Baikal miner

QUADRUPLE

USER'S GUIDE

Start Quadruple Mini

Installation guide

✓ Quadruple Mini Specifications
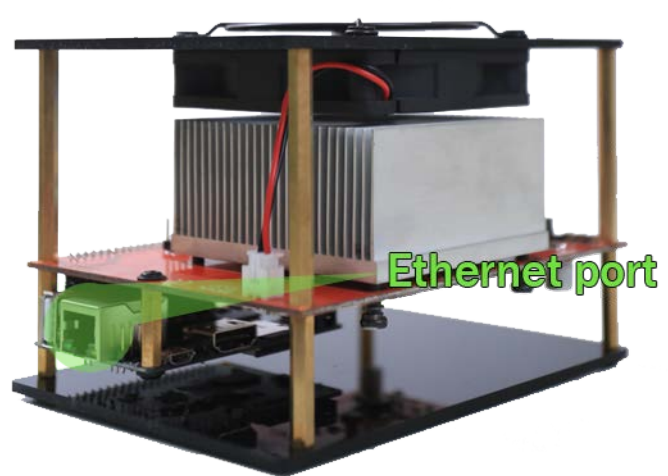
Hash Rate	600MH/s(±10%)
Power	150W(±5%) @ 0.27J/MH (at the wall , with 25℃ ambient temp)
Input Power	4 *12V/5A DC
Interface	Ethernet
Operation Temp	0 ~ 40 ℃
Dimension	140mm(L) x 100mm(W) x 355mm(H)
Weight	1720g

✓ Introduction

Power switch

12V Input DC port

front

Ethernet port
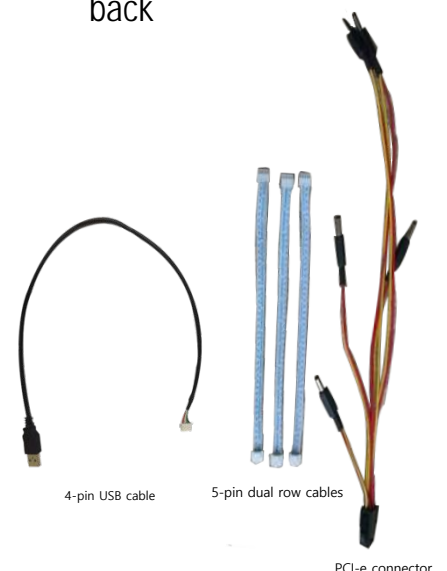
back

✓ Package Contents

1 Quadruple Mini Miner
1 4-pin USB cable
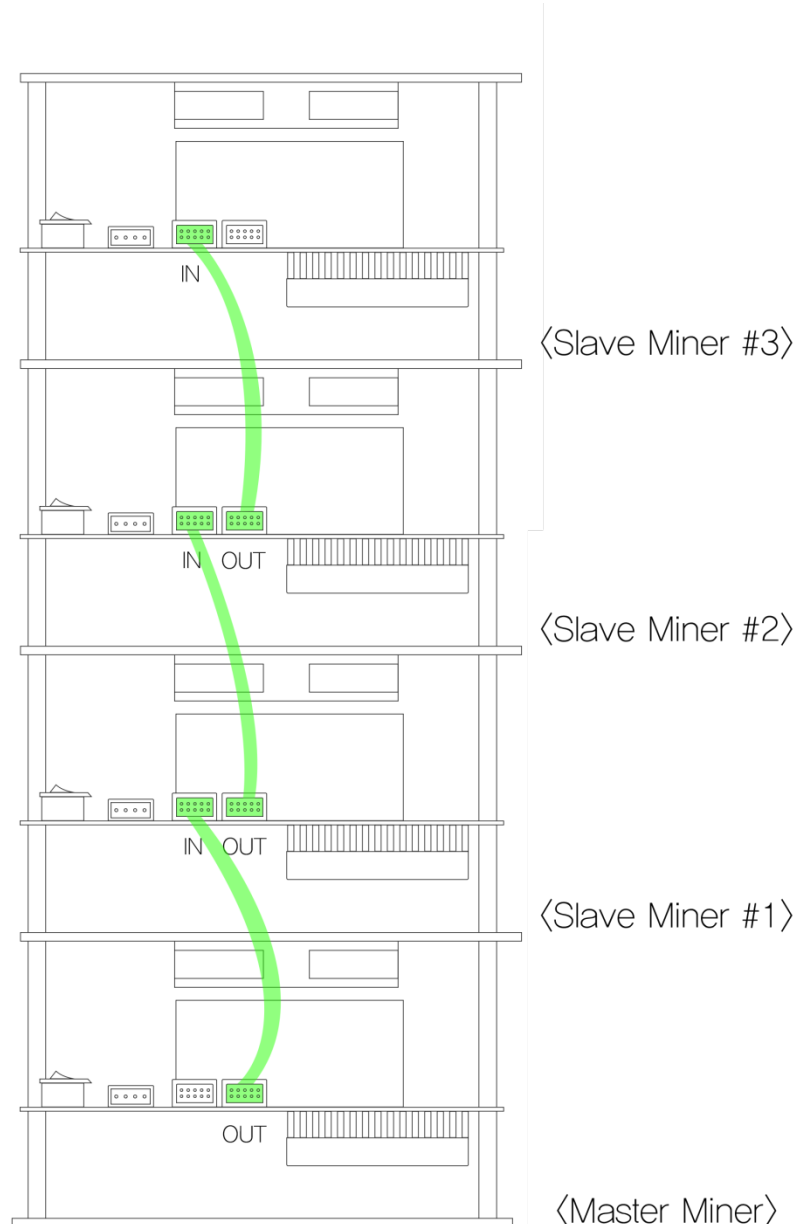3 5-pin dual row cables
1 PCI-e connector with 5 x Ø2.5 DC Plug

4-pin USB cable   5-pin dual row cables

PCI-e connector

✓ Connection Guide

1. Connect each miner with 5-pin dual row cable as attach below.

⟨Slave Miner #3⟩

⟨Slave Miner #2⟩

⟨Slave Miner #1⟩

⟨Master Miner⟩

Make sure not to connect/remove any of these cables when the switch is on, which can cause serious damage to your device.

2. Connect Master miner to Ethernet with Ethernet cable.
3. Plug power cable to 12V 5A DC port on every layer and to the power outlet as well.
    Make sure all the switches are off when plugging in.
4. Turn the switch on in order from the top to the bottom and check if you have blinking lights on at the Ethernet Port.
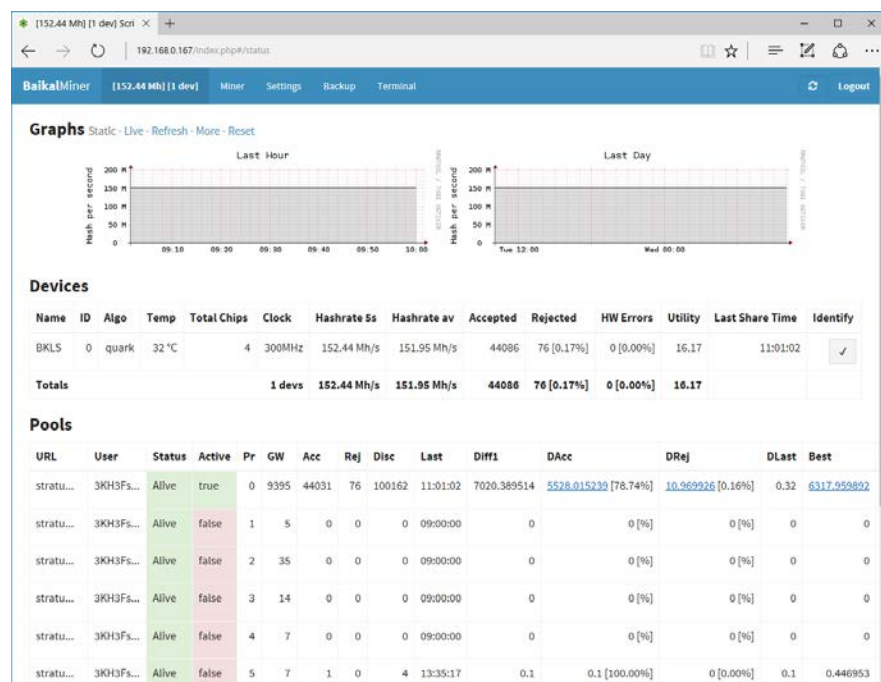
5.   Switching off also goes in order from the top to the bottom as well.
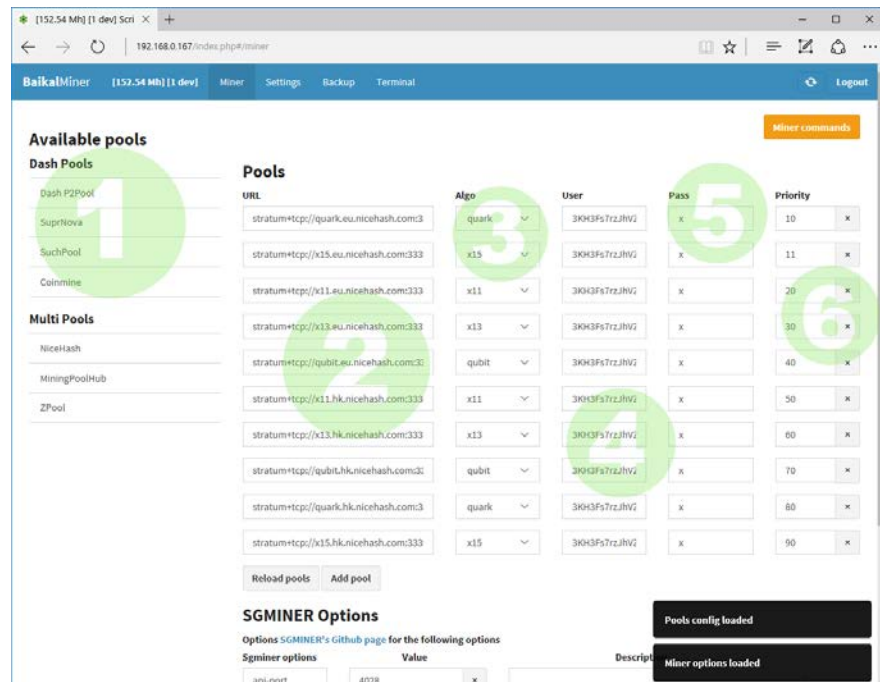
✓ Pool setting

1.   Enter Mini IP address on your web browser to access pool setting page and log in with 'baikal' as password.
(IP address can be found either on setting page of your internet router or by using our program from <u>download link</u>)
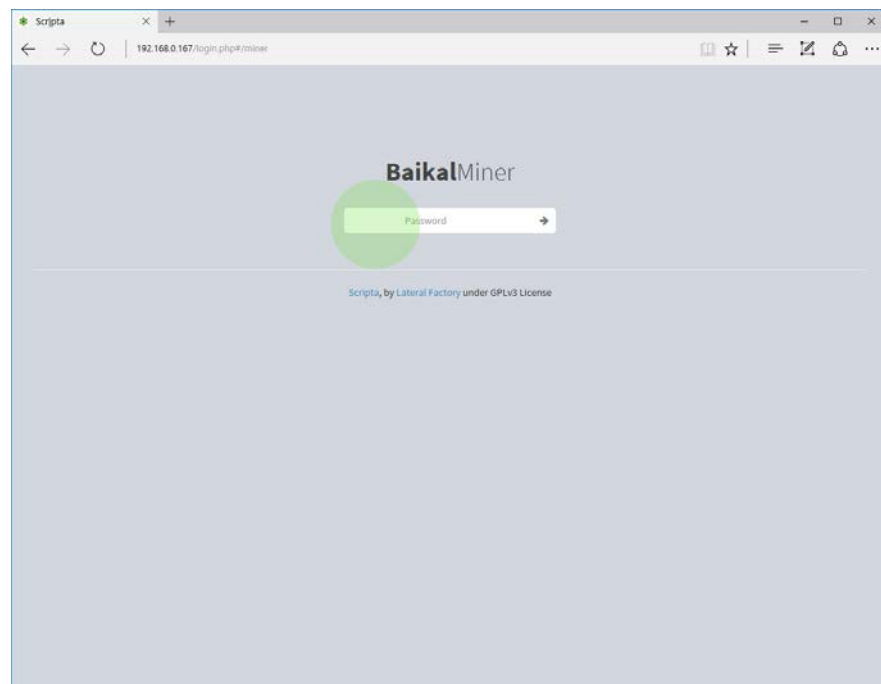
2.   First page you'd see if you log in successfully.

3. Go to Miners tab to set pool lists and give them mining details.

1 – Pool links for your information

2 – Server URLs from each pools

3 – Select Algorithm type

4 – Your wallet address

5 – Pool password (normally set as x)

6 – Give priority with your own numbers; the system counts lowest number as first and the next as second regardless how big are the numbers.

Note

For P2Pool you should add **/+0.08** at the end of your account to manage the hashrate for the best outcome.
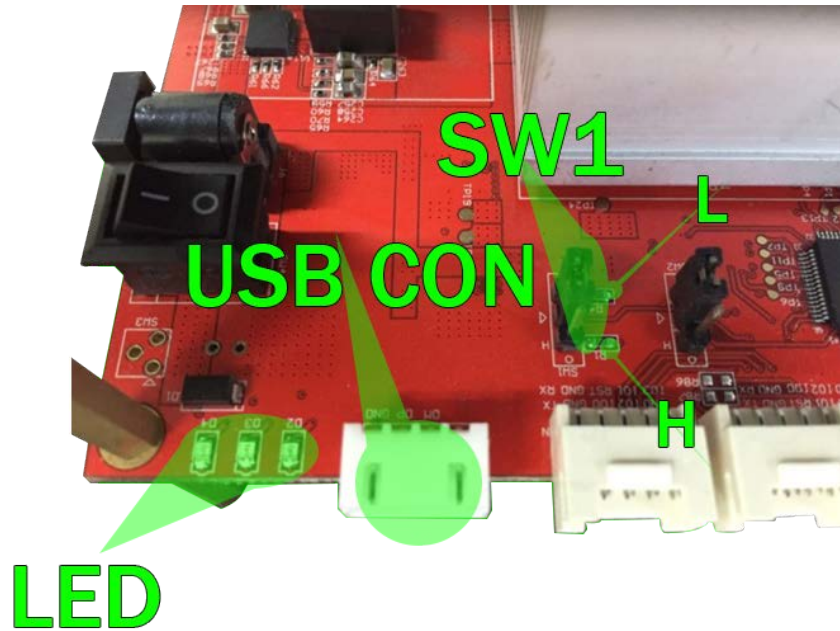
Example)

Keep Quadruple Mini Up-to-date

Upgrade guide

✓ Configuration

	Description
SW1	Boot mode setting.　H : DFU boot mode , L : Normal
USB CON	4-pin USB connector.　Use Baikalteam made 4pin USB Cable.
LED	Show DFU boot mode enter in 'H' of SW1. RGB is blinking one by one.
4-pin USB cable	USB A plug to 4-pin connector converter cable

✓ Firmware Update

01   Before the installation

1. Power off Quadruple Mini by switching off from top to the bottom
2. Remove 5-pin dual row cables connecting each miner.
3. Switch all SW1s to H.

Mode L   Mode H
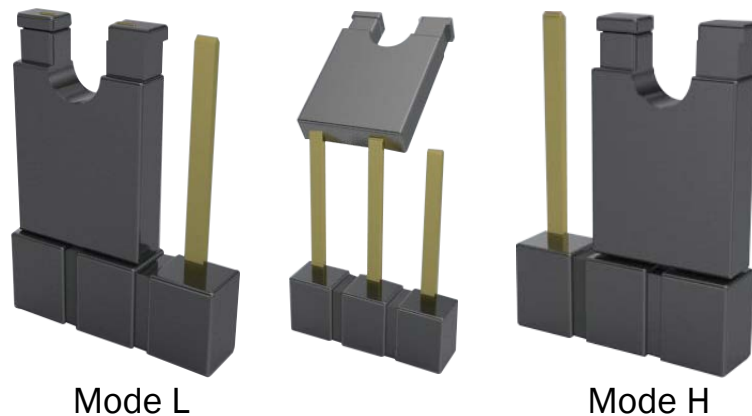
4. Choose one miner to work on.
   The whole process from below to the end should be repeated to apply upgrades to every layers of Quadruple Mini.
5. Connect 4-pin USB cable into USB CON of the selected board.
6. Turn the switch on of the very board. LED lights at installation mode would glow one by one as waves go through.
7. Download following list of updating tools available from here :

| Name	Description
dfu-util.exe	USB DFU(Device Firmware Utility) utility.
update_firmware_mini.bat	Firmware update batch file.
zadig_2.1.2.exe	USB Driver Installer
baikal_mini.bin	Firmware binary image.

02   Install DFM Utility driver

1. Connect the other end of 4-pin USB cable to your PC.
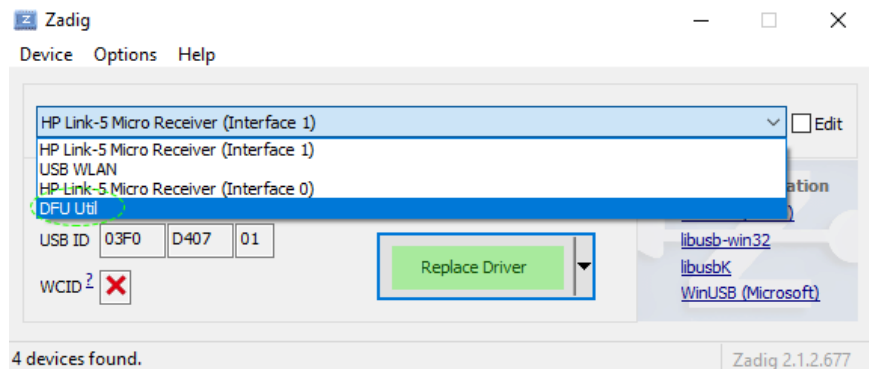2. Check if you have STM Device in DFU Mode on device manager.
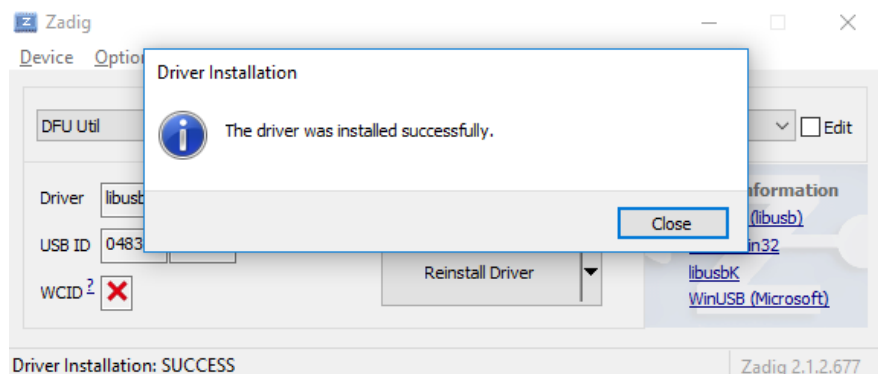
3. Run zadig_2.1.2.exe
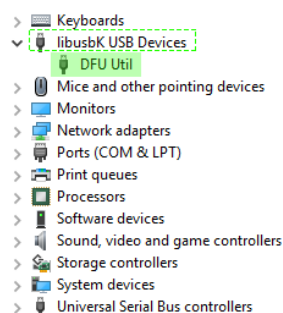4. Select Options>List all devices.
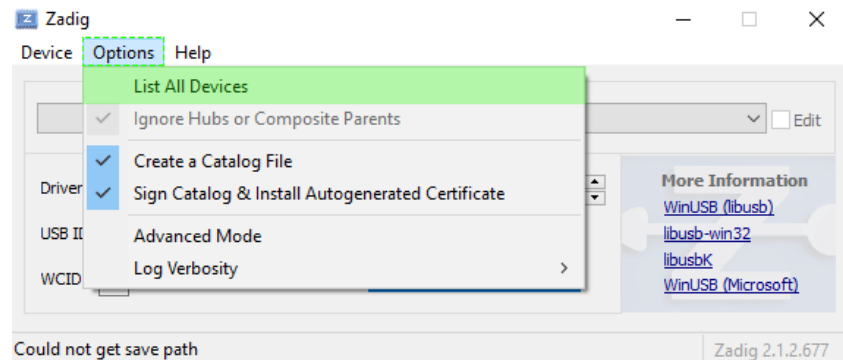
5. Select 'DFU Util' on USB device list, then replace driver.

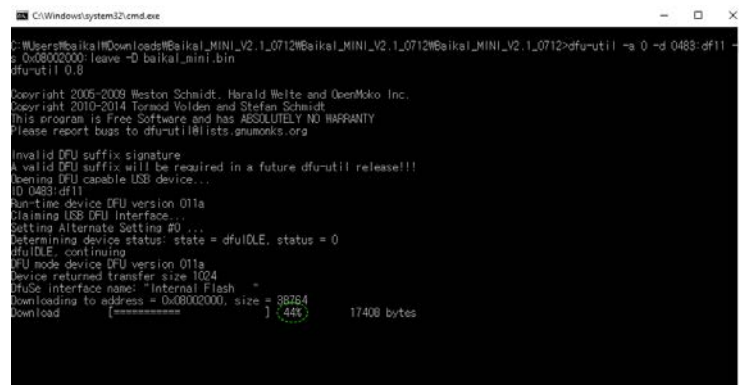6. It should be followed by pop-up message below.

7. DFU Util would appear as a replacement of STM Device in DFU Mode on Device Manager if installed successfully.

03   Update firmware

1. Run **update_firmware_mini.bat** and console window would pop up.

2. When the progress reaches 100% window will close itself.

04   Finish

1. Switch off the board.
2. Remove 4-pin USB cable from USB CON.
3. Go on to the next board to work on. Repeat from Step 01-5 to Step 04-3 until finishing all of 4 boards.
4. Set all SW1s to 'L'.
5. Connect each board with 5-pin cables.
6. Power on in order from the top to the bottom.

✓ SD Card Update

OrangePI SD Card setup guide

01 Download files

1. Download the OrangePI image from the following link :
File : OrangePI-PC_8G_V2.1_0712.img
[Download Link 1](#) : Google drive
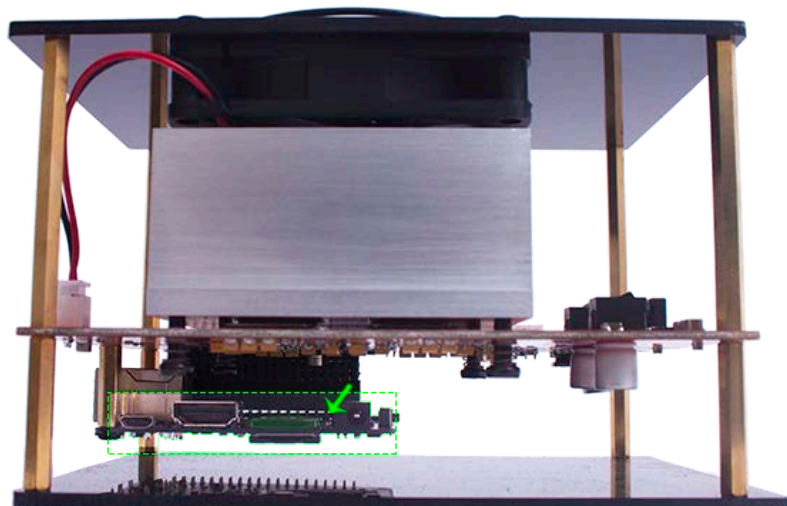
2. Download Win32diskImager Utility.
File : Win32DiskImager-0.9.5-binary.zip
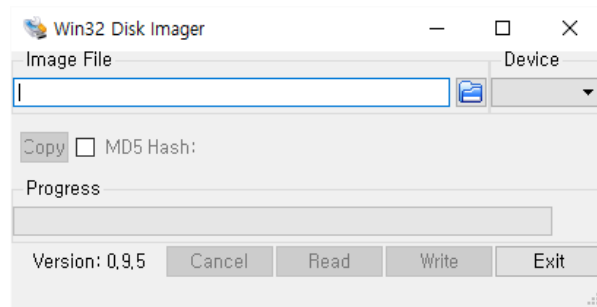[Download Link 1](#) : Google drive

02 Update OrangePI SD Card

1. Turn Quadruple Mini off.
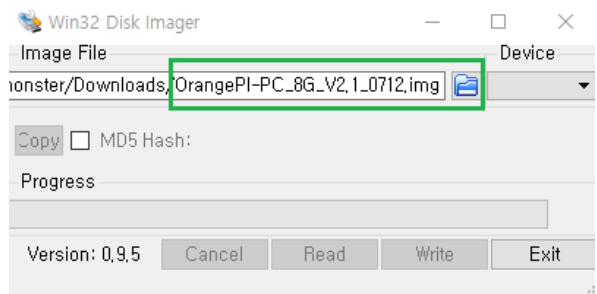2. Remove the SD Card from the OrangePI Controller of the **Master miner**.

3. Read the SD card on your computer and check which drive letter it assigned.
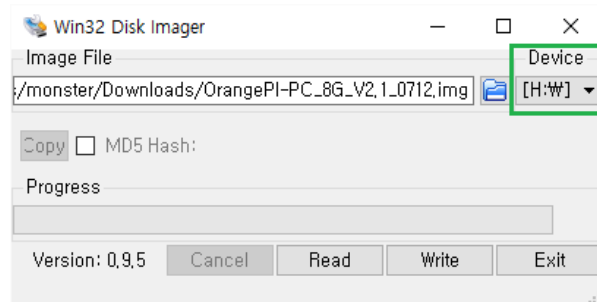4. Run the win32diskImager utility.

5. Select the OrangePI-PC_8G_V2.1_0712.img

6. Select the driver letter of the SD card in the device box.
7. Be careful to select the correct drive; if you get the wrong one you can destroy your data on the computer's hard disk!

8. Click Write and wait for the write to complete.
9. You are now ready to plug the card into your OrangePI.