
5	Btc.zsolo.bid	6057	https://zsolo.bid/en/btc-solo-mining-pool
6	Eu.stratum.slushpool.com	3333	https://braiins.com/pool
7	btc.luckymonster.pro	7112	https://luckymonster.pro
8	Btc.millpools.cc	4567	https://millpool.cc/btc-pool
9	Stratum.solomining.io	7777	https://btc.molepool.com
10	Aminingpool.com	3004	https://amingpool.com/#btc
11	Pool.mynewmining.com	3333	https://pool.mynewmining.com/#btc2
12	Pubilc-pool.io	21496	https://web.public-pool.io

You can also refer to <https://miningpoolstats.stream/bitcoin> to see more pools information.

3.5 SETUP PASSWORD

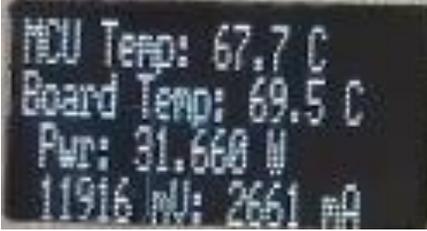
Go the User page to enter the current password and new password.

Press “ Change Password” then the password would be changed successfully. Simply reflash the web page, then the UI requires the new password to login.



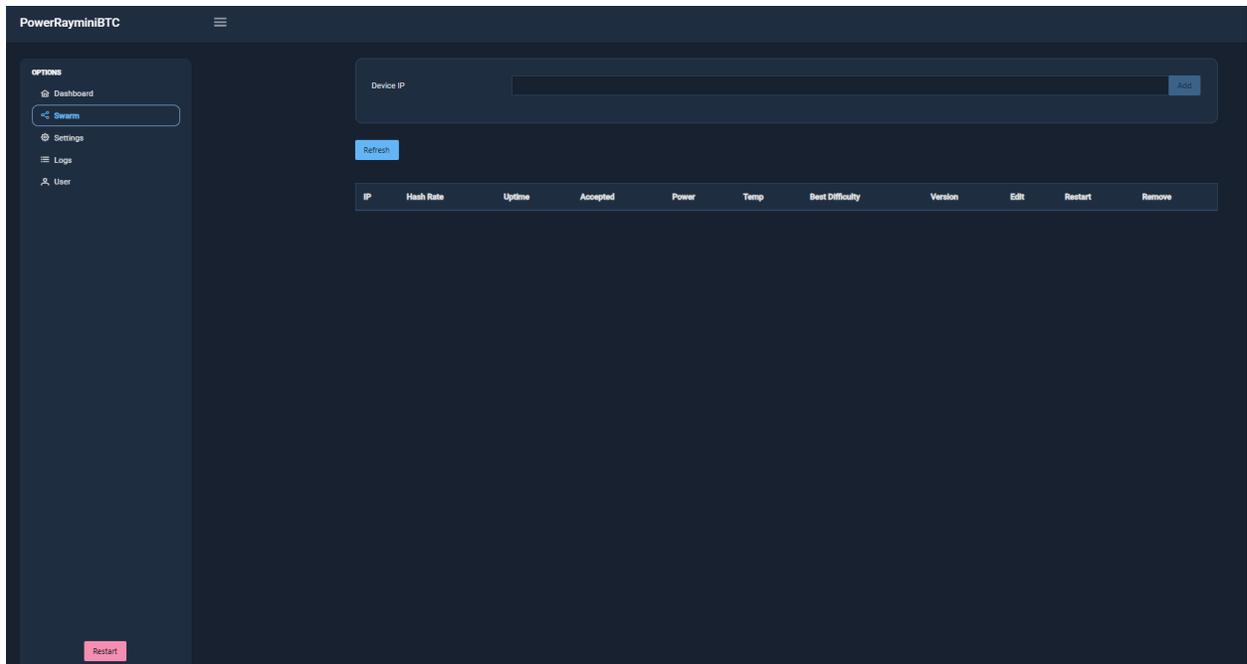
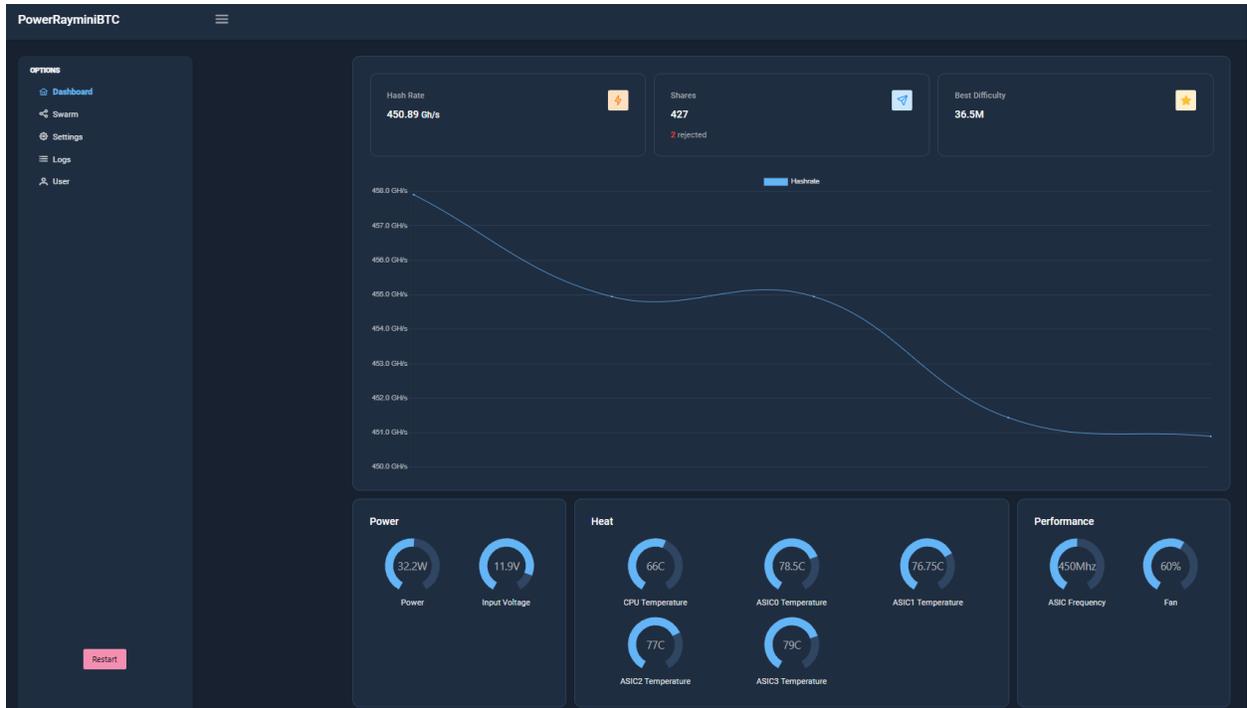
CHAPTER 4 OPERATION GUIDE

Once the device is setup ready and starts to work, you will see the screens showing by turns as the following. (Here are the reference values on it)

	<p>Gh: 337.0 ,means the current hash rate is 337.0T A/R:104/1 ,means accept shares are 104, and reject share is 1 UT: 0d 0h 10m, means from turn on, it is 0 day 0 hour and 10 minutes. BD:58K, means best difficulty is 58K</p>
	<p>MCU Temp:67.7 C, means the MCUs average temperature is 67.7C Board Temp:69.5 C, means the device board is 69.5C Pwr : 31.660 W : means the MCU power consumption is 31.660W 11916 mV; 2661 mA ; means input power is 11935mV and current consumption is 2518mA.</p>
	<p>ASIC0 temperature 75.8 C ASIC1 temperature 65.2 C ASIC2 temperature 67.0 C ASIC3 temperature 85.0 C</p>
	<p>SSID: Mining (SSID Name will be different on each device) IP: 192.168.2.163</p>

You can also use your smart device (such as cell phone , tablet , laptop/desktop) to browse the device for the setting.

The screen on the web browser will be as following:



PowerRayminiBTC

OPTIONS

- Dashboard
- Swarm
- Settings
- Logs
- User

Settings

WIFI SSID: PowerRay_2G

WIFI Password:

Stratum URL: stratum.kanols
Do not include 'stratum+tcp://' or port.

Stratum Port: 3333

Stratum User: DanielPR.NextTest

Stratum Password:

Flip Screen

Save You must restart this device after saving for changes to take effect.

SW Version: v1.39
DSN: A1AA243200567

Update Firmware
[+ Browse](#)
(esp-mini-btc)

Update Website
[+ Browse](#)
(www.btc)
Refresh the Webpage after Updating

Restart

PowerRayminiBTC

OPTIONS

- Dashboard
- Swarm
- Settings
- Logs
- User

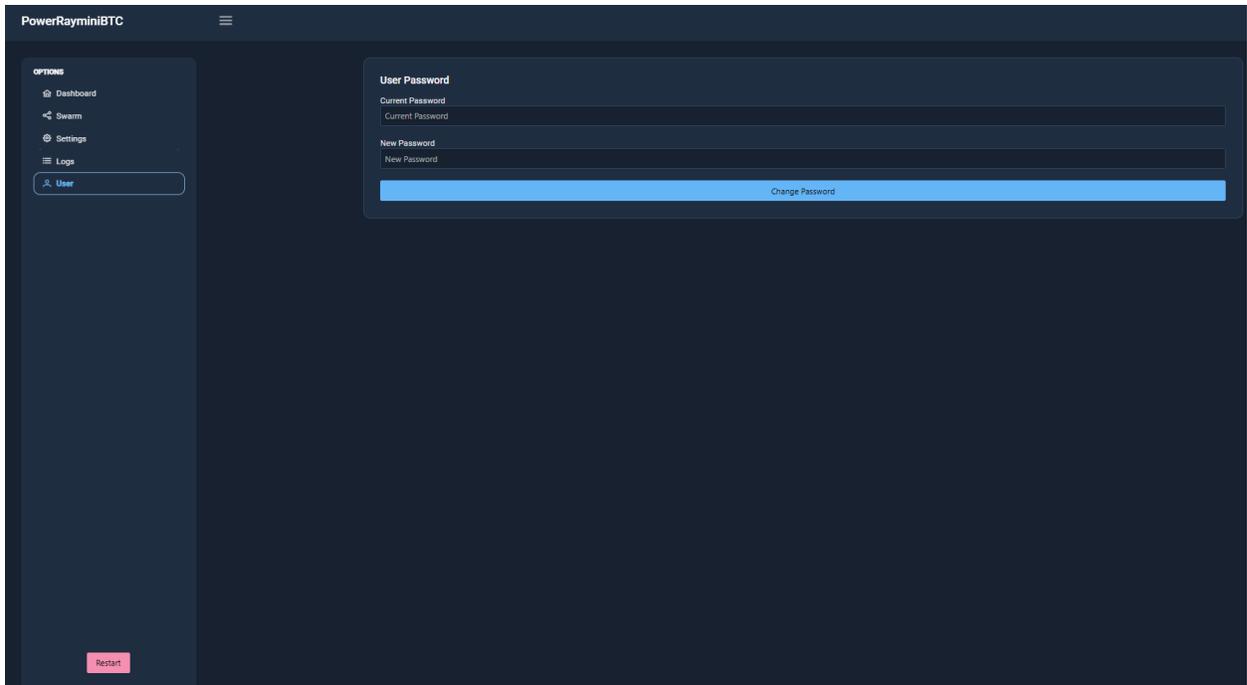
Overview

Model: PR2B18
Uptime: 37 minutes
WiFi Status: Connected
Free Heap Memory: 89256
Version: v1.39
Board Version: 1

Realtime Logs

[Show Logs](#)

Restart



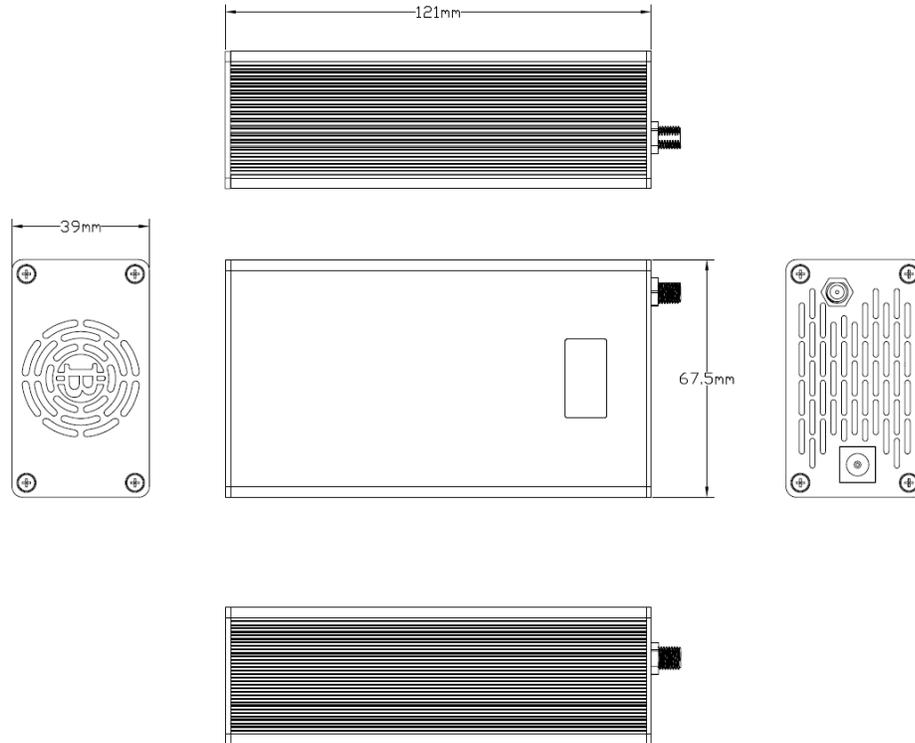
CHAPTER 5 SPECIFICATION

5.1 SPECIFICATION

Item	Max	Typical	Min	Unit
Average hash rate in 24H	-	400	-	G H/s
Average power consumption in 24 H.	-	33	-	W
Efficiency	-	65	-	J/T
ASIC Temperature@Env. 25 degree C	95	85	-	°C
Noise	-	<40	-	dB

5.2 MECHANICAL

THE DEVICE SIZE IS :121 X 67.5 X 39 MM



5.3 ENVIRONMENTAL

ITEM	Normal range
Ambient temperature	0°C~ +40°C
Environment humidity	10~80%, no condensing
Storage temperature	-10°C~+60°C

5.4 DECLARATION OF THE PRESENCE CONDITION OF THE RESTRICTED SUBSTANCES MARKING

Equipment name :Blockchain Processor Model no: PR-0818						
Unit	Restricted substances and its chemical symbols					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr ⁺⁶)	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
PCB	○	○	○	○	○	○
Components	○	○	○	○	○	○
Housing	○	○	○	○	○	○
LCD Module	○	○	○	○	○	○
<p>Note 1 : "Exceeding 0.1 wt %" and "exceeding 0.01 wt %" indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.</p> <p>Note 2 : "○" indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.</p> <p>Note 3 : The "-" indicates that the restricted substance corresponds to the exemption.</p>						