BITDEER · SEALMINER

# A2 Hyd
# 446 TH/s

Hydro-cooled Bitcoin server · SHA-256 · 19-inch 2U




COIN · ALGORITHM
**Bitcoin · SHA-256**

COOLING
**Hydro (liquid loop)**

POWER
**3-phase 380–480 V**

RELEASED
**Mar 2025**

## Product Manual

Setup, operation, maintenance and OneMiners hosting guide

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

Contains manufacturer documentation © Bitdeer Technologies Group, summarised for customer reference.

# About this manual

This manual covers the **Bitdeer SealMiner A2 Hyd**, rated at **446 TH/s** and **7,359 W**.

Coolant limits come from Bitdeer's Hydro Series Cooling User Guide (A2, A3 and A4 hydro servers); installation and network steps from Bitdeer's SealMiner guides.

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 A2 Hyd** | **3-phase 380–480 V** | **Inlet 20–55 °C** | **RJ45 + DHCP** |
| Check the hashrate bin. | Max 20 A per the equipment table. | ≤ 350 kPa; stainless loop. | A PC with the Sealminer Tool. |

# 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

© OneMiners, 2026. This manual combines documentation published by the manufacturer, Bitdeer Technologies Group, and other cited sources with supplementary material written by OneMiners (platform, hosting, warranty and wallet chapters). Manufacturer content remains the property of its owner and is reproduced or summarised here for the convenience of OneMiners customers. OneMiners claims no ownership of it. All product names and trademarks belong to their respective owners.

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 SealMiner A2 Hyd is a hydro-cooled SHA-256 server from Bitdeer, built on Bitdeer's own SEAL chips.




**Figure 1-1** SealMiner A2 Hyd 446 TH/s. Image: OneMiners product photo.

## 1.1 Key figures

| 446 TH/s | 7,359 W | 16.5 J/TH |
|---|---|---|
| Typical hashrate | Power on wall | Efficiency |

## 1.2 Specifications

| ITEM | VALUE |
|---|---|
| **PRODUCT** | |
| Model / version | **SealMiner A2 Hyd** |
| Algorithm / coins | **SHA-256 · BTC / BCH / BSV** |
| Hashrate | **446 TH/s (446 TH/s)** |
| Power on wall | **7,359 W (7,359 W)** |
| Efficiency | **16.5 J/TH** |
| **POWER** | |
| Supply | **3-phase AC, 380–480 V, 50/60 Hz** |
| Current | **Max 20 A (equipment table)** |
| Power cable | **Not supplied by default with hydro units** |

| ITEM | VALUE |
|---|---|
| **HARDWARE** | |
| Network | **RJ45 Ethernet 10/100M** |
| Size (L×W×H) | **482 × 665 × 88 mm** |
| Weight | **20.5 kg net · 23 kg gross** |
| Noise | **Fanless server (pump and cooler noise not included)** |
| **COOLING AND ENVIRONMENT** | |
| Inlet temperature | **20–55 °C normal mode · 20–45 °C high-hash mode** |
| Flow | **≥ 10.2 L/min (pure water) · ≥ 11 L/min (30% glycol)** |
| Inlet pressure | **≤ 350 kPa (3.5 bar); 3.5 bar relief valve on the system** |
| Humidity | **10–90% RH, non-condensing** |

SOURCE D-Central (Bitdeer SEALMINER A2 Hydro product record P241105000002); OneMiners product page.

## 1.3 Hardware

| | |
|---|---|
| **Front panel** | Ethernet port, status LEDs, **IP Report** and reset buttons, power interface. |
| **Cooling** | Liquid through cold plates; blue inlet and red outlet quick connectors. |

SOURCE Bitdeer SealMiner hydro installation guide.

## 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 |
|---|---|---|
| **Size and weight** | Bitdeer 482 × 665 × 88 mm, 20.5 kg · OneMiners 400 × 195 × 290 mm, 27 kg | Bitdeer values |
| **Input voltage** | Bitdeer 380–480 V · OneMiners 380–415 V | 380–415 V satisfies both |
| **Operating temperature** | OneMiners 0–40 °C; Bitdeer specifies coolant inlet instead | Use the inlet limits |

# 02 CHAPTER Safety and Installation Requirements

The SealMiner A2 Hyd needs three-phase power and an engineered liquid-cooling loop with heat rejection for about 7.4 kW. Installation must be done by qualified personnel.

## 2.1 Safety warnings

**DANGER · ELECTRICAL**

- The SealMiner A2 Hyd runs on **three-phase 3-phase 380–480 V**. Connection must be made by a licensed electrician, with earthing, surge protection and a disconnect that breaks all phases.
- Observe the polarity markings on all power connections, and complete Bitdeer's pre-power checks before switching on.

**CAUTION · COOLING LOOP**

- Maximum inlet pressure **350 kPa**. Fit a **3.5 bar pressure relief valve** and a constant-pressure expansion tank.
- **No copper**: use stainless steel piping. Main filter 100 mesh or finer, plus a recommended 10 µm side filter.
- Use only the factory-supplied quick connectors.

SOURCE Bitdeer, SealMiner hydro installation and operation guidance (A2 Hydro article) and Hydro Series Cooling User Guide, as cited by Alliance Chemical.

## 2.2 Electrical requirements

| | |
|---|---|
| Supply | **3-phase AC, 380–480 V (Bitdeer); OneMiners lists 380–415 V, within range** |
| Typical load | **7,359 W (7,359 W)** |
| Current | **Max 20 A (Bitdeer equipment table)** |
| Protection | **Earthing, surge protection, disconnect breaking all phases** |

## 2.3 Coolant requirements

| | |
|---|---|
| Inlet temperature | **20–55 °C normal mode · 20–45 °C high-hash mode** |
| Flow | **≥ 10.2 L/min (pure water) · ≥ 11 L/min (30% glycol)** |
| Inlet pressure | **≤ 350 kPa (3.5 bar); 3.5 bar relief valve on the system** |
| Coolant | **Pure or distilled water + inhibitor + EG/PG antifreeze** |
| Piping and filters | **Stainless steel, no copper · 100 mesh + 10 µm side filter** |

- Recommended fluid: pure or distilled water, plus corrosion inhibitor, plus ethylene or propylene glycol antifreeze in the ratio your lowest site temperature needs.
- Water quality: pH 7.0–8.7, chloride < 20 mg/L, sulfate < 10 mg/L.
- Clean the loop thoroughly before the first fill. Incomplete cleaning voids Bitdeer's warranty.

SOURCE Bitdeer Hydro Series Cooling User Guide (2026-07-13), Sections 2 and 3, as summarised by Alliance Chemical; values apply to SealMiner A2, A3 and A4 hydro servers. Confirm against Bitdeer's current guide before filling.

## 2.4 Rack installation and start-up

1. **Mount**
   Two people slide the SealMiner A2 Hyd into the rack and secure the front panel with its screws.
2. **Water**
   Connect the **blue inlet** and **red outlet** with the factory quick connectors.
3. **Circulate**
   Run coolant before powering on. Don't power on until all air has been expelled from the system.
4. **Power on**
   Turn on pumps, valves and dry-cooler fans first. Fill and start one miner at a time, check for condensation, and let the loop stabilise before full load.

### Shutdown and removal

1. Shut down and disconnect power, then remove the Ethernet and power cables.
2. Disconnect the **inlet first**, then the outlet.
3. Unscrew the front panel and remove the unit with two people.
4. Drain fully with air pressure if the unit will be stored for more than 2 hours, or if the room may approach the coolant's freezing point.

SOURCE Bitdeer, "SealMiner A2 Series Hydro Cooling: How to Install and Operate Safely". Procedures are shown for the SealMiner hydro range.

# 03 CHAPTER Initial Setup

These steps take a racked SealMiner A2 Hyd 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 inspection

- Confirm the label shows **SealMiner A2 Hyd**.
- Inspect the quick connectors, power interface and front panel (Ethernet port, status LEDs, IP Report and reset buttons).
- Keep the packing for transport and warranty returns.

## 3.2 Finding the IP address

1. The miner uses **DHCP** by default. Connect it to a network with a DHCP router.
2. Run the **Sealminer Tool** on a PC on the same network and start a scan.
3. Hold the **IP Report** button for 5 seconds. The miner's IP appears in the tool.

## 3.3 Logging in

1. Enter the IP address in a web browser.
2. Log in with username `seal` and password `seal`.
3. Change the password after the first login.
4. Optional static IP: **Network** › **Settings**. Changes take effect without a reboot.

SOURCE Bitdeer, SealMiner setup guides (A2 air and hydro): Sealminer Tool, default login and network settings. Confirm on your A2 Hyd firmware.

# 04 CHAPTER Mining Configuration

The SealMiner A2 Hyd mines SHA-256 coins, mainly Bitcoin (BTC).

## 4.1 Setting up pools

1. Open the pool settings in the web interface.

2. Enter the pool URL and worker name (and password if your pool needs one) for each pool.
3. Save. Bitdeer's guide states pool changes apply without a reboot.

| 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.sm-a2hyd01`. |
| **Password** | Optional. Most pools accept any value, such as `x`. |

**COIN AND POOL**
The SealMiner mines SHA-256; this manual assumes Bitcoin (BTC). For many units, use the Sealminer Management Tool for batch configuration.

**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 Bitdeer, SealMiner setup guide: Pool configuration.

# 05 CHAPTER Monitoring Performance

Judge performance by the average hashrate, and watch the coolant values alongside it.

## 5.1 What to watch

The dashboard shows total and per-board hashrate, temperatures, cooling status and pool connectivity.

| 446 TH/s | 20–55 °C | < 1 % |
|---|---|---|
| Bitdeer range | Inlet coolant | Pool rejection rate |

Bitdeer tolerances: hashrate ±10%, efficiency ±5% (A3) or the published bin range.

**COOLING FIRST**
If hashrate drops, check the inlet temperature, flow and pressure before anything else. Air in the loop and blocked filters are the most common causes.

SOURCE Bitdeer, SealMiner hydro guide: Monitoring.

# 06 CHAPTER Firmware and Maintenance

Keep the firmware current and the loop within Bitdeer's coolant limits.

## 6.1 Firmware

**USE THE RIGHT FILE**

Install only firmware Bitdeer publishes for the **SealMiner A2 Hyd**, from Bitdeer or the OneMiners Manuals & Firmware Library. The Sealminer Management Tool handles batch firmware updates. Keep power on during an upgrade.

## 6.2 Component replacement

Control board, hashboard and power-supply replacement follow the procedures in section 11 of Bitdeer's user manual. Follow them exactly; hosted customers should leave this to the OneMiners repair team.

## 6.3 What voids Bitdeer's warranty

- Non-compliant coolant or piping (including copper), or a missing expansion tank or relief valve.
- Incomplete loop cleaning, or improperly inserted connectors.
- Failing to drain after shutdown, condensation damage, or damage from unfiltered debris.

SOURCE Bitdeer, "SealMiner A2 Series Hydro Cooling: How to Install and Operate Safely".

# 07 CHAPTER Troubleshooting

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

| SYMPTOM | CHECK |
|---|---|
| **No power** | Check the supply is 3-phase 380–480 V and the breaker is on. Check the power connection and polarity. |
| **IP not found** | Check DHCP and the cable. Hold IP Report for 5 s while the Sealminer Tool is scanning. |
| **Pool won't connect** | Re-check the pool URL, port and worker name, DNS and gateway. |

| SYMPTOM | CHECK |
| --- | --- |
| **Low hashrate or protection** | Check inlet temperature (20–55 °C normal mode · 20–45 °C high-hash mode), flow and pressure. Purge air, open valves and clean filters. |
| **Condensation or leak** | Power off first. Don't restart until the miner is dry and the leak is fixed. |

**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.

CHAPTER 08

# 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 SealMiner A2 Hyd.

## 8.1 Miner details

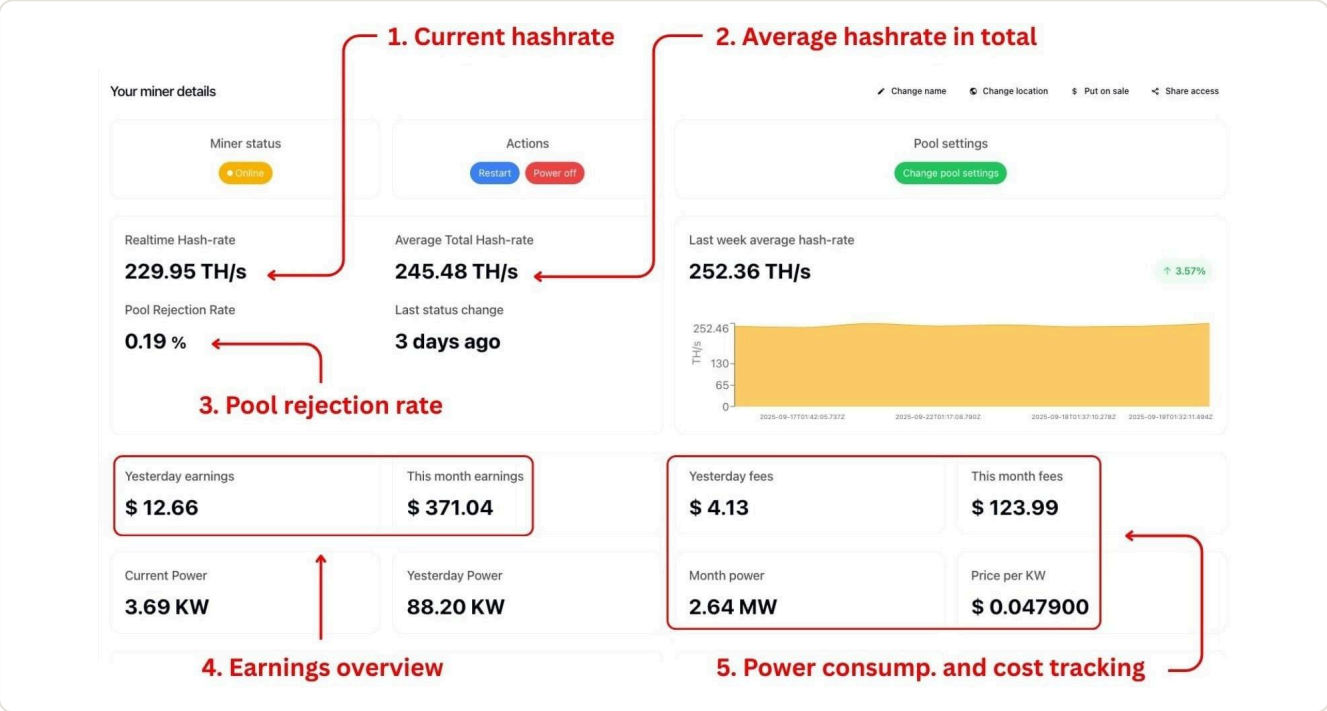



**Figure 8-1** Miner details on OneMiners platform v1.2 (example values).

| | |
|---|---|
| **1 · Current hashrate** | Real-time hashrate (for the SealMiner A2 Hyd, 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 SealMiner A2 Hyd, expect about 433–459 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

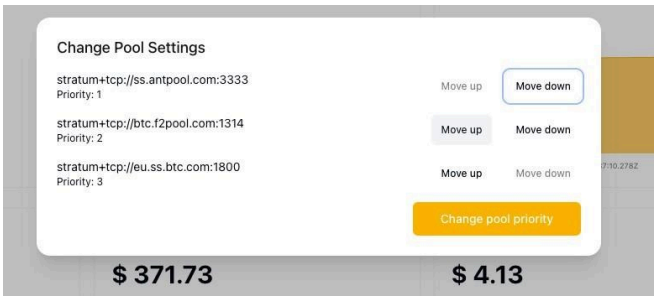



**Figure 8-2** Change Pool Settings.

- 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

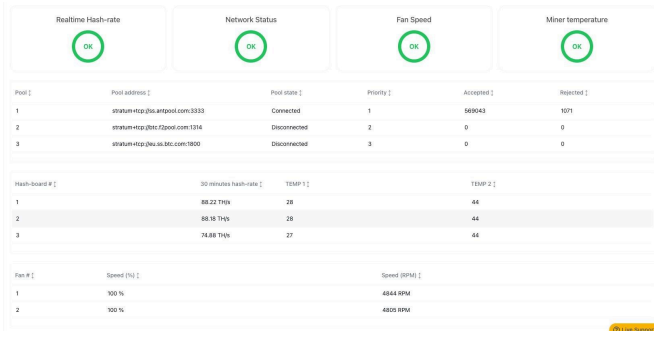



**Figure 8-4** Hardware status (example from an air-cooled miner).

- **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 SealMiner A2 Hyd 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 SealMiner A2 Hyd.

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 SealMiner A2 Hyd, this includes damage from incorrect voltage, frozen or non-compliant coolant, poor coolant quality, loose connectors, 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.

CHAPTER 10

# 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.

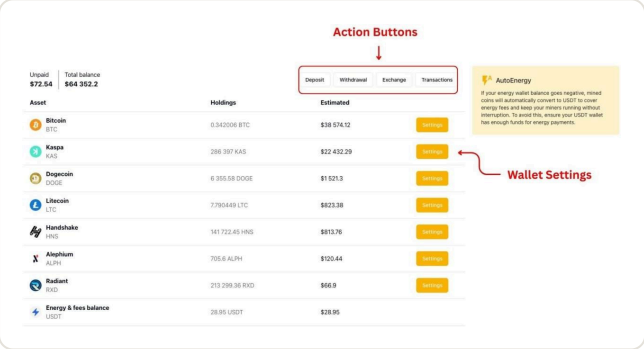



**Figure 10-1** Wallet section.

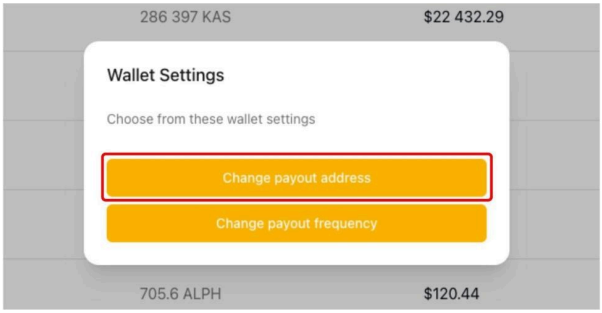



**Figure 10-2** Changing the payout address.

## 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.

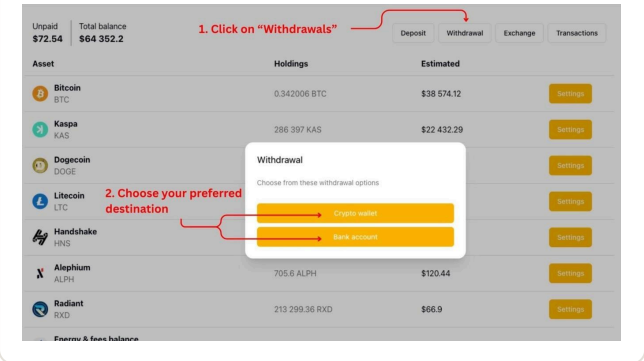



**Figure 10-3** Choosing a withdrawal destination.

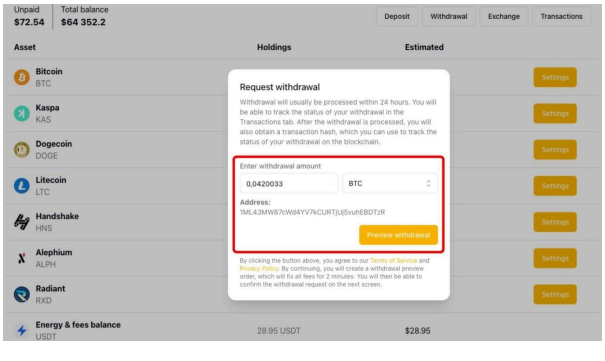



**Figure 10-4** Choosing currency and amount.

## 10.3 Exchange

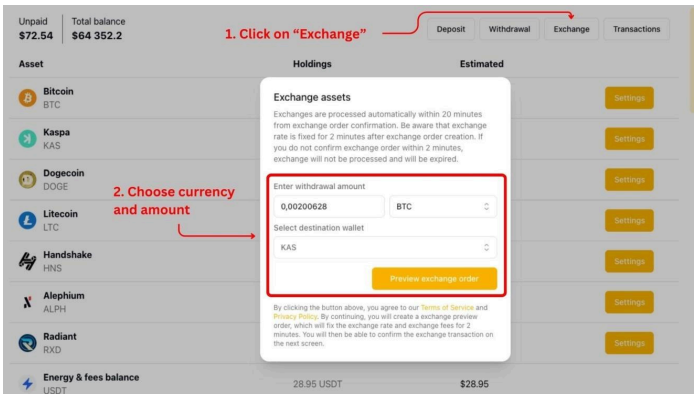



**Figure 10-5** Exchanging currencies.

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

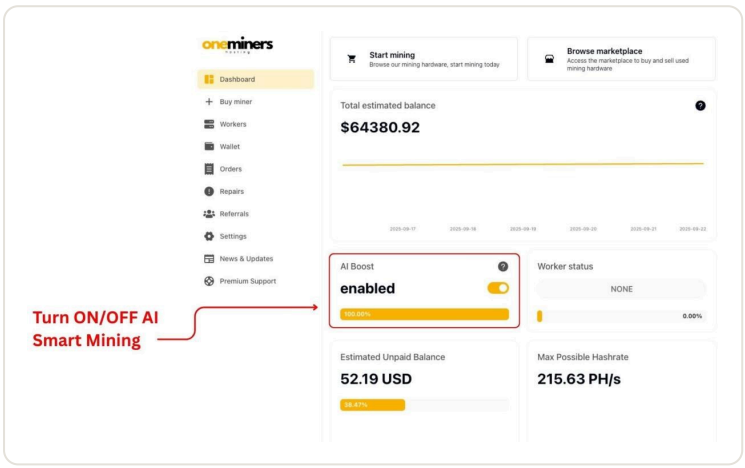



**Figure 11-1** AI Boost toggle on the dashboard (platform v1.2).

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.

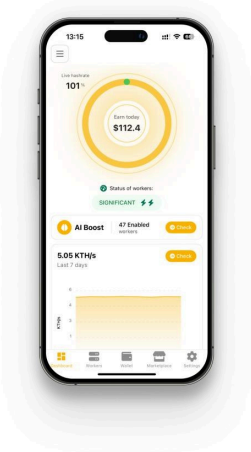
Results depend on hardware and market conditions and aren't guaranteed. More information: oneminers.com/pages/ai-smart-mining.

## 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 SealMiner A2 Hyd 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 SealMiner A2 Hyd, use 446 TH/s and 7,359 W with your own price per kWh. Estimates aren't financial advice.

# 12 CHAPTER Official Resources and Support

## 12.1 Resources

BITDEER
**SEALMINER firmware and manuals**
www.bitdeer.com/shop/support/firmware

BITDEER
**Support centre**
bitdeersupport.zendesk.com

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

ONEMINERS
**Product page**
oneminers.com/products/sealminer-a2-hyd-446-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. D-Central, SEALMINER A2 Hydro reference page (Bitdeer product record): hashrate, power, input, current, inlet, flow, pressure, size, weight, humidity, storage.
2. OneMiners product page, SealMiner A2 Hyd 446 TH/s.
3. Bitdeer Hydro Series Cooling User Guide (2026-07-13), as cited by Alliance Chemical: pressure, piping, filtration and water quality for A2, A3 and A4 hydro servers.
4. Bitdeer, "SealMiner A2 Series Hydro Cooling: How to Install and Operate Safely" and A2 air setup guide: installation, Sealminer Tool, default login (seal / seal), pools, warranty conditions.
5. 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. |