Pico Wifi Analyzer - New Code

Sep 2026

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Introduction

The Wifi Analyzer has been working very well. However, there were a couple of things niggling me and I wanted to resolve them before putting this project to bed.

These improvements were:

- Slow LCD Refresh
- Visible MAC Address
- Seconds on the Next Scan
- SSID details in separate file.

The first one was the cause/reason for a couple of things. The slow refresh stopped me having seconds on the 'Next Scan' and I just have to have minutes (starting with 15m). But now the page refreshes so fast you can't see it, I have Minutes and Seconds after the 'Next Scan' Line.

I wanted the MAC Address shown on the page. Sadly not enough room to have MAC:xx:xx:xx:xx:xx:xx so I had to drop the word MAC. It should be pretty obvious what it is though?

Lastly is the speed, the slow page refresh was actually slowing down the scanning. Now when we do a scan the scan happens quite quickly. Also, during the Scanning, where we have the word Scanning with dots is actually properly animated now.

Before this version, you had to dig through the Python script to find the SSID details. This was messy and meant someone could accidentally change the Python code and break the project. Now we have a separate file on the Pico called:

- wifi_details.json

| download

```
[
    {
        "label": "Wifi Network 1 name",
        "ssid": "YOUR-SSID",
        "password": "YOUR-PASSWORD"
    },
    {
        "label": "Wifi Network 2 name",
        "ssid": "YOUR-SSID",
        "password": "YOUR-PASSWORD"
    }
]
```

A user now only needs to edit this file with their Wifi details and our Python script will pull this information from here:

The New Code

You need to download three files for the project to work:

- The driver

st7789nf.py

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