WLAN Pi Project Update





Jiri Brejcha
www.wlanpi.com
October 2026

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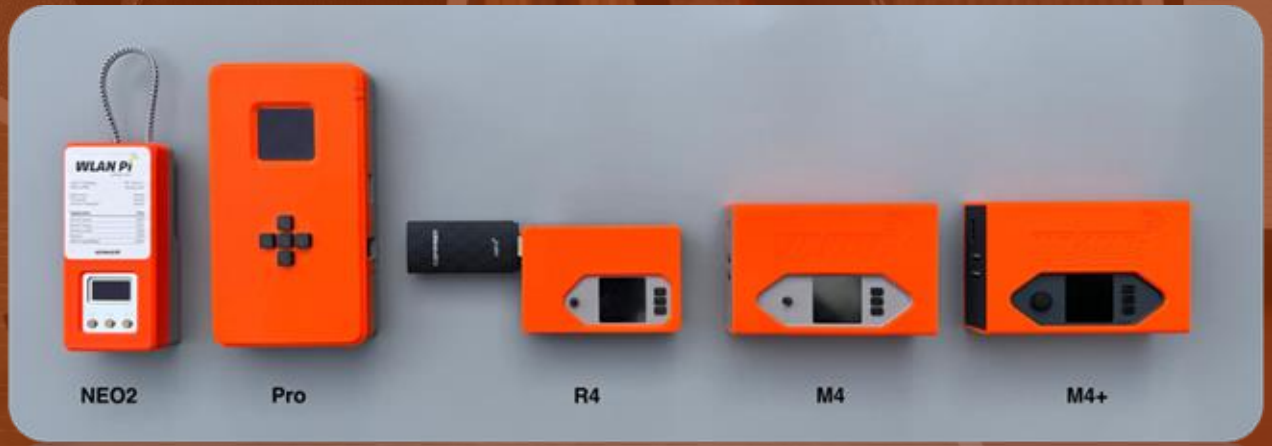
AI meets WLAN Pi

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Multitool for WLAN Pros

The WLAN Pi is the open-source affordable community hardware tool to assist you in the validation, troubleshooting, and maintenance of Wi-Fi networks.





The WLAN Pi Team

Meet the Core Team



Jerry Olla
Founder & Project Lead



Josh Schmelzle
Wi-Fi Engineer + Web UI and Python Master



Adrian Granados
Actual Developer & Wi-Fi guru



Nick Turner
Wi-Fi Engineer + Prints things, in 3D



Ben Toner
Actual Developer & Hardware Aficionado



Jiri Brejcha
Wi-Fi Architect



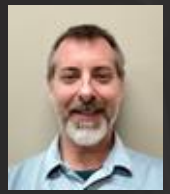
Jake Snyder
Wi-Fi Engineer MCP, MLO

New contributors

Our growing community



Ian Stout
Wi-Fi Engineer



Matt Lee
Hardware, Firmware & RF Engineer

Honorable contributors

Who have gone above and beyond



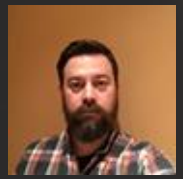
Dylan Toner
App Developer



Bryan Ward
Grafana SME & Wi-Fi guru



Daniel Finimundi
Wi-Fi Engineer & Linux Guru



Colin Vallance
Wi-Fi Engineer + Python Dude



Nigel Bowden
Wi-Fi Engineer



Joel Crane
Wi-Fi Engineer + Prints things, in 3D

The WLAN Pi Team v5



– The WLAN Pi Team v5



The WLAN Pi Team v5



– The WLAN Pi Team v6



The WLAN Pi Team v7



– The WLAN Pi Team



– The WLAN Pi Team



– The WLAN Pi Team



What is WLAN Pi Cookbook?

- **Deep Dive materials** from previous WLPC conferences are **available to all of you**
- Step-by-step guides including screenshots, labs, and practical tips



cookbook.wlanpi.com

The most intensive software efforts so far

New **v26.10-DeadEye image** for WLAN Pi **Pro, R4, M4, M4+**



July to October 2026: 144 tracked items across 23 repos, 86 PRs merged, 52 issues closed

- Moved to Debian 13 Trixie. Skipped Bookworm entirely. About 20 packages were rebuilt and published for Trixie

- The image builder gained a kernel package covering the Pi 4 and Pi 5, Scandump, updated firmware. hostapd and wpa_supplicant moved to 2.12, iperf to 2.2.2, iperf3 to 3.21, and iw got Multi-Link (MLO) patches

Security hardening

- Core API is now **HTTPS only**, each device makes its own TLS certificate on first boot. Before this, every image shared one key.

- WebUI login goes through PAM with a password policy, and token lifetime and revocation were tightened

- Packet capture WebSockets now require authentication

- Process kills no longer reach outside their network namespace, and cache files moved out of /tmp



WLAN Pi Go

Released v26.10-Cortado image for Go



- Updated WLAN Pi kernel from 6.12.67 to 6.12.107 with 2 fixes for the MAX3421 USB host controller used by Oscium devices
- Oscium capture and spectrum tools updated: oscium-capture 0.7.6, oscium-spectrum 0.6.5
- wireless-regdb 2026.09.03, rpi-eeprom 28.33 and tzdata 2026c
- Debian security updates, including OpenSSL 3.0.22, OpenSSH, sudo, nginx, Kerberos, GnuTLS, and glibc
- Images are exported without SSH host keys, and the build fails if any remain. Each device generates its own keys on first boot.
- Update using WLAN Pi App or flash the “AB” image



Wi-Fi 7 software updates

Core service and WebUI

- New Core endpoints: system health, PCI devices, NTP, failed services, LLDP neighbours, reachability inside a namespace (with DNS server IPs), and reading profiler reports
- WebUI redesign phases 1 and 2
- Bugs fixed: wrong eth0 address, VLAN 500 errors, DHCP renew 409s, scan frequency parsing

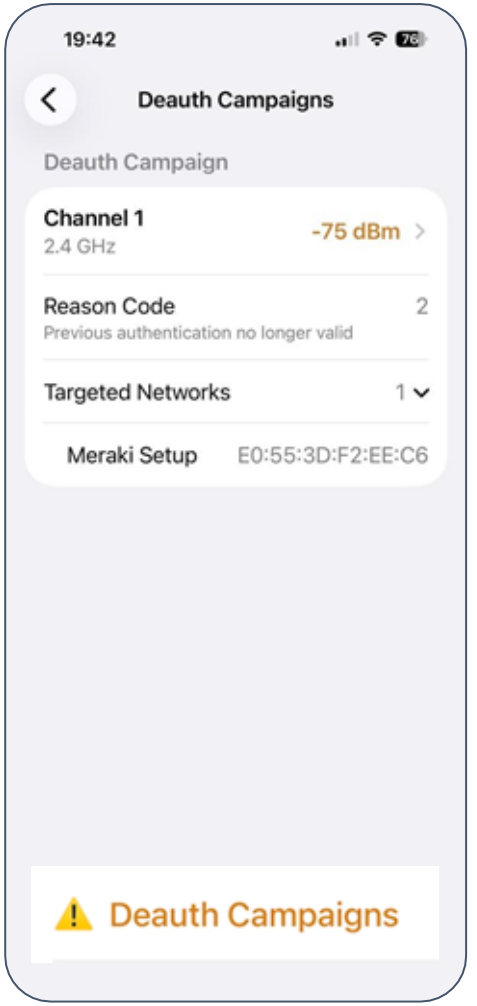
Profiler and WLAN Pi Go

- Fixed the profiler that was broken in 3.4.4 and 26.02.
- Fixes for Intel BE200 and Qualcomm ath12k adapters, and corrupt frames are filtered out
- The Go got its own build (Bookworm backport) and the 26.10-Cortado release
- Kernel fix for Oscium spectrum analysers dropping off USB

WiFi Explorer Pi App

New features

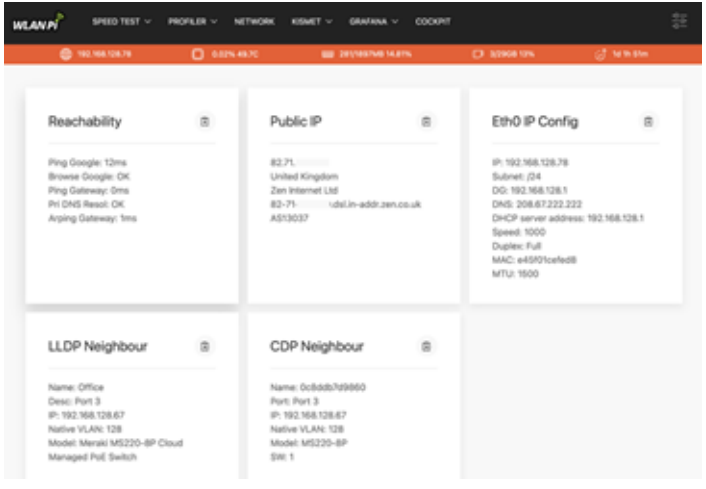
- Open existing PCAP
- Detect deauthentication campaign
- Checklists



Traditional ways of engaging with WLAN Pi

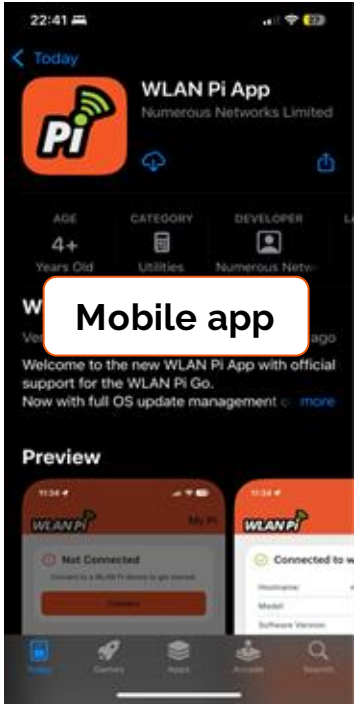


SSH

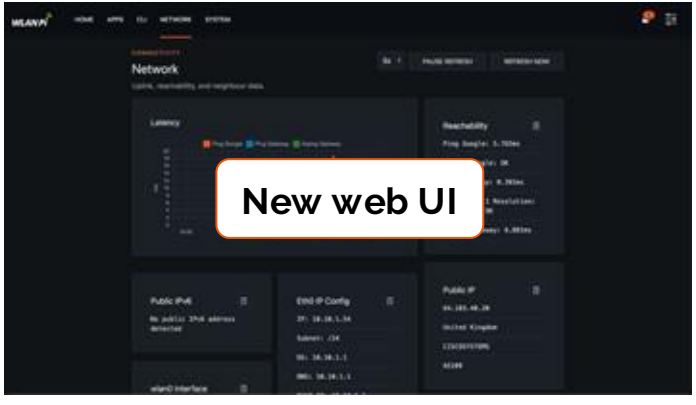


Web UI

New ways of engaging with WLAN Pi



Mobile app



New web UI



Secure API

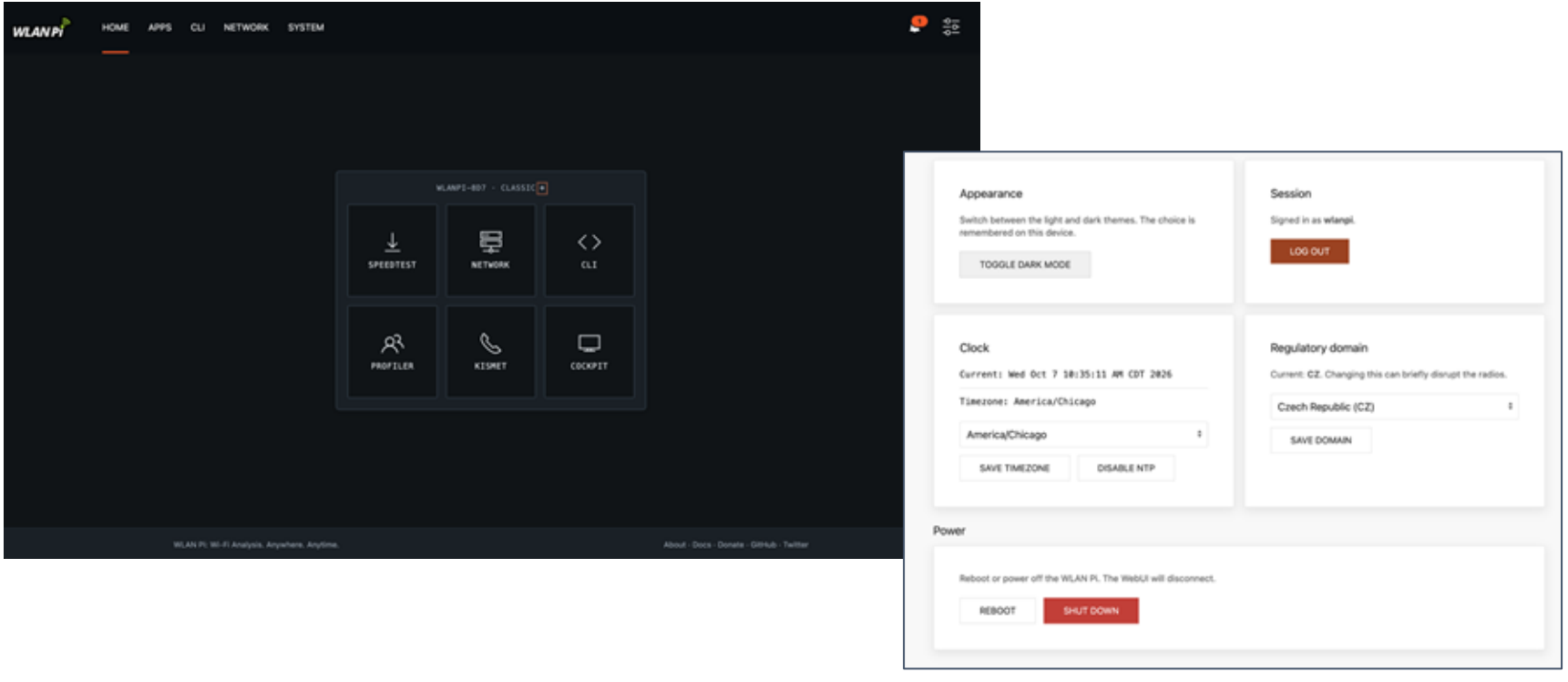


AI model via MCP

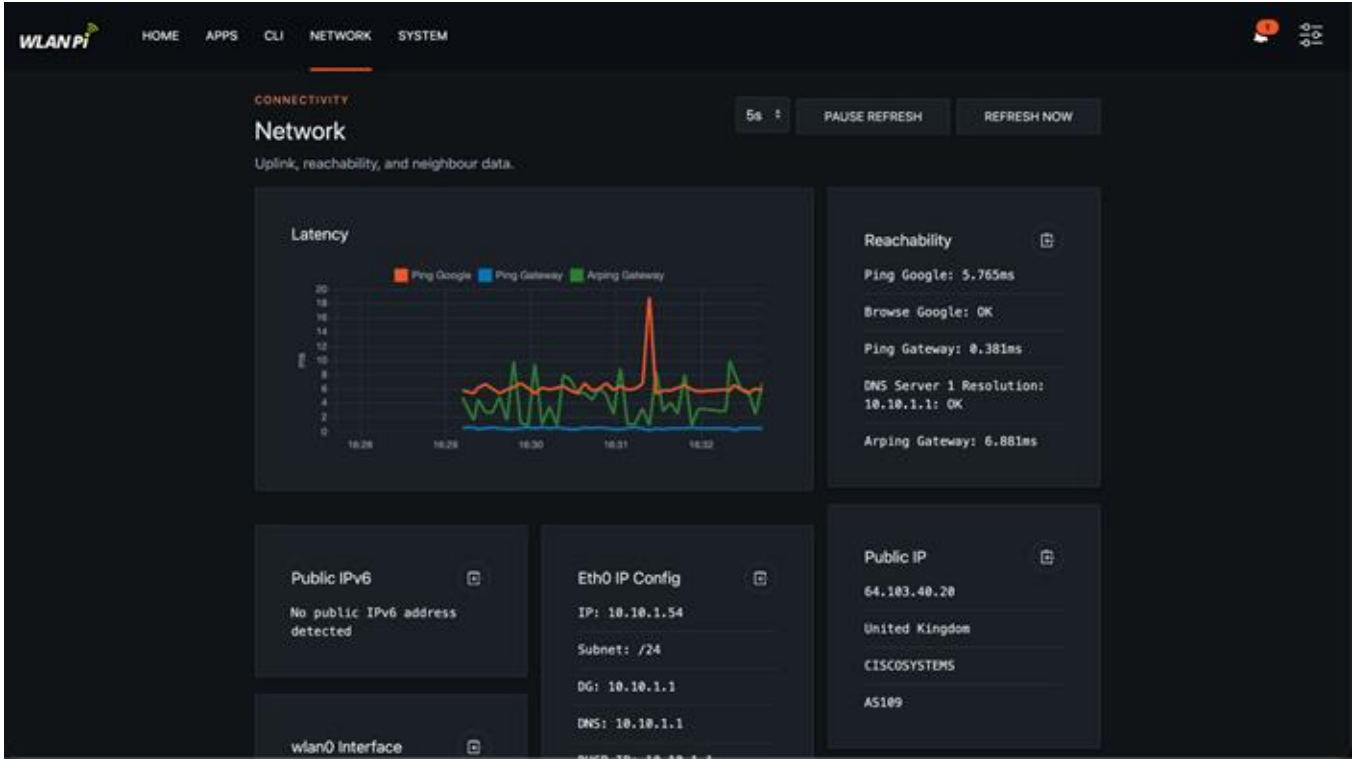


SSH / web CLI

New web UI - dark mode



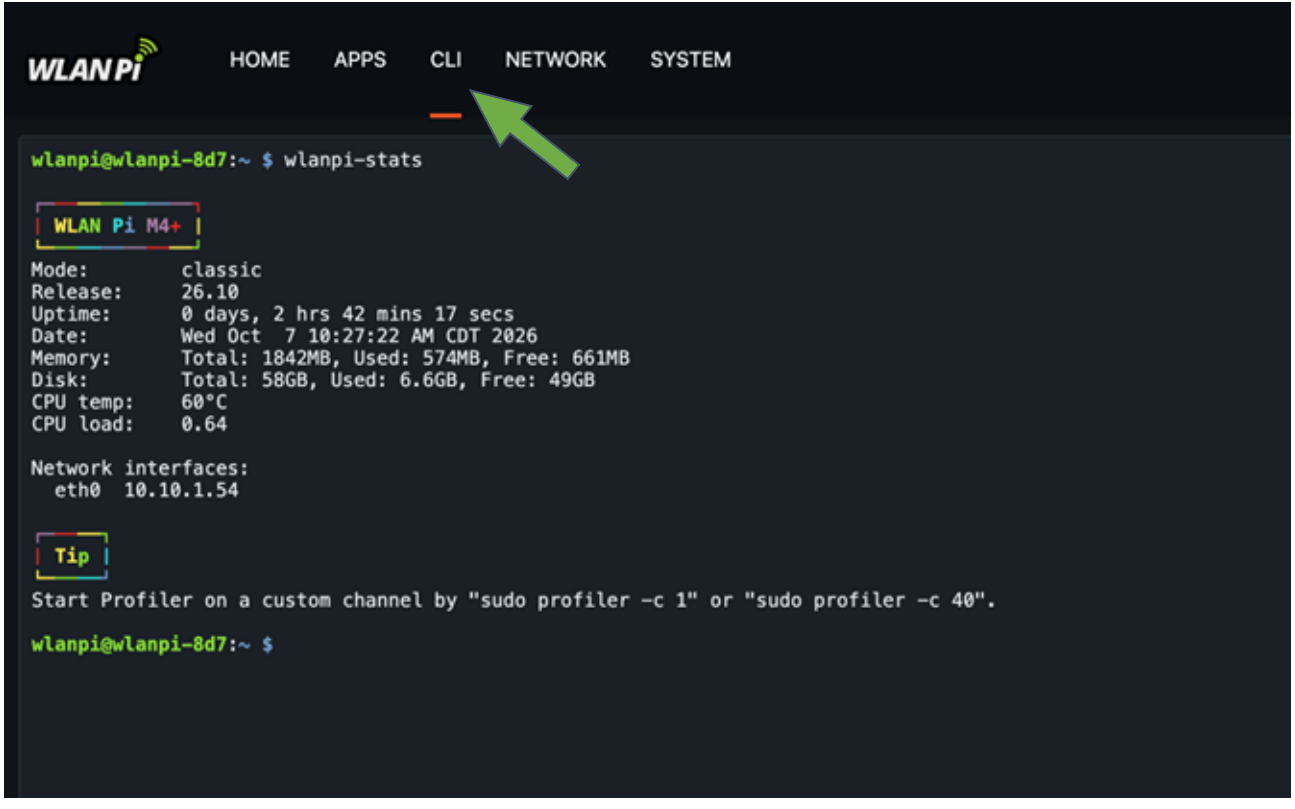
New web UI - auto refresh, reachability



New web UI - speedtest



New web UI - web CLI



WLAN Pi: Now with 100% more AI

On-Box MCP server

Now your favorite AI model can talk directly to the WLAN Pi.

76
Tools

10
Resources

4
Prompts

HTTP Streaming, Stateless

Connect with Claude, Codex, OpenCode



/update to install v2.0.28

Ask anything… "What is the tech stack of this project?"

Build · Big Pickle OpenCode

~/wlanpi-class shift+tab agents ctrl+p commands

⊙ 1 MCP /mcps 2.0.24

wlanpi-class — OC | Pi health check via device resources — opencode — 124×36

Pi health check via device re +

> Read the device://info and device://stats resources and tell me whether this Pi is healthy right now. What would you check next?

+ Thought · 775ms

✓ execute
› opencode.list_mcp_resources

+ Thought · 2.6s

✓ execute
› opencode.read_mcp_resource [server=wlanpi, uri=device://info]
› opencode.read_mcp_resource [server=wlanpi, uri=device://stats]

Build · Big Pickle OpenCode Zen

esc interrupt 20.9K (10%) ctrl+p commands

Pi health check via device resources

Context
20,926 tokens
10% used

MCP
• **wlanpi** Connected

◆ Getting started ×

OpenCode includes free models so you can start immediately.

Connect from 75+ providers to use other models, including Claude, GPT, Gemini etc

Connect provider /connect

~/wlanpi-class

Josh Schmelzle: *Boring tools, strict rules

- MacBook Air M5 → SSH → MacBook Pro

  M2 Asahi Linux in a rack
- A fleet of various WLAN Pi's for testing
- tmux + opencode for agents, Neovim for hand edits
- Claude + GPT + Kimi + Deepseek. Not loyal.
- Rules file: reuse code first, fix the root cause, leave a test
- No PR until tests, on real hardware, and review agents pass gates



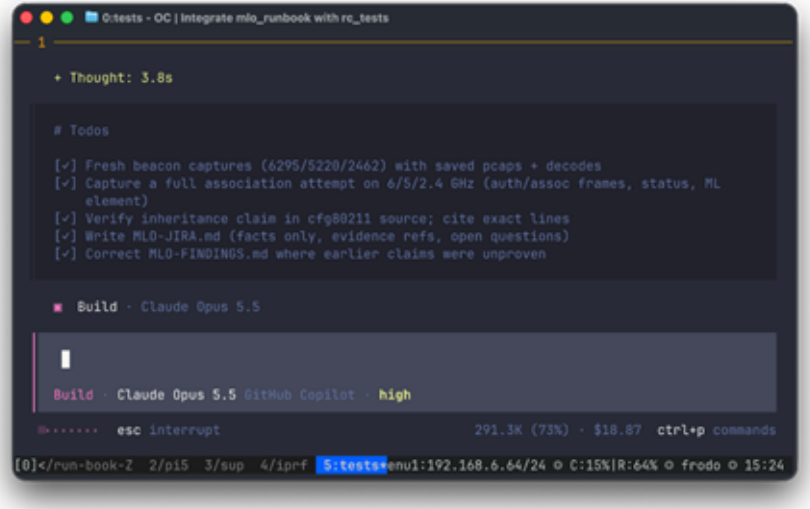
*He said that, not us

Context, precision, and rules matter most.



Jake's Tools:

- MacBook Air M4 → SSH → Minisforum MS-R1
- A fleet of various WLAN Pi's for testing
- Claude + Local AI (Qwen3.8-27B, Qwen3.8-flash-next)
- Rules: Architecture first, follow existing conventions, every bug gets a test.
- Test, Build, Deploy to live device, Test, Validate. Jake Tests > PR.





Famous last dev team words

18:55

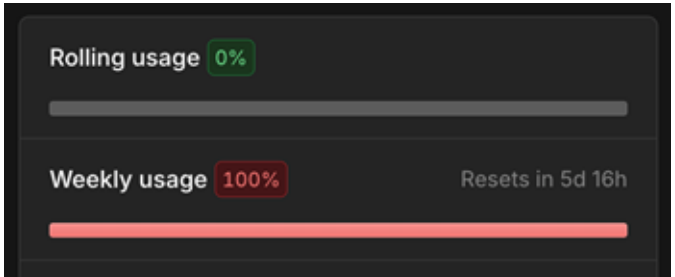
i finally found a use-case for the screen. I can see when the device crashes

1

so i was manually editing an agent configuration and put a recursive loop of spinning up agents. I burned about $30 of fable usage in 5 minutes...

18:57

Yeah, it burns fast when you aren't paying attention and next thing you know... $500 down the drain.



21:48

Probably need some way of keeping them in sync-ish. I'm jus

Kernel patch coming for 7.2 and 7.1 😞

1

22:07

Hardware updates

💿 **Qualcomm QCN7851 M.2 Wi-Fi 7 MLO STR adapter (experimental support)**



- Kernel: ath12k MLO fixes, a two-link cap, management frames delivered to monitor interfaces, and mac80211 debugfs
- Firmware for Qualcomm WCN785x and QCN radios
- A PCIe fix for Qualcomm cards on the M4+
- Per-link MLO reporting in both Core and MCP

✅ **Tested WLAN Pi Go compatibility with new Apple devices**

Join in. Stay in touch.

Simply visit **wlanpi.com**



Thank you!

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