

JABITAXE GUIDE: HOW TO FLASH BITAXE GAMMA MANUALLY

You need create a folder(e.g **bitaxefirmware**) in your home directory on the Ubuntu 24.04 PC to use:

Assuming that your home username on ubuntu pc is **<user-home-folder>** and you created a folder **bitaxefirmware** to use for your flashing.

Place **both** the Firmware and the modified config file in the bitaxefirmware folder you created
i.e. **/home/<user-home-folder>/bitaxefirmware**

(1) Firmware and the config file

(a) Firmware (esp-miner-factory-601-v2.8.1.bin) is at

<https://github.com/bitaxeorg/ESP-Miner/releases/download/v2.8.1/esp-miner-factory-601-v2.8.1.bin>

(b) Texted-based Config file with your configs. You get the sample config-601.cvs at

<https://github.com/bitaxeorg/ESP-Miner> .

just download the entire code and extract it and get the sample config file only to modify and use.

below is how the default sample text based **config-601.cvs** looks like but you only need to modify a few lines (4 lines) as per your configs

```
key,type,encoding,value
main,namespace,,
hostname,data,string,bitaxe
wifissid,data,string,
wifipass,data,string,
stratumurl,data,string,public-pool.io
stratumport,data,u16,21496
stratumuser,data,string,bc1qnp980s5fpp8l94p5cvttmtdqy8rvrq74qly2yrfmzkdsntqzlc5qkc4rkq.bitaxe
stratumpass,data,string,x
fbstratumurl,data,string,solo.ckpool.org
fbstratumport,data,u16,3333
fbstratumuser,data,string,bc1qnp980s5fpp8l94p5cvttmtdqy8rvrq74qly2yrfmzkdsntqzlc5qkc4rkq.bitaxe
fbstratumpass,data,string,x
asicfrequency,data,u16,525
asicvoltage,data,u16,1150
asicmodel,data,string,BM1370
devicemodel,data,string,gamma
boardversion,data,string,601
flipscreen,data,u16,1
autofanspeed,data,u16,1
fanspeed,data,u16,100
selftest,data,u16,1
overheat_mode,data,u16,0
```

Here is the sample with **our lab config-601.cvs** with 4 lines changed. Please save the file after modification.

```
key,type,encoding,value
main,namespace,,
hostname,data,string,bitaxe
wifissid,data,string,JabitaxeLabWifi
wifipass,data,string,LabWifiPassword
stratumurl,data,string,public-pool.io
stratumport,data,u16,21496
stratumuser,data,string,Enter-your-bitcoin-mining-address-here.bitaxe
stratumpass,data,string,x
fbstratumurl,data,string,solo.ckpool.org
fbstratumport,data,u16,3333
fbstratumuser,data,string,Enter-your-bitcoin-mining-address-here.bitaxe
fbstratumpass,data,string,x
asicfrequency,data,u16,525
asicvoltage,data,u16,1150
asicmodel,data,string,BM1370
devicemodel,data,string,gamma
boardversion,data,string,601
flipscreen,data,u16,1
autofanspeed,data,u16,1
fanspeed,data,u16,100
selftest,data,u16,1
overheat_mode,data,u16,0
```

(2) We also have a command line python tool for flashing Bitaxe and updating the config called Bitaxetool

Bitaxetool Requires Python3.4 or later and pip

Install bitaxetool from pip. pip is included with Python 3.4 but if you need to install it check <https://pip.pypa.io/en/stable/installation/>

pip install --upgrade bitaxetool

OR

pip3 install bitaxetool

The bitaxetool includes all necessary library for flashing the binaries to the Bitaxe Hardware.

At this point you should have bitaxetool installed locally

- Check by changing to your local folder with bitaxetool **.bin** file usually at **/home/<your-username>/.local/bin**
- Check that the Ubuntu OS can see your plugged USB C
ls -l /dev/tty*

you will see several listed . In most cases it will be **/dev/ttyACM0**

(a) To Flash a "factory" image to a Bitaxe to reset to factory settings.
Make sure to choose an image built for your hardware version (601) in this case:

```
bitaxetool --firmware ./esp-miner-factory-601-v2.8.1.bin
```

(b) To Flash just the NVS config to a bitaxe:

```
bitaxetool --config ./config-601.cvs
```

(c) **Flash both a factory image and your modified config file (config-601.cvs) to your Bitaxe:**
note the settings in the config file will overwrite the config already baked into the factory image:

```
bitaxetool -p /dev/ttyxxxxxx --config ./config-601.cvs -f ./esp-miner-factory-601-v2.8.1.bin
```

ACTUAL FLASHING:

Assuming that your home username on ubuntu pc is **dan** and you created a folder **bitaxefirmware** to use for your flashing.

Place **both** the Firmware and the modified config file in the bitaxefirmware folder you created i.e. **/home/<user-home-folder>/bitaxefirmware** . Your command to flash should look like this (it's a single command)

```
bitaxetool -p /dev/ttyACM0 --config /home/<user-home-folder>/bitaxefirmware/config-601.cvs  
-f /home/dan/bitaxefirmware/esp-miner-factory-601-v2.8.1.bin
```

If your Bitaxe gamma is connected to the usb c port , it will start to flash it . once complete , it restart and do a Bitaxe default test . it will show fail or pass (Not usually important) . Press **RESET** or **BOOT** button as shown on the screen to bypass this step and entire config mode and then proceed with normal config using your phone and web interface