

Connecting the Firefly to WiFi

The first time Firefly powers up it knows no network, so it tries the stored credentials for about 15 seconds and then opens its own WiFi network while it keeps retrying yours in the background every 10 minutes. You only need to tell it your credentials once.

1. Join the Firefly network

- On your phone or computer, join the open WiFi network called **firefly**.
- Open **http://192.168.4.1** in a browser. The Firefly dashboard appears.

2. Enter your WiFi credentials

- Click **Settings** in the navigation bar. The settings file is one `key, value` pair per line.
- Set `wifi_ssid` to your 2.4 GHz network name and `wifi_pass` to its password. (Firefly is 2.4 GHz only.)
- Optionally set `device_name` (used as the network hostname and dashboard title). On networks where several repeaters share one SSID and the board grabs a distant one, pin it with `wifi_bssid` (e.g. `82:20:DA:05:A4:7B`) plus `wifi_channel`.
- Click Save, then restart the board (**Reset** in the navigation bar).

On reboot Firefly joins your network. The fallback access point only appears when it cannot connect, so a configured board on a healthy network shows no `firefly` network at all.

3. Find it on your network

- **OLED display:** the bottom line always shows the current IP address (or the AP address when in fallback mode).
- **UDP beacon:** every 10 seconds (`udp_beacon_secs`) Firefly broadcasts its name and IP on UDP port 1234 (`udp_port`). Listen with `nc -ul 1234` on Windows, Mac or Linux, or any UDP monitor app.
- **Router:** look for a device named after your `device_name` in the router's client list.

If it never joins

- Double-check the password and that the network is 2.4 GHz.
- Watch the USB serial log at 74880 baud: it prints `Connecting...`, the reason for failures, and the IP once linked.
- A board that cannot connect keeps serving the dashboard at **http://192.168.4.1** on the `firefly` network, so you can always fix the settings there.