

Hey there, Firefly fan! Ready to light up your Wemos Mini D1 Firefly board with some shiny new firmware? Don't worry if you've never done this before—I've written these beginner-friendly instructions. We're going to load a zip file packed with .bin files onto your board. The memory table you'll be working with is like a map telling us where each file goes in this case:

- 0x00000 - firefly.bin (this is the firmware)
- 0x3000000 - littlefs.bin (this is the file system image)

We've got 3 ways to do this: a breezy, browser-based method using Chrome (perfect for newbies), a python uploader if you already have python in your system and a more hands-on approach with esptool for those who already are familiar with uploading to microcontrollers.

Let's dive in!

Option 1: The Easy-Peasy Chrome Way (No Experience Needed!)

Imagine flashing your Firefly board as simple as clicking a button in your Chrome browser. Here's how to do it:

1. Gear Up

- Plug your Firefly (Wemos Mini D1) into your computer with a USB cable. It's like giving it a little power hug!
- Make sure you're using a recent version of Chrome (or Edge works too). Old browsers are like grumpy grandpas—they won't play nice here.

2. Grab the Zip File

- Download the zip file I've left for you (it's got all those .bin goodies inside).

Save it somewhere easy to find, like your Desktop.

3. Head to the Online Installer

- Open Chrome and zoom over to install.wled.me. This is a slick tool made for ESP boards like your Firefly. (Note: It's technically for WLED, but it can handle custom .bin files too with a little tweak!)
- Bonus tip: If that site gives you trouble, try wled-install.github.io as a backup—some folks say it's smoother.

4. Connect Your Firefly

- Click "Install" on the site. It'll ask to connect to your board. Look for a serial port option (like COM3 on Windows or /dev/ttyUSB0 on Linux/Mac). If you don't see it, you might need a driver—hop to wemos.cc to grab the CH340 driver, install it, and try again.

5. Upload the Zip

- The site usually expects a single .bin file, but since we've got a zip with multiple files, unzip it first (right-click and "Extract All" on Windows, or double-click on Mac). You'll see those five .bin files pop out.

This online tool isn't perfect for multi-file uploads with specific addresses

yet, so here's the catch: it works best with a single combined .bin file. If your zip came with a note saying it's pre-combined, upload that single file. If not, you'll need to tell folks to use Option 2 (below) for now—or bundle it into one file with a tool like esptool beforehand (more on that later).

6. Flash It!

- Hit the “Flash” button, and watch the magic happen. Your Firefly might blink like it’s winking at you while it loads up. When it’s done, you’ll get a happy “Success” message. Unplug, replug, and see your board come to life!

Newbie Note: If you’re scratching your head because the zip has multiple .bin files and the Chrome tool only takes one, don’t panic! Option 2 is your friend—it handles all those files with their special memory spots perfectly.

Option 2: the easy python way

If you already have python installed in your system I prepared an uploader that just launches esptool with the right parameters. When you execute the uploader by typing in a terminal and in the same folder where you unzipped the files:

```
python3 uploader.py
```

you’ll see this window where you can choose the port and upload the firmware.



Option 3: The Tech-Wizard Way with esptool (For Curious Adventurers)

This method uses esptool, a powerful tool for ESP boards, and it’s perfect for loading all those .bin files exactly where they belong. Let’s get started!

1. Set Up your dependencies (Install Python & esptool)

- You’ll need Python installed on your computer—it’s like the spellbook for esptool. Head to python.org, grab the latest version (3.9 or higher is fab), and install it. Make sure to check “Add Python to PATH” during setup.

- Open a terminal (Command Prompt on Windows, Terminal on Mac/Linux) and type pip install esptool then hit Enter. This grabs esptool from the internet and sets it up for you.

2. Unzip Your Files

- Download that zip file I’ve shared, then unzip it (right-click > “Extract All” on Windows, or double-click on Mac). You’ll see those five .bin files: firefly.bin and littlefs.bin. Move them to a folder you’ll remember, like [C:/FireflyFirmware](#) on Windows or [~/FireflyFirmware](#) on Mac/Linux.

3. Hook Up Your Firefly

- Plug your Firefly into your computer via USB. If your computer doesn’t

recognize it (no “ding” sound?), you might need that CH340 driver from wemos.cc. Install it, then check your ports:

- Windows: Open Device Manager, look under “Ports (COM & LPT)” for something like COM3.
- Mac/Linux: Type `ls /dev/tty*` in the terminal and spot something like `/dev/ttyUSB0`.

4. Flash Those .bin Files

• Now, load each file to its special spot on the memory map. Run this big, fun command all at once (copy-paste it!):

```
esptool.py --chip esp8266 --port COM3 --baud 115200 write_flash -z  
0x0000 firefly.bin 0x300000 littlefs.bin
```

- Swap COM3 for your port.
- `-z` keeps the flash compressed (faster!).
- `--baud 115200` sets a speedy upload rate (you can bump it to 921600 if you’re feeling bold, but 115200 is safe).
- You’ll see progress bars zip by as each file lands in place. If it says “Connecting...” forever, unplug/replug your Firefly and try again— sometimes it’s shy.

5. Celebrate!

• When it’s done, you’ll see “Hash of data verified” or similar. Unplug your Firefly, plug it back in, and watch it glow with its new firmware!

Wizard Tip: If something goes wonky (like “Failed to connect”), double-check your port, ensure your cable’s good (data cables only—no charge-only ones!), and maybe press the reset button on the board before flashing.