BITMAIN · ANTMINER

Z15
420 KSol/s

Air-cooled Zcash miner · Equihash · External APW7 PSU



COIN · ALGORITHM
Zcash · Equihash

COOLING
Air (2 fans)

POWER SUPPLY
APW7 (external)

RELEASED
June 2020

Product Manual

Setup, operation, maintenance and OneMiners hosting guide

Version 1.2
Updated November 2026
Specifications verified 7 Nov 2026

Contains manufacturer documentation © Bitmain Technologies Inc., reproduced for customer reference.

About this manual

This manual covers the original **Bitmain Antminer Z15** rated at **420 KSol/s** and 1,510 W. It uses an **external APW7 power supply** and older Antminer firmware. It does **not** cover the Z15 Pro (840 KSol/s), which has a built-in APW12 power supply and different firmware.

Chapters 1 to 7 are based on Bitmain's Z15-series documentation. Each section that reproduces manufacturer content is marked with a **Source** tag. Chapters 8 to 11 cover the OneMiners platform, hosting, warranty and wallet, and are marked **OneMiners**.

Before you start

CHECK	POWER	ROOM	PAYOUT
Z15 · 420 KSol/s	**APW7 · all PCI-E**	**0–40 °C · 10–90% RH**	**Zcash wallet**
Not a Z15 Pro. Check the label.	One PSU per miner. All connectors plugged in.	Clean, ventilated, away from people (72 dB).	Plus a Windows PC for IP Reporter.

How notices are used

DANGER
Risk of electric shock, fire or injury. Do not continue until the condition is met.

CAUTION
Risk of damage to the miner, lost earnings or loss of data. Read before acting.

NOTE
Useful background, limits of a specification, or where to check further.

ONEMINERS
Applies to miners hosted in a OneMiners data center.

Copyright and disclaimer

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Specifications are typical values and may change without notice. Always confirm against the label on your unit and the latest manufacturer documentation. Information about profitability, hosting prices and platform features is for guidance only and is not financial advice. OneMiners' supplementary chapters may not be copied or redistributed without written permission.

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CHAPTER 01

Product Overview

The Antminer Z15 is Bitmain's 2020 Equihash miner for Zcash (ZEC). It runs on 12 V DC from a separate APW7 power supply connected by PCI-E cables. It was tested and configured before shipping.



Figure 1-1 Antminer Z15 420 KSol/s. Image: OneMiners product photo.

1.1 Key figures

420 KSol/s	1,510 W	3.6 J/KSol	11.6–13 V DC
Rated hashrate	Power on wall ±5%	Efficiency ±5%	Miner DC input (12 V typical)

1.2 Specifications

ITEM	VALUE	SOURCE
PERFORMANCE		
Algorithm / coin	**Equihash · Zcash (ZEC)**	Bitmain
Hashrate	**420 KSol/s**	Bitmain (via D-Central); ASIC Miner Value
Power on wall	**1,510 W (±5%)**	Bitmain (via D-Central)
Efficiency	**3.6 J/KSol (±5%)**	Bitmain (via D-Central)
POWER		
Miner DC input	**11.6–13.0 V DC (12 V typical)**	Bitmain Z15-series manual; D-Central
Power supply	**External APW7, PCI-E connectors**	D-Central
PSU mains input	**See the APW7 label**	Not stated in the sources checked

ITEM	VALUE	SOURCE
Network	**RJ45 Ethernet 10/100M**	Bitmain Z15-series manual
PHYSICAL AND ENVIRONMENT		
Hash boards	**3**	Bitmain Z15-series manual
Dimensions (L × W × H)	**245 × 133 × 290 mm**	ASIC Miner Value; Kryptex (miner only)
Weight	**Needs verification**	Sources list 5.9 kg and 9.0 kg (with or without PSU unclear)
Cooling · noise	**Air, 2 fans · about 72 dB**	ASIC Miner Value
Operating temperature	**0–40 °C**	Bitmain environmental requirements
Operating humidity	**10–90% RH, non-condensing**	Bitmain environmental requirements
Altitude	**< 2,000 m**	Bitmain environmental requirements
Release	**June 2020**	ASIC Miner Value

NOTE
Bitmain's Z15 product page wasn't reachable for this edition, so each value shows where it comes from. Confirm the PSU's mains voltage on the APW7 label before connecting it.

1.3 Power supply rules

- Use **one PSU per miner**. Never connect more than one PSU to the same hash board.
- Plug in **all PCI-E connectors** before powering up.
- An additional mains power cord for the PSU is required.

SOURCE Bitmain, Z15-series user manual: Overview and power notes.

CHAPTER 02

Safety and Installation Requirements

The Z15 and its APW7 draw about 1.5 kW continuously. Most Z15 power faults come from loose or missing PCI-E connectors.

2.1 Safety warnings

DANGER · ELECTRICAL

- Connect the PSU to an **earthed** mains socket-outlet installed near the equipment and easy to reach.
- Use the mains voltage printed on the APW7 label. Wrong input voltage may damage the server.
- Plug in all PCI-E connectors before switching on, and switch off the PSU before unplugging any of them.

CAUTION · EQUIPMENT

- Place the server as shown in Bitmain's layout to avoid damage.
- Use one PSU per miner. Don't share a PSU between miners or connect two PSUs to one board.
- Don't open the case. Opening the unit without authorisation can void the warranty.

SOURCE Bitmain, Z15-series user manual: Cautions.

2.2 Climate and site

CONDITION	REQUIREMENT
Operating temperature	0–40 °C
Operating humidity	10–90% RH, non-condensing
Storage	−20 to 70 °C · 5–95% RH
Altitude	< 2,000 m

- Keep the site away from heavy pollution (smelters, coal mines: > 5 km), chemical or electroplating plants and the sea or salt lakes (> 3.7 km).
- No transformers > 10 kA within 20 m, no high-voltage lines within 50 m, no radio transmitters > 1,500 W within 100 m.
- The room must be free of explosive, conductive, magnetic and corrosive dust.

Airflow and placement

- Keep the fan intake and exhaust of both the miner and the APW7 clear. Don't let hot exhaust flow back into the intake.
- At about 72 dB, the Z15 isn't suitable for living or office spaces.

SOURCE Bitmain, Z15-series user manual: Environmental Requirements.

03 CHAPTER Initial Setup

These steps take a Z15 from the box to its web dashboard. If your miner is hosted by OneMiners, our team does this for you; skip to Chapter 8.

3.1 Unboxing and connecting

- Check the miner, fans and PCI-E sockets for damage. Confirm the label shows **Z15** (not Z15 Pro). Keep the packing for transport.

1. **Network**
   Connect an Ethernet cable to the controller. The default DHCP setting assigns an IP address automatically.
2. **Power**
   Connect every PCI-E cable from the APW7 to the miner, connect the PSU's mains cord, then switch on.

3.2 Finding the miner's IP address

1. Download `IPReporter.zip` from shop.bitmain.com/support/download or the OneMiners Manuals & Firmware Library. It runs on Windows only.
2. Extract it, right-click `IPReporter.exe` and run it as administrator.
3. Choose **Shelf, Step, Position** (farm) or **Default** (home), then click **Start**.
4. On the controller, hold **IP Report** until it beeps (about 5 seconds). The IP address appears on your computer.

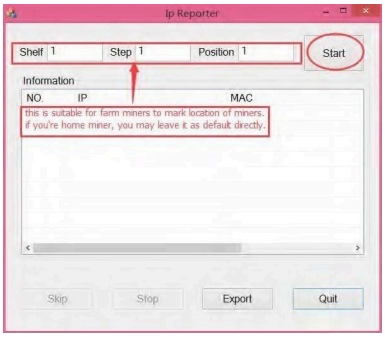


Figure 3-1 IP Reporter. © Bitmain.

3.3 Logging in and network settings

1. Enter the IP address in a web browser on the same network. Log in with `root` as both username and password, then change the password (6.2).
2. Optional: in **Network**, set the protocol and IP details, then click **Save & Apply**.

Dashboard menu map

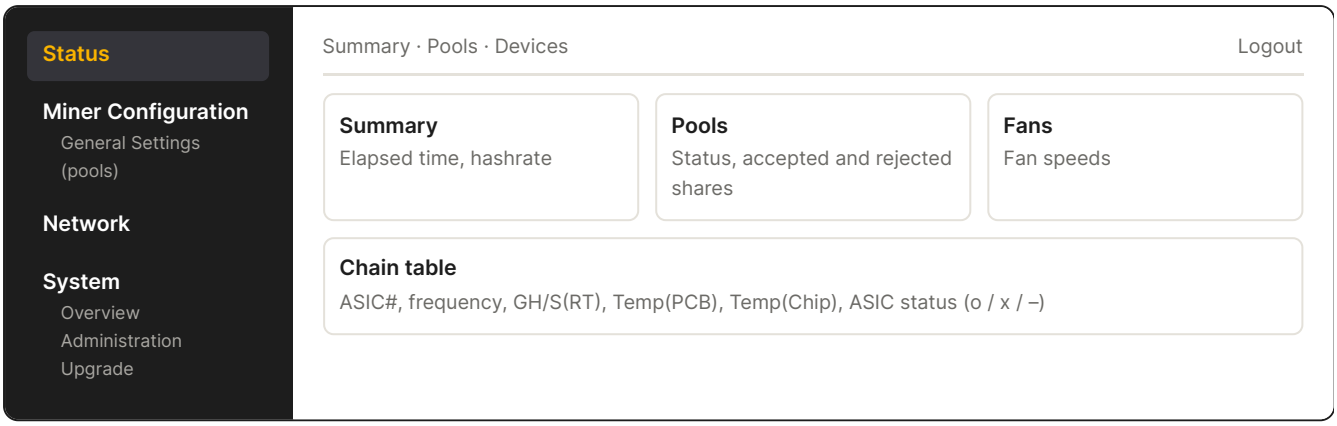


Illustration of the older Antminer web interface used by the Z15, not a screenshot. Labels can differ slightly between firmware releases.

SOURCE Bitmain, Z15-series user manual: Setting up the Server.

04 CHAPTER Mining Configuration

The Z15 mines Equihash coins, mainly Zcash (ZEC). You need a Zcash pool and a Zcash wallet address. The miner holds three pools in priority order.

4.1 Setting up pools

1. Open **Miner Configuration** › **General Settings**.
2. Enter up to three pools: URL, worker and password. Pool 1 has the highest priority; lower pools are used only when all higher pools are offline.
3. Click **Save & Apply**. The server restarts.

Worked example: Kryptex Pool

FIELD	VALUE
URL	`stratum+tcp://zec.kryptex.network:7042` (regional: `zec-eu`, `zec-us`, `zec-sg`, `zec-ru`.kryptex.network, same port)
Worker	`ZEC_WALLET_ADDRESS.WORKER`, for example `t1Abc…xyz.z15-01`
Password	`x`, or leave blank

SOURCE Kryptex Pool, Antmimer Z15 / Z15 Pro setup article, checked 7 November 2026. Pool addresses change; confirm on the pool's website.

WALLET ADDRESS
Kryptex's example uses a transparent Zcash address (starting with `t1`). Check which address types your pool accepts.

4.2 Fan speed

Fan speed can be customised, but Bitmain recommends keeping the default automatic setting.

ONEMINERS
Hosted miners are configured from the OneMiners platform rather than the miner's own dashboard. To change pools, use **Pool Settings** in your account (see 8.2).

SOURCE Bitmain, Z15-series user manual: Configuring the Server.

05 CHAPTER Monitoring Performance

The Z15 uses automatic frequency. Judge performance by the average hashrate after it has run for some time.

5.1 Status values

VALUE	MEANING
ASIC#	Number of chips detected in the chain.
Frequency	ASIC frequency setting.
GH/S(RT)	Real-time hashrate of each hash board.
Temp(PCB) / Temp(Chip)	Board and chip temperature of each hash board.
ASIC status	`o` = OK · `x` = error · `-` = dead

5.2 What "normal" looks like

Average hashrate	**about 420 KSol/s**
Wall power	**1,435–1,586 W (±5%)**
Pool rejection rate	**Below 1%**

SOURCE Bitmain, Z15-series user manual: Monitoring Your Server.

5.3 Temperature protection

AUTOMATIC STOP
Mining stops when the **PCB reaches 80 °C** or a **chip reaches 110 °C**. The kernel log shows `Fatal Error: Temperature is too high!`

06 CHAPTER Firmware and Maintenance

Keep the firmware current and the airflow clean, for both the miner and its APW7.

6.1 Upgrading firmware safely

DANGER · KEEP POWER ON
Keep the server powered throughout the upgrade. A power failure during the upgrade may mean the server has to go back to Bitmain for repair.

USE THE Z15 FILE
Only install firmware Bitmain publishes for the **Antminer Z15**, from shop.bitmain.com/support/download or the OneMiners Manuals & Firmware Library. **Never install Z15 Pro firmware** on a Z15; they are different generations.

1. Check the current **File System Version** in `System` › `Overview`.
2. Open `System` › `Upgrade`. Leave **Keep settings** selected (the default).
3. Select the file and click **Flash image**. Then reboot, or keep mining and load the new firmware at the next restart.

6.2 Changing the password

Open `System` › `Administration`, enter the new password and click **Save & Apply**.

6.3 Restoring factory settings

1. Turn on the server and let it run for 5 minutes.
2. On the controller front panel, press and hold **Reset** for 10 seconds.
3. The server reboots with default settings. The red LED flashes once every 15 seconds when the reset has succeeded.

SOURCE Bitmain, Z15-series user manual: Administering Your Server.

6.4 Preventive maintenance

WHEN	TASK
Daily / remotely	Check all three chains report, ASIC status shows `o`, and temperatures are stable.
Monthly	Check room conditions against 2.2. Check every PCI-E connector is fully seated with no heat marks.
Every 1–3 months	Switch off and unplug the PSU, then clean the miner's and PSU's fans with dry compressed air.

Intervals are OneMiners recommendations. The Z15 is a 2020 model; worn fans and PCI-E connectors are the most common age-related faults.

07 CHAPTER Troubleshooting

Start with the symptom table, then check the kernel log. Hosted customers: don't attempt repairs yourself; contact OneMiners service.

SYMPTOM	CHECK
Miner doesn't power on	Check the APW7 is switched on and its mains voltage matches the label. Check **every** PCI-E connector is plugged in.
A hash board missing	Switch off, then reseat that board's PCI-E connectors. Never connect a second PSU to the same board.
No network / IP not found	Check the cable, switch port and DHCP. Run IP Reporter as administrator and hold **IP Report** until it beeps.
Pool won't connect	Re-check the pool URL and port, the Zcash wallet and worker format, gateway and DNS. Make sure the port isn't blocked.
Chips show `x` or `-`	Error or dead chips on that chain. Update the firmware; if it persists, contact service.
"Temperature is too high"	PCB 80 °C or chip 110 °C reached. Check room temperature, fans and airflow; clean, then restart.
Smell, unusual sound or smoke	Switch off the PSU immediately and contact service.

SOURCE Based on Bitmain's Z15-series user manual (power rules, status values, temperature protection).

ONEMINERS
For a hosted miner, send the symptom, the last lines of the kernel log, and your miner's service ID to **service@oneminers.com** or WhatsApp **+1 305 867 6143**. Repairs under warranty are handled on site by our repair team.

08 CHAPTER OneMiners Platform Guide

Miners hosted by OneMiners are monitored and managed from your account at app.oneminers.com or the OneMiners mobile app. Screens in this chapter are from OneMiners platform v1.2 and show example values from other miners, not an Z15.

8.1 Miner details

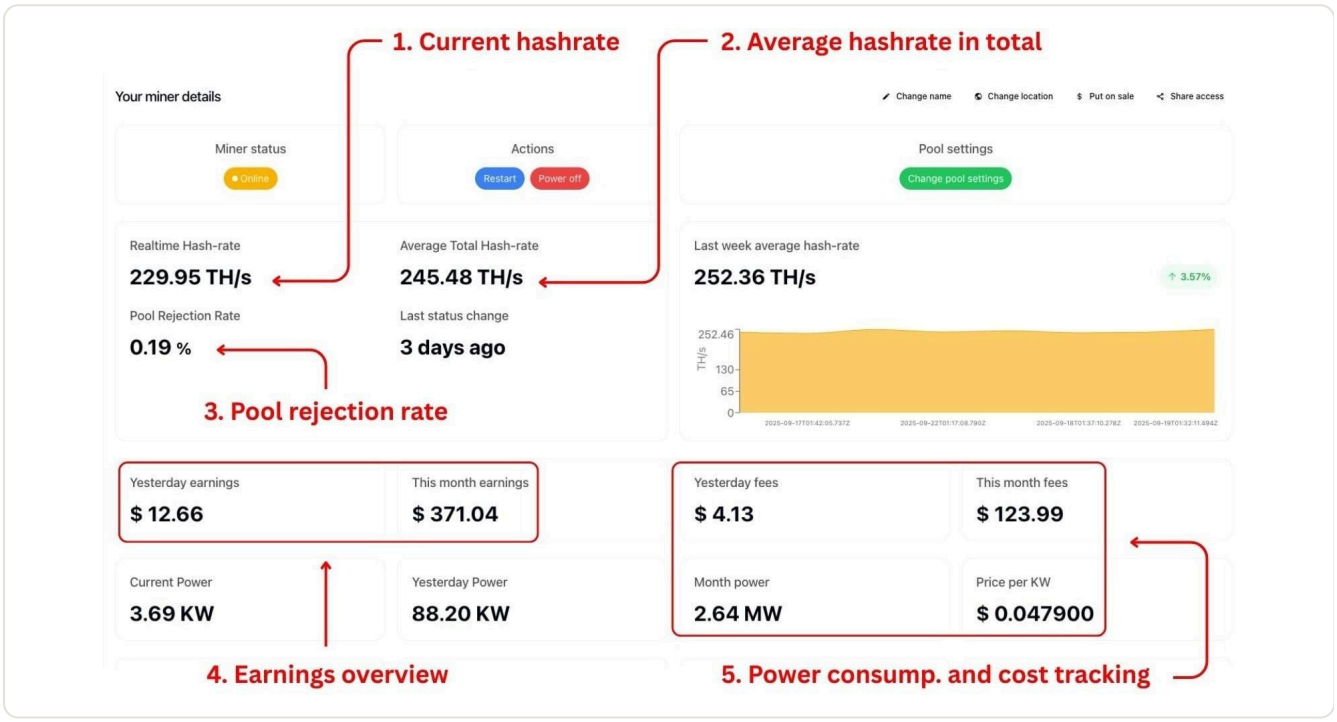


Figure 8-1 Miner details on OneMiners platform v1.2 (example values).

1 · Current hashrate	Real-time hashrate (for the Z15, in KSol/s; OneMiners listings write KH/s). It moves with network stability, hardware and pool communication.
2 · Average hashrate	Average over a longer period (typically 24 h). The most reliable measure of performance; for the Z15, expect about 420 KSol/s.
3 · Pool rejection rate	Share of submitted shares the pool rejected. Below 1% is healthy.
4 · Earnings overview	Estimated earnings for the selected period, based on accepted shares.
5 · Power and cost	Real-time and historical energy use (kW) and its cost at your configured price per kWh.

8.2 Pool settings

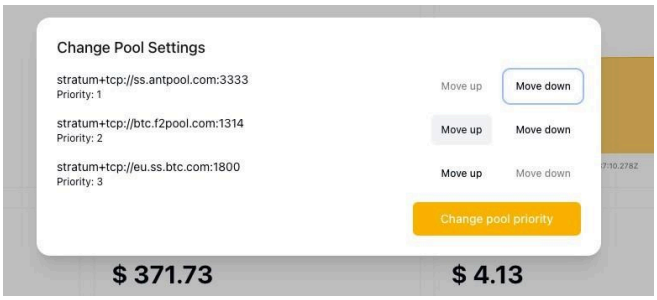


Figure 8-2 Change Pool Settings.

- Up to three pools can be connected.
- Pools are listed in priority order. If the first is unavailable, the miner switches to the second, then the third.
- Use **Move up** / **Move down** to set the order, then **Change pool priority** to apply it.

8.3 Earnings and fees



Figure 8-3 Earnings, fees, power and price per kWh (example values).

- **Earnings:** daily, monthly and cumulative mining rewards in USD or your selected currency.
- **Fees:** pool and platform fees deducted from earnings, shown daily and monthly.
- **Net result:** earnings minus fees, which is your net mining income.

8.4 Hardware status

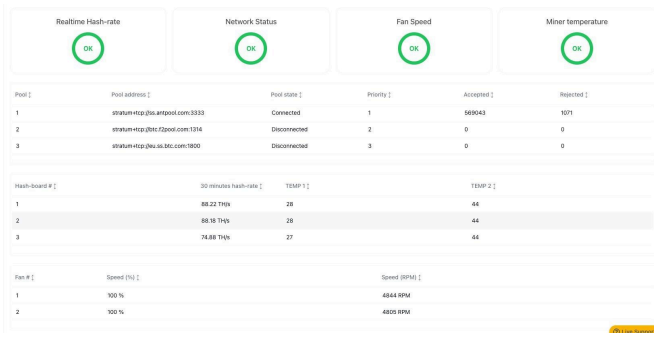


Figure 8-4 Hardware status (example from an air-cooled miner).

- **Network status:** whether the miner is connected to its pools. Address disconnections immediately.
- **Miner temperature** and **hashboard table:** per-board hashrate and temperatures. Useful for spotting an underperforming board early.

> **AIR-COOLED UNITS**
> Fan speed is shown per fan. A slow or stopped fan raises temperatures and stops mining, so act on fan alerts quickly.

ONEMINERS OneMiners platform v1.2. Confirm layout against the current version of your account.

CHAPTER 09

OneMiners Hosting and Warranty

OneMiners hosts customer-owned miners in its data centers, providing power, cooling, racking and monitoring. Terms below reflect OneMiners' published pages as checked on 7 November 2026.

9.1 Hosting

- Hosting is offered across 17 data centers worldwide, **from 3.6¢ per kWh** at the time of writing.
- Locations include Nigeria, Ethiopia, Dubai, the USA (Texas, Houston, Georgia, South Carolina, Kansas and a no-service-fee option), Finland, Norway, Canada, Brazil, Czechia, China and Paraguay.
- Hosted orders are deployed turnkey; OneMiners racks, connects and monitors the miner.
- Air-cooled Zcash miners like the Z15 are accepted at most sites. Ask sales which locations currently host the Z15.

Current prices and locations: oneminers.com/pages/hosting-centers.

9.2 Warranty

HOSTED WITH ONEMINERS

7-year full warranty for miners hosted in the USA, Dubai, Norway, Finland, Ethiopia, Nigeria and China.

- Free on-site repairs
- No-cost replacement of power supplies and cables
- No labour or diagnostic fees

SHIPPED TO YOU

Standard 12-month warranty, unless the manufacturer specifies otherwise.

- Free repair of manufacturing defects
- Replacement of defective units when necessary
- Valid only when the miner is operated according to official instructions

All customers during warranty

Remote diagnostics, real-time monitoring, 24/7 technical support, and firmware upgrades and maintenance.

Exclusions

The warranty may be voided by damage from misuse, unauthorised modifications or non-compliant operation. For the Z15, this includes damage from running outside 0–40 °C, missing or mismatched PCI-E connections, more than one PSU per board, blocked airflow, installing Z15 Pro firmware, or opening the unit.

Out of warranty

Repairs typically cost **US$80–220**, depending on the fault and parts required.

Making a claim

Contact OneMiners support with your miner's hosting details and service ID through oneminers.com/pages/contact or **service@oneminers.com**.

ONEMINERS OneMiners Warranty Policy, oneminers.com/pages/warranty-policy . The policy page prevails if it differs from this summary.

10 CHAPTER Wallet and Mining Rewards

Rewards from a hosted miner are credited to your OneMiners wallet, where you can withdraw them or exchange between currencies.

10.1 Automatic mining balance

- The miner starts generating rewards as soon as it is installed and activated.
- If no energy payment has been preloaded, mining continues and energy costs and fees are deducted automatically from the rewards.
- If funds are preloaded in advance, earnings are credited without automatic deductions.
- You can change your payout wallet address in the wallet settings.

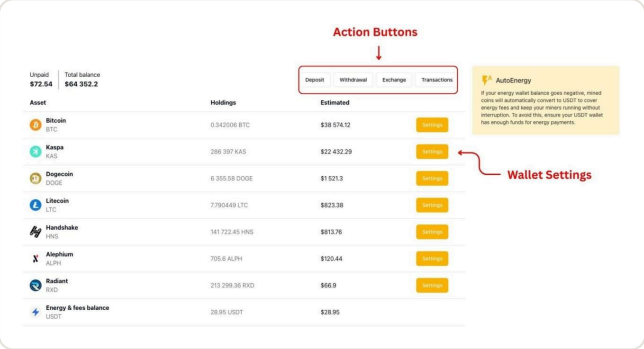


Figure 10-1 Wallet section.

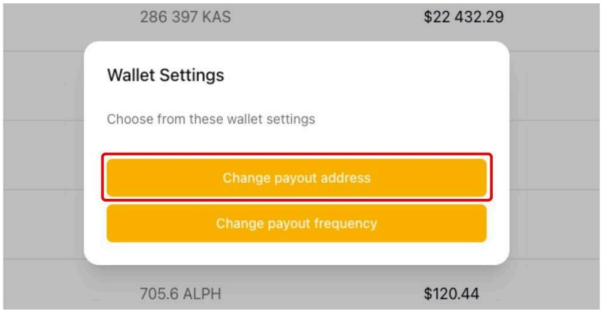


Figure 10-2 Changing the payout address.

10.2 Withdrawals

1. Go to **Wallet** › **Withdrawal**.
2. Add a crypto wallet address or a bank account.
3. Select the currency, enter the amount and confirm.

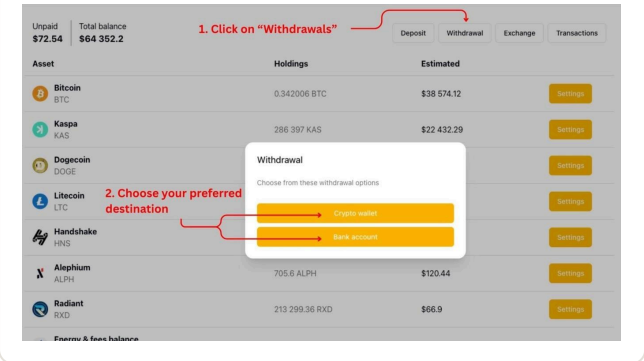


Figure 10-3 Choosing a withdrawal destination.

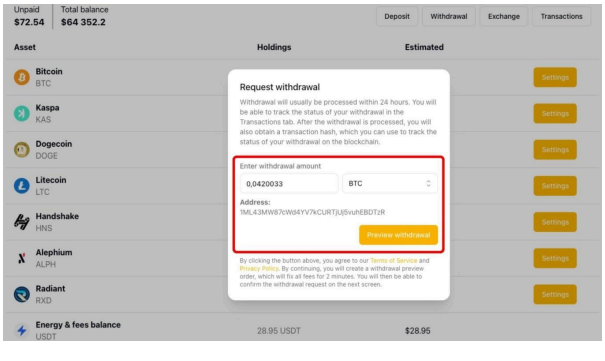


Figure 10-4 Choosing currency and amount.

10.3 Exchange

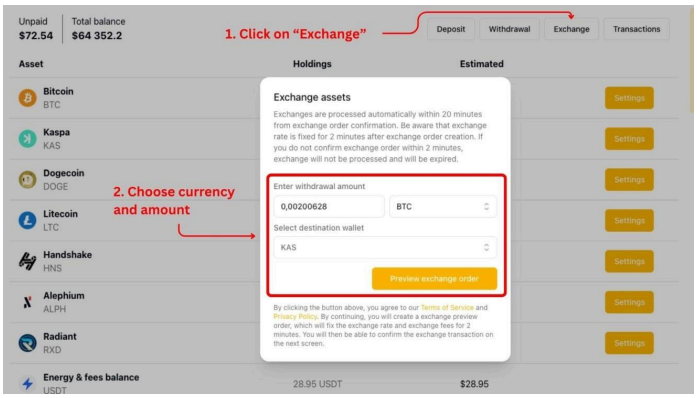


Figure 10-5 Exchanging currencies.

1. Go to **Wallet** › **Exchange**.
2. Select the currencies to exchange. You can also convert directly into **Energy & Fees** funds to keep the miner running.
3. Enter the amount and confirm.

> **BEFORE YOU WITHDRAW**
> Double-check addresses and networks. Crypto transfers to a wrong address usually can't be reversed. Keep enough Energy & Fees balance to avoid deductions from your rewards.

ONEMINERS OneMiners platform v1.2.

CHAPTER 11

Additional OneMiners Features

Optional tools in your OneMiners account. Availability and settings can change; check your dashboard for what is active on your account.

11.1 AI Smart Mining

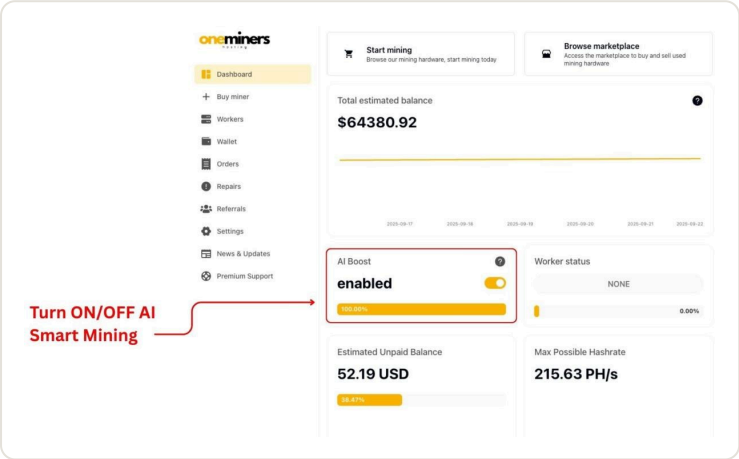


Figure 11-1 AI Boost toggle on the dashboard (platform v1.2).

AI Smart Mining analyses market conditions and pool performance and can switch your miner to the pools it calculates are most profitable.

- Turn it on or off with the **AI Boost** toggle on your dashboard.
- Your hardware keeps mining to your own account and wallet.

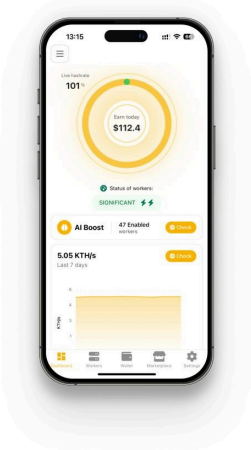
Results depend on hardware and market conditions and aren't guaranteed. More information: oneminers.com/pages/ai-smart-mining.

11.2 OneMiners mobile app

Monitor and manage your miners from your phone: start and stop miners, view hashrate, power use and hardware status, and manage balances and withdrawals. The app is built on the CircleHash white-label hosting platform and is free.

App Store

Google Play



11.3 Profitability tools

Zcash mining income depends on the ZEC price, network difficulty and your electricity cost, all of which change daily. For current estimates, use the live tools rather than figures printed in a manual:

- Miner profitability table: oneminers.com/pages/miner-profitability
- Zcash miners collection: oneminers.com/collections/zcash-miners

For the Z15, use 420 KSol/s and 1,510 W with your own price per kWh. Estimates aren't financial advice.

12 CHAPTER Official Resources and Support

12.1 Resources

BITMAIN
Firmware and IP Reporter
shop.bitmain.com/support/download

BITMAIN
Support centre
support.bitmain.com

ONEMINERS
Manuals & Firmware Library
oneminers.com/pages/manuals-and-firmware

ONEMINERS
Product page
oneminers.com/collections/zcash-miners

ONEMINERS
Warranty policy
oneminers.com/pages/warranty-policy

ONEMINERS
Hosting locations
oneminers.com/pages/hosting-centers

12.2 Contact OneMiners

SUPPORT, 24/7

+1 305 867 6143

WhatsApp

+1 607 9009 004 · Sales, USA

service@oneminers.com · Service and repairs
sales@oneminers.com · Sales
payinquire@oneminers.com · Payments

Telegram: t.me/oneminers_hosting

ADDRESS

CIRCLEHASH LLC
701 Tillery Street
Austin, Texas 78702, USA

Contact page

Manuals library

12.3 Sources used for this version

1. Bitmain, Z15-series user manual (as published by Manuals+): power rules, setup, pools, status values, temperature protection, administration, environment.
2. D-Central, Antminer Z15 family owner hub, citing Bitmain's Z15 specification: hashrate, power, efficiency, APW7 and DC input.
3. ASIC Miner Value and Kryptex Pool device pages: dimensions, weight, fans, noise, release date.
4. Kryptex Pool, Antminer Z15 / Z15 Pro setup article: Zcash pool addresses and worker format.
5. OneMiners: product pages, Warranty Policy, hosting pages, AI Smart Mining page, Media Kit, site contact details. All checked 7 November 2026.

12.4 Revision history

VERSION	DATE	CHANGES
V1.2	Nov 2026	Rewritten for the OneMiners media-kit template from Bitmain's Z15-series documentation. External APW7 power rules, older Antminer interface, temperature protection limits, Kryptex Zcash pool example, warning against Z15 Pro firmware. Weight marked for verification. Current warranty, hosting and contact details.
V1.1	—	Version published on the OneMiners library. Not reviewed for this revision.