



S21 Pro - 245 TH

Product Manual

Document Version 1.0
Jul. 2025



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1.Overview

1. Overview

The S21 XP server is Bitmain's newest version in the 21 server series. Power supply APW171215 is part of S21 XP server. All S21 XP servers are tested and configured prior to shipping to ensure easy set up.





Front View Back View



Caution:

- Please refer to the layout above to place your goods in usage in case of any damage.
- The equipment must be connected to an earthed mains socket-outlet. The socket-outlet shall be installed near the equipment and shall be easily accessible.
- The equipment has two power inputs, only by connecting those two power supply sockets simultaneously can the
- equipment run. When the equipment is powered off, be sure to power off all power inputs.
- DO NOT remove any screws and cables tied on the
- product. DO NOT PRESS the metal button on the cover.
 - Please note that the actual server shall prevail.



1. Overview

1.1 S21 XP Server Components

The main components and controller front panel of S21 XP servers are shown in the following figure:





APW171215 Power Supply:





1

2.

One ANTWIRE-20SP power cord is needed and should be connected to PDU.



1. Overview

1.2 Specificatio

n Model: S21 XP Version: 10

Product Glance	Value
Model	S21 XP
Version	10
Crypto algorithm/coins	SHA256 BTC/BCH/BSV
Typical Hashrate, TH/s ⁽¹⁻¹⁾	270
Power on wall @25° $C^{(1-2)}$, Watt ⁽¹⁻¹⁾	3645

Detailed Characteristics	Value	
Power supply		
Power supply AC input voltage ⁽²⁻¹⁾ , Volt	220~277V AC	
Power supply AC Input Frequency Range, Hz	50~60	
Power supply AC Input current ⁽²⁻²⁾ , Amp	20	
Hardware Configuration		
Network connection mode	RJ45 Ethernet 10/100M	
Server size (Length*Width*Height, w/o package), mm), 449*219*293	
Server size (Length*Width*Height, with package), mm	640*360*450	
Net weight, kg	18.7	
Gross weight, kg	21.5	
Noise ⁽²⁻³⁾ , dBA	76	
Environment Requirements		
Operation temperature,°C	-20~45	
Storage temperature, °C	-20~70	
Operation humidity, RH	10%~90%	
Operation altitude ⁽²⁻⁴⁾ , m	≤2000	



1. Overview

Notes:

- (1-1) The Hashrate value, Power on wall, and Power efficiency on wall are all typical values, The actual Hashrate value fluctuates by $\pm 3\%$, and the actual Power on wall and Power efficiency on wall fluctuate by $\pm 5\%$.
- (1-2) Inlet air temperature.
- (2-1) Caution: Wrong input voltage may probably cause server damaged.
- (2-2) Single-phase AC input 20A.
- (2-3) Max condition: Fan is under max RPM(rotation per minute).
- (2-4) When the server is used at an altitude from 900m to 2000m, the highest operating temperature decreases by 1° C for every increase of 300m.



2. Setting up the Server

2. Setting up the Server



The file IPReporter.zip is supported by Microsoft Windows only.

Go to the following site:

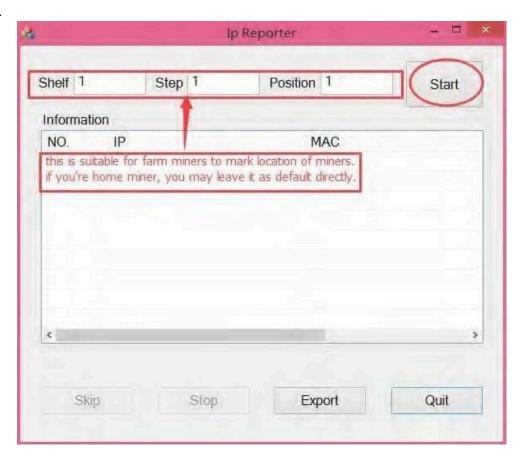
https://oneminers.com/cdn/shop/files/Antminer-IP Reporter-oneminers.zip?v=2015692706878851696

Download the following file: IPReporter.zip.



The default DHCP network protocol distributes IP addresses automatically.

- 3. Right-click **IPReporter.exe** and run it as Administrator.
- 4. Select one of the following options:
- Shelf, Step, Position suitable for farm servers to mark the location of the servers.
- Default suitable for home servers.
- 5. Click Start.





2. Setting up the Server

6. On the controller board, click the IP Report button. Hold it down until it beeps (about 5 seconds).



The IP address will be displayed in a window on your computer screen.



- 7. In your web browser, enter the IP address provided.
- 8. Proceed to login using root for both the username and password.
- 9. In the Protocol section, you can assign a Static IP address (optional).
- 10. Enter the IP address, Subnet mask, gateway and DNS Server.
- 11. Click "Save".



2. Setting up the Server





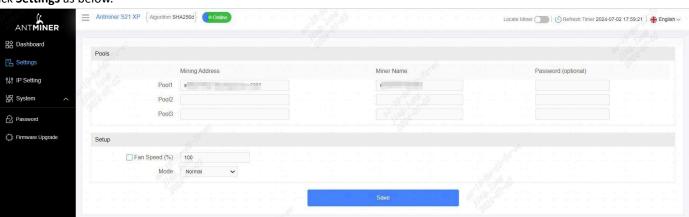
3. Configuring the Serve

3. Configuring the Server

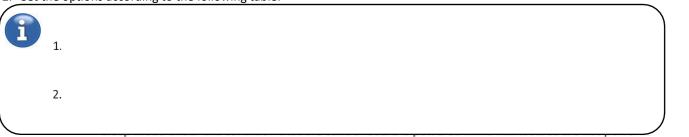
Setting up the Pool

To configure the server:

1. Click **Settings** as below.



2. Set the options according to the following table:



Option	Description
Mining address	Enter the address of your desired pool.
	The S21 XP servers can be set up with three mining pools, with decreasing priority from the first pool (pool 1) to the third pool (pool 3). The pools with low priority will only be used if all higher priority pools are offline.
Name	Your worker ID on the selected pool.
Password (optional)	The password for your selected worker.

'c Save after the configuration.

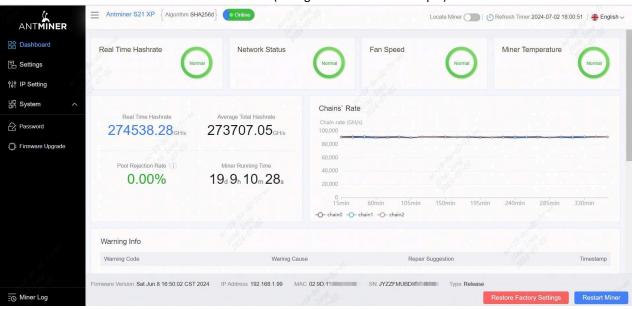


4. Monitoring Your Server

4. Monitoring Your Server

To check the operating status of your server:

1. Click dashboard marked below to check the server status (taking S21 XP 270T as example).



2. Monitor your server according to the descriptions in the following table:

Option	Description	
Number of chips	Number of chips detected in the chain.	
Frequency	ASIC frequency setting.	
Real Hashrate	Real-time Hashrate of each hash board (GH/s).	
Inlet Temp	Temperature of the inlet (°C).	
Outlet Temp	Temperature of the outlet (°C).	
Chip state	One of the following statuses will appear:	
	The Green Icon - indicates normal	
	The Red Icon- indicates abnormal	



5. Administering Your Server

5. Administering Your Server

5.1 Checking Your Firmware Version

To check your firmware version:

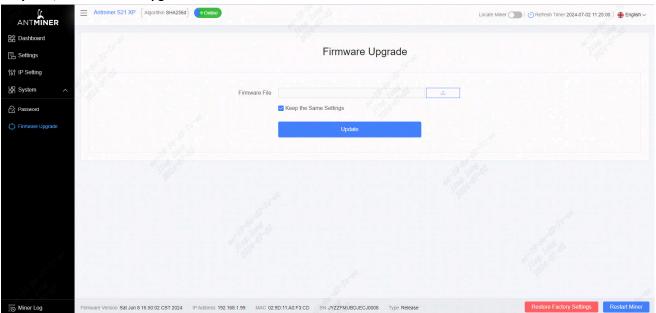
- 1. Enter the backstage of your server, find the firmware version on the bottom.
- 2. **Firmware Version** displays the date of the firmware your server uses. In the examples below, the server is using firmware version 20240608.

5.2 Upgrading Your System



To upgrade the server's firmware:

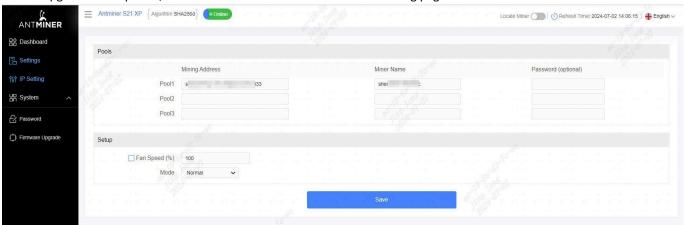
1. In System, click Firmware Upgrade.





5. Administering Your Server

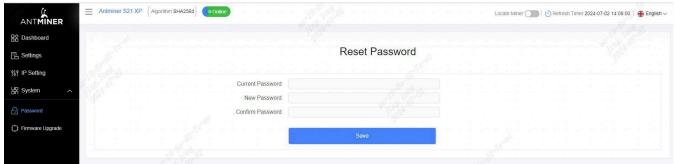
- 2. For Keep Settings:
- Select "keep settings" to keep your current settings (default).
- Unselect "keep settings" to reset the server to default settings.
- 3. Click the button and navigate to the upgrade file. Select the upgrade file, then click **Update**.
- 4. When the upgrade is completed, restart the server and it will turn to the setting page.



5.3 Modifying Your Password

To change your login password:

- 1. In System, click the Password tab.
- 2. Set your new password, then click Save.



5.4 Restoring Initial Settings

To restore your initial settings

- 1. Turn on the server and let it run for 5 minutes.
- 2. On the controller front panel, press and hold the Reset button for 10 seconds

Resetting your server will reboot it and restore its default settings. The red LED will automatically flash once every 15 seconds if the reset is operated successfully.



Environmental Requirements

Please run your server in accordance with the following requirements

1. Basic Environmental Requirements:

1.1 Climatic Conditions:

Description	Requirement
Operating Temperature	-20-45°C
Operating Humidity	10-90%RH (non-condensing)
Storage Temperature	-20-70°C
Storage Humidity	5-95%RH (non-condensing)
Altitude	≤2000m

1.2 Site Requirements of the Server Running Room:

Please keep the server running room away from industrial pollution sources:

For heavy pollution sources such as smelters and coal mines, the distance should be more than 5km.

For moderate pollution sources such as chemical industries, rubber and electroplating industries, the distance should be more than 3.7km.

For light pollution sources such as food factories and leather processing factories, the distance should be more than 2km. If unavoidable, the site should be chosen in the perennial upwind direction of the pollution source.

Please do not set your location within 3.7km from the seaside or the salt lake. If unavoidable, it should be built as airtight as possible, equipped with air conditioning for cooling.

1.3 Electromagnetic Environmental Conditions:

Please keep your site away from transformers, high-voltage cables, transmission lines and high-current equipment, for example, there should be no high-power AC transformers (>10KA) within 20 meters, and no high-voltage power lines within 50 meters. Please keep your site away from high-power radio transmitters, for example, there should be no high-power radio transmitters (>1500W) within 100 meters.

2. Other Environmental Requirements:

The server running room shall be free of explosive, conductive, magnetically conductive and corrosive dust. The requirements of mechanical active substances are shown below:

2.1 Requirements of Mechanical Active Substances

Mechanical Active Substance	Requirement
Sand	<= 30mg/m ³
Dust (suspended)	<= 0.2mg/m ³
Dust (deposited)	<=1.5mg/m²h



2.2 Requirements of Corrosive Gas

Corrosive Gas	Unit	Concentration
H ₂ S	ppb	< 3
SO ₂	ppb	< 10
Cl2	ppb	< 1
NO ₂	ppb	< 50
HF	ppb	< 1
NH ₃	ppb	< 500
Оз	ppb	< 2

Note: ppb (part per billion) refers to the unit of concentration, 1ppb stands for the volume ratio of part per billion.



Regulations:

FCC Notice (FOR FCC CERTIFIED MODELS):

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note:

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

EU WEEE: Disposal of Waste Equipment by Users in Private Household in the European Union



This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handling it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste

disposal service or the shop where you purchased the product.



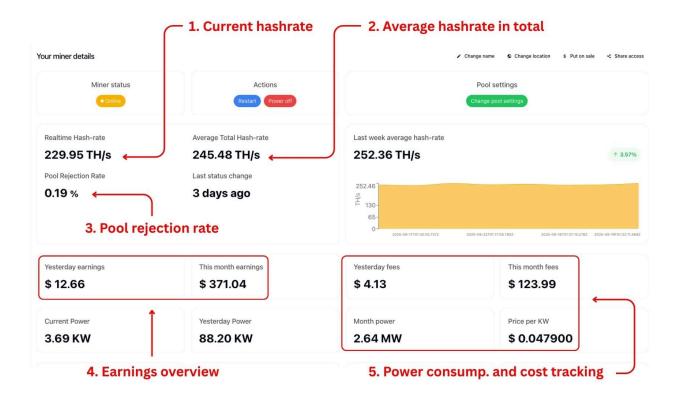
OneMiners Enhanced Manual

(Official Bitmain manual with integrated OneMiners platform insights)

Note: All illustrations and values shown are for demonstration purposes only. Actual figures in the OneMiners platform may vary depending on the specific ASIC miner model and configuration.

<u>www.oneminers.com</u>

Miner Details (OneMiners Platform)



1. OneMiners Platform v1.2 - Miner Details

1. Realtime Hash-rate

- Displays the current hashrate of the miner in terahashes per second (TH/s).
- This value fluctuates in real time depending on network stability, hardware performance, and pool communication.

2. Average Total Hash-rate

- Shows the miner's average hashrate over a longer period, typically 24 hours.
- Provides a more reliable measure of overall performance compared to realtime spikes.



3. Pool Rejection Rate

- Percentage of submitted shares rejected by the mining pool.
- A low rejection rate (below 1%) indicates stable pool communication and efficient mining.
- Higher rates may suggest network latency, misconfiguration, or hardware issues.

4. Earnings Overview

- Displays estimated earnings for the selected period (daily, weekly, or monthly).
- Earnings are calculated based on accepted shares submitted to the mining pool.

5. Power Consumption and Cost Tracking

- Shows real-time and historical energy usage of the miner in kilowatts (kW) and megawatts (MW).
- Tracks electricity costs based on your configured price per kWh, helping you calculate net profitability.

6. How to Interpret These Numbers

- Compare realtime and average hashrates to ensure consistent performance.
- Keep rejection rate as low as possible to maximize earnings.
- Track electricity usage and costs regularly, as power efficiency is crucial for ROI.
- Use earnings vs. costs comparison to determine whether adjustments in hosting or settings are needed.



2. Packaging of Antminer S21 Pro - 245 TH in person.

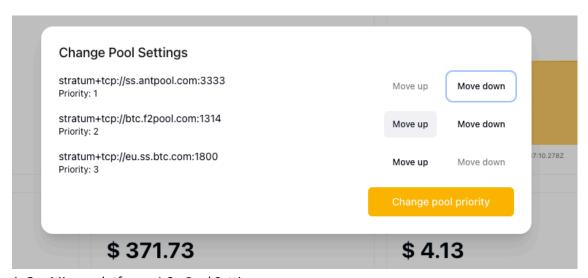


3. Antminer S21 Pro - 245 TH in person.



Pool Settings

- The miner can be connected to up to three mining pools at once.
- Pools are listed in order of priority: if the first pool is unavailable, the miner will automatically switch to the second, and then to the third.
- Priority is set by simply arranging the pools in order; the top position is always the primary pool.



4. OneMiners platform v1.2 - Pool Settings

Earnings & Fees

Earnings

- Shows daily, monthly, and cumulative mining rewards in USD (or selected currency).
- Based on the miner's hashrate, accepted shares, and pool performance.

Fees

- Displays pool or platform fees deducted from earnings.
- Calculated on a daily and monthly basis for transparency.

Net Result

The difference between gross earnings and fees represents your net mining income.
 Allows you to quickly assess profitability at a glance.

Yesterday earnings \$ 13.03	This month earnings \$ 371.73	Yesterday fees \$ 4.13	This month fees \$ 123.99
Current Power 3.66 KW	Yesterday Power 88.20 KW	Month power 2.64 MW	Price per KW \$ 0.047900

5. OneMiners platform - Earnings & Fees



Hardware Status

Network Status

- Indicates whether the miner is successfully connected to the selected pool(s).
- Any disconnection warnings should be addressed immediately to avoid downtime.

Fan Speed

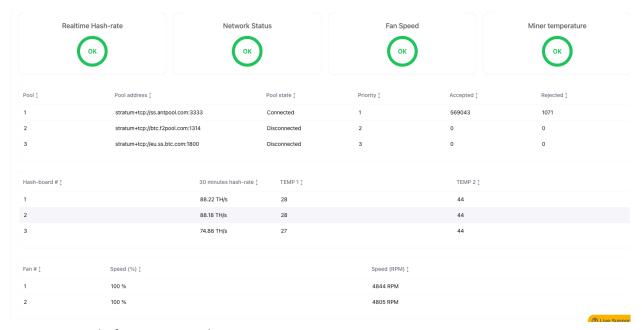
- Displays percentage and RPM of each cooling fan.
- Proper airflow is critical for maintaining optimal temperature and preventing overheating.

Miner Temperature

- Reports the current operating temperature of each hash board.
- Keeping temperatures within recommended ranges ensures stability and extends hardware lifespan.

Hash-board Level Monitoring

- Provides detailed performance data per board, including hashrate and temperature.
- Useful for diagnosing imbalances or early signs of hardware degradation.



6. OneMiners platform v1.2 - Hardware status



OneMiners Warranty

7-Year Extended Warranty

- All mining machines hosted within OneMiners data centers are eligible for up to 7 years of extended warranty coverage.
- The warranty applies exclusively when the machines are operated inside officially managed facilities, ensuring professional maintenance, stable electricity, and optimal environmental conditions.

Circlehash Group Data Centers

• The same **7-year warranty** may also apply when machines are operated within data centers managed by trusted partners from the Circlehash Group.

Warranty Coverage

- Covers manufacturing defects, hardware malfunctions, and replacement of faulty components under normal operation.
- Requires that miners are used in compliance with official guidelines and maintained within the hosted environment.

Exclusions

- Machines operated outside OneMiners or Circlehash Group data centers are not eligible for extended warranty.
- Damage caused by unauthorized modifications, external tampering, or improper usage is not covered.

Claim Process

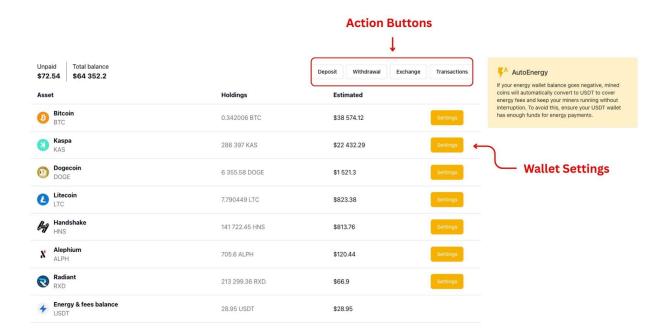
- To initiate a warranty claim, customers must contact OneMiners support with the machine's hosting details and service ID.
- Repairs or replacements will be processed through OneMiners' repair service team.



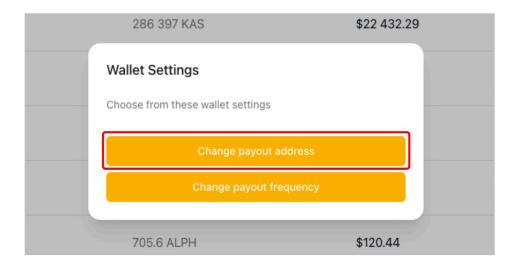
Wallet

Automatic Mining Balance

- From the very first moment your miner is installed and activated, it begins generating mining rewards.
- Even if no energy payments are preloaded into your wallet, mining continues.
- In such cases, the system automatically deducts energy costs and fees from the generated rewards.
- If funds are preloaded into the wallet in advance, earnings are credited without automatic deductions.
- You are able to change your wallet address in the wallet settings.



7. OneMiners Platform v1.2 - Wallet Section.

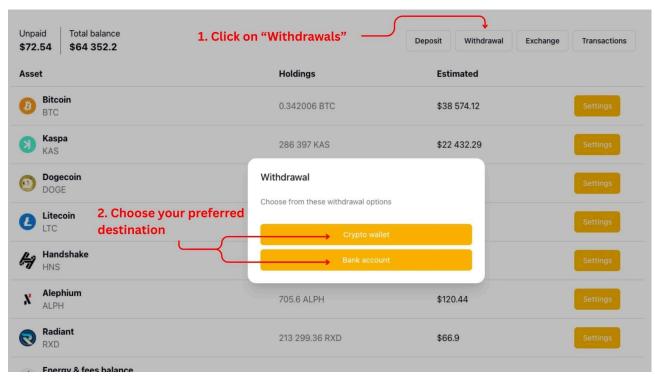


8. OneMiners Platform v1.2 - Changing your payout wallet address.

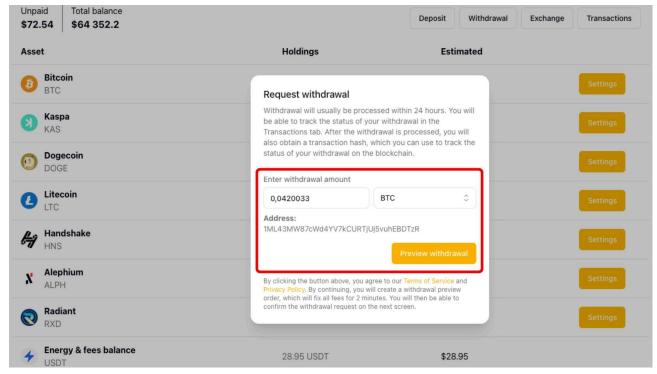


Withdrawal

- Navigate to: Wallet > Withdrawal
- Add a crypto wallet address or bank account.
- Select the **currency**, enter the **amount**, and confirm.
- Funds will be withdrawn quickly and securely to your chosen destination.



9. OneMiners Platform v1.2 - Withdrawal process

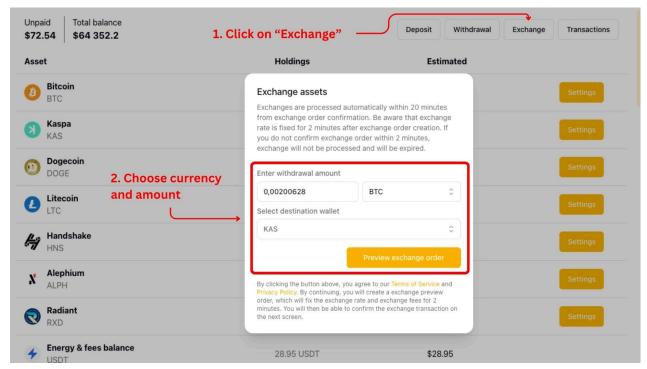


10. OneMiners Platform v1.2 - Choose the currency and amount.



Exchange

- Navigate to: Wallet > Exchange
- Select the currencies you want to exchange.
- Option also available to convert directly into Energy & Fees Funds for smooth miner operation.
- Enter the desired amount and confirm to complete the exchange instantly.



11. OneMiners Platform v1.2 - Process of currency exchange in wallet.



AI Smart Mining

What is AI Smart Mining?

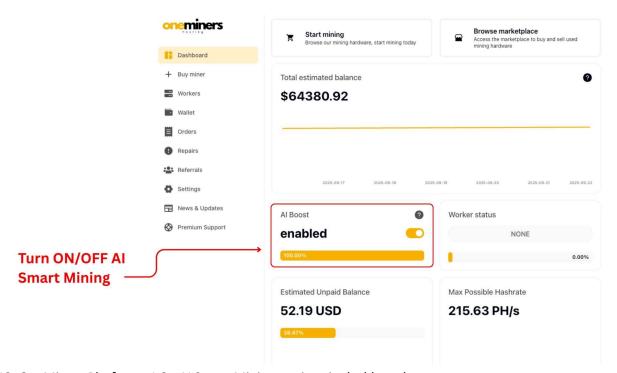
• Al Smart Mining is a feature that uses artificial intelligence to optimize your mining operations by selecting the most profitable pools and managing machines automatically.

How It Works

- Continuously analyses market conditions and pool performance.
- Redirects mining power to maximize profitability.
- Improves efficiency by avoiding less profitable pools.

Control on Dashboard

You can easily enable or disable AI Smart Mining at any time directly from your OneMiners dashboard.



12. OneMiners Platform v1.2 - AI Smart Mining settings in dashboard.



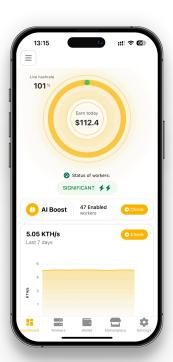
OneMiners Smart App

What is the OneMiners Smart App?

The OneMiners Smart App is a mobile application that allows you to remotely monitor and manage your ASIC miners anytime, anywhere. Thanks to our white-label hosting platform provider CircleHash LLC, the app is available for free download on both the App Store and Google Play.

Key Features

- Remote Control Start, stop, and adjust your miners directly from your phone.
- Performance Monitoring View real-time hashrate, power consumption, and hardware status.
- Wallet Access Easily manage balances, withdrawals, and transfers of mined cryptocurrencies.
- User-Friendly Interface Simple design for both beginners and advanced users.



Availability

Download the OneMiners Smart App for free on iOS (App Store) and Android (Google Play).

Scan to Download

• iOS (App Store):



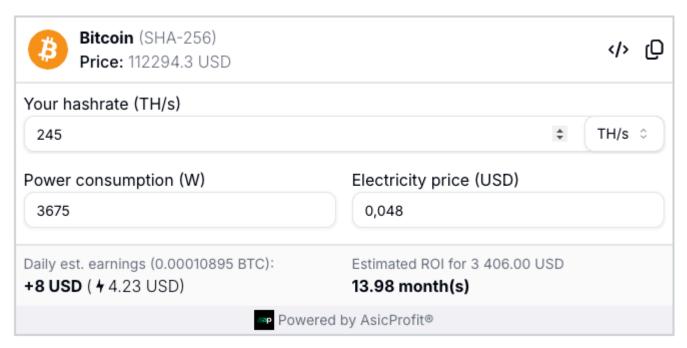
Android (Google Play):





Daily Profitability Calculations (AsicProfit.com)

- Shows estimated daily earnings in USD and BTC.
- Includes calculation of ROI (Return on Investment) based on miner purchase price, hashrate, and electricity cost.
- Data shown is valid as of 2025/09/22.
- Disclaimer: Profitability depends on network difficulty and coin market price. Always confirm updated results before making financial decisions.



13. Calculations of Daily Earnings & Estimated ROI - https://www.asicprofit.com/

: Profitability

	Daily	Monthly	Yearly
Income	\$ 11.69	\$ 355.70	\$ 4 268.38
Electricity	\$ 4.04	\$ 123.07	\$ 1 476.90
Profit	\$ 7.64	\$ 232.62	\$ 2 791.48

14. Profitability & Energy costs with 1M electricity rate of \$0.048 / kWh - https://www.asicprofit.com/



Additional Notes

Electricity Pricing

- Electricity is the largest ongoing expense for mining operations. Always negotiate the lowest possible kWh rate with your hosting provider or local supplier. OneMiners Nigeria hosting for \$0.04 / kWh.
- Consider hosting options in countries with competitive electricity pricing to maximize ROI.
- Visit OneMiners Hosting site: https://oneminers.com/pages/hosting-centers

Hosting with OneMiners

- OneMiners offers professional hosting services with locations across the USA, Europe, and the Middle East.
- Hosting ensures stable power supply, professional maintenance, and remote monitoring of your miners. Customers using OneMiners hosting benefit from optimized electricity pricing and dedicated support.

Maintenance & Repairs

- Regular hardware maintenance is essential to maximize miner lifespan.
- Dust removal, fan checks, and thermal monitoring should be carried out regularly.
- For professional repair services, please contact our repair team directly.

Platform Monitoring

- The OneMiners platform provides real-time statistics, profitability calculators, and hosting ROI tools.
- Users should frequently check miner status, temperature, and earnings to ensure stable operation.

Disclaimer

- All profitability and ROI calculations shown in this manual are valid only as of the indicated date.
- Market conditions, electricity prices, and coin values fluctuate frequently; results should always be verified before making investment decisions.
- Screenshots from the OneMiners platform are provided for reference only; actual values may differ depending on miner type, configuration, and hosting environment.



Contact & Support

For sales, technical assistance, and hosting inquiries, our team is available 24/7.

• WhatsApp Support (24/7): +1 305 867 6143

Repairs & Service: +420 739 482 744

• General Support (USA): +1 607 9009 004

• Emails:

Sales: sales@oneminers.com

 $\circ \quad \text{Business: business@oneminers.com}$

Service: service@oneminers.com

o Payments: payinquire@oneminers.com

Mailing Addresses:

United States – USA: 701 Tillery St 12, Austin, 78702 Texas

• Europe – Czechia: Rostovska 260/2b, Prague, 110 00

• Middle East - Dubai: Sheikh Rashed Bin Saeed Al Maktoum Road, C1 Building, Ajman, UAE

Please visit our Contact page for more information - https://oneminers.com/pages/contact

Official email: info@oneminers.com

Telephone: +1 607 9009 004

Scan this QR Code for any link you are looking for:

