



# SatoshiSync

The First Permissionless Chain Agnostic  
Protocol for Inscriptions and BTC L2



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## *Abstract*

SatoshiSync introduces the first permissionless and chain-agnostic protocol for the emerging Inscription and Bitcoin Layer 2 (L2) markets.

With a vision to overcome challenges in liquidity, interoperability, and scalability, SatoshiSync pioneers an innovative solution that empowers users to seamlessly deploy, mint, and bridge Inscriptions across various blockchain ecosystems.

This whitepaper delves into the key features, technologies, and strategies employed by SatoshiSync to reshape the BTCFi ecosystem and unlock the full potential of Inscriptions in open markets.

# 1. Introduction

## 1.1 Overview

The BTCFi ecosystem, while holding immense promise, faces critical challenges such as interoperability issues, scalability concerns, and liquidity challenges for Inscriptions.

SatoshiSync aims to tackle these hurdles head-on by introducing a permissionless and decentralized protocol that simplifies the process of making BTCFi tokens liquid.

## 1.2 Vision

SatoshiSync envisions a future where aspiring projects can seamlessly enter the BTCFi space without the need for coding skills or technical knowledge.

By introducing a one-click solution for deploying, minting, and bridging Inscriptions, SatoshiSync paves the way for a truly decentralized and open market.



# 2. SatoshiSync Technologies



## 2.1 InscripSync

SatoshiSync's core technology, InscripSync, empowers users to create new Inscriptions with just a few clicks, eliminating the need for extensive coding knowledge.

This technology ensures a seamless and permissionless process for deploying new tokens.

## 2.2 Satoshi Router

The Satoshi Router facilitates the cross-chain bridging of BRC20 assets, providing liquidity wherever it is needed.

This technology eliminates the barriers associated with manual oversight and whitelists, ensuring a decentralized approach to asset bridging.

## 2.3 SatoshiBank

SatoshiBank offers a unified dashboard to track BTCFi holdings across various chains.

Users can optimize their portfolio management with advanced price feeds to provide accurate, current, and precise market data for their investment assets.

# 3. Challenges in the BTCFi Ecosystem

## 3.1 Interoperability Issues

The blockchain landscape's fragmented nature results in interoperability challenges, limiting the seamless interaction and information-sharing between different Inscriptions projects.

## 3.2 Scalability Concerns

As the BTCFi ecosystem grows, scalability becomes a paramount concern.

SatoshiSync addresses this challenge by offering a solution capable of handling a growing user base and transaction volume without compromising efficiency.

## 3.3 Liquidity Challenges for Inscriptions

SatoshiSync recognizes the fundamental importance of liquidity for any token ecosystem and provides a solution to enhance tradability and market acceptance for Inscriptions.

## 3.4 Centralized Control of Bridging Assets

The reliance on manual oversight and whitelists for bridging assets introduces centralization risks.

SatoshiSync's permissionless approach mitigates these risks, ensuring a secure and trustworthy bridging process.

## 3.5 Dependency on EVM/SOL for BRC20 Token Liquidity

SatoshiSync eliminates the complexity of bridging BRC20 tokens to chains like EVM/SOL, fostering accessibility and adoption in open markets.

## 3.6. Bridging the Gaps

SatoshiSync serves as a bridge to overcome the challenges.

By providing a permissionless protocol, SatoshiSync enables seamless deployment, minting, and bridging of Inscriptions, promoting increased decentralization and liquidity across popular platforms like EVM/SOL.



# 4. The Ordinals Revolution

## 4.1 The Inflection Point for BTC Asset Adoption

As we approach 2024, SatoshiSync anticipates a significant inflection point in BTC asset adoption.

The inherent limitations of the BTC network for decentralized applications (dApps) are being overcome with innovations like Ordinals and recursive inscriptions, opening new possibilities for extending Bitcoin's utility.

## 4.2 Opportunities in BTCFi Ecosystem

SatoshiSync recognizes the emerging opportunities in the BTCFi ecosystem.

With less than 1% of Bitcoin currently utilized in dApps, the introduction of RC20 assets and the SatoshiSync protocol aims to bridge the gap, providing BTC holders with access to decentralized finance applications.

# 5. RC20 and BRC20 Tokens

## 5.1 RC20 Tokens

RC20, or 'xRC tokens,' represents various token standards on the Bitcoin blockchain.

Examples include AR20, SRC20, and BRC20, each contributing to the diversity of digital assets within the SatoshiSync ecosystem.

## 5.2 BRC20 Tokens

BRC20 tokens, an experimental fungible token standard, utilize Ordinals and Inscriptions on the Bitcoin base chain.

With a unique approach to token contracts and minting, BRC20 tokens introduce new possibilities for creating value on the BTC network.

# 6. Ordinals - The Numerical System for Satoshis

## 6.1 Ordinals Overview

Ordinals serve as a numerical system for satoshis, providing a stable identifier for tracking across transactions.

The ordinal numbering system is based on the order of mining and transfer, offering a unique and chronological identification for each satoshi.

## 6.2 How Ordinals Work

Bitcoin Ordinals function as digital assets within the existing Bitcoin network.

These non-fungible, indivisible assets enhance security and transparency in transactions, contributing to the renewed interest and development on the Bitcoin blockchain.

## 6.3 Advantages of Using Bitcoin

Ordinals Bitcoin Ordinals enable the creation of Non-Fungible Tokens (NFTs) on the Bitcoin blockchain, enhancing security and fostering increased interest in BTC transactions.

The unique characteristics of Ordinals contribute to the security and transparency of transactions conducted on the Bitcoin network.



# 7. Inscriptions

## 7.1 Overview

Inscriptions, the metadata added or "inscribed" onto Bitcoin satoshis (sats), serve as digital artifacts on the Bitcoin blockchain.

These inscriptions encompass information attached to transactions, existing solely as digital entries on the public ledger.

Ordinals, the outcome of inscriptions, include inputs and outputs, contributing to the dynamic nature of Bitcoin transactions.

## 7.2 Inscription Limitations

Inscriptions are limited by block space allotment for each satoshi, with a ceiling of around 4 MB in size.

While satoshis themselves do not inherently have inscriptions, transaction comments, messages, or assets can be inscribed onto a satoshi, offering a means of attaching additional data to transactions within the confines of the block size limit.

## 7.3 Evolution of Bitcoin's Transaction Witnesses

In a transaction, inscriptions contribute to the witness data, playing a crucial role in validating transactions.

The segregated witness ("SegWit") upgrade in 2017 and Taproot in 2021 removed size restrictions on witness data, leading to an effective block size increase of up to 4MB.

This innovation laid the groundwork for systems like inscriptions, providing enhanced capabilities for data storage within Bitcoin transactions.

## 7.4 Leveraging Inscriptions for Data Storage

Inscriptions leverage the absence of size restrictions compared to OP\_RETURN, storing a significantly larger amount of data per transaction. The mechanism involves embedding data in the input's witness, utilizing unexecuted conditionals known as "envelopes."

These envelopes introduce a unique storage mechanism that encodes digital artifacts within bitcoin scripts.

## 7.5 Envelopes

The inscription protocol introduces "envelopes," bitcoin scripts designed not to be executed but to reveal digital artifacts upon spending.

Envelopes encode data, such as JPEG bytes, using an OP\_FALSE OP\_IF ... OP\_ENDIF structure. This mechanism enhances data storage capabilities within Bitcoin transactions, offering a novel approach to handling and revealing digital artifacts.

## 7.6 Navigating the Inscription System

While inscriptions qualify as valid transactions per Bitcoin network rules, the involved scripts pose a challenge for conventional Bitcoin wallets, requiring an understanding of ordinal theory.

Specialized software is necessary for receiving, sending, and tracking inscriptions, highlighting the need for continued development in the realm of blockchain user interfaces.



# 8. OP\_RETURN Function

## 8.1 Overview

OP\_RETURN, a script opcode in Bitcoin, serves as a means of terminating the script and storing data on the ledger.

Originally designed for termination purposes, OP\_RETURN has evolved into a powerful tool for data storage, enabling various use cases in Application Layer Protocols.

## 8.2 Decoding OP\_RETURN

OP\_RETURN terminates the script, leaving the stack as-is, with the success or failure of the script determined by the result on top of the stack.

It is commonly used to generate provably unspendable transaction outputs and store arbitrary formatted data for Application Layer Protocols.

## 8.3 Role in SatoshiSync

InscripSync, at the core of SatoshiSync, utilizes OP\_RETURN and other inscription techniques for data storage.

This enhances the smooth transfer of assets between diverse blockchain networks, providing efficient and secure ways to handle digital artifacts attached to Bitcoin transactions.



# 9. Bridging Blockchain Networks

## 9.1 SatoshiBank

A fundamental aspect of SatoshiSync is the SatoshiBank, a dashboard designed for tracking BTCFi asset holdings across diverse blockchains. This unified dashboard streamlines portfolio management and incorporates advanced price feeds, ensuring users have access to accurate, up-to-date, and precise market data for their investment assets. This feature empowers users with the information needed to make informed investment decisions, leveraging real-time market insights.

Currently supporting BRC20 assets, SatoshiBank's future integration plans include Ethereum, all EVM chains, and Solana, further expanding its capabilities.

## 9.2 InscripSync

InscripSync is enabling users to effortlessly create new BTCFi assets with just a few clicks, even without coding expertise.

By eliminating the need for whitelisting, SatoshiSync allows users to deploy, mint, and establish an open market for their Inscriptions seamlessly.

Launching the market for BRC20 tokens has never been easier.

## 9.3 Satoshi Router

The Satoshi Router facilitates the seamless cross-chain bridging of BTCFi assets, ensuring liquidity at preferred destinations.

It efficiently transfers any Inscription across supported blockchains, ensuring maximum security and speed to boost liquidity and engage a broader base of holders.

The Satoshi Router enhances blockchain interoperability, connecting isolated chains and fostering increased cross-chain compatibility.

## 9.4 v2 SatoshiSync Protocol

Committed to continuous refinement, SatoshiSync is evolving with its v2 iteration. This version aims to pioneer the development of the first permissionless, chain-agnostic protocol for cross-chain Inscriptions, including BTC Layer 2 integration. The introduction of Omnichain Fungible Tokens (OFTs) within LayerZero addresses liquidity challenges, allowing fluid movement across chains.

The v2 protocol promotes a simplified user experience and is actively collaborating with partners such as Polyhedra, CoreDAO, and ZetaChain to create a cohesive and efficient ecosystem that transcends individual blockchains, providing users with unprecedented accessibility and flexibility.



# 10. \$SSNC Token: Fueling the SatoshiSync Ecosystem

## 10.1 Introduction

\$SSNC, the native token within the SSNC ecosystem, plays a pivotal role in fueling the functionalities and growth of the SatoshiSync platform.

This section outlines the key utilities and benefits associated with \$SSNC.

## 10.2 Key Utilities of \$SSNC

### Cross Chain Bridging

\$SSNC token holders enjoy the privilege of engaging in Inscriptions trading across multiple chains without the need to bridge their funds.

This seamless cross-chain bridging capability enhances the flexibility and accessibility of assets within the SatoshiSync ecosystem.

### Deflationary Mechanism

SatoshiSync adopts a deflationary model for the \$SSNC token.

Revenue generated from the platform's activities, such as trading and fees, will be utilized to buy back and burn \$SSNC tokens.

This deflationary approach aims to reduce the total supply of \$SSNC over time, creating scarcity and potential value appreciation as the adoption of RC20 tokens increases.

### Staking

Token holders can stake their \$SSNC tokens to earn rewards in the form of additional RC20 tokens.

Staking incentivizes active participation and commitment to the ecosystem, providing users with an additional avenue to benefit from their \$SSNC holdings.

### Cross Chain Revenue Capture/Fees

Holders of the \$SSNC token will receive a share of the revenue generated from cross-chain fees on the SatoshiSync platform.

This mechanism aligns the interests of token holders with the platform's success, creating a symbiotic relationship between users and the ecosystem.

### Governance/Voting Rights

\$SSNC token holders actively participate in shaping the future of the RC20 ecosystem by exercising governance and voting rights within the SatoshiSync platform.

This democratic approach ensures that the community has a voice in decision-making processes, fostering a decentralized and inclusive governance structure.


## 10.3 Easy Road to Profitability

### Token Revenue Model:

SatoshiSync implements a transparent token revenue model:

- SatoshiSync takes 0.10%-0.20% of the total supply for any bridged assets.
- All bridge revenue is market sold at a reasonable price, used to buy back tokens, and distributed to stakers.
- A percentage of profit is allocated to market buy and burn the token supply.





# 10.4 Tokenomics (Pending)



# 10.5 Token Distribution (Pending)



# 11. Governance

## 11.1 Introduction

At SatoshiSync, we firmly believe in the power of community participation and inclusivity.

This section provides an overview of our governance structure and how you, as a member of our community, can actively contribute to shaping the future of SatoshiSync.

## 11.2 Principles of Governance

### Community Ideas Matter

In SatoshiSync, everyone in our community has the opportunity to suggest changes, propose improvements, or share innovative ideas.

We believe that your ideas are the driving force behind the continuous evolution of SatoshiSync, making it a truly community-driven project.

### Easy Voting with Snapshots

To facilitate quick and fair decision-making, we employ Snapshot voting within our governance system. This ensures that every voice in our community counts in our democratic process.

The simplicity and efficiency of Snapshot voting empower our community to actively participate in shaping the direction of SatoshiSync.

### Keeping It Transparent

Transparency is a cornerstone of our governance model. All proposals, discussions, and votes within the SatoshiSync Governance Hub are public.

We are committed to keeping our community informed about every aspect of the decision-making process.

Openness builds trust, and trust is crucial in fostering a strong and collaborative community.

### Adapting Together

Our governance is designed to evolve with the changing needs of our community.

We regularly review and update our governance protocols to align with the goals and values of SatoshiSync.

Your input and feedback are crucial in ensuring that our governance remains responsive and effective.

### Everyone's Welcome

We value diverse perspectives and opinions. At SatoshiSync, everyone is welcome to participate in the governance process.

Share your thoughts, contribute your ideas, and collaborate with us to make SatoshiSync better together.

The strength of our project lies in the collective wisdom and engagement of our community members.

## 11.3 How to Participate

Participating in SatoshiSync's governance is straightforward:

### Suggest Ideas:

Share your thoughts, propose changes, or suggest improvements to SatoshiSync.

### Vote with Snapshots:

Engage in the decision-making process by participating in Snapshot votes.

Your vote counts, ensuring a fair and efficient governance mechanism.

### Stay Informed:

Keep track of all proposals, discussions, and votes happening in the SatoshiSync Governance Hub.

Transparency is key to building trust within our community.

### Join the Conversation:

Actively engage in discussions, provide feedback, and be a part of the collaborative spirit that defines SatoshiSync's governance.

