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*Learning by building*

# NERD 2 MINER

MULTIPLE  
SCREENS



LOW POWER  
CONSUMPTION

1W 

EASY TO  
CONFIGURE



OPEN  
SOURCE



# THE NERDMINERV2

The NerdMinerv2 is a 1W lottery miner that you can have in your desktop.

This small microMiner is trying to reach a bitcoin block every 10minutes. Having the possibility to get 6.25Bitcoins.

The NerdMinerv2 has the iconical form factor of a Bitmain S9 and consumes only 1W, costing you only 2\$ a year to have it powered.

Today NerdMinerv2 mines at 22kHs and has several screens where you can see global minery data and current work done.

## NERD MINER SCREEN

Standard mining data, kilohashes/s, uptime, 16bitShares, 32bitShares...



## CLOCK MINER SCREEN

Hidden miner inside a new style clock. Display your current time and mine



## GLOBAL STATS SCREEN

Global minery data Network hashrate, current block heigh, bitcoin price...



# HOW TO BUILD IT

If you got a Bitronics kit and need help to build & flash the firmware follow the full guide scanning the QR code

*Required time: 20 minutes*



## QUICK SETUP

*Required time: 5 minutes*

1 - Power up your NerdMiner to any usb power adapter (5V /1A)

2 - On the following screen (1), use your phone to scan for Wi-Fi networks and connect to **NerdMinerAP** with password **MineYourCoins**.

3 - Once connected, the following menu will be shown (2). Click on **Configure Wifi** to setup.

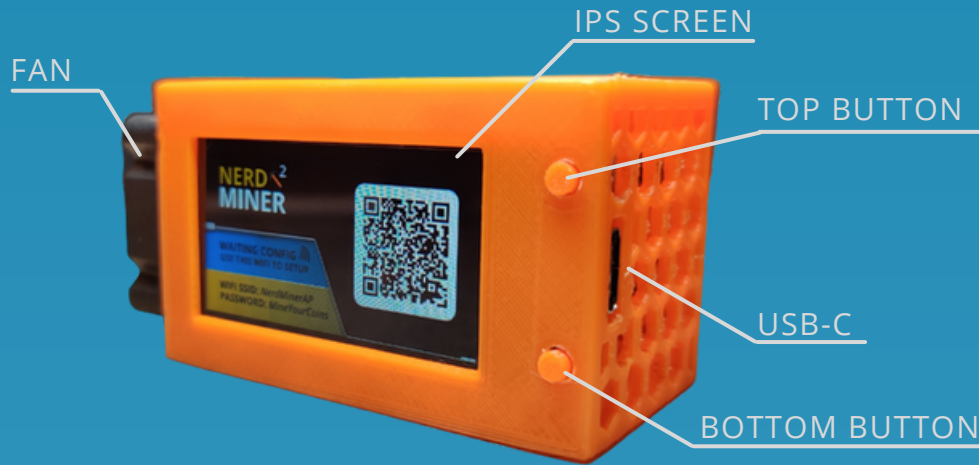
4 - Setup miner parameters:

- **WiFi/Password:** network credentials were you want to connect to.
- **Pool url/port:** introduce your pool settings or leave default
- **BTC address:** BTC address where you will receive prize.
- **TimeZone:** set your timezone from UTC to display correct time.

*For any problem check full guide or contact Bitronics team.*



# ATTRIBUTES



**Vcc:** 5V  
**I<sub>max</sub>:** 300mA  
**P:** 1W  
**USB type:** USB-C

**Wifi:** only 2.4GHz  
**MCU:** ESP32-S3R8 Dual-core  
LX7 microprocessor  
**TFT:** 1.9" Full-color Display

# FEATURES

- POWER UP** Use any usb adapter at 5V/1A
- CHANGE SCREEN** Press the top button to move between screens
- SUSPEND SCREEN** Press bottom button to suspend screen
- ROTATE SCREEN** Double click bottom button
- CONFIG MODE** Hold top button and power up
- RESET CONFIG** Hold 5 seconds top button

# BUILD YOUR KIT

Required time: 10 minutes

TOOLS  
NEEDED

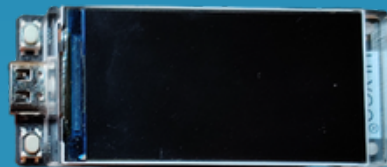


## KIT PARTS

Case



Board



Backplate



Buttons



Holder

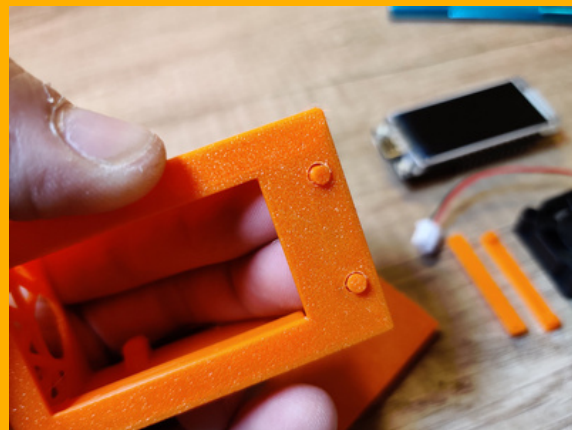


Fan



## BUILD PROCEDURE

### STEP 1 Insert buttons



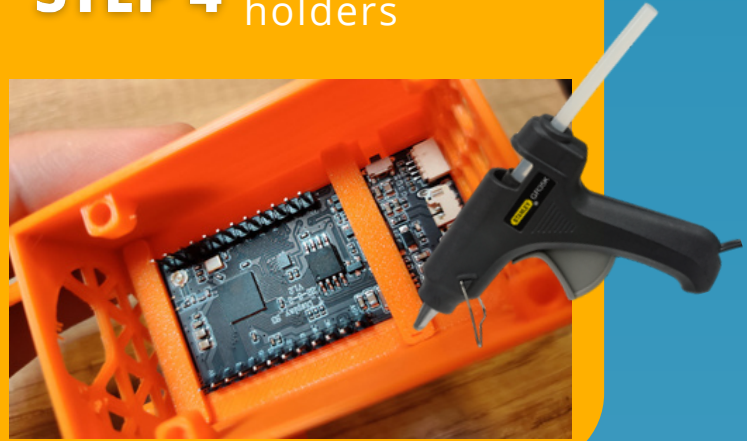
**STEP 2** Insert board > Verify USB position



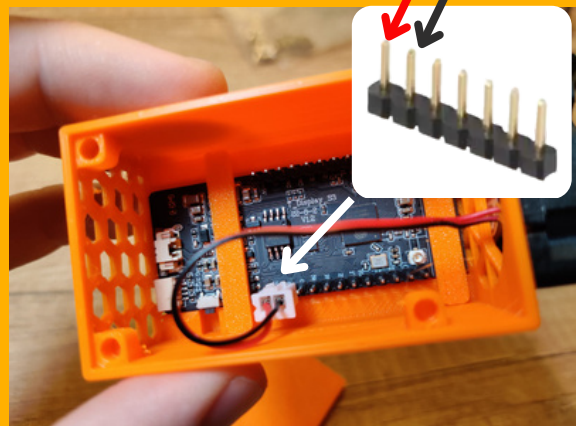
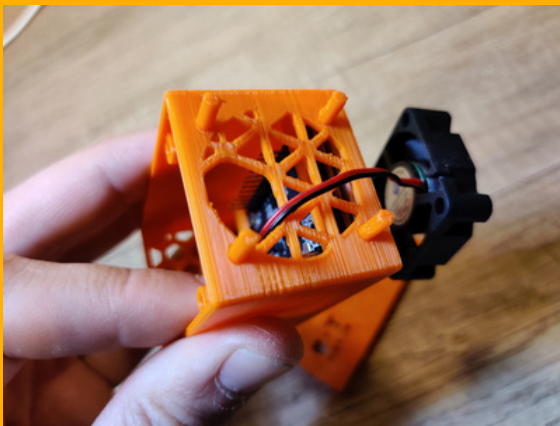
**STEP 3** Insert holders



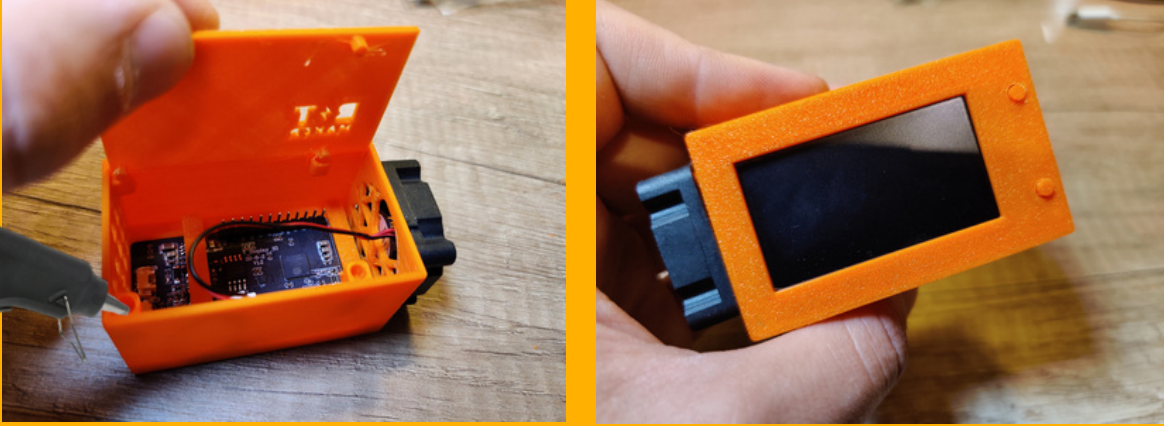
**STEP 4** Add glue to holders



**STEP 4** Add the Fan > Connect to **3V - GND**



## STEP 5 Insert backplate > All ready to flash



## FLASH FIRMWARE

You can flash the firmware using 3 methods, the online tool ESPtool, a Windows concrete tool or the python tool ESPtool.py.

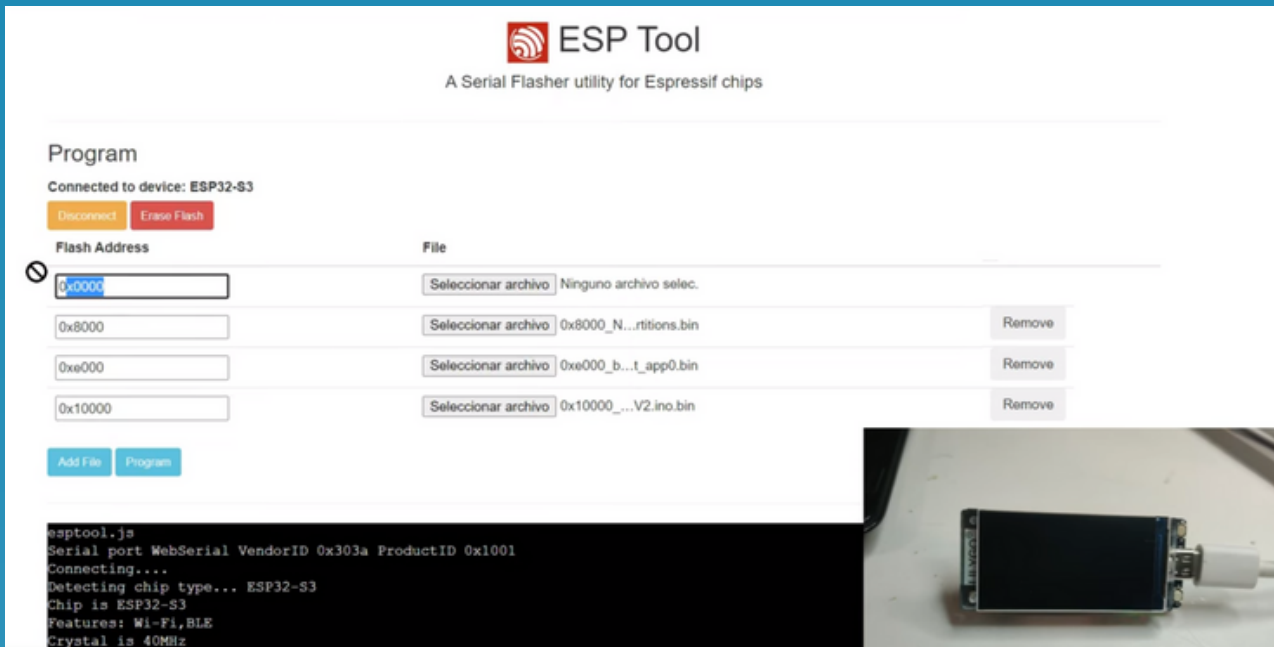
All necessary files will be found in the src/bin folder of this project on github. If you want you can compile the entire project using Arduino, PlatformIO or Expressif IDF.

Standard online procedure

1. Go to [https://github.com/BitMaker-hub/NerdMiner\\_v2](https://github.com/BitMaker-hub/NerdMiner_v2)
2. Download this repository pressing Code > Download ZIP.
3. Go to ESPtool online <https://espressif.github.io/esptool-js/>
4. Connect your device. Set baudrate 115200 and click connect. If your device is not listed, try using a different cable.
5. Select each of the following 4 files previously downloaded and add each one with his corresponding map address.

0x0000	Bootloader
0x8000	Partitions
0xe000	BootApp
0x10000	Firmware

6. Then click program > refer to following page



After flashing the device, refer to **Quick Setup guide** to finish configuration

## BUILD TROUBLESHOOTING

1. Online ESPtool works with chrome, chromium, brave
2. ESPtool recommendations: use 115200bps
3. Build errors > If during firmware download upload stops, it's recommended to enter the board in boot mode. Unplug cable, hold right bottom button and then plug cable. Try programming
4. In extreme case you can "Erase all flash" on ESPtool to clean all current configuration before uploading firmware. There has been cases that experimented Wifi failures until this was made.

If you can't success send us an email to [bitronics@bitronics.store](mailto:bitronics@bitronics.store).

You can also join the NerdMiner [Telegram](#) Group where you could ask for additional support.