SRX COIN

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White Paper

SRX Coin is more than a cryptocurrency — it's a movement towards a decentralized economy where trust, security, and speed power the next generation of financial systems.

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SRX: A Decentralized Digital Currency System

A Trustless, Peer-to-Peer Electronic Cash Protocol

Abstract

SRX is a decentralized digital currency system that enables direct transactions between parties without intermediaries. By combining cryptographic proof with an innovative consensus mechanism, SRX solves the double-spending problem while maintaining security, transparency, and scalability. This document outlines the technical and economic framework of the SRX network.

1. Introduction

Traditional electronic payment systems rely on centralized authorities, creating inefficiencies, censorship risks, and exclusion. SRX eliminates these dependencies through:

- A public, immutable ledger secured by cryptographic hashing
- Distributed consensus for transaction validation
- Predictable monetary policy with fixed supply
- Adaptive block generation for faster confirmations

SRX is designed to be self-sustaining, with incentives that align miners, users, and developers toward network growth.

2. Core Protocol Design

2.1 Transaction Model (PoS - Account-Based)

- Transactions update account balances directly(account-based ledger model)
- Each transaction includes:
  - Sender's address (derived from the public key)
  - Recipient's address
  - Transaction amount
  - Digital signature (ECDSA or EdDSA) to authorize spending
  - Transaction nonce to prevent replay attacks
- Transaction fee (paid in SRX, used for validator incentives and network security)

2.2 Blockchain Structure

- Blocks contain:
  - Header: previous block hash, timestamp, validator ID (block proposer), block height
  - Merkle Root: Hash of all transactions in the block for quick verification State Root:
  - Hash of the entire global ledger state for instant validation of balances & contracts Validator Signature: Digital signature of the block proposer (ECDSA / BLS) ensuring authenticity
  - Consensus: Proof-of-Stake with deterministic validator selection & finality checkpoints.
  - Block Time: Target ~2-3seconds per Block, dynamically adjusted based on network latency & validator participation.
  - Security: Slashing conditions for malicious or offline validators, and randomization in block proposer selection to prevent manipulation.

2.3 Decentralized Validation

- Full Nodes: Maintain the complete blockchain history, validate all transactions, and enforce consensus rules to ensure protocol integrity. Validators: Stake SRX
- tokens to become eligible for block proposal; are selected based on stake weight & randomness. Rewards include newly minted SRX plus transaction fees from the block.
- Light Clients (SPV): Verify the authenticity of transactions and blocks using block headers and Merkle proofs, without downloading the full blockchain.

3. Security & Attack Resistance

3.1 Consensus Safeguards

- 51% Attack Mitigation: Finality checkpoints for early blocks prevent deep chain re organizations,high staking requirements and slashing penalties make attacks economically impractical.
- Sybil Resistance: Proof-of-Stake requires validators to lock substantial SRX holdings, ensuring that control over the network demands real economic commitment.

3.2 Network Resilience

- *Adaptive Block Production: Block time dynamically adjusts based on validator participation and network conditions (recalculated every 360 blocks).*
- *Peer Discovery: Combination of DNS seed nodes and manual peer addition ensures robust connectivity, even during network disruptions*

4. Monetary Policy

4.1 Issuance Schedule

- Total supply:- 1 Billion SRX
- Block reward:- Starts at 50 to 100SRX, halves every 840k blocks (~4 years)
- Final block reward:- 0 SRX (reached in ~84 years)
- Total Halvings:- 21 (adjusted for 1 Billion supply).

Key Adjustments: 1. **Initial Block Reward:**

●Increased from 50SRX→100 SRX to ensure the 1B supply is fully minted over 84 years.

● Math: - Total blocks to emit 1B SRX = (1,000,000,000 ÷ 200 SRX/block cumulative) = 5,000,000 blocks.

- Total duration = (5,000,000 blocks ÷ 525,600 blocks/yr) ≈ 9.52 years.
- Cumulative rewards = 100 SRX × (1 + 0.5 + 0.25 + ...) over 21 halvings ≈ 1 Billion SRX.

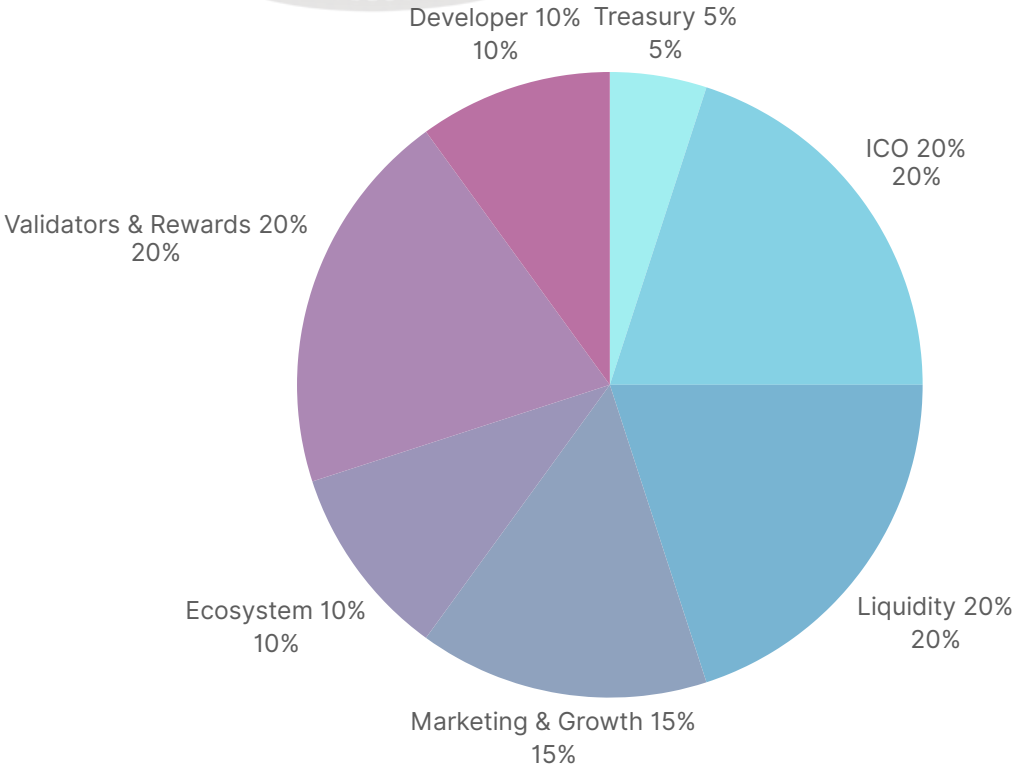
2. Halving Intervals:

- Every 840k blocks (consistent with Bitcoin's 4-year cycle).
- Ensures predictable, diminishing inflation.

3. Final Supply:

- No tail emission (block reward → 0 after 21 halvings).
- Total supply asymptotically approaches 1B SRX.

Visualization:



4.2 Fee Market

- *Basefee:0.000001 SRX/kB (burned to reduce supply)*
- *Priority fees: Optional for faster inclusion*

5. Governance & Upgrades

5.1 Decentralized Decision-Making

- *Node signaling:- Miners vote on protocol changes*
- *Developer fund:- 2% of block rewards for maintenance*

5.2 Upgrade Process

1. Proposal submitted to community forum
2. Discussion + reference implementation
3. Activation threshold: 75% miner support

6. Privacy Features

6.1 Data Security & Privacy

- *Employs robust cryptographic encryption to safeguard data integrity and privacy.*
- *Ensures transactions are verifiable and auditable without compromising confidentiality.*

6.2 Governance & Development

- *Incorporates decentralized on-chain governance mechanisms for protocol upgrades and fee structures.*

- *Ensures the platform evolves in a manner that aligns with the interests of its users.*

7. Roadmap

Phase 1: Q3 (2025)

- *SRX Token Launch & Airdrop*

Phase 2: Q4 (2025)

- *L1Blockchain Dev&Launch decentralized wallet.*

Phase 3: Q1 (2026)

- *L2Integration&Scaling*

Phase 4: Q2 (2026)

- *Exchange(Cex+Dex) Live*

Phase 5: Q3 (2026)

- *Visa Card Rollout*

Phase 6: Q3 (2026)

- *Forex Broker Co/Mining*

8. Comparison to Existing Solutions

Feature	SRX	Traditional Systems
Settlement Time	60 to 100 seconds	1-5 business days
Transaction Cost	*0.000001*	1-3% + fees
Censorship	Resistant	Subject to freeze
Supply	Fixed (1 B)	Inflationary

9. Conclusion

SRX delivers a secure, scalable, and sovereign monetary network through:

- Decentralized validation (no single point of control)
- Predictable issuance (hard-capped supply)
- Adaptive through put (faster confirmations)

By prioritizing user autonomy and network resilience, SRX establishes foundation for borderless digital commerce

Getting Started

Network specs:- docs.srx.network -
Source code:- git.srx.network -
Community:- forum.srx.network

Key Differentiators

- ✓ No corporate or foundation control
- ✓ Low gas fees and faster transactions
- ✓ Clear exit strategy for mining subsidies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