Sphygmos Protocol: The Mining Core

SMOS Technical Whitepaper v2.2

Sphygmos Development Core

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Abstract

The Sphygmos ($SMOS$) token is the primary utility asset for the Sphygmos Mining Hub. With a hard-capped supply of 10,000,000 tokens and a 1% ecosystem tax, $SMOS$ functions as a liquid mining catalyst. By utilizing a "Proof-of-Commitment" staking model, participants can temporarily augment their mining capacity, creating a high-velocity reward environment fueled by transaction volume and protocol deposits.

1 Introduction

The Sphygmos ecosystem is built on the principle of Perpetual Yield. Unlike traditional DeFi protocols that rely on aggressive minting, SMOS focuses on a fixed-supply model where value is distributed through a decay-based drip. The goal is to provide a sustainable mining environment where reward rates are proportional to both asset commitment and ecosystem activity.

2 $SMOS Tokenomics

The $SMOS$ token architecture is defined by scarcity and volume-driven replenishment.

- **Maximum Supply:** 10,000,000 SMOS
- **Decentralized Distribution:** Initial liquidity is established to ensure fair market access.
- **1% Transaction Tax:** A universal fee applied to all Buys, Sells, and Peer-to-Peer Transfers.

3 The Ecosystem Tax

Sustainability is achieved through the **1% Transaction Tax**.

3.1 Reward Pool Contribution

100% of the tax collected from $SMOS$ market activity is diverted directly into the `rewardPoolBalance`. This ensures that the Reward Pool is constantly "refilled" by the very act of trading, allowing rewards to persist even after the maximum supply has been reached.

4 Mining Power (PU) Dynamics

The protocol utilizes **PowerUnits (PU)** to determine a user's share of the daily reward drip.

4.1 Base PU Acquisition

Participants generate base PU through USDT deposits. These units represent the permanent mining hardware of the user's account within the protocol.

4.2 SMOS Staking (Temporary PU)

Users can boost their mining output by staking $SMOS$ tokens. Unlike base PU, staked units are temporary and derived from the current token commitment.

- **Conversion Rate:** $1\ SMOS = 0.5\ PU$
- **Mechanism:** While $SMOS$ is staked, the user's total PU is increased by the calculated amount, allowing for a larger share of the reward pool.
- **Lock Period:** Staked $SMOS$ is subject to a 7-day lock to ensure network stability.

5 The Reward Drip System

Sphygmos employs a non-depleting drip mechanism.

5.1 Drip Calculation

The protocol releases 10% of the current Reward Pool balance daily. The individual reward (R_i) is calculated as:

$$R_i = \left(\frac{PU_{base} + PU_{staked}}{Total\_PU} \right) \times (Pool \times 0.10)$$

This ensures that as the pool grows from taxes and deposits, the absolute value of rewards increases, while the percentage-based release ensures the pool never hits zero.

6 Sustainability & Hard Cap

The 10,000,000 $SMOS$ limit is an immutable constraint.

6.1 Post-Cap Phase

Once the 10M supply is fully circulating, the minting of new rewards transitions to a **Volume-Only Model**. In this phase, the 1% ecosystem tax becomes the sole provider of the reward pool, turning the protocol into a pure reflection of market velocity.

7 Security & Integrity

- **Immutable Supply:** The 10M cap is enforced by smart contract logic.
- **Non-Custodial:** Users maintain control of their assets through decentralized staking.
- **Anti-Drain Protection:** The 10% drip cap prevents ”bank runs” on the reward pool.

8 Conclusion

The Sphygmos ($SMOS$) protocol provides a balanced approach to DeFi mining. By allowing users to convert $SMOS$ into temporary PowerUnits at a 1:0.5 ratio, the protocol incentivizes token utility and staking while maintaining a sustainable, tax-fed reward ecosystem.