Bitlazer: Lightpaper

August 11, 2024

Introduction

Bitlazer is a revolutionary Bitcoin L3 project that leverages advanced Arbitrum Orbitrum technology to bring unprecedented scalability and efficiency to the Bitcoin ecosystem. By enabling seamless bridging of WBTC and native BTC payments on a robust L3 layer, Bitlazer aims to create a thriving smart contracts ecosystem. This ecosystem is designed to be cheap, fast, and scalable, driving the next generation of blockchain innovation.

Value Proposition Summary

1. Ultra-Fast Bitcoin-Paid Transactions: Bitlazer enables transactions paid in Bitcoin with lightning-fast speeds of less than 1 second and transaction costs below 1 cent. This makes it an ideal solution for microtransactions, everyday purchases, and other use cases where speed and low cost are paramount. By significantly reducing transaction times and costs, Bitlazer makes Bitcoin practical and scalable for a wide range of real-world applications.

2. Security and Smart Contracts: In later stages, Bitlazer will derive its security directly from the Bitcoin network, ensuring the highest level of security for its users. At the same time, it will offer the freedom to develop and deploy smart contracts using the Ethereum Virtual Machine (EVM) and WebAssembly (WASM) through Arbitrum Stylus. This combination of Bitcoin's security and the flexibility of EVM and WASM will enable developers to create sophisticated decentralized applications (dApps) on the Bitcoin network, leveraging the best of both worlds.

3. BTC Native Bridging: Bitlazer will introduce Layer 3 BTC native bridging using light clients integrated with Arbitrum Stylus native WASM contracts. This innovative approach will enable seamless, trustless, and decentralized bridging of BTC within the Bitlazer ecosystem. Users will be able to move their native BTC to and from Bitlazer network, unlocking new possibilities for liquidity, trading, and decentralized finance (DeFi) applications directly on the Bitcoin network.

4. Dual Staking Rewards: Bitlazer offers a dual staking rewards program that incentivizes both L3 BTC staking and LZRD token staking. Users who stake their L3 native BTC into a dedicated contract will receive rewards in

LZRD tokens as well as share in the gas fees yield the Bitlazar platfrom generates, paid in native to the platform BTC, creating a robust incentive structure for long-term participation and ecosystem growth.

Bitlazer's Mission

Bitlazer's mission is to create a seamless, scalable, and secure ecosystem where Bitcoin can be used not only as a store of value but also as a functional currency for everyday transactions and as a foundation for smart contracts. By combining the strengths of Bitcoin with cutting-edge layer-3 technology, smart contract capabilities, and innovative staking mechanisms, Bitlazer aims to drive the next evolution of blockchain technology, making Bitcoin more versatile, accessible, and usable for a broader range of applications.

Technical Overview

The Bitlazer platform is built on top of Arbitrum Orbitrum technology, which enables scalability and high-speed transactions by leveraging an L3 layer that operates above the traditional L1 and L2 layers. This architecture allows Bitlazer to maintain the security and decentralization of the Bitcoin network while offering the performance needed for modern decentralized applications. The initial launch will focus on bridging WBTC to the L3 native currency, supporting payments in native BTC on the L3 layer, and building a smart contracts ecosystem that is both cost-effective and scalable.

As Bitlazer evolves, it will integrate additional features, such as Layer 3 BTC native bridging via light clients using Arbitrum Stylus native WASM contracts, and optimize transaction sequencing and withdrawal processing. The dual staking rewards program will incentivize users to actively participate in the ecosystem, ensuring long-term engagement and stability. These advancements will ensure that Bitlazer remains at the forefront of Bitcoin's technological innovation, providing users with a secure, efficient, and versatile platform for all their blockchain needs.

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Roadmap

1. Initial Launch and Bridging: Bitlazer will launch by enabling the bridging of WBTC to the L3 native currency. This phase will also support payments in native BTC on the L3 layer, allowing the development of a smart contracts ecosystem that is both cost-effective and scalable.

2. Ecosystem Bootstrap with LZRD Airdrop: To incentivize early community engagement, Bitlazer will conduct an airdrop of 20% of the LZRD tokens to early community builders. This will encourage the creation of decentralized applications (dApps) and other innovative projects on the platform.

3. Native BTC Bridge via Light Client: A key phase of Bitlazer's development is the implementation of a native BTC bridge through a light client using Stylus smart contracts on Arbitrum. This will facilitate seamless transfers and interactions with native BTC within the Bitlazer ecosystem.

4. Native Sequencing and Withdrawal Processing: Bitlazer will optimize its transaction sequencing and withdrawal processing. This phase includes enabling native sequencing of L3 roll-up payloads and withdrawals, with a focus on securely handling native BTC requests that are signed, published, and submitted.

Gas Cost Calculation

To determine the appropriate gas price for an average transaction cost of 1 cent, given an average gas cost of 100,000 gas units and a Bitcoin price of $60,000, we can use the following calculation:

$$\text{Desired Transaction Cost (in USD)} = \$0.01$$
$$\text{Gas Units} = 100,000$$
$$\text{Bitcoin Price (in USD)} = \$60,000$$

First, convert the desired transaction cost to BTC:

$$\text{Desired Transaction Cost (in BTC)} = \frac{\$0.01}{\$60,000} = 1.6667 \times 10^{-7} \text{ BTC}$$

Next, calculate the gas price:

$$\text{Gas Price (in BTC per gas unit)} = \frac{1.6667 \times 10^{-7} \text{ BTC}}{100,000 \text{ gas units}}$$
$$\text{Gas Price (in BTC per gas unit)} = 1.6667 \times 10^{-12} \text{ BTC/gas unit}$$

Convert this to gwei (assuming 1 BTC $= 10^8$ satoshis and 1 gwei $= 10^{-9}$ ETH):

$$\text{Gas Price (in gwei)} = 1.6667 \times 10^{-12} \times 10^8 \times 10^9 = 0.167 \text{ gwei}$$

Thus, to ensure that an average transaction costs 1 cent, the gas price should be approximately 0.167 gwei.

LZRD Tokenomics

The LZRD tokenomics are designed to promote a sustainable and growth-oriented ecosystem for Bitlazer. The total supply of LZRD is 1,000,000,000 tokens, distributed as follows:

1. Staking Rewards (30%): 300,000,000 LZRD

- **L3 Native BTC Staking:** 20% (200,000,000 LZRD) is allocated for rewarding users who stake L3 native BTC. These rewards are distributed over 3 years.

- **LZRD Staking:** 10% (100,000,000 LZRD) is reserved for rewarding LZRD stakers, also distributed over 3 years.

2. Team and Strategic Sales (40%): 400,000,000 LZRD

- **Team Allocation:** 25% (250,000,000 LZRD) is allocated to the core team, with a 4-year vesting period and a 1-year cliff.

- **Strategic Sales and Partnerships:** 15% (150,000,000 LZRD) is reserved for strategic sales and partnerships to support ecosystem growth.

3. Ecosystem Builders and Community Incentives (30%): 300,000,000 LZRD

- **Airdrop for Early Builders:** 20% (200,000,000 LZRD) will be distributed to early community builders to bootstrap the ecosystem.

- **Community Incentives and Grants:** 10% (100,000,000 LZRD) is allocated for funding community-driven initiatives, developer grants, and hackathons.

This structure balances the need for early growth and development with long-term sustainability, ensuring that all stakeholders in the Bitlazer ecosystem are appropriately incentivized.