

ePIC UMC OS for Antminers

Complete User Guide

Last updated: June 2026

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UMC OS

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ePIC Dashboard

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Control Board Form Factor

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Installing ePIC UMC Control Board

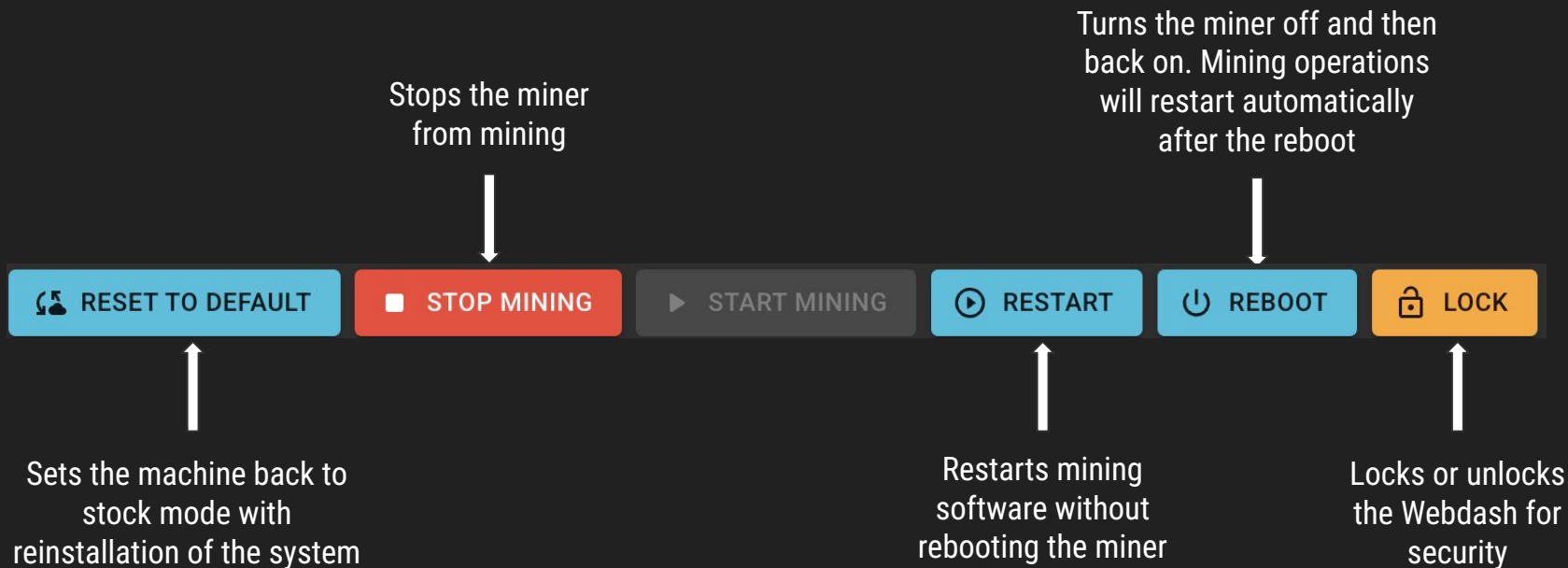
12. [ePIC Control Board for Antminer Overview](#)
13. [Installation Instructions](#)
14. [Flashing Guide](#)

UMC OS

Full Ownership of a Miner

Control Panel

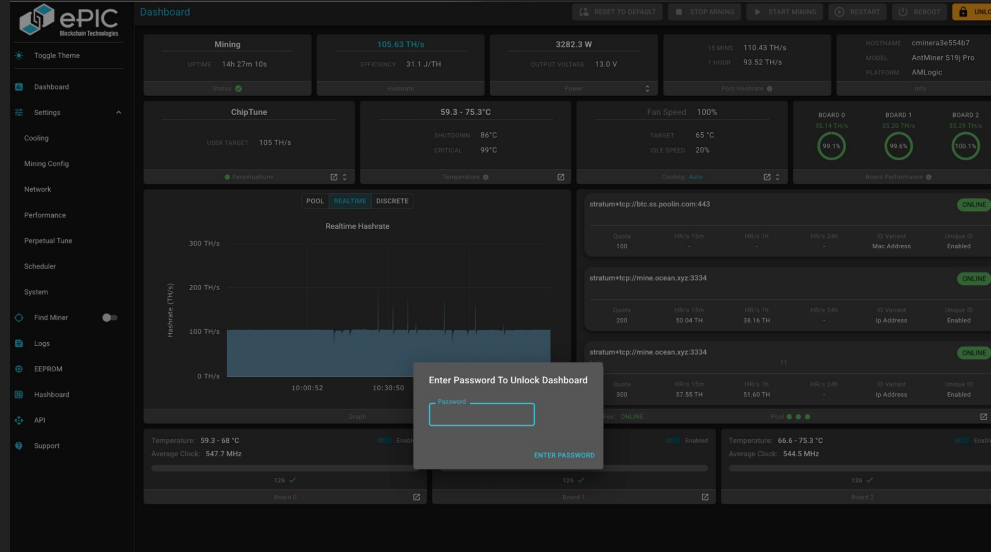
To execute desired commands



Note: your miner may take a few minutes to reboot but it will keep mining

Unlocking Miner

To access Webdash, the default password is **letmein**

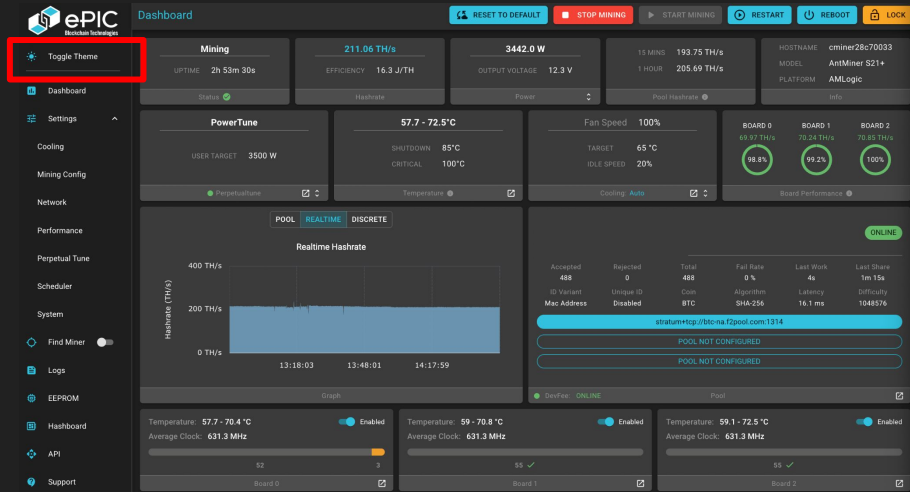


Enter the password in the pop-up box to unlock the Webdash

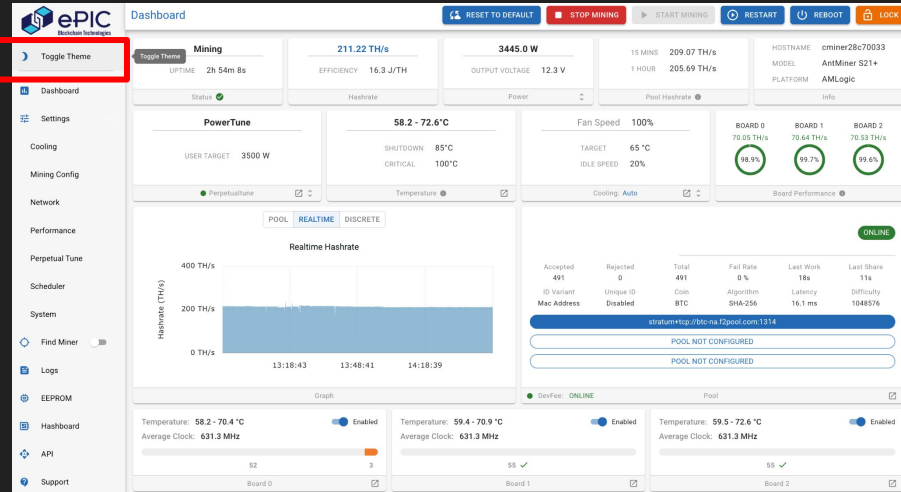
Default password : *letmein*

Toggle Theme

Customize Webdash colour scheme to your preference



Dark Mode



Light Mode

Dashboard

To view status of a miner

Real-time
mining status

Configurations

EEPROM

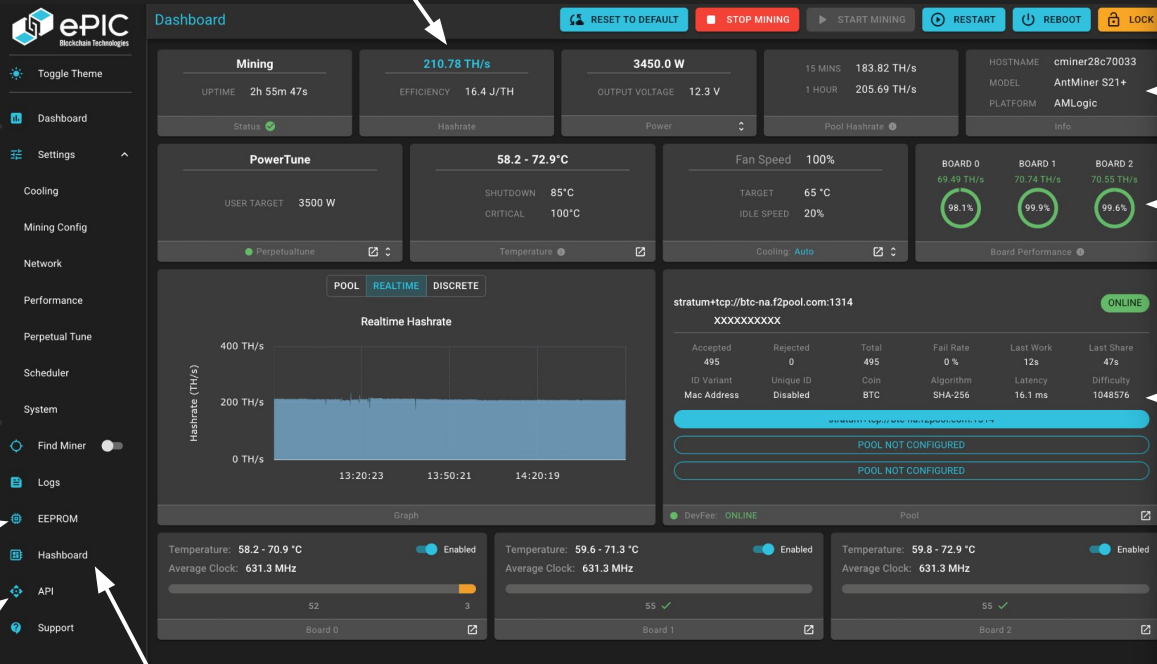
API

Hashboard
details

Control board info

Fan status

Pool info



Settings - Cooling

Set temperature guards

TEMPERATURE

FANS

Temperature Guards

Manually set the temperature guards. Shutdown temperature is the temperature at which the miner will shutdown and can self restart to check if temperature has cooled. Critical temperature is the temperature at which the miner stay idle.

55°C

110°C

85 °C

100 °C

Shutdown

Critical

APPLY

Pre-Init Cooldown Max Duration

Sets the maximum time (in seconds) the miner can spend in Pre-Init Cooldown. If the max duration is reached, the miner will skip the initialization temperature checks and start mining. Default is 300 seconds. Setting to 0 means the Pre-Init Cooldown state will last for at most 0 seconds.

0 seconds

600 seconds

300

APPLY

Note: It is recommended to keep the shutdown temperature below 95°C for safety

Temperature Guards

Sets the miner's thermal protection limits. When the shutdown temperature is reached, mining stops to protect the hardware and the miner can try to start again after it cools. When the critical temperature is reached, the miner remains idle until the temperature drops.

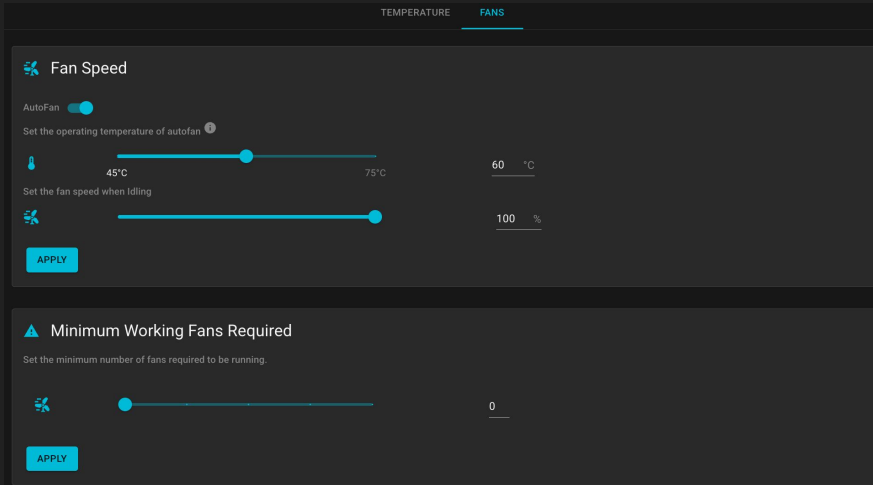
Pre-init Cooldown Max Duration

Sets the maximum time the miner can stay in Pre-Init Cooldown during startup while waiting for temperatures to reach a safe level. If the limit is reached, the miner skips the startup temperature checks and continues initializing.

Default: 300 seconds. A value of 0 means no cooldown wait.

Settings - Cooling

Manage Autofan settings

The screenshot shows the "FANS" tab in the settings menu. The "Fan Speed" section has an "AutoFan" toggle switch turned on. Below it, a slider for "Set the operating temperature of autofan" is set to 60°C, with a range from 45°C to 75°C. Another slider for "Set the fan speed when idling" is set to 100%. An "APPLY" button is at the bottom. The "Minimum Working Fans Required" section has a slider set to 0, with an "APPLY" button below it.

TEMPERATURE FANS

Fan Speed

AutoFan ☒

Set the operating temperature of autofan ⓘ

45°C 60 °C 75°C

Set the fan speed when idling

100 %

APPLY

Minimum Working Fans Required

Set the minimum number of fans required to be running.

0

APPLY

Note: Enabling AutoFan is recommended for better efficiency and safety.

Fan Speed (Autofan)

Manually set a fixed fan speed or enable **AutoFan**. AutoFan adjusts fan speed to maintain the target temperature and lets you set the idle fan speed. *The maximum target temperature is limited to 10°C below the current shutdown temperature.*

Min. Working Fans Required

Sets the minimum number of fans that must be working. If fewer working fans are detected than required, the miner stops to protect the hardware. *Set this to 0 disables the check.*

Settings - Mining Config

Add pool information

Mining Pool Settings Hashrate Split ☐

Change pool, wallet, and worker name

coin: BTC Unique ID: ☒ unique ID Variant: **Ip Address**

Primary Pool Address: stratum-tcp://btc.ez-pool.com:1314 Wallet Address/Pool Username: ez21ez21 Worker Name: s21 Password (Optional):

Fallover Pool Address: Wallet Address/Pool Username: Worker Name: Password (Optional):

Fallover Pool Address: Wallet Address/Pool Username: Worker Name: Password (Optional):

CLEAR FIELDS

APPLY

Fill in the main pool information along with 1-2 backup pools in case of disconnection from the pool.

“Unique ID” will append a unique miner ID to the end of the worker name if enabled, in the format:
Worker_address.Worker_name-unique_ID

Hashrate Split

Distribute shares across multiple pools based on a set percentage

ⓘ Mining Pool Settings Hashrate Split ☒

Change pool, wallet, and worker name

coin **BTC**

Unique ID ☒

unique ID Variant **Ip Address**

ratio **100** %

Primary

Pool Address

Wallet Address/Pool User...

Worker Name

Password (Optional)

Fallover

Pool Address

Wallet Address/Pool...

Worker Name

Password (Optional)

Fallover

Pool Address

Wallet Address/Pool...

Worker Name

Password (Optional)

CLEAR FIELDS

coin **BTC**

Unique ID ☒

unique ID Variant **Ip Address**

ratio **0** %

Primary

Pool Address

Wallet Address/Pool...

Worker Name

Password (Optional)

Fallover

Pool Address

Wallet Address/Pool...

Worker Name

Password (Optional)

Fallover

Pool Address

Wallet Address/Pool...

Worker Name

Password (Optional)

CLEAR FIELDS

APPLY

Enable **Hashrate Split** at the top right-hand corner.
Fill in the pool information along with 1-2 backup pools.
Can be set up to three groups.

Note: If you split three groups equally as 33:33:33, the first group will receive the remainder, making the final distribution 34:33:33 instead.

Setting - Network

Choose your own IP assignment

Hostname setting

Current Miner Hostname
cminer28c70033

Update Miner Hostname

Hostname
cminer28c70033

[APPLY](#) [RESET HOSTNAME](#)

HOSTNAME	cminer28c70033
MODEL	AntMiner S21+
PLATFORM	AMLogic
Info	

Ethernet settings

DHCP ☒

IP Address
10.5.0.158

MAC Address
02:8B:33:00:C7:28

DNS
10.5.0.1

DNS2 (optional)

DNSv6
N/A

Mask
255.255.255.0

Gateway
10.5.0.1

[APPLY](#)

DHCP is enabled by default.

To set a **Static IP**, disable the DHCP toggle and enter the IP address, DNS, Mask and Gateway, then hit "APPLY".

Note: ePIC dashboard does NOT support setting static IPs across multiple miners.

Setting - Performance

To manually adjust performance of your miner by adjusting frequency and voltage

 Tune

Change Clock or Voltage settings

Presets (Optional)

 50 MHz 1400 MHz 489 MHz

 11.877 V 15.182 V 14.11 V

APPLY

 Advanced settings

Overdrive mode

May provide better efficiency when overclocking (BM1366 ASIC chips only)

☐ Disabled

APPLY

Resets Perpetual Tune if it is currently running

Tune

Manually change **clock** or **voltage** of the miner.
Presets are only available in S19J, S19J Pro, S19J Pro+, S19 XP, S19K Pro, S21, S21 Pro, S21 XP, S21+ and T21

Advanced Settings

Overdrive Mode provides advantage of overclocking during Voltage Optimizer.
Only available in S19K Pro and S19 XP

Perpetual Tune & Survival Mode

Configuration

- **Target Hashrate:** The desired performance output in TH/s
- **Minimum Throttle:** The lowest throttled hashrate target Survival Mode can reduce to before it stops trying to recovery automatically. (Default: 50TH/s)
- **Throttle Steps:** The amount by which the target hashrate is reduced or increased during Survival Mode adjustments. (Default: 5TH/s)

Survival Mode

Survival Mode automatically lowers the target hashrate when the miner temperature gets close to the shutdown threshold. If the miner stops due to high temperature, it can reduce the target further and attempt to restart automatically.

Manual Intervention Required

If the minimum throttle target is reached, automatic recovery stops. If the critical temperature is reached, the miner remains idle until it cools. Some error conditions may also require manual intervention.

Perpetual Tune - Summary

	Voltage Optimizer	ChipTune	Board Tune (Recommended)	Power Tune
Adjusting Variable	Voltage	Individual chip clocks + Voltage	Board clocks + Voltage	Board clocks + Voltage
Duration	~ 30min	> 60min	~ 45min	< 60min The target power will be adjusted within 5 minutes but tuning can take up to 1hr
Survival Mode	Yes	No	Yes	Yes
Use Case	You operate multiple miners in an unstable environment and prioritize long-term stability	You have a few miners in a highly stable environment and want to extract maximum performance	You want the best balance of speed and optimization. Ideal for S21 miners with mixed hashboards	You want to keep the steady power target

Perpetual Tune

For better efficiency and stability



Algorithms

Switching to a tuned algorithm will automatically set the miner to an optimal state unless the target is changed.

Voltage Optimizer

0 TH/s

Maintain the target hashrate by perpetually adjusting voltage for efficiency. The system automatically throttles down the user-specified target hashrate when the rig temperature is within 2°C of the shutdown temperature. Conversely, the target is throttled up to the user-defined hashrate when the rig temperature is 7°C lower than the shutdown temperature.

60TH/s

300TH/s

238 TH/s

10 TH/s

5 TH/s

Target

Min Throttle

Throttle Step

Board Tune

238 TH/s

Maintain the target hashrate by perpetually adjusting board clocks to improve performance while optimizing voltage for efficiency. The system automatically throttles down the user-specified target hashrate when the rig temperature is within 2°C of the shutdown temperature. Conversely, the target is throttled up to the user-defined hashrate when the rig temperature is 7°C lower than the shutdown temperature. Tunes faster than chiptune while providing improved performance compared to Voltage Optimizer.

Chip Tune

0 TH/s

Maintain the target hashrate by adjusting individual chip clocks to squeeze more performance while perpetually optimizing voltage for efficiency.

Power Tune

3500 W

Maintain the target power by perpetually adjusting board clocks while optimizing voltage for efficiency. The system automatically throttles down the user-specified target power when the rig temperature is within 2°C of the shutdown temperature. Conversely, the target is throttled up to the user-defined power when the rig temperature is 7°C lower than the shutdown temperature. Supported only on rigs where the PSU reports true power draw.

APPLY

Voltage Optimizer

optimizes voltage to maintain the target hashrate. Throttles down near the shutdown temp and throttles back up after cooling.

Board Tune

adjusts board clock to maintain the target hashrate while optimizing voltage. Throttles down near the shutdown temp and back up after cooling. Tunes faster than ChipTune

Note: Perpetual Tuning is only available in firmware version 0.26.0 or later

Perpetual Tune

For better efficiency and stability

Algorithms

RESET PERPETUAL TUNE

STOP PERPETUAL TUNE

Switching to a tuned algorithm will automatically set the miner to an optimal state unless the target is changed.

☐

Voltage Optimizer

0 TH/s

Maintain the target hashrate by perpetually adjusting voltage for efficiency. The system automatically throttles down the user-specified target hashrate when the rig temperature is within 2°C of the shutdown temperature. Conversely, the target is throttled up to the user-defined hashrate when the rig temperature is 7°C lower than the shutdown temperature.

☐

Board Tune

238 TH/s

Maintain the target hashrate by perpetually adjusting board clocks to improve performance while optimizing voltage for efficiency. The system automatically throttles down the user-specified target hashrate when the rig temperature is within 2°C of the shutdown temperature. Conversely, the target is throttled up to the user-defined hashrate when the rig temperature is 7°C lower than the shutdown temperature. Tunes faster than chiptune while providing improved performance compared to Voltage Optimizer.

☐

Chip Tune

0 TH/s

Maintain the target hashrate by adjusting individual chip clocks to squeeze more performance while perpetually optimizing voltage for efficiency.

☒

Power Tune

3500 W

Maintain the target power by perpetually adjusting board clocks while optimizing voltage for efficiency. The system automatically throttles down the user-specified target power when the rig temperature is within 2°C of the shutdown temperature. Conversely, the target is throttled up to the user-defined power when the rig temperature is 7°C lower than the shutdown temperature. Supported only on rigs where the PSU reports true power draw.

A horizontal slider bar with a blue gradient. A blue dot is positioned at the left end, and a red dot is positioned at the right end. A small blue wave icon is at the left end.

1000W

4000W

3500 W

1000 W

200 W

Target

Min Throttle

Throttle Step

APPLY

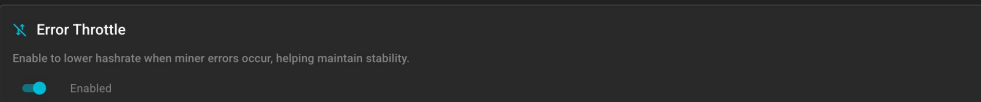
Chip Tune

Adjusting individual chip clocks to maintain the target hashrate while optimizing voltage

Power Tune

Adjusting board clock to maintain the target power while optimizing voltage

Note: Power Tuning is only available in firmware version 1.20.4 or later



Error Throttle

Occurs when the miner idles due to an error, often from too high of a target.
Perpetual Tune will lower and cap the target hashrate.
User intervention is required to reset it.

Note: Temperature throttling will still function, but cannot exceed this new error throttle cap

Scheduler

Custom scheduled downtime

Scheduler

The miner defaults to mining. Create scheduled windows to opt out, and the miner will go idle during those times.

Disabled

Current Miner Timezone

Etc/UTC

Calendar Timezone

Etc/UTC

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
00:00							
01:00		01:30 - 08:30	01:30 - 08:30	01:30 - 08:30			
02:00							
03:00							
04:00							
05:00		idling	idling	idling			
06:00							
07:00							
08:00					08:30 - 12:30	08:30 - 12:30	
09:00							
10:00					idling	idling	
11:00							
12:00							
13:00							

APPLY

RESET

CLEAR

Scheduler

The system defaults to active mining.

Use the click-and-drag interface to create scheduled opt-out periods, prompting the miner to automatically idle during those selected times

Setting - System

Manage system settings, including password changes and firmware updates

PASSWORDSYSTEM UPDATEPREFERENCES

🔑 Password

Change miner password

APPLY

🔧 System Update

Current Miner System
PowerPlay-BMS v1.23.3

Update Miner System

System Update File (.zip)

BROWSE

Drag and drop a .zip file, or browse

☒ Maintain config over update

APPLY

Password

Enter your new password, confirm it then click “APPLY”

System Update

1. Download the latest release of the firmware from [ePIC Github](#)
2. Download the .zip file
powerplay-xxxx-update-vxxxxxxx.zip
3. Upload it, then click “APPLY”

Note: The “Maintain config over update” will save your settings across the update.

Your miner will take a few minutes to reboot and recalibrate.

System - Preferences

Configure miner behaviour for network loss, board failures, and idle states.

PASSWORDSYSTEM UPDATEPREFERENCES

⌚

Timezone

Current Miner Timezone

America/Toronto

Update Miner Timezone

APPLY

🔌

Idle On Connection Lost

On connection lost, the miner will go to idle. When disabled, the miner will continue to draw power.

🔵

Enabled

APPLY

❌

Disable Board On Failure

If the board experiences a failure it will be disabled and mining will continue without the failed board(s).

🔵

Enabled

APPLY

🔄

Enable Boards While Idling

Automatically re-enable any disabled boards if the miner remains idle for more than 10 minutes.

⚪

Disabled

APPLY

Idle On Connection Lost

Enabled means the miner will be stopped and be put in an idle state until network connection is re-established.

Disable if consistent power draw is required.

Disable Board On Failure

If the board experience a failure, it will be disabled and mining will continue without the failed board(s).

Enable Boards While Idling

If the miner remains idle for more than 10 minutes, it will automatically re-enable any disabled boards.

11. Find Miner

Turn on the “Find Miner” toggle.
Your miner will be flashing red light



12. Logs

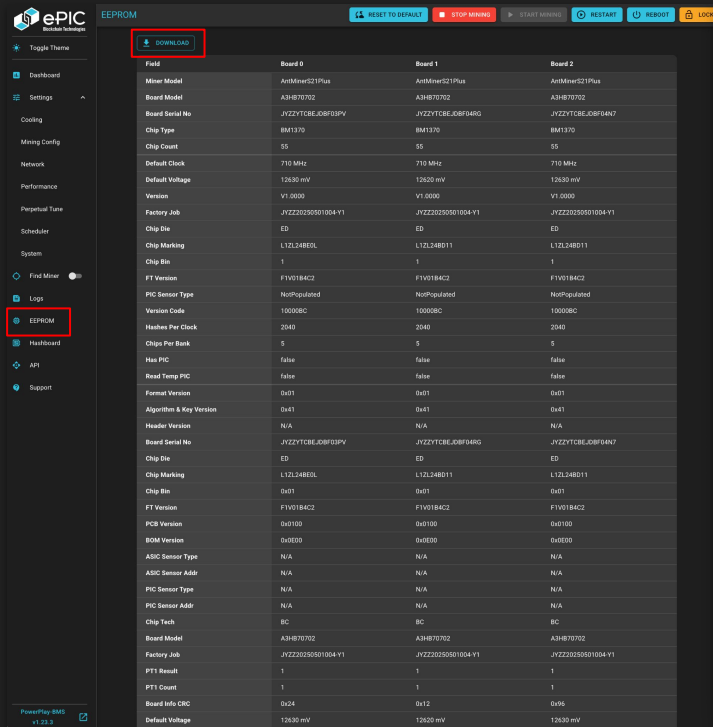
Display options: All logs, error logs, and warn logs



View options: Download the logs, scroll to bottom and close the log window



13. EEPROM



EEPROM

RESET TO DEFAULT STOP MINING START MINING RESTART REBOOT LOCK

DOWNLOAD

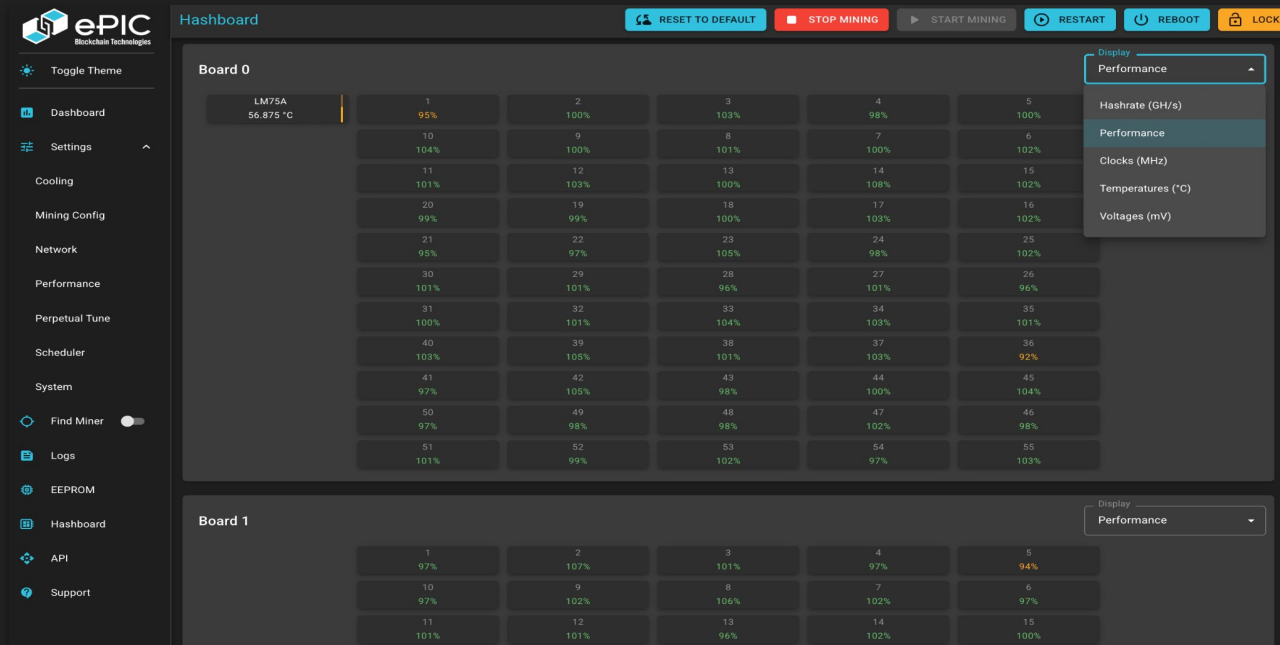
Field	Board 0	Board 1	Board 2
Miner Model	AntiMinerS21Plus	AntiMinerS21Plus	AntiMinerS21Plus
Board Model	A3H870702	A3H870702	A3H870702
Board Serial No	JYZZYTCBEJ0BF03PV	JYZZYTCBEJ0BF04RG	JYZZYTCBEJ0BF04N7
Chip Type	BM1370	BM1370	BM1370
Chip Count	55	55	55
Default Clock	710 MHz	710 MHz	710 MHz
Default Voltage	12630 mV	12630 mV	12630 mV
Version	V1.0000	V1.0000	V1.0000
Factory Job	JYZZ20250501004-V1	JYZZ20250501004-V1	JYZZ20250501004-V1
Chip Die	ED	ED	ED
Chip Marking	L1ZL348E0L	L1ZL348D11	L1ZL348D11
Chip Bin	1	1	1
FT Version	FTV018AC2	FTV018AC2	FTV018AC2
PIC Sensor Type	NotPopulated	NotPopulated	NotPopulated
Version Code	10000BC	10000BC	10000BC
Hashes Per Clock	2040	2040	2040
Chips Per Bank	5	5	5
Has PIC	false	false	false
Read Temp PIC	false	false	false
Format Version	0x01	0x01	0x01
Algorithm & Key Version	0x01	0x01	0x01
Header Version	N/A	N/A	N/A
Board Serial No	JYZZYTCBEJ0BF03PV	JYZZYTCBEJ0BF04RG	JYZZYTCBEJ0BF04N7
Chip Die	ED	ED	ED
Chip Marking	L1ZL348E0L	L1ZL348D11	L1ZL348D11
Chip Bin	0x01	0x01	0x01
FT Version	FTV018AC2	FTV018AC2	FTV018AC2
PCB Version	0x0100	0x0100	0x0100
BOM Version	0x0E00	0x0E00	0x0E00
ASIC Sensor Type	N/A	N/A	N/A
ASIC Sensor Addr	N/A	N/A	N/A
PIC Sensor Type	N/A	N/A	N/A
PIC Sensor Addr	N/A	N/A	N/A
Chip Tech	8C	8C	8C
Board Model	A3H870702	A3H870702	A3H870702
Factory Job	JYZZ20250501004-V1	JYZZ20250501004-V1	JYZZ20250501004-V1
PT1 Result	1	1	1
PT1 Count	1	1	1
Board Info CRC	0x24	0x12	0x96
Default Voltage	12630 mV	12630 mV	12630 mV

PowerPlay MMS v1.29.3

EEPROM for Board 0, 1, and 2
To view EEPROM details and download *.bin* file

14. Hashboard

Hashboard Details



- Hashrate (GH/s)
- Performance
- Clock (MHz)
- Temperature (C)
- Voltages (mV)

Chip Performance

Green 97% <

Yellow 95% < & > 97%

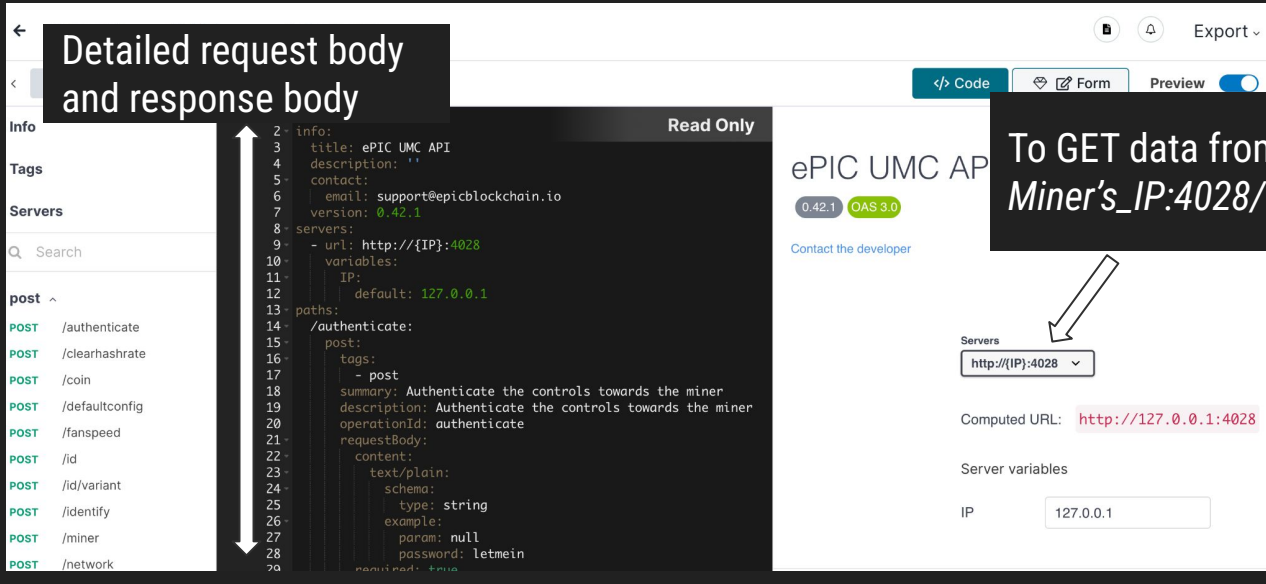
Red < 95%

Chip Temperatures is unavailable on the S19 series

15. API

To manually send (POST) or retrieve (GET) data

POST & GET



Detailed request body and response body

Info

- Tags
- Servers
- Search

post

- `POST /authenticate`
- `POST /clearhashrate`
- `POST /coin`
- `POST /defaultconfig`
- `POST /fanspeed`
- `POST /id`
- `POST /id/variant`
- `POST /identify`
- `POST /miner`
- `POST /network`

Read Only

```
2 info:
3   title: ePIC UMC API
4   description: ""
5   contact:
6     email: support@epicblockchain.io
7   version: 0.42.1
8 servers:
9   - url: http://{IP}:4028
10     variables:
11       IP:
12         default: 127.0.0.1
13 paths:
14   /authenticate:
15     post:
16       tags:
17         - post
18       summary: Authenticate the controls towards the miner
19       description: Authenticate the controls towards the miner
20       operationId: authenticate
21       requestBody:
22         content:
23           text/plain:
24             schema:
25               type: string
26             example:
27               param: null
28               password: letmein
29       requestBody: true
```

ePIC UMC API

0.42.1 OAS 3.0

Contact the developer

Servers

`http://{IP}:4028`

Computed URL: `http://127.0.0.1:4028`

Server variables

IP: `127.0.0.1`

To GET data from a server,
Miner's_IP:4028/GET_command

API documentation: [here](#)

15. API

POST example

POST /tune/clock/all Change only the clocks of the chips in the miner

Parameters [Try it out](#)

No parameters

Request body required

Example Value | [Schema](#)

```
{
  "param": 550,
  "password": "letmein"
}
```

Responses

Code	Description	Links
200	Response status Media type: application/json Controls Accept header. Example Value Schema <pre>{ "error": "{\\"MissingParam\\":\\"Missing param\\"}", "result": true }</pre>	No links

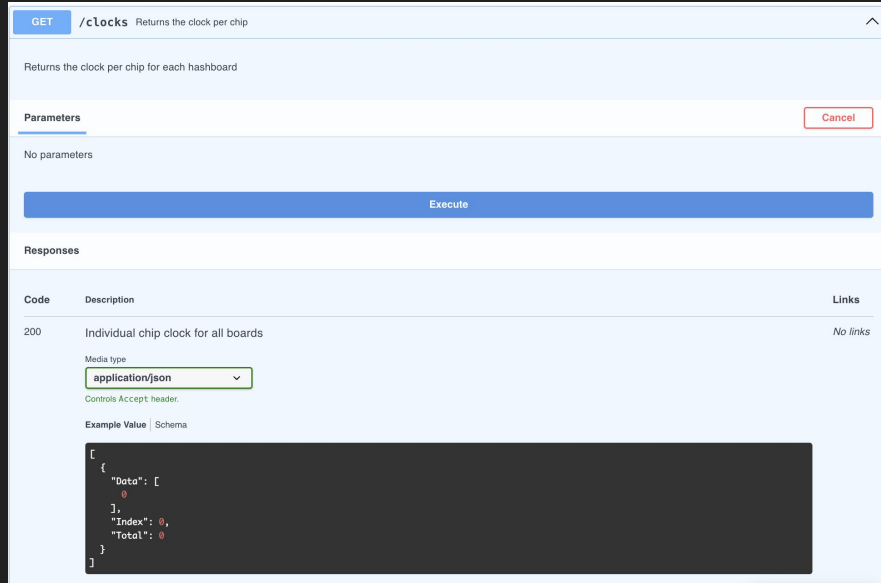
POST: /tune/clock/all

Changing the clocks of the chips in the miner

1. Click "Try it out"
2. Enter the desired value in the Request Body
3. Click "Execute"
4. Check the Response Body

15. API

GET example



The screenshot shows the ePIC API interface for the `GET /clocks` endpoint. The interface includes a header bar with the method `GET` and the endpoint `/clocks`, followed by a description: "Returns the clock per chip". Below this, there is a section for parameters, which is currently empty. A large blue "Execute" button is visible. The "Responses" section shows a table with one entry: a 200 status code, the description "Individual chip clock for all boards", and a link to "No links". Below the table, there is a "Media type" dropdown menu set to "application/json", a "Controls Accept header" checkbox, and an "Example Value" field displaying a JSON object:

```
{  "Data": [    0  ],  "Index": 0,  "Total": 0}
```

.

GET: /clocks

Returning the clock per chip

1. Click "Try it out"
2. Click "Execute"
3. Check the Response Body

OR

1. Miner's_IP:4028/clocks
2. Click "Pretty-print" at the top left corner

16. General Solutions for Hashboard Errors

1. Ensure all Hashboards are Connected as well as the PSU
2. Reset to Default to ensure FW is in a good state
3. If all HBs are not responding, replace PSU to ensure HBs are getting power
4. Disable HBs based on log to isolate which HB may need repair
5. If confident that PSU is working and HBs are good, use stock control board to confirm that there are no chip issues and isolate the UMC board

ePIC Dashboard

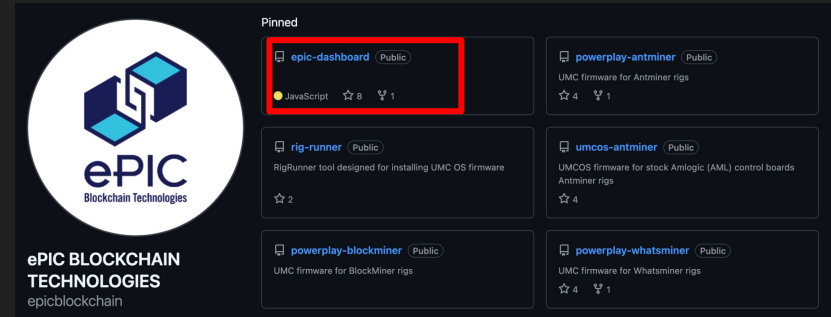
A powerful solution for managing miner fleet

Downloading the ePIC Dashboard

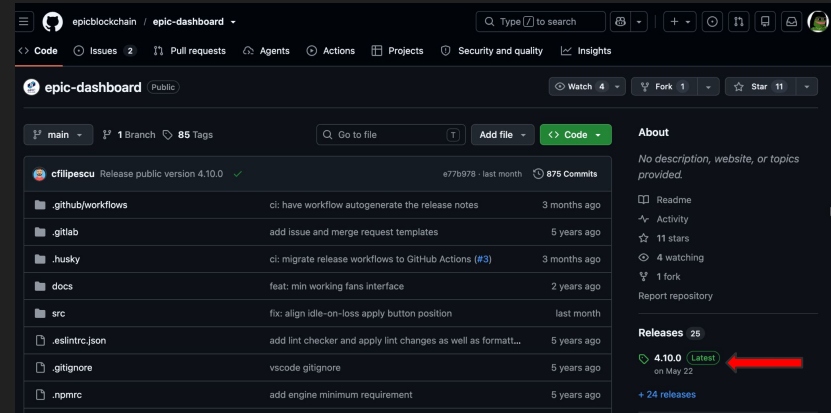
Install fleet management tool to scan for miner IP addresses and manage mining operation from a single interface

Installation Steps

1. Go to [ePIC Github](#) and click on **epic-dashboard**
2. Download the package that matches your operating systems (Windows, macOS, or Linux) from the latest release
3. Extract the downloaded .zip file
4. Open the extracted folder and run the ePIC Dashboard application



epic-dashboard on Github



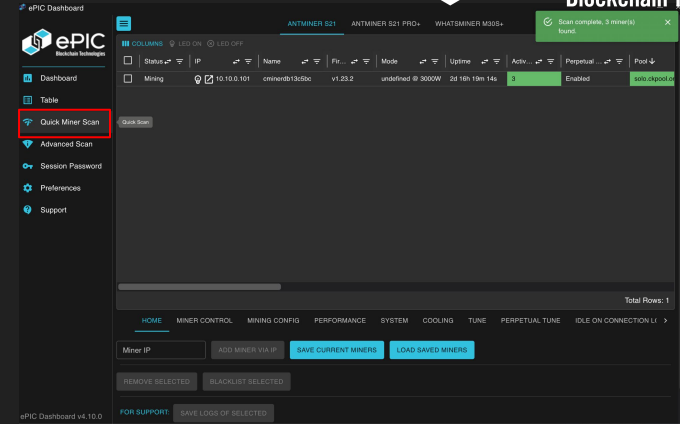
Download the latest release

Finding Miner's IP Address

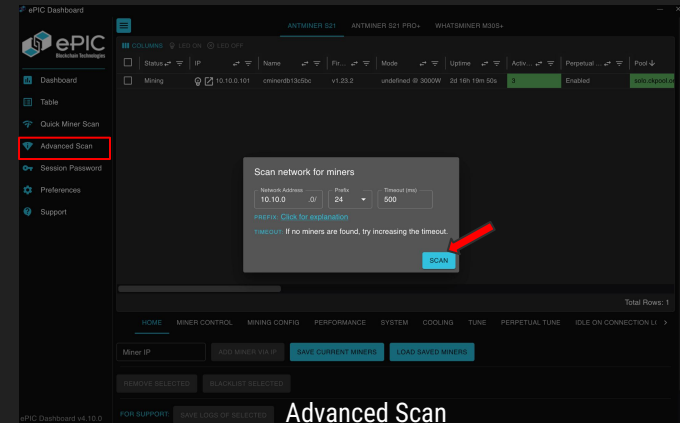
Locate your miner on your local network

The default password for all miner is **letmein**

1. Open the **ePIC Dashboard** application
2. Choose your preferred scan method:
 - **Quick Miner Scan** to automatically scan your computer's current network,
 - **Advanced Scan** to manually enter a custom network range
3. Once the scan completes, navigate to the **Table** tab
4. Locate your miner's IP address under the **IP** column



Quick Miner Scan



Advanced Scan

ePIC Dashboard - Table

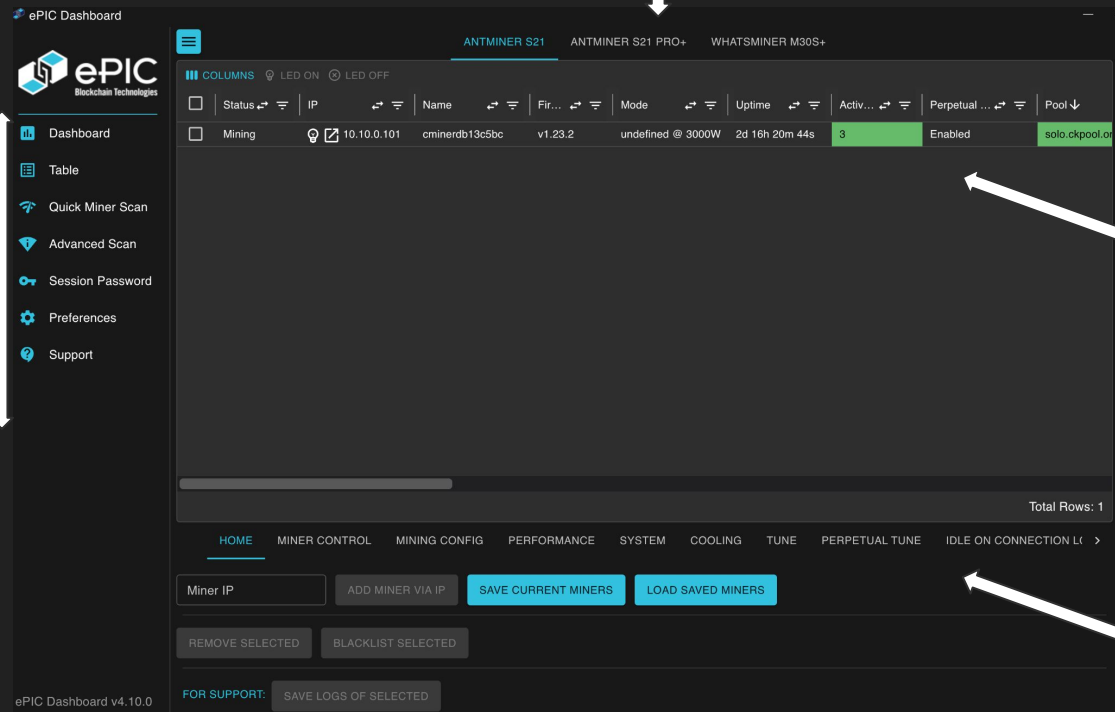
Manage multiple miners from a single interface

Options

Sorted by model

Miner's
information

Control Panel



The screenshot displays the ePIC Dashboard interface. On the left is a sidebar with navigation options: Dashboard, Table, Quick Miner Scan, Advanced Scan, Session Password, Preferences, and Support. The main area shows a table of miners under the 'ANTMINER S21' tab. The table has columns for Status, IP, Name, Fir..., Mode, Uptime, Activ..., Perpetual..., and Pool. A single miner is listed with the following details: Mining, IP 10.10.0.101, Name cminerdb13c5bc, Mode v1.23.2, Uptime undefined @ 3000W, 2d 16h 20m 44s, Activ... 3, Perpetual... Enabled, and Pool solo.ckptool. Below the table is a 'Total Rows: 1' indicator. At the bottom is a 'Control Panel' with buttons for 'Miner IP', 'ADD MINER VIA IP', 'SAVE CURRENT MINERS', 'LOAD SAVED MINERS', 'REMOVE SELECTED', 'BLACKLIST SELECTED', and 'FOR SUPPORT: SAVE LOGS OF SELECTED'.

Columns	LED ON	LED OFF						
Status	IP	Name	Fir...	Mode	Uptime	Activ...	Perpetual...	Pool

Columns	LED ON	LED OFF						
Mining	10.10.0.101	cminerdb13c5bc	v1.23.2	undefined @ 3000W	2d 16h 20m 44s	3	Enabled	solo.ckptool.0

Total Rows: 1

HOME MINER CONTROL MINING CONFIG PERFORMANCE SYSTEM COOLING TUNE PERPETUAL TUNE IDLE ON CONNECTION LC >

Miner IP ADD MINER VIA IP SAVE CURRENT MINERS LOAD SAVED MINERS

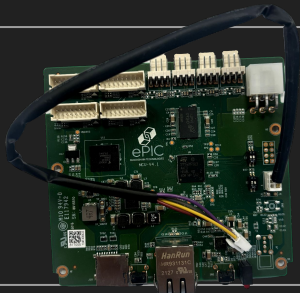
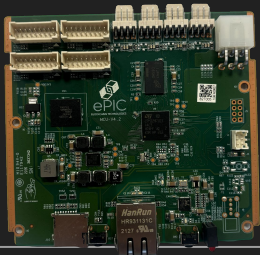
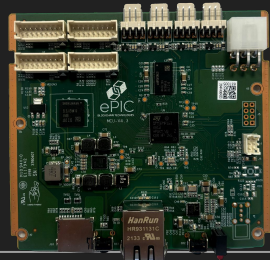
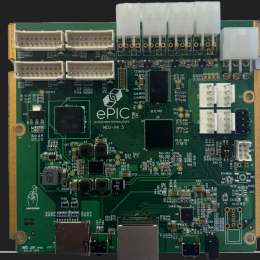
REMOVE SELECTED BLACKLIST SELECTED

FOR SUPPORT: SAVE LOGS OF SELECTED

Control Board Form Factor

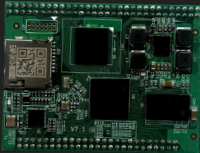
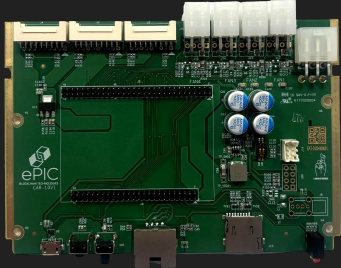
UMC V4.x

Compatible with Antminer S19 and S21 series

	V4.1	V4.2	V4.3	V4.5
Image				
Release Year	2022	2022	2023	2024
Compatible Models	S19 series and S19K Pro & S21 with square fan connectors			S19K Pro & S21
Note	PSU 4-pin connector is required	PSU 4-pin connector no longer required	J16 enhanced IP report button configured *works on supported 3rd management tools & ePIC Dashboard Modified and enhanced	Square fan female connectors implemented

SOM (System on Module)

UMC V7 Module & Carrier Boards

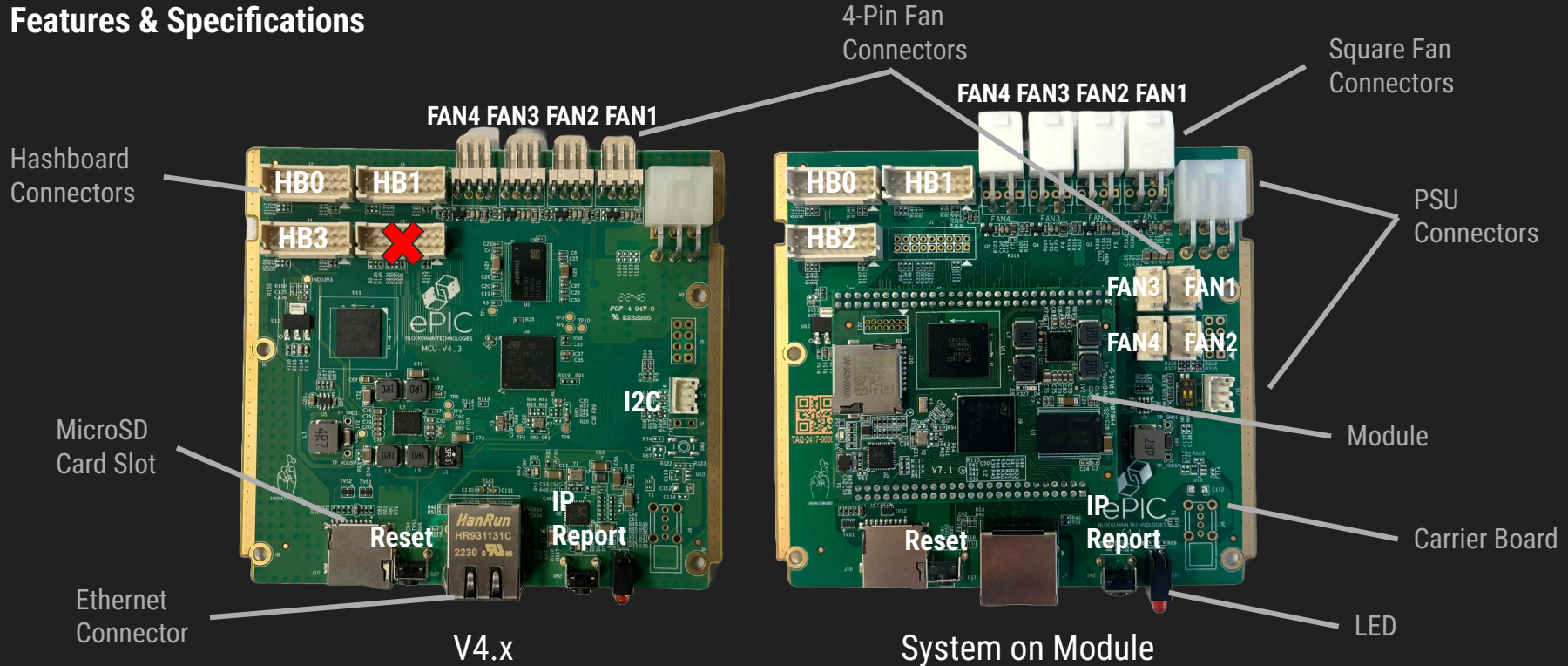
	V7 (Module)	C4	C10
Image			
Release Year	2024	2024	2025
Compatible Models	On any carrier boards	S19 series S19K Pro & S21	S21 Pro, S21 XP, S21 +
Note	Cannot be used alone		Does not support built-in display

Installing UMC Board

UMC Board for Antminer Overview

Compatible with Antminer S19 and S21 series

Features & Specifications



*The J1 port is DISABLED by default, and the S21 Pro, S21 XP and S21 + models require a different carrier board.

UMC Board for Antminer Overview

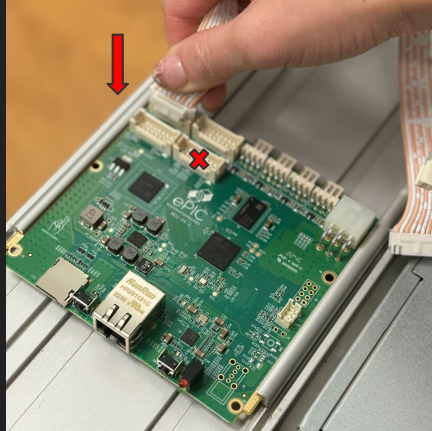
Compatible with Antminer S19 and S21 series

Components

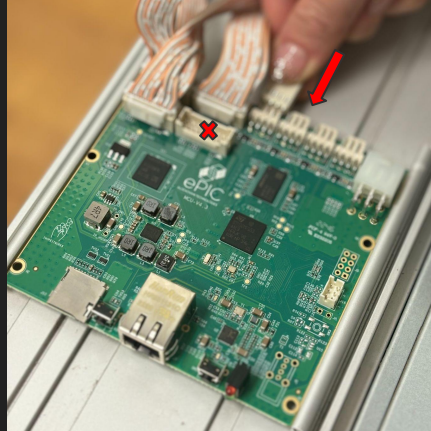
Included	Not Included
ePIC UMC Control Board	MicroSD Card SD card to USB adapter Power Cords Ethernet Cable
Required Tool : Screwdriver 	

Installation Guide

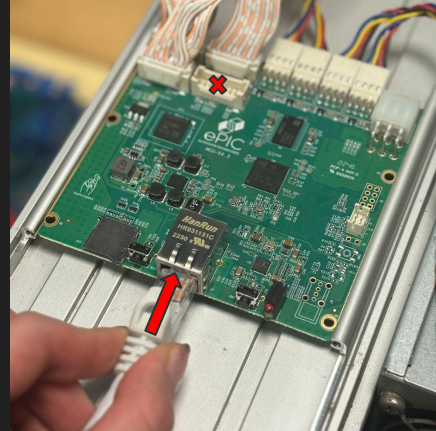
Connect the hashboard, fan, Ethernet and PSU connectors in the direction as shown



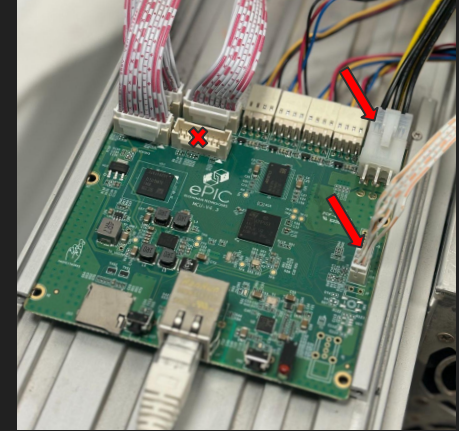
1. Data cable for hashboards



2. Fan connectors



3. Ethernet cable



4. PCIe power cable and I2C 4-pin cable

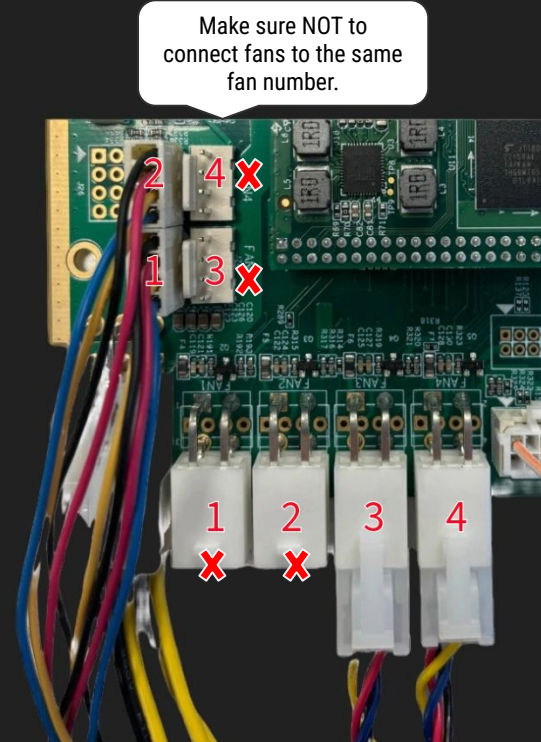
*J1 port is DISABLED by default. S19K Pro may have different fan configuration. Please see the page 10.

How to Connect Two Different Fan Cables for S19K Pro

1. Read the fan numbers labeled on the UMC, as shown
2. Connect the 4-pin fan connectors to **FAN1** and **FAN2**
3. Connect the square fan connectors to **FAN3** and **FAN4**

DO NOT CONNECT TO THE SAME FAN NUMBERS

Example: Connecting both square and the 4-pin fans to FAN1 and FAN2, this will cause the software to detect only two fan.



Pre-Flashing Requirements

1. Select the correct image

Download the appropriate .zip file based on your hardware:

Hardware Model	Required Firmware Image
S19 and S19 Pro (chiptype BM1398 ONLY)	powerplay-antminer- legacy -s19
All other miners	powerplay-antminer

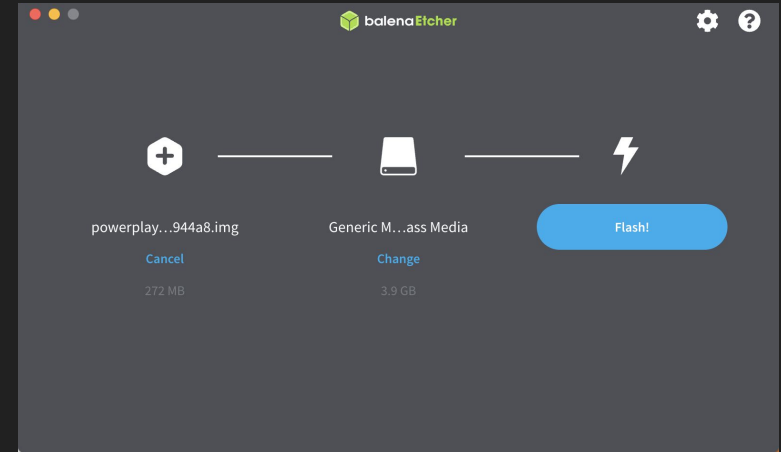
2. Upgrade path for older versions (v0.56.3 or older)

If your miner is currently running v0.56.3 or older, you must choose one of the following methods:

- **System Update:** update to version v0.100.3 first then update to the latest release
- **SD recovery:** flash the latest version directly using the SD card instructions below

Flashing the microSD card

1. **Download Prerequisites:** Install a flashing tool (e.g., balenaEtcher) and download the correct *sdrecovery.zip* for your miner from the ePIC Github.
2. **Setup:** Insert the microSD card into your PC and launch your flashing tool.
3. **Flash:** Select the downloaded *.zip* file and your microSD card as the target device, then click **Flash!**
4. **Eject:** Once the process completes, safely eject the microSD card.

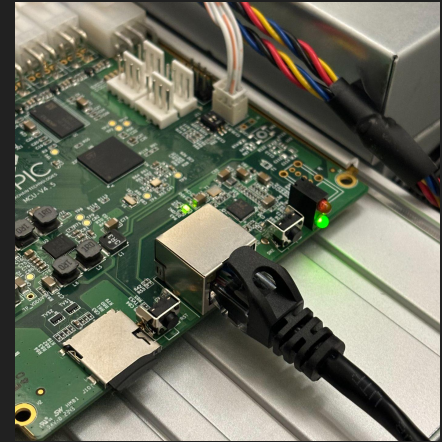


balenaEtcher

Flashing the Miner

1. **Initial Boot:** Insert the flashed microSD card into the powered-off miner and turn it on.
2. **Flash:** Wait for the LED to turn **solid green** (about 30-60 seconds), then power off the miner.
3. **Boot & Calibrate:** Remove the microSD card and power the miner back on.
4. **Wait for Mining:** The miner will boot up (blinking green), calibrate (alternating red/green), and begin mining once the LED returns **solid green**.

Wait for the solid green light before power off!



Step 4

*You can use any available microSD slot on either the module or the carrier board

Have a question?

Website

<https://epicblockchain.io/support/>

Email

Support@epicblockchain.io

Github

<https://github.com/epicblockchain>

Twitter

<https://twitter.com/ePICBlockchain>

Telegram

https://t.me/epic_umc