CANAAN · AVALONMINER

Avalon A1566I
249 TH/s

Immersion-cooled Bitcoin miner · SHA-256



COIN · ALGORITHM
Bitcoin · SHA-256

COOLING
Immersion (dielectric fluid)

POWER
220–277 V AC

RELEASED
Jun 2024

Product Manual

Setup, operation, maintenance and OneMiners hosting guide

Version 1.0
First edition, November 2026
Information checked 7 Nov 2026

Contains manufacturer documentation © Canaan Inc., summarised for customer reference.

About this manual

This manual covers the **Canaan AvalonMiner A1566I**, rated at **249 TH/s** and **4,500 W**.

The 249 and 267 TH/s versions sold by OneMiners share this manual. OneMiners' listings call it air-cooled; it is an immersion miner (see 1.4).

Each section that reproduces or summarises manufacturer content is marked with a **Source** tag. Values that sources disagree on, or that no source confirms, are marked **Needs verification** and listed in section 1.4. Chapters 8 to 12 cover the OneMiners platform, hosting, warranty and wallet, and are marked **OneMiners**.

Before you start

CHECK	POWER	COOLING	NETWORK
Label says A1566I	**220–277 V AC**	**Fluid 20–50 °C**	**RJ45 + DHCP**
Check the hashrate bin.	See 2.2.	Tank or loop ready before power-on.	A PC with an IP scanner or Canaan FMS.

How notices are used

DANGER
Risk of electric shock, fire, burst pipes 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.

Contents

01 **Product Overview** 4
Specifications, versions and open questions

02 **Safety and Installation Requirements** 6
Electrical, immersion fluid and tank installation

03 **Initial Setup** 7
Inspection, IP address and dashboard login

04 **Mining Configuration** 8
Pools, worker names and saving settings

05 **Monitoring Performance** 9
Dashboard values and what normal looks like

06 **Firmware and Maintenance** 10
Firmware, reset and fluid care

07 **Troubleshooting** 11
Power, network, pools and cooling

08 **OneMiners Platform Guide** 12
Miner details, pool settings, earnings and hardware status

09 **OneMiners Hosting and Warranty** 14
Hosting service, warranty terms, exclusions and support

10 **Wallet and Mining Rewards** 15
Mining balance, payout address, withdrawals and exchange

11 **Additional OneMiners Features** 17
AI Smart Mining, mobile app and profitability tools

12 **Official Resources and Support** 19
Links, contacts, sources and revision history

CHAPTER 01

Product Overview

The Avalon A1566I is an immersion-cooled SHA-256 miner from Canaan. It has no fans and runs submerged in dielectric fluid.



Figure 1-1 Avalon A1566I 249 TH/s. Image: OneMiners product photo.

1.1 Key figures

249 TH/s	4,500 W	19 J/TH
Typical hashrate	Power on wall	Efficiency

1.2 Specifications

ITEM	VALUE
PRODUCT	
Model / version	**Canaan Avalon A1566I**
Algorithm / coins	**SHA-256 · BTC / BCH / BSV**
Hashrate	**249 TH/s**
Power on wall	**4,500 W**
Efficiency	**19 J/TH**
POWER	
Supply	**220–277 V AC, 50/60 Hz (Canaan)**
Typical load	**4,500 W ±10% (249T)**
Current	**About 20.5 A at 220 V (calculated); Canaan sheet: up to 35 A**
Power cable	**Custom-made cable (Canaan); PSU supplied without cord**

ITEM	VALUE
HARDWARE	
Network	**RJ45 Ethernet 10/100M**
Size (L×W×H)	**292.5 × 171.5 × 281–301 mm net · 390 × 290 × 395 mm packed**
Weight	**10.6–11.3 kg net**
Noise	**Fanless (pump and cooler noise not included)**
COOLING AND ENVIRONMENT	
Operating temperature	**20–50 °C (Canaan spec sheet via Zeus Mining)**
Fluid	**Dielectric immersion fluid; Canaan's sheet names a transformer-oil type (Needs verification)**
Fluid flow	**Needs verification: not published per miner**

ITEM	VALUE
Server cooling	**No fans; rear mesh exhaust; fully submerged**

SOURCE Canaan specification sheet (via Zeus Mining); D-Central (A1566I-249T and -261T listings); OneMiners product pages.

Versions and OneMiners listings

VERSION	HASHRATE	POWER ON WALL	EFFICIENCY
A1566I-249T (Canaan)	249 TH/s	4,500 W	18.1 J/TH
A1566I-261T (Canaan)	261 TH/s	4,500 W	17.2 J/TH
A1566I 267 TH/s (OneMiners)	267 TH/s	5,073 W	19.0 J/TH

1.3 Hardware

Cooling	No fans; fully submerged in dielectric fluid.
Control board	Ethernet port, status light, **FUNC** and **RST** buttons.

SOURCE Canaan product listings; Canaan user manual (buttons).

1.4 Values that need verification

These values conflict between sources or aren't confirmed by the manufacturer. Check the label on your unit, and ask OneMiners support before planning power or cooling around them.

ITEM	WHAT THE SOURCES SAY	USED IN THIS MANUAL
Cooling	OneMiners lists both bins as "Air Cooled"	Immersion only; never run in air
Plug	OneMiners 249T: C13 · 267T: industrial 3-phase connector	Canaan custom cable, single phase 220–277 V
267 TH/s bin	Listed by OneMiners (5,073 W); Canaan's published bins are 249T and 261T (270T/273T withheld by D-Central)	Check the label
Efficiency (267T)	OneMiners 17.24 J/TH; 5,073 W ÷ 267 TH/s = 19 J/TH	19 J/TH
Operating temperature	OneMiners −20 to 70 °C (storage range) · Canaan 20–50 °C	20–50 °C

CHAPTER 02

Safety and Installation Requirements

The A1566l runs submerged in a dielectric fluid inside an immersion tank. Tank, fluid and electrical work must be done by qualified personnel.

2.1 Safety warnings

DANGER · ELECTRICAL

- Use only 220–277 V AC from an **earthed** supply with surge protection, and a power cable rated for the current in 2.2.
- Use only a **dielectric** immersion fluid. Water or conductive liquids in the tank cause short circuits and fire.

CAUTION · EQUIPMENT

- The A1566l has no fans and must only run fully submerged in circulating fluid.
- Lift it by its handle; don't open the housing.

2.2 Electrical requirements

Supply	**220–277 V AC, 50/60 Hz (Canaan)**
Typical load	**4,500 W ±10% (249T)**
Current	**About 20.5 A at 220 V (calculated); Canaan sheet: up to 35 A**
Power cable	**Custom-made cable (Canaan); PSU supplied without cord**
Protection	**Earthing and surge protection**

2.3 Immersion fluid requirements

Operating temperature	**20–50 °C (Canaan spec sheet via Zeus Mining)**
Fluid	**Dielectric immersion fluid; Canaan's sheet names a transformer-oil type (Needs verification)**
Fluid flow	**Needs verification: not published per miner**
Server cooling	**No fans; rear mesh exhaust; fully submerged**

SOURCE Canaan A1566l specification sheet as published by Zeus Mining; D-Central reference page (Canaan listings).

2.4 Installing in the tank

1 **Prepare**

Fill the tank, start circulation and bring the fluid into the specified range.

2. **Lower**
   Lower the miner slowly by its handle so trapped air can escape.
3. **Connect**
   Connect power and network cables as the tank design requires.
4. **Start**
   Power on and watch the fluid outlet temperature as the load rises.

> **TANK DESIGN**
> Tank layout, fluid volume and connectors depend on the immersion tank. Follow the tank maker's instructions together with this manual.

03 CHAPTER Initial Setup

These steps take an installed A1566l to its web interface. If your miner is hosted by OneMiners, our team does this for you; skip to Chapter 8.

3.1 Unboxing and connecting

- Check the carton for damage and confirm the label shows **Avalon A1566l**. Keep the packing for transport and warranty returns.
- Canaan supplies the power supply with the miner; the power cord is not included. Use a cord rated for the current in 2.2.

1. **Network**
   Connect an Ethernet cable. The miner gets its IP address by DHCP by default.
2. **Power**
   Switch on the supply once the cooling is running.
3. **Start-up**
   The status light flashes during start-up. Allow a few minutes before looking for the miner on the network.

3.2 Finding the miner's IP address

- Look the miner up in your router's DHCP client list, or scan the network with a tool such as Advanced IP Scanner.
- For many miners, Canaan's batch management software (**FMS**) and **AvalonUpgradeTool** also scan an IP range and list Avalon miners.
- Some Avalon controllers have an **IP Report** function on the control-board button; hold it for about 5 seconds until it beeps (Luxor guide for the A1246). Confirm on your unit.

3.3 Logging in and network settings

1. Enter the IP address in a web browser on the same network.
2. Log in. Canaan's user manuals give the default username `root` and password `root`. Change the password after the first login.
3. The **Overview** page opens, showing hashrate, temperatures, fans and pool status.
4. Static IP (optional): in the configuration menu open **Network**, choose **IP (Static)**, enter address, mask, gateway and DNS, save and reboot the miner.

SOURCE Canaan, AvalonMiner user manuals (A1346/A1366 series, as published on ManualsLib) and Canaan support guidance on downloads (KA-01189) and upgrades (KA-01195); Kryptex and Luxor setup guides for the A15 / A1566 and A1246. Menu names can differ between firmware versions; confirm on your unit.

04 CHAPTER Mining Configuration

The Avalon A1566l mines SHA-256 coins, mainly Bitcoin (BTC).

4.1 Setting up pools

1. Open the **Configuration** page.
2. Enter up to three pools in priority order: pool address, worker and password.
3. Choose the **Work Mode** (or **Power Mode** level) if your firmware offers it. Normal mode gives the rated figures in 1.1.
4. Click **Save**, then **Reboot**. After a few minutes, check the **Overview** page: a hashrate curve confirms the pool connection.

FIELD	WHAT TO ENTER
Pool / mining address	The pool's stratum address, in the format `stratum+tcp://host:port`. Copy it from your pool's "Connect" or "Getting started" page.
Worker / user	Your pool account or wallet address plus a worker name, usually `account.worker`, for example `myaccount.a1566i01`.
Password	Optional. Most pools accept any value, such as `x`.

COIN AND POOL
Pool 1 is used first; Pools 2 and 3 are backups. The miner mines SHA-256 coins; this manual assumes Bitcoin (BTC).

CAUTION
Use only pool addresses from the pool's official website, and always add at least one backup pool. A mistyped address mines for nobody.

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 Kryptex, "ASIC Canaan Avalon A15 / A1566" setup guide; Luxor, "How to set up an AvalonMiner 1246"; Canaan A1346/A1366 user manual (pool and work-mode settings).

05 CHAPTER Monitoring Performance

For an immersion miner, the fluid temperatures matter as much as the hashrate.

5.1 What normal looks like

237–261 TH/s	20–50 °C	< 1 %
Average hashrate (±5%)	Operating (fluid)	Pool rejection rate

Canaan tolerances: hashrate ±5%, power ±10%.

5.2 What to watch

VALUE	MEANING
Average hashrate	The most reliable measure of performance.
Board temperatures	Should stay stable. Rising values point to fluid temperature, circulation or a low tank level.
Fluid inlet	Keep within Fluid 20–50 °C.
Pool status	Active pool, accepted and rejected shares. Rejection below 1% is normal.

CHAPTER 06

Firmware and Maintenance

Keep the firmware current and the fluid clean and within limits.

6.1 Upgrading firmware

> **USE THE RIGHT FILE**
> Avalon firmware comes as an `.aup` file. Install only firmware Canaan publishes for the **Avalon A1566I**, from Canaan's download page or the OneMiners Manuals & Firmware Library. Keep the miner powered throughout.

1. Single miner: open the **Firmware** (upgrade) page in the web interface, choose the `.aup` file and start the upgrade.
2. Many miners: in **AvalonUpgradeTool** or **FMS**, scan the IP range, select the miners, choose the file and click **Upgrade**. FMS reports failed IPs.
3. Check the new version on the overview page (or the Ver column in FMS).

6.2 Password and factory reset

- Change the web password after first login and store it securely.
- Factory reset (Canaan manual): with the miner powered on, hold the **FUNC** button for 5–10 seconds. Network, pool, password and other settings are cleared.
- The **RST** button restarts the system without clearing settings.

SOURCE Canaan AvalonMiner user manual (A1346/A1366 series): firmware upgrade and reset; Kryptex A15 guide: AvalonUpgradeTool.

6.3 Preventive maintenance

WHEN	TASK
Daily	Fluid inlet and outlet temperatures, tank level, hashrate.
Monthly	Check filters and pumps; inspect cables and glands.
Every 6 months	Test the fluid (moisture, particles) per the fluid supplier; replace filters.
Yearly	Full fluid analysis; clean the heat exchanger.

Intervals are OneMiners recommendations; follow the cooling system or fluid supplier where it is stricter.

CHAPTER 07

Troubleshooting

Start with the symptom table. Hosted customers: contact OneMiners service rather than attempting repairs.

SYMPTOM	CHECK
No power	Check the supply is 220–277 V AC and the breaker is on. Check the power cord and PSU connections.
IP not found	Check the cable and DHCP. Look in the router client list or scan with FMS / an IP scanner.
Pool won't connect	Re-check the pool address, port and worker name, gateway and DNS. Save, then Reboot.
Low hashrate or overheating	Check fluid inlet temperature, circulation and tank level. Clean filters.
Fluid contamination	Power off first. Filter or replace the fluid before restarting; water in the fluid is an electrical hazard.
Smell, unusual sound or smoke	Switch off immediately and contact service.

SOURCE Based on Canaan documentation cited in Chapters 2–6.

ONEMINERS

For a hosted miner, send the symptom 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 A1566I.

8.1 Miner details

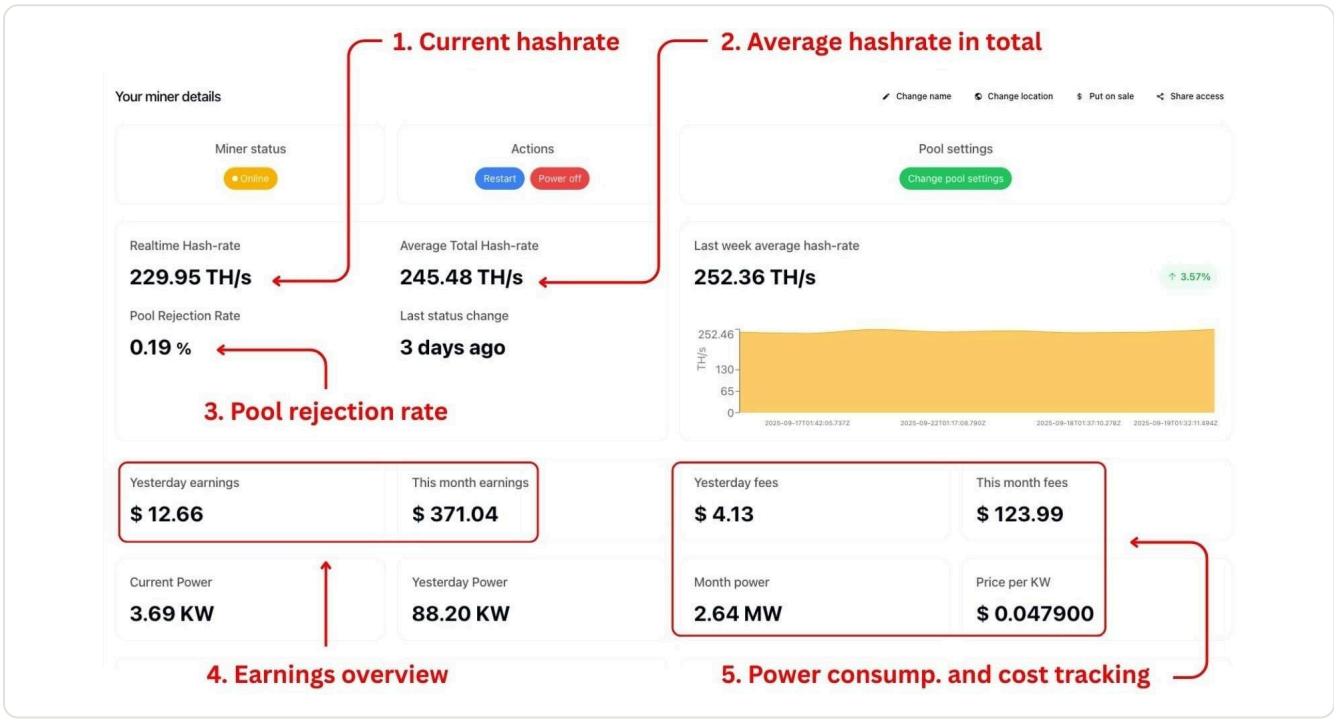


Figure 8-1 Miner details on OneMiners platform v1.2 (example values).

1 · Current hashrate	Real-time hashrate (for the A1566I, in TH/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 A1566I, expect about 242–256 TH/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

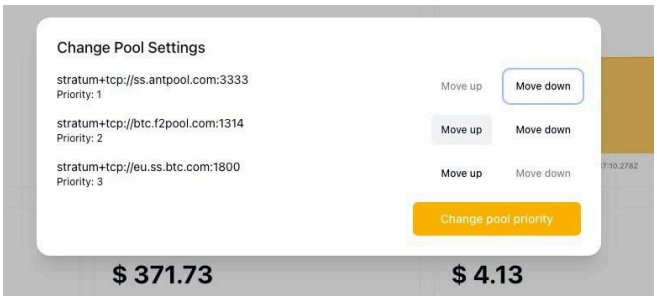


Figure 8-2 Change Pool Settings.

- 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

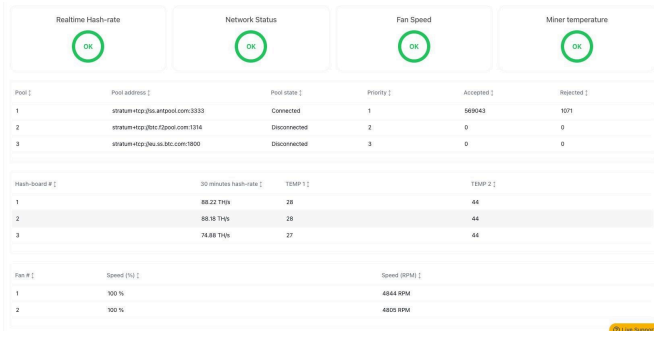


Figure 8-4 Hardware status (example from an air-cooled miner).

- **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.

> **HYDRO UNITS**
> The A1566l is liquid-cooled. Fan readings, if any are shown, don't describe its cooling. Watch board and coolant temperatures and the cooling alerts instead.

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.
- Hydro-cooled units need sites with a liquid-cooling loop. Ask sales which locations currently accept the A1566I.

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 A1566I, this includes damage from incorrect voltage, non-dielectric or contaminated fluid, running out of fluid, unofficial 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.

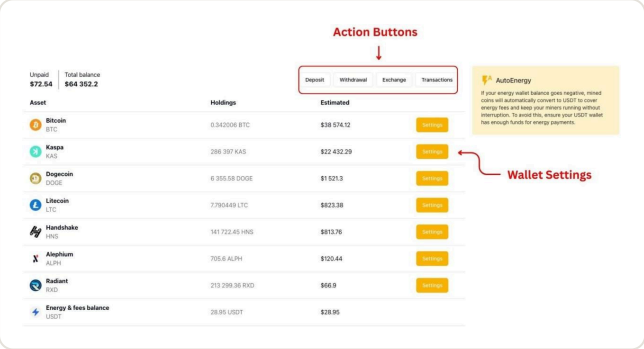


Figure 10-1 Wallet section.

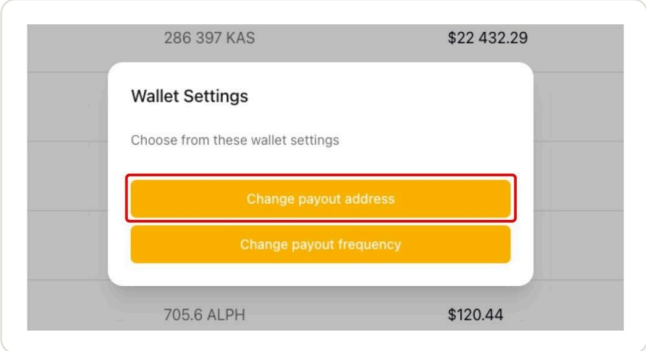


Figure 10-2 Changing the payout address.

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.

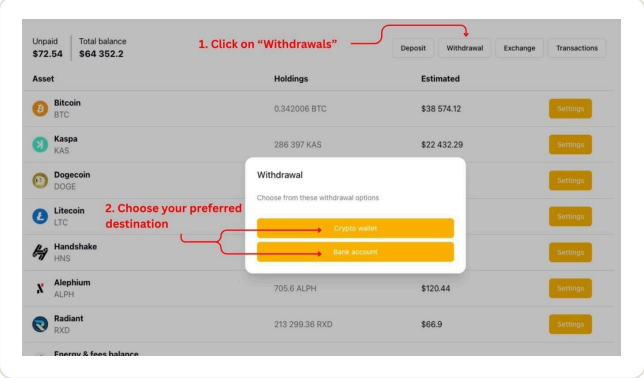


Figure 10-3 Choosing a withdrawal destination.

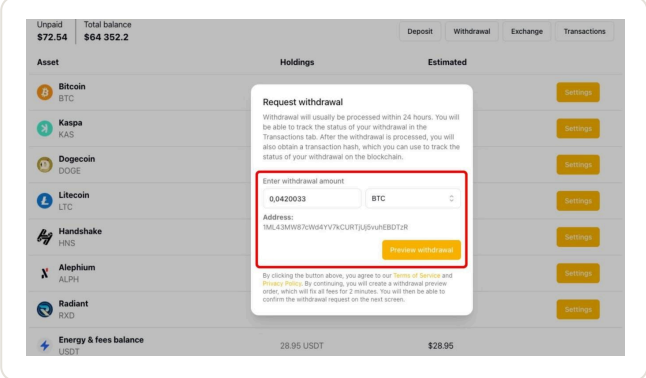


Figure 10-4 Choosing currency and amount.

10.3 Exchange

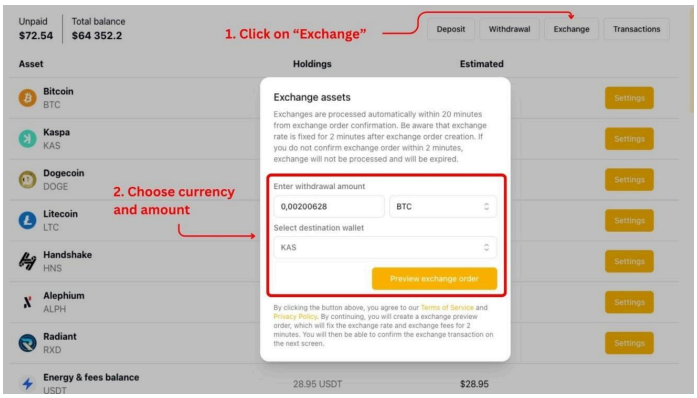


Figure 10-5 Exchanging currencies.

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

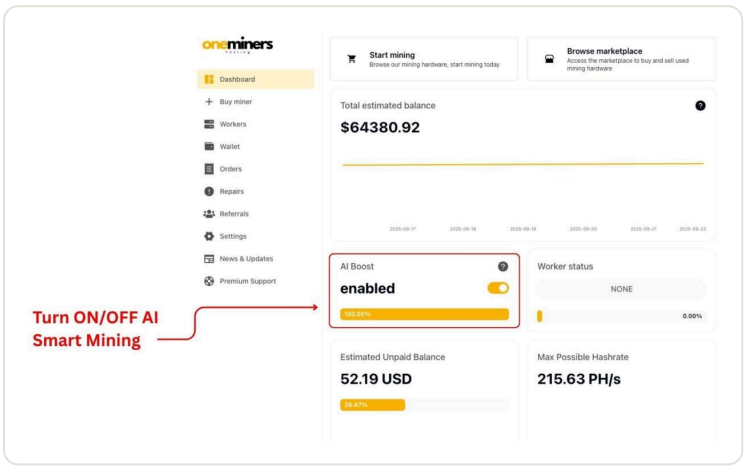


Figure 11-1 AI Boost toggle on the dashboard (platform v1.2).

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.

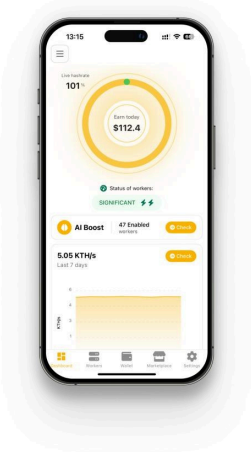
Results depend on hardware and market conditions and aren't guaranteed. More information: oneminers.com/pages/ai-smart-mining.

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

Mining income from the A1566l depends on the BTC price, network difficulty, transaction fees 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
- Bitcoin miners collection: oneminers.com/collections/bitcoin-miners

For the A1566I, use 249 TH/s and 4,500 W with your own price per kWh. Estimates aren't financial advice.

12 CHAPTER Official Resources and Support

12.1 Resources

CANAAN
Support and downloads
www.canaan.io/support

CANAAN
Avalon Family app
apps.apple.com/app/avalon-family/id6479229114

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

ONEMINERS
Product page
oneminers.com/products/avalon-a1566i-249-th-s

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. Canaan A1566I specification (Zeus Mining): hashrate, power, efficiency, input, current, cable, fluid, size, weight, temperature, network.
2. D-Central miner reference pages (reviewed Aug 2026), which reproduce Canaan's official product listings: A1566I-249T and -261T bins.
3. Canaan press release, "Canaan launches the third generation of immersion cooling Avalon Miner A1566I" (Mining Disrupt, June 2024).
4. OneMiners product pages, Avalon A1566I 249 and 267 TH/s.
5. Canaan AvalonMiner user manual (A1346/A1366 series, ManualsLib); Kryptex "ASIC Canaan Avalon A15 / A1566" guide; Luxor "How to set up an AvalonMiner 1246": IP, login, pools, work mode, firmware (.aup, AvalonUpgradeTool, FMS) and reset.
6. OneMiners: product page, 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
V1.0	Nov 2026	First edition on the OneMiners media-kit template: manufacturer specifications with conflicts listed in 1.4, safety, installation, setup, pools, monitoring, firmware, maintenance and troubleshooting. Current warranty, hosting and contact details.