



X-1 Prospero (Control Board - Original Design) Product User Instruction Manual

Manual V4
For the latest Manual & Support, please visit
<http://www.blackarrowsoftware.com/store/prospero-support.html>

I. Introduction

This guide describes the features and the user instructions for X-1 Prospero (Control Board – Original Design) Miner

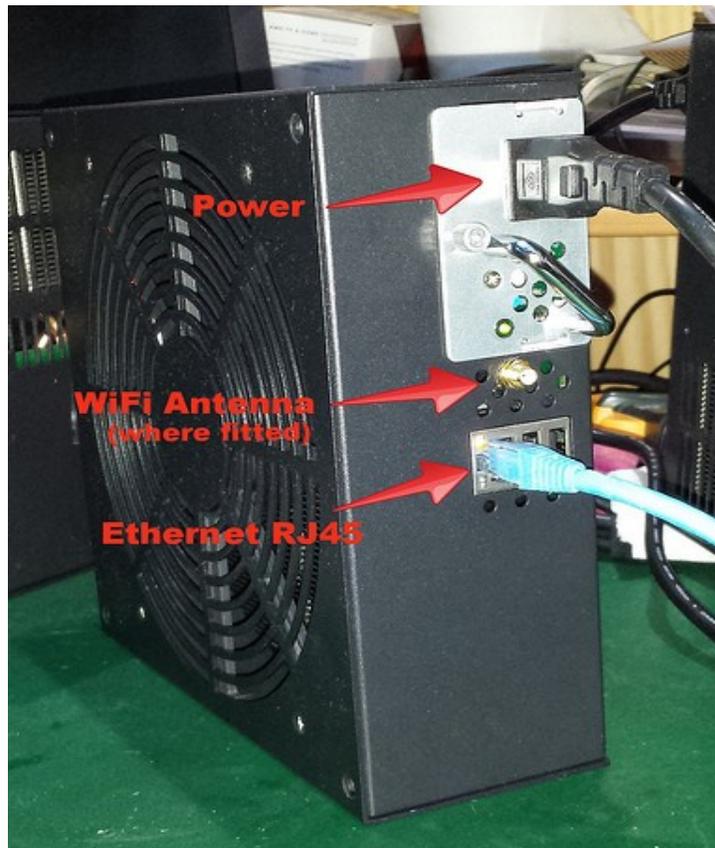
The X-1 Prospero Miner has inside one powerful MINION chip which can reach 100Ghash/s hash rate (+/-10%) and has a very low power consumption. X-1 is contains a Control Board and is very easy to control.

- **Hashing rate** **100Ghash/s (+/- 10%)**
- **Power consumption** **100Watts (whole system)**
- **Power supply** **110V/220V**

II. Connecting your Prospero

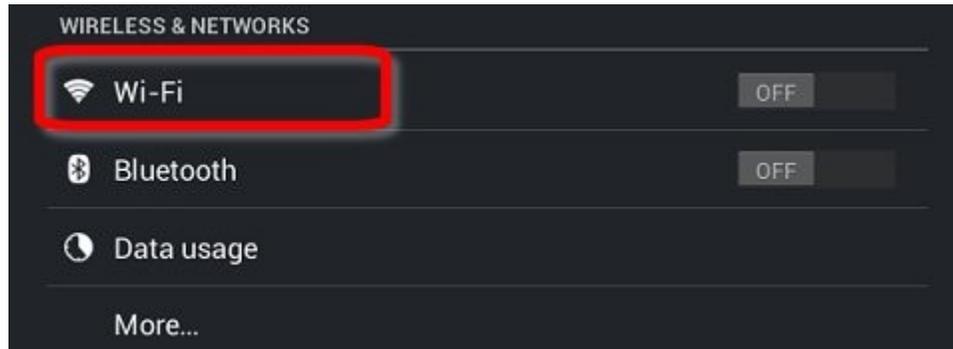
STEP 1: Plug the Internet cable into the Ethernet port OR connect the WiFi antenna.

STEP 2: Plug the power cable into the power port.



III. WiFi (optional)

Navigate to the WiFi settings on the Android LCD, and switch ON to configure. Select your the WiFi access point in the list.



IV. Web Configuration

Obtaining the IP address

The Prospero is shipped with DHCP enabled, for an automatic IP address. To set it manually, you need an LCD model, or first connect it to a network that supports DHCP.

With or Without LCD:

Open a web browser to <http://prospero.blackarrowsoftware.com> (your browser must be on the same internal network for this to work) your Prospero(s) should be listed. Click to connect.

LCD Model:

The IP address will be displayed on the screen, or will be in the Android settings (Settings → More → Ethernet)
Then open a web browser to `https://<ip address>`

Login details (default)

USER: user
PASSWORD: blackarrow

Browser: <https://192.168.0.200>

Black Arrow Connected Device: Prospero Selected Total Hash Rate: 107.52/GHs

Overview

- Prospero(109.8 gh/s)
baac08440478 192.168.0.200 (v1.8)
Active
- Prospero(91.5 gh/s)
baac08440493 192.168.0.126 (v1.8)
Active (CONNECTED)
- Prospero(103.5 gh/s)
b827eb262eef 192.168.0.180 (v1.0v)
Active (CONNECTED)
- Prospero(96.3 gh/s)
baac0844045e 192.168.0.174 (v1.8)
Active (CONNECTED)
- Prospero(96.1 gh/s)
baac0844008d 192.168.0.118 (v1.8)
Active (CONNECTED)
- Prospero(95.0 gh/s)
baac084400d3 192.168.0.188 (v1.8)
Active (CONNECTED)
- Prospero(101.2 gh/s)
baac08440479 192.168.0.100 (v1.8)

Dashboard Graphs Pools

Dashboard

Hash

107.52

0 Ghs 135 Ghs

Watts

0.00

0 W 3000 W

Temp

60.00

0°C

ASIC-ID	Status	Freq	Gh/s
baac08440478-00	Alive	1100	107.52
			107.52

Showing 1 to 1 of 1 entries

Overview

- Prospero(109.8 gh/s)
baac08440478 192.168.0.200 (v1.8)
Active
- Prospero(91.5 gh/s)
baac08440493 192.168.0.126 (v1.8)
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Active (CONNECTED)
- Prospero(96.3 gh/s)
baac0844045e 192.168.0.174 (v1.8)
Active (CONNECTED)

Control Panel

If you have purchased multiple Prosperos, and you have connected them all to the network, your network control panel will look something like this.

The first Prospero in the list, is always the unit you that you are connected to. Additional units you may have are listed below. There is no need to connect to all your other Prosperos individually.

You can control everything from here. The selected Prospero (highlighted in yellow) is the device that you are controlling.

- Start, Stop, Update Software
- Adjust Clock Settings
- Edit Name

Setting up the Pool.

The first thing you will want to do is add a pool. Select a Prospero on the left, then select the "Pool" tab, and "Add Pool"



The screenshot shows the Prospero web interface. On the left, there is a sidebar with an 'Overview' section containing a list of Prospero units. The first unit is highlighted in yellow: Prospero(87.1 gh/s) with ID aabbccdde03 and IP 192.168.0.51, status Active. Below it are two other units: Prospero(110.4 gh/s) with ID baac08440025 and IP 192.168.0.60, status Active (CONNECTED); and Prospero(110.7 gh/s) with ID baac0844001b and IP 192.168.0.49, status Active (CONNECTED). On the right, the main content area has tabs for 'Dashboard', 'Graphs', and 'Pools'. The 'Pools' tab is active. Below the tabs are four buttons: 'Add Pool' (blue), 'Fallover' (green), 'Load Balance' (blue), and 'Sync Network' (blue). Below the buttons is a table with columns 'Status', 'URL', and 'Us'. The table contains one entry: 'Alive' status, 'http://192.168.0.242:3334' URL, and 'ad' user. Below the table, it says 'Showing 1 to 1 of 1 entries'.

You can use any pool that is compatible with cgminer. For pool recommendations, see the Back Arrow Support forums.

You can add multiple pools, and run them in either Fallover or Load Balance mode. It is advisable to do this, as pools can go off-line, leaving your Prosperos with nothing to hash. In Fallover mode, pools higher up the list are given priority. In Load Balance mode, they are all given equal share.

Sync Network

If you have multiple Prosperos, you may want them all to use the same Pool settings. Just click "Sync Network", and your configuration will be sent to all your miners on the network.

V. LCD Status & Configuration (where fitted)

Note: if the LCD display is missing, you can access it from a web browser <http://<ip address>/lcd>

Login details (default)

USER: user
PASSWORD: blackarrow



Configuring parameters

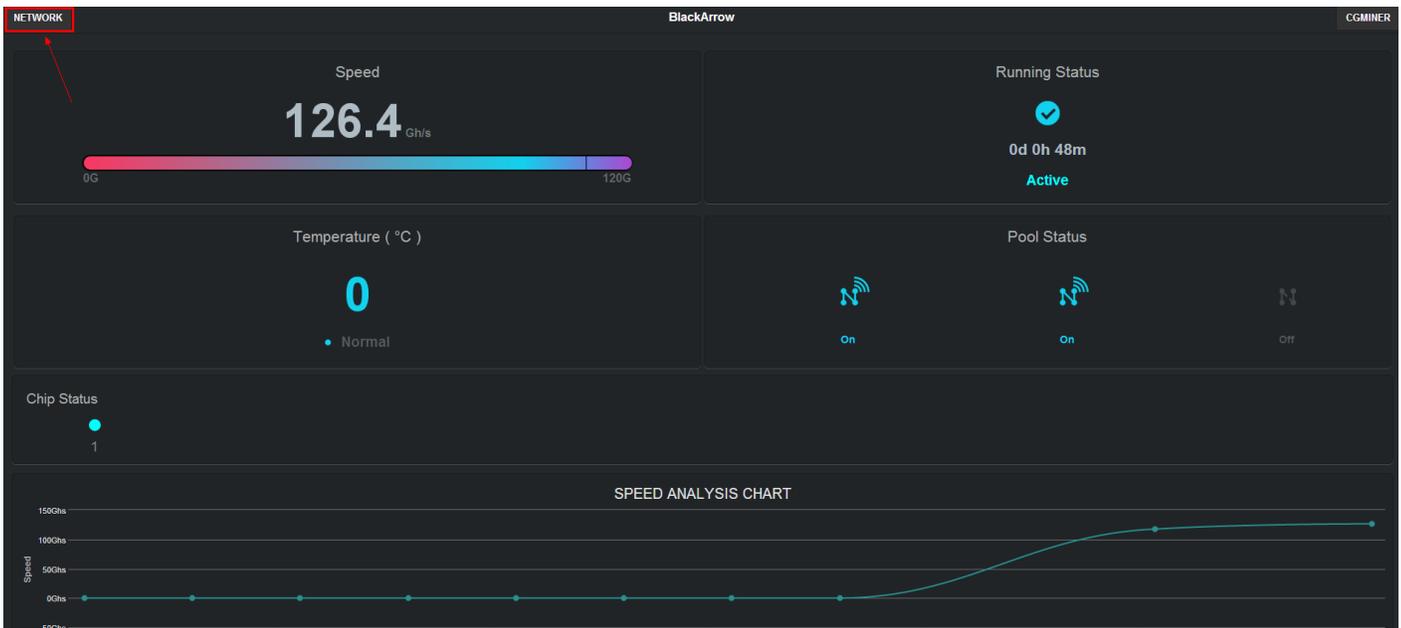
- 1. NETWORK** setup button: gives access to the network configuration window. The button is positioned in the top left corner of the screen. The user can configure here: IP address, net mask, gateway and DNS (default is 192.168.0.180). After changing the configuration user must click the SAVE button in the top right corner to save the configuration.
- 2. CGMINER** button: gives access to the CGMINER configuration window. The button can be found in the right top corner of the screen
- 3. SPEED:** this field registers the miner's average speed.
- 4. RUNNING STATUS:**
 - "Active (BLUE)" - confirms the miner is configured properly and is functioning to optimal status
 - "Stopped (RED)" - confirms the miner is in standby position and is not functioning properly.
- 5. Temperature** - registers the chip's average internal temperature.
 - "NORMAL (BLUE)" - confirms the chip is performing OK and is running below the critical temperature.
 - "HOT (RED)" - confirms the chip is overheating and running above the normal temperature.
- 6. Pool Status:** there are 3 pools listed automatically
 - "ON" - Pools are available
 - "OFF" - Pools are currently unreachable or pools' addresses have not been set properly.
- 7. Chip Status:** can list any number between 1 and 99.
 - "BLUE" - Chip is OK and is running

“RED” - Chip on the standby, or is overheated or other the existence of other issues are preventing the chip from starting up properly.

8. **SPEED ANALYSIS CHART** – A chart is automatically displayed to capture the miner’s average speed.
9. **TEMPERATURE STATUS ANALYSIS CHART** – A chart is automatically displayed to capture the miner’s average temperature.

VI. Network options

To change assigned static IP for your device, the user must click on the NETWORK button situated in the top left corner of the miner status screen.



The user should be able to access the network configuration window.

The user can the miner’s network details according to current network setup.

CANCEL Network Configuration

Network Info

ip:

netmask:

gateway:

dns:

Please note that if the network default IP mask is different from static IP set on the miner, therefore user will need to change its router, or computer's IP address to 192.168.0.XXX where XXX is the desired static IP. After the new IP address is setup, user must press the SAVE button and the miner will restart automatically.

Pool Settings (cgminer)

CANCEL Cgminer Configuration

Pool Info

pool1:

worker1:

password1:

Pool Info

pool2:

worker2:

password2:

Pool Info

pool3:

worker3:

password3:

Over Clock

Over Clock

Click on the CGMINER button in the top right corner on the main page. In the cgminer configuration, input the pool address, username and password. The user has the choice to change the overclock selection as well. There are four options: 800Hz/s, 1000Hz/s, 1100Hz/s and 1200Hz/s. After choosing the configuration, click SAVE button in the top right corner to save, the cgminer will restart.

User can Insert **Pool Information** as stated in the pool general information stratum+tcp://(POOLADDRESS) : (PORT)

This information can be copied from the pool's web page, or "How to/FAQ" section.

Note: User can setup up 3 different pool addresses. Once the setup is completed the pool address will be switched automatically if any of them is unreachable.

CANCEL – situated in the top LEFT corner, this button cancels the changes and brings the user to the main screen.

SAVE – clicking this button, will save any changes and will restart the miner.

NOTE: User should allow some time for miner to restart and if it does not happen, user should wait for few minutes longer. If miner is still not running plug out the power cord, wait for minimum 15 seconds, then plug it back in.

OVER CLOCKING: User can use this option to overclock or under-clock the chip. Please note that a stable performance is not guaranteed at any other frequency above the default 1000Hz. User can select a frequency from the drop down menu. To save the change, the SAVE button should be clicked on.

IMPORTANT:

- Please note that any custom overclocking, disassembling the device, replacing default parts with custom ones can damage or prevent the device from working.
- Do not remove power supply from miner when power is on. Make sure that device is shut down completely before removing power supply.
- Do not apply excessive force when inserting power supply in to device.
- Please avoid water from entering any part of the device. If water has been spilled on the device, turn it off immediately and dry it well with hair drier, let it dry for a few days before attempting to power the device on.
- Please do not insert any items in the airflow openings on the case, doing so may cause device to stop working and a short circuit which will disable the device and void the warranty.
- Avoid touching working miner, or any of the parts such as power supply, without proper anti-static protection, Gloves/bracelet.
- Note that mechanical damage, disassembling the device, any customization or modifications will void the device's warranty.
- Network security: If your running on an untrusted Local Area Network (e.g public places, shared accommodation, unsecured network, open WiFi, etc.), your Prospero as default, is not secure. Steps are need to be taken, such as changing root passwords, and software settings to lock it down. Check the online help, or contact support for help. Note, that the web interface is secure by design, and you can open it up to outside access on port 443.

Miner's default position and airflow.

Note that device is designed to be placed on the side, vertically. Blocking the airflow vents may cause device to overheat and prevent it from working properly.

