

AlynCoin Whitepaper

A Quantum-Resistant, zk-STARK Powered Blockchain

Introduction

AlynCoin is a cutting-edge Layer-1 blockchain that combines quantum resistance, recursive zk-STARK proofs, and a modular cryptographic framework. Designed for future-proof decentralization, it supports Falcon and Dilithium signatures, atomic swaps, encrypted metadata, zk-based identity, and on-chain governance.

Key Features

- Quantum-Secure with Falcon & Dilithium Signatures
- zk-STARK and Recursive zk-STARK Proofs
- Layer-1 + Layer-2 Rollups
- Self-healing nodes and smart identity layer
- Zero Knowledge DAO governance
- NFT and atomic swap support
- RocksDB + Protobuf architecture for high performance

Mining and Dynamic Difficulty

AlynCoin uses a hybrid mining model combining BLAKE3 and Keccak PoW with an adaptive LWMA difficulty adjustment algorithm. This ensures both energy efficiency and fair distribution. Block rewards decrease as the circulating supply approaches the 100 million cap. A small portion of transaction fees is dynamically burned and partially redirected to a developer fund. This mechanism helps regulate inflation and reinforces decentralization, while maintaining a fixed maximum supply of 100 million ALYN.

Burn and Developer Fund

For every transaction, a minimal fee is deducted. Of this, a small percentage is burned permanently, while another small share is allocated to the developer fund. The actual burn rate is dynamic and depends on recent transaction activity. This system sustains long-term network health and

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guarantees that the total supply of AlynCoin never exceeds 100 million tokens, even as burned coins are reintroduced through capped block rewards.

Governance and DAO

AlynCoin implements 100% on-chain governance with proposals, voting, and finalization all executed via smart contracts. The DAO handles all treasury decisions, feature upgrades, and fund distribution, ensuring transparency and true decentralization.

Current Progress

Blockchain Core with hybrid PoW engine is complete
Falcon & Dilithium signature support integrated
GUI + CLI Wallet with L1/L2 transactions and mining
zk-STARK Proofs and Recursive Rollups functional
NFT and Atomic Swap protocols implemented
Live node sync + Self-healing sync logic verified
Public Testnet and Mobile Wallet in progress
DAO voting improvements and GUI polish ongoing

Contact & Collaboration

AlynCoin is a private, community-driven initiative built by passionate contributors across the world. While our core GitHub repositories remain private for now, we are selectively onboarding developers, cryptographers, and early supporters aligned with our mission.

If you're an investor, researcher, or builder interested in shaping the future of quantum-secure decentralized systems, we welcome your collaboration.

Email: contact@alyncoin.com

Twitter: [@alyncoin](https://twitter.com/alyncoin)

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Instagram: @alyncoin_official

GitHub: github.com/ab1567/alyncoin-site