NITO WHITEPAPER

A Next-Generation, Ultra-Resilient Proof-of-Work Blockchain

Nito is an advanced, decentralized blockchain built on the proven SHA-256 algorithm, designed for resilience and true fairness. Emission is transparently scheduled for 200 years. With real-time difficulty adjustment, no premine, and no ICO, Nito is designed as a secure, open platform for mining and digital value transfer.

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1. Project Motivation

The blockchain ecosystem is saturated with networks promising decentralization but falling short on the essential trio: fairness, transparency, and enduring security. Nito was conceived to fill this gap, combining:

- Unrivaled network longevity: coin distribution scheduled over 200 years
- Proven mining infrastructure: native SHA-256, compatible with the world's most abundant hardware
- Real-time difficulty retargeting, ensuring mining accessibility and network stability
- No premine, no ICO - only pure, fair, Proof-of-Work distribution

2. Nito Blockchain Architecture

Mining Algorithm: SHA-256

Block Interval: 1 minute

Block Weight: 0.8 MB

Genesis Block Creation: Wednesday, August 21, 2024

Genesis Block Hash: Nito/Core Genesis 8-4

Launch Date: Wednesday, August 21, 2024

Each block B_n is defined as:

B_n = (h_{n-1}, M_n, T_n, N_n, TS_n)

where:

- h_{n-1}: hash of previous block
- M_n: Merkle root of transactions
- T_n: target (difficulty)
- N_n: nonce
- TS_n: timestamp

Address Format Supported:

- SegWit/Bech32 (nito1...)

(Legacy (1...) and P2sh (3...) addresses are not supported to ensure security, speed, and regulate chain weight.)

3. Security and Mining: Why PoW with SHA-256?

3.1 Proof-of-Work vs. Proof-of-Stake

Proof-of-Work (PoW) maximizes decentralization. Anyone with hardware - CPU, GPU, or ASIC - can participate, democratizing block creation and validation. PoW protects against centralization, as control cannot simply be bought: it must be earned through computation.

In contrast, Proof-of-Stake (PoS) has an inherent 'rich-get-richer' dynamic and can ultimately favor wealth concentration and potential collusion among large holders. Nito's choice of PoW is a deliberate commitment to fairness, accessibility, and robust network security.

3.2 The Science and Strength of SHA-256

SHA-256, developed by the NSA, is the backbone of Bitcoin and many other robust digital networks. It is mathematically defined as:

SHA256(M) = H

Where M is the message and H the resulting 256-bit hash. The design properties include:

- Preimage resistance: infeasible to reconstruct M from H
- Collision resistance: infeasible to find M1 != M2 such that SHA256(M1) = SHA256(M2)
- Avalanche effect: a single-bit change in input yields a radically different output

This algorithm's hardware compatibility and mining ecosystem make it the premier choice for security, accessibility, and long-term decentralization.

4. Block Reward, Distribution & Economic Model

Total Supply: 1,154,217,600 NITO

Smallest Unit: 1 Nitoshi = 0.00000001 NITO

Block Reward Schedule

Years	Reward/Block	Blocks/Year	Total Per Period
1	512	525,600	269,107,200
2	256	525,600	134,553,600
3	128	525,600	67,276,800
4-10	64	525,600	235,468,800 (total)
11-20	32	525,600	168,192,000 (total)
21-50	8	525,600	121,939,200 (total)
51-200	2	525,600	157,680,000 (total)

(See table below)

Distribution Duration: 200 years

Block reward for year y =

512 NITO if y=1

256 NITO if y=2

128 NITO if y=3

64 NITO if 4 <= y <= 10

32 NITO if 11 <= y <= 20

8 NITO if 21 <= y <= 50

2 NITO if 51 <= y <= 200

Premine: None. 100% of coins are mined.

Difficulty Adjustment: Real-time, per block, using an adaptive formula:

D_{n+1} = D_n * (T_actual / T_target)

ensuring block times remain consistent despite rapid hashrate changes.

5. Tokenomics and Network Details

Ticker Symbol: NITO

Mainnet Port: 8820 (RPC: 8825)

Testnet Port: 8840 (RPC: 8845)

Signet Port: 8860

Regtest Port: 8880

Explorer: https://explorer.nito.network

Website: https://nito.network

Smallest Unit: Nitoshi (1 NITO = 100,000,000 Nitoshi)

Transaction Fees: Dynamically calculated and fully awarded to miners, providing continued incentive for block production as block rewards decrease over time.

6. Governance & Future Adjustments

Upon completion of the 200-year emission, Nito's block reward drops to zero, and miners are rewarded only by transaction fees. If this model proves unsustainable for security, the protocol allows for community-driven adjustments:

- Potential soft fork: Maintain a 1 NITO/block reward indefinitely, yielding a predictable, moderate inflation of 0.0455% per annum (525,600 NITO/year), balancing lost coins and miner incentives.
- All changes are subject to decentralized community governance and consensus among Nito Core developers.

7. Roadmap

2024-2025:

- Mainnet launch
- Community-driven mining start
- Listing on top-tier and community exchanges
- Explorer and lightweight wallets released

2026-2028:

- Integration with leading DEX platforms
- Bridge to other networks
- Layer-2 research and implementation (off-chain scaling)

2029+

- Ongoing improvements, scaling, and integration based on community input and technological evolution

8. Team & Contact

Nito is built and maintained by a distributed network of open-source developers, cryptographers, and miners worldwide.

Website: https://nito.network

Explorer: https://explorer.nito.network

Email: help@nito.network

X: https://x.com/Nito_Network

GitHub: https://github.com/orgs/NitoNetwork/repositories

Telegram: https://t.me/Nito_Network

9. Why Participate & Invest in Nito?

- Ultra-fair launch: No premine, no VC allocation, only mining
- Longest planned distribution in crypto: 200-year emission, optimal for long-term holders and miners
- Unrivaled security: SHA-256, the most proven cryptographic mining algorithm
- Pro-community governance: All major changes are proposed and voted on by stakeholders
- Compatible with established and new mining hardware: Mine with readily available equipment

Nito: Uncompromising Security. Radical Fairness. Designed to Endure.