POD256 Episode 110 Newsletter: April Fools? Real Progress – Open Firmware, Open Pools, and the Path to Decentralized Mining

Assembling Freedom #22: April 1, 2026 | For Tech Enthusiasts, Bitcoin Builders, and Open-Source Mining Rebels

256 FOUNDATION
APR 04, 2026

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In this lively April 1 episode of **POD256** (hosted by @econoalchemist and @skot9000 the team cuts through the April Fools jokes to deliver genuine advancements in open-source Bitcoin mining. No gimmicks—just concrete progress on dismantling proprietary mining empires through community-driven hardware, firmware, and pools. The episode previews Bitcoin 2026 in Las Vegas, celebrates renewed 256 Foundation grants, spotlights the Bitaxe Bonanza prototype, and explores AI-assisted

development, UTXOracle price feeds, and why open tools are accelerating true decentralization.

Perfect for tinkerers, home miners, and devs tired of black-box miners and centralized pools—this newsletter breaks it all down with technical depth, comparisons, visuals, and fresh X chatter.

Listen to POD256 #110 here

Episode Overview & Key Takeaways

- **Core Theme**: Open-source is resilient. From community forks (e.g., Ashigaru/Whirlpool) to leaked LLM client code, closed systems crack while open ones thrive.
- **256 Foundation Spotlight**: Renewed grants for four flagship projects (Mujina Firmware, Libre Board, Ember One hashboard, Hydra Pool). The Foundation runs an all-Bitcoin treasury experiment—paying devs in sats pegged to cost basis for predictable funding amid volatility.

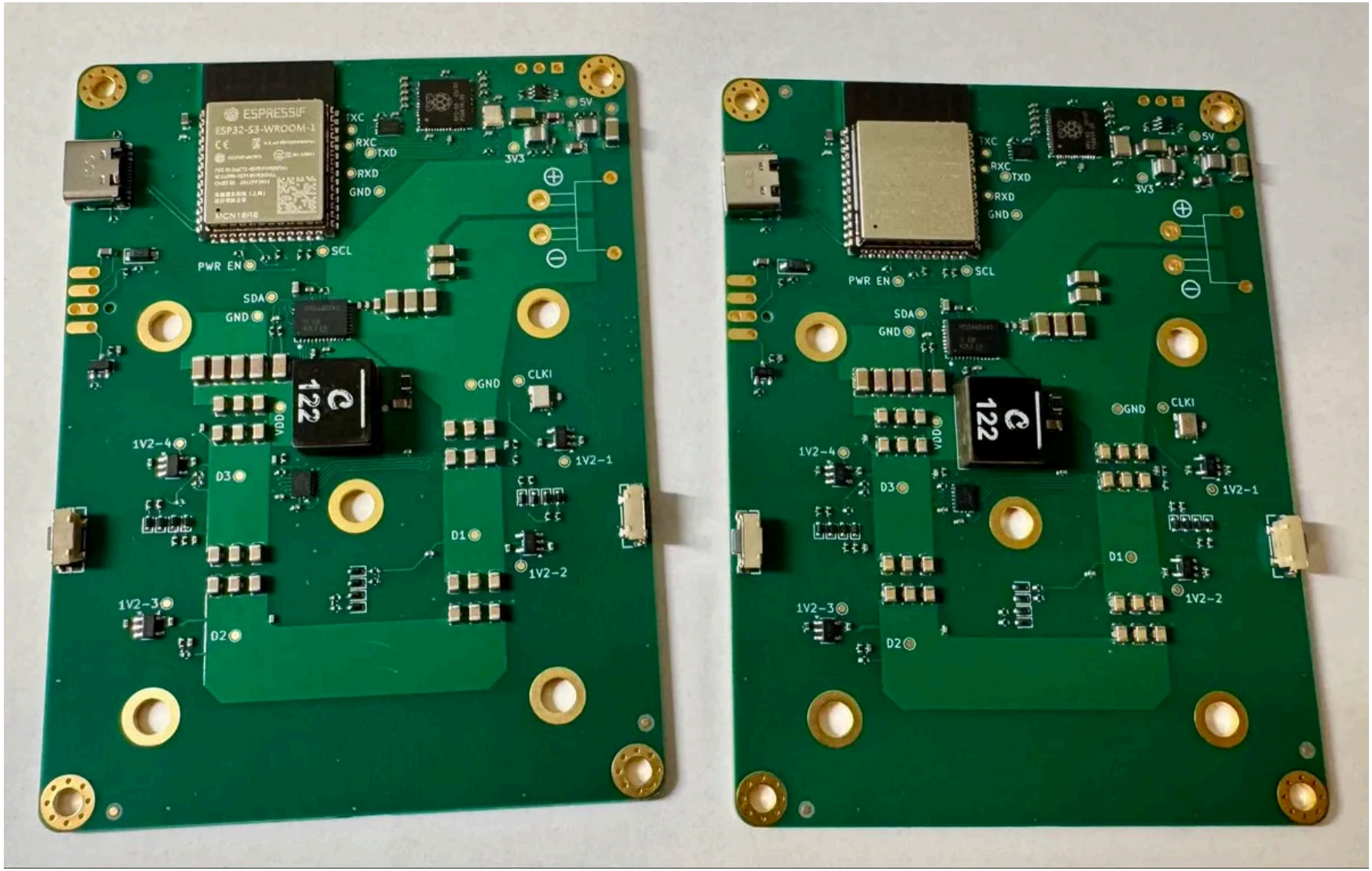
- **Technical Wins Discussed**:
- Unlocking Bitmain control boards and porting Mujina to Amlogic-based Antminers.
- Model guardrails + AI-assisted workflows speeding up Rust-based development.
- Non-Bitmain chips (like donated Intel BZM2 ASICs) enabling home-scale, heat-reuse mining.
- **Shoutouts**: Hydra Pool hashers and the sleek new Bitaxe Touch.
- **Why It Matters for Techies**: Full sovereignty—no dev fees, no vendor lock-in, Stratum V2 support, and self-hosted infrastructure. This stack turns mining from a corporate game into accessible freedom tech.

The 256 Foundation's Open-Source Mining Stack (Renewed Grants)

The Foundation funds a complete, modular, GPL/CERN OHL-licensed replacement for proprietary mining. Here's the breakdown:

Project	Description	Key Tech Specs & Goals	Status/Next Steps	Why It Accelerates Decentralization
Mujina Firmware	Modern async Rust Bitcoin mining software for ASIC hashboards via USB serial	Linux-based, multi-driver (Antminer, Whatsminer, Avalon + extendable), Stratum V2 client, no dev fees	Porting to Amlogic Antminers; unlocking Bitmain boards	Replaces closed firmware; full control over voltage, tuning, pools
Hydra Pool	One-click, self-hosted Bitcoin mining pool (solo + PPLNS)	Rust implementation, AGPLv3, zero-downtime upgrades, Start9/Umbral packaging	Mainnet test instance live; Lightning/eCash payouts planned	Ends pool centralization—run your own in minutes
Ember One Hashboard	Standardized ~100W multi-chip open hashboard	Modular for various ASICs; v5 prototyping on pick-and-place	Next rev targets Intel BZM2 chips	Reference hardware anyone can build/modify; no single-vendor dependency
Libre Board	Versatile open control board	Runs full Bitcoin node, sensor/relay integration, customizable compute module	v3 design; orchestrates multiple boards	Full-stack sovereignty: node + control + automation

Combined impact: Over $400k in prior grants already flowing; these projects form a plug-and-play ecosystem for home miners to megawatt farms.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Open-source mining boards in production (similar to Ember One/Libre prototypes). Community manufacturing is real and accelerating.

Deep Dive: Mujina Firmware – The Linux of Mining

Mujina is a full-featured, open-source firmware written in Rust for maximum portability and security. Highlights:

- **Multi-driver compatibility**: Drop-in support for existing ASICs; extendable to new chips.
- **Stratum V2 native**: Better efficiency, privacy, and decentralization vs. legacy Stratum V1.
- **Episode Focus**: Unlocking locked Bitmain boards + Amlogic ports. Devs use AI tools with guardrails to accelerate code gen while maintaining auditability.
- **Resilience Example**: Community forks prove open code survives leaks and bans.

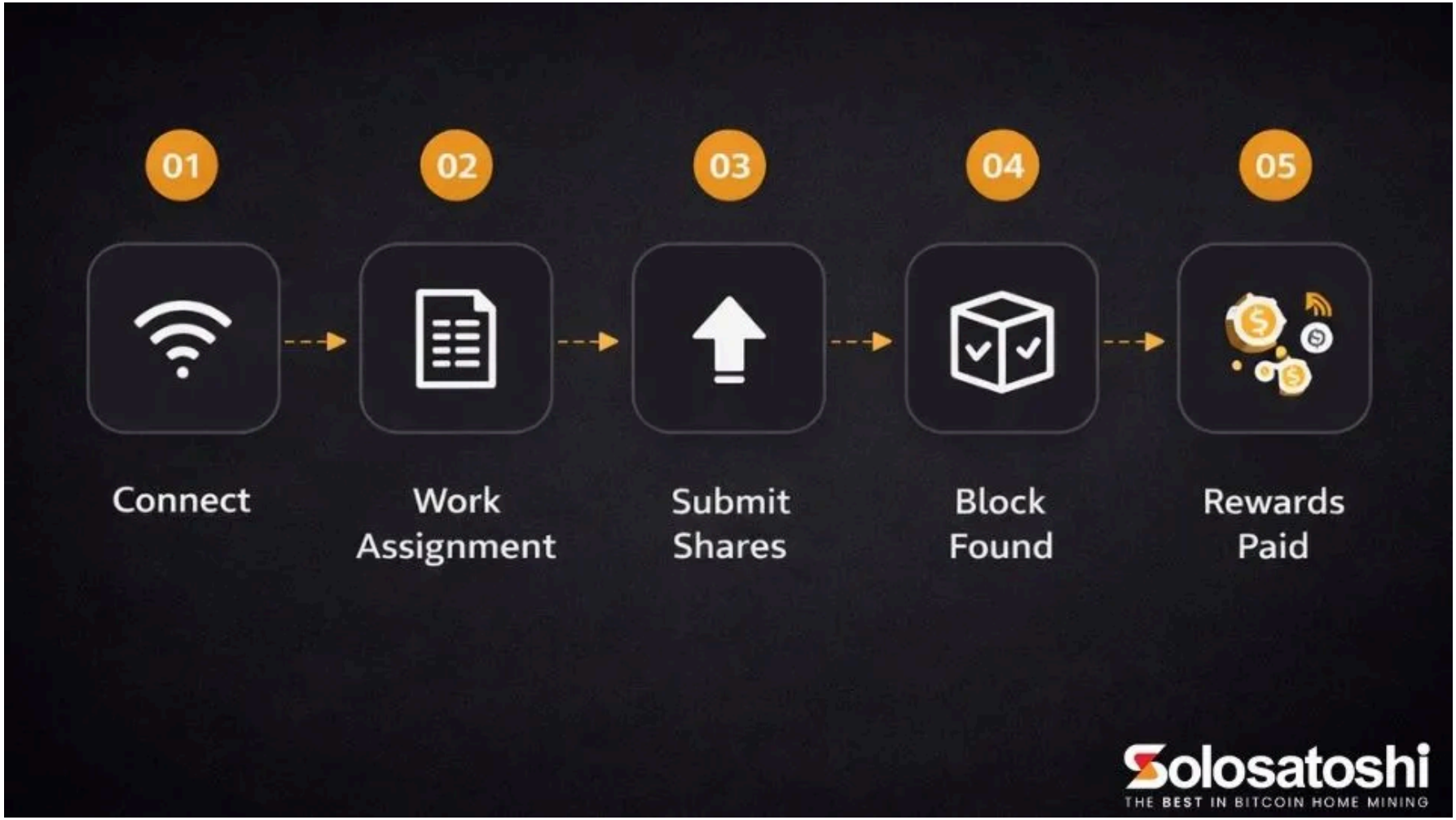
Tech enthusiasts love this because it eliminates manufacturer backdoors and dev fees—pure performance tuning in your hands. GitHub: 256foundation/mujina.

Deep Dive: Hydra Pool – One-Click Decentralized Mining

Centralized pools dominate hashrate. Hydra fixes that:

- **Self-hosted & simple**: Stratum server in one easy deploy.
- **Accounting**: Solo (full block reward lottery) + PPLNS for steady shares.
- **Future-Proof**: Plugin architecture, gamified dashboard, Lightning payouts on the roadmap.
- **Episode Tie-In**: Shoutouts to current hashers; positions as default for Ember One systems. See in action here

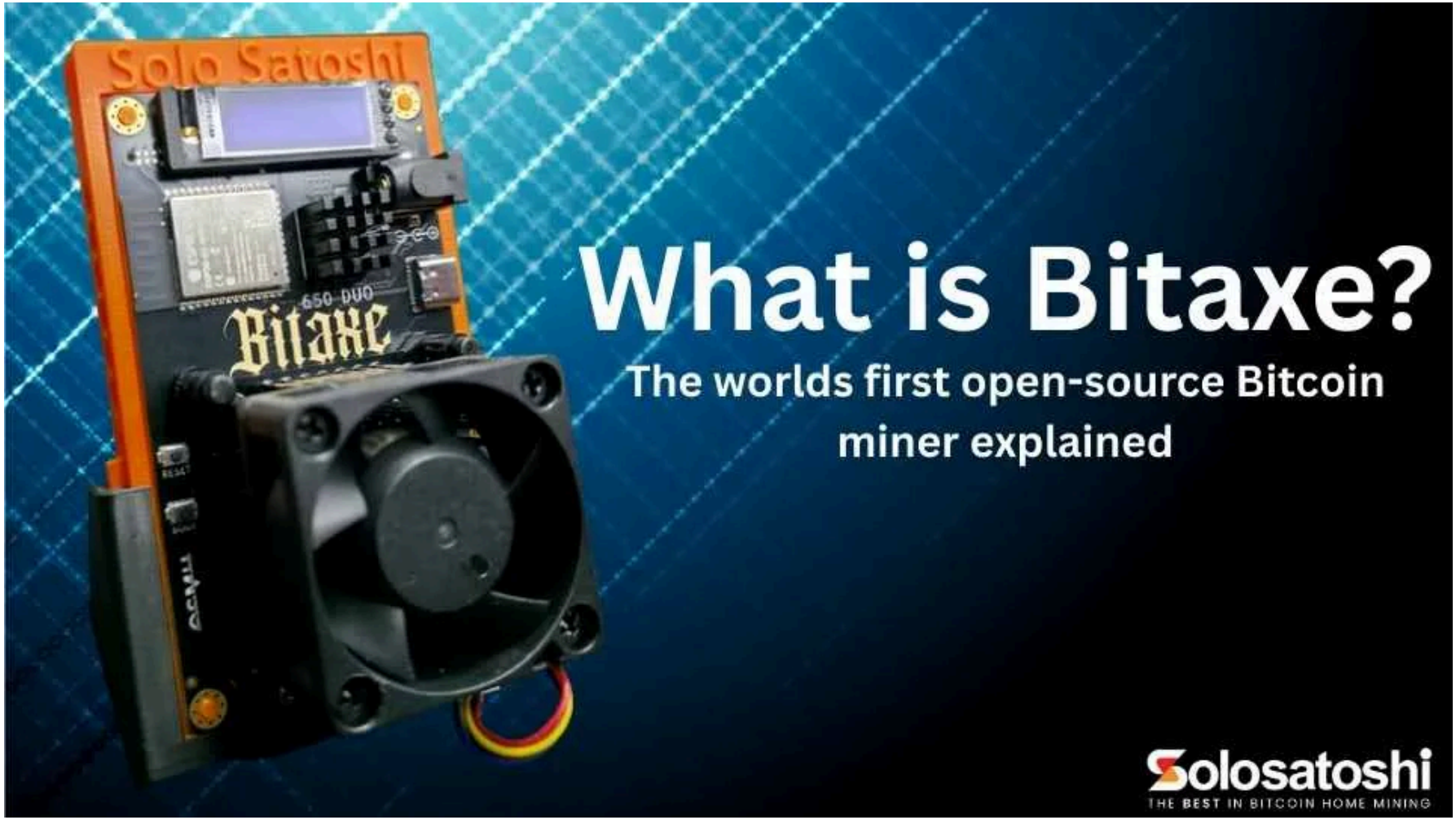
Run your own pool → no KYC, no custody risk, true decentralization. Test instance: test.hydrapool.org.



Mining pool workflow (Hydra-style self-hosted setup makes every step sovereign).

Hardware Revolution: Ember One, Libre Board & Bitaxe Bonanza

- **Ember One + Libre Board**: Open hashboard + controller combo for DIY rigs. Prototypes already running; next-gen embraces donated Intel chips for heat-reuse projects.
- **Bitaxe Bonanza Show-and-Tell**: Skot unveiled this beast—built around 256,000 donated Intel BZM2 ASICs (from ProtoMining). Specs target ~1.2 TH/s per unit with robust heatsink, 12V fan, and custom sidecar for Intel's 9-bit serial protocol. Non-Bitmain chips = no unsoldering ASIC chips, perfect for home miners and waste-heat applications. (Note: Early designs had scaling challenges, but community iteration continues via bitaxeorg/bitaxeBonanza.)



Classic Bitaxe open-source miner family—Bonanza builds on this ethos with Intel BZM2 chips for higher hashrate sovereignty.


ASIC
bitaxe

Intel BZM2 ASIC in context: Open chips + open firmware = the future of accessible mining hardware.

Bonus Tech Nuggets: - **UTXOracle**: Bitcoin-native price oracle—no third-party APIs required. Pure on-chain data for treasury and payout logic. Check out the live dashboard here and see how to host it with your own node.

- **AI-Assisted Dev**: Guardrails keep LLM-generated code auditable and on-mission.

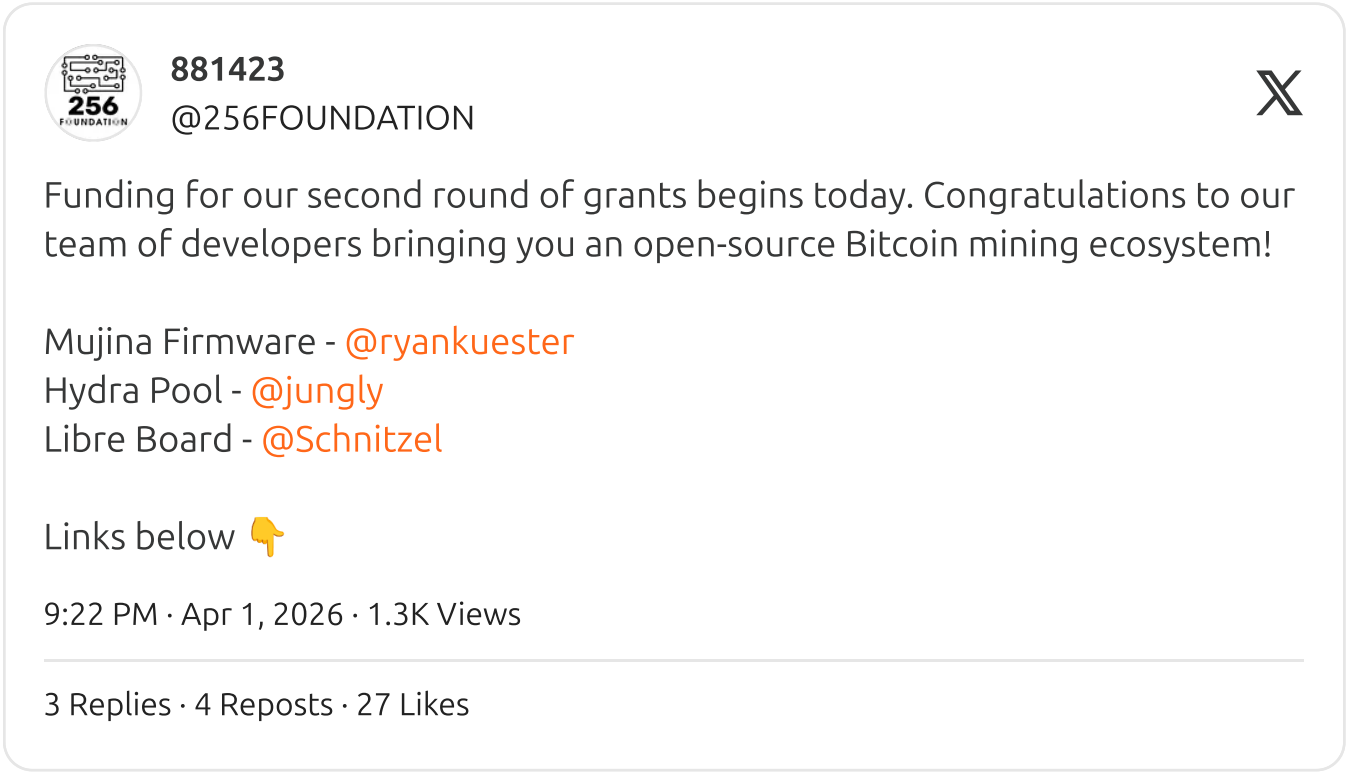
Proprietary vs. Open-Source Mining Stack (Tech Comparison Table)

Aspect	Proprietary (Bitmain/MicroBT Stock)	Open-Source (256F Stack + Bitaxe)	Winner for Enthusiasts
Firmware Control	Locked, dev fees possible	Full source (Rust/Linux), no fees, Stratum V2	Open
Hardware Mods	Vendor-locked boards	Modular hashboards/controllers, any ASIC	Open
Pool Integration	Centralized defaults	Self-hosted Hydra + solo options	Open
Transparency	Black box	GitHub auditable + community forks	Open
Decentralization	High hashrate centralization	Home/mini-rigs + private pools	Open
Cost of Entry	High (enterprise only)	DIY kits ~$200+ scalable	Open
Heat Reuse/Home Use	Limited	Explicitly designed for it	Open

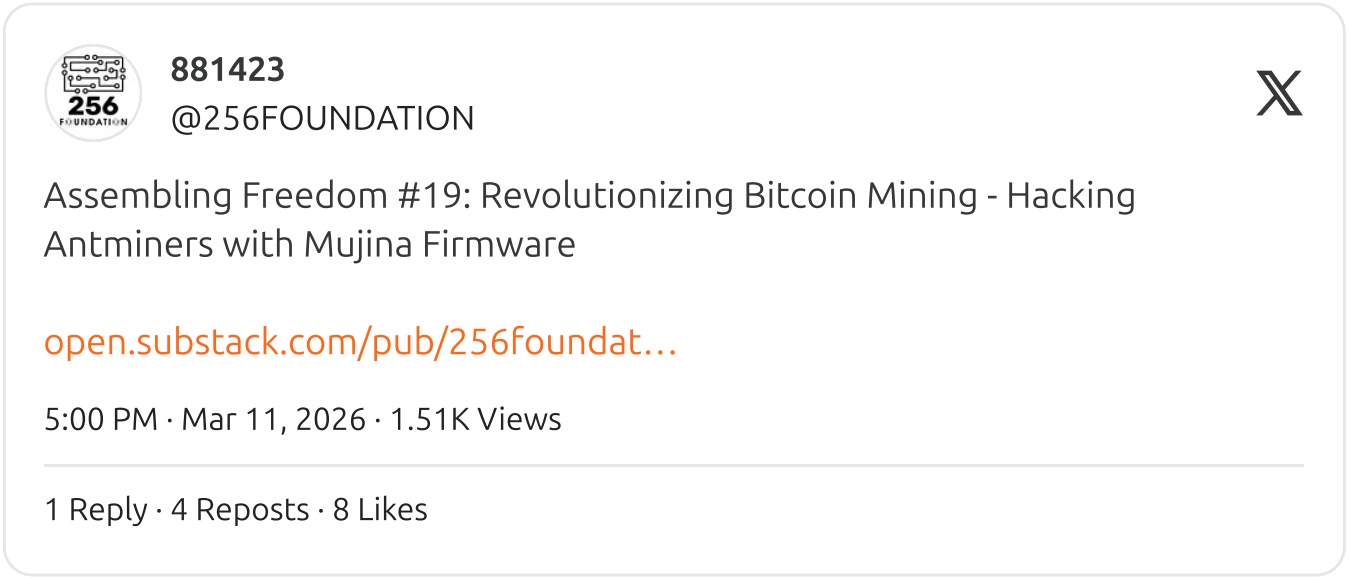
Open-source wins on sovereignty, innovation speed, and resilience.

Community Buzz: Related X Posts

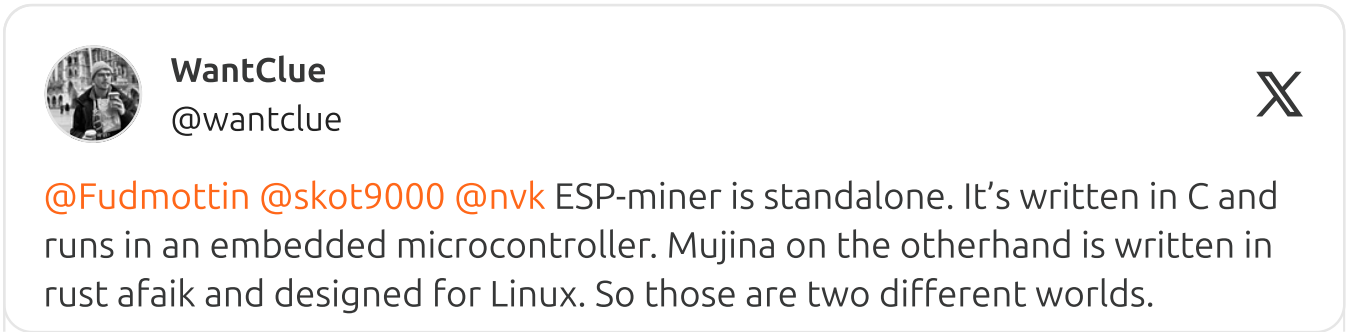
Fresh signals from the open-mining ecosystem (post-episode vibes): - @256FOUNDATION (**Apr 2, 2026**): “Funding for our second round of grants begins today. Congratulations to our team… Mujina Firmware - @ryankuester, Hydra Pool - @jungly, Libre Board - @Schnitzel.” Direct follow-up to the episode’s grant celebration.



- @256FOUNDATION (**Mar 11, 2026**): Deep substack on “Hacking Antminers with Mujina Firmware”—exactly the porting/unlocking discussed.



- Broader chatter ties into Bitaxe/ESP-Miner vs. Mujina (Rust/Linux) differences, showing active dev cross-pollination.



Some logic can be used vis versa but a direct port of the firmware is not possible.

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Final Thoughts: The Path Forward

This episode isn't hype—it's a roadmap. Open firmware + open pools + open hardware = mining anyone can verify, modify, and run privately. Whether you're flashing Mujina on an old Antminer, spinning up Hydra Pool on a Raspberry Pi, or building a Bitaxe Bonanza for your garage heater, the tools are here.

Action Items for Tech Enthusiasts: - Check the 256 foundation GitHub repos. - Point a miner at Hydra pool and donate some hashrate. - Attend Bitcoin 2026 in Vegas. - Donate to 256 Foundation or contribute PRs.

Listen to the full episode on Fountain, Podverse, or your favorite player. Next week: more open mining magic. Stay sovereign! ⚡

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