



Enabling Verifiable Decentralized AI through
Deterministic GPU Computing

TOKENOMICS

Litepaper

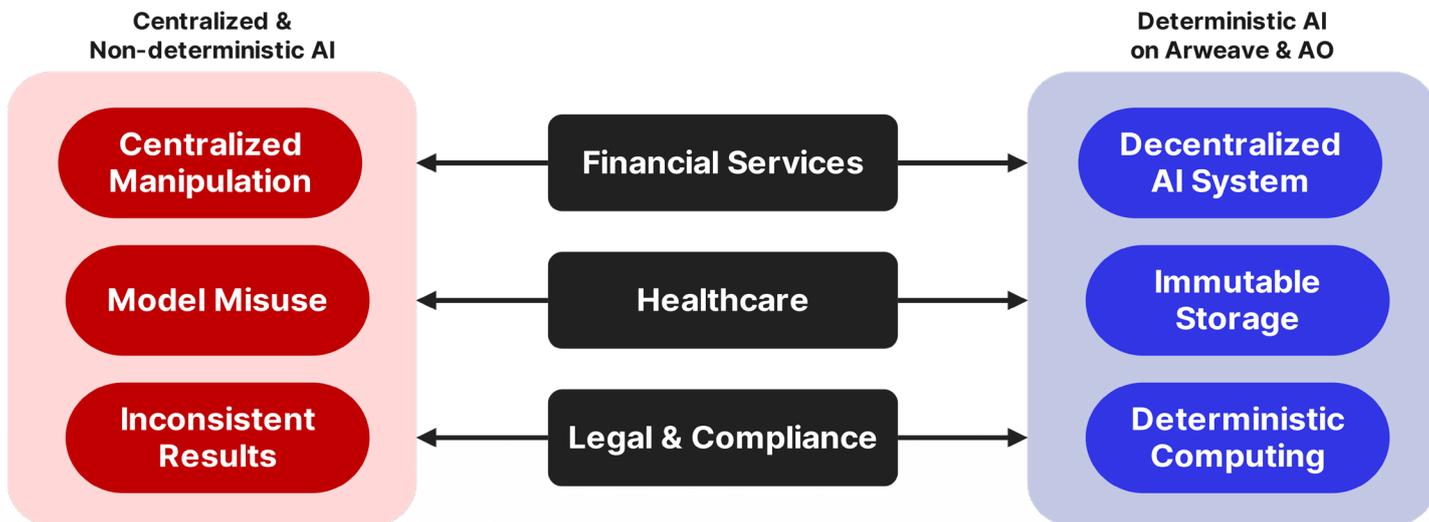
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1. Introduction

1.1 Challenges of Centralized AI Systems

Centralized and non-deterministic AI systems often produce inconsistent and unreliable results, especially in critical applications like autonomous driving, healthcare, and trading bots where predictable and verifiable outcomes are essential.

They are vulnerable to centralized manipulation, where operators can alter model outputs for profit, and model misuse through unauthorized modifications of trading strategies. This underscores the need for a robust, decentralized solution that guarantees consistency and accountability in AI operations.



1.2 A Decentralized Solution

Apus Network is the first AO protocol extension based on deterministic GPU computing. It combines Arweave's permanent and immutable storage with AO's decentralized computing to create a trustless on-chain infrastructure for AI LLM model inference and verification.

What makes it unique is that AI inference is fully executed by decentralized GPU nodes, using deterministic GPU computing to ensure consistent results, with all key steps permanently recorded on Arweave.

This allows anyone to audit and verify the process, fundamentally preventing centralized cheating and model abuse, accelerating AI democratization, and promoting the development of AI technology towards transparency, fairness, and reliability.

1.3 Sustainable Tokenomics

To guarantee long-term sustainability, Apus Network has developed carefully designed tokenomics that ensures all participants, from investors, GPU node operators, developers and community members, are fairly rewarded for their contributions to the network.

A critical component of this model is the **\$APUS** token, which not only fuels the network's operations but also empowers governance and incentivizes active participation.

2. Overview

2.1 Core Role of \$APUS Token

The **\$APUS** token is the core utility and governance token of the Apus Network, playing a central role in securing the network, facilitating transactions, and empowering decentralized governance.

As a **100% community-launched token**, **\$APUS** ensures fair distribution from the outset, with no token allocation reserved for the team. This structure fosters a high degree of decentralization, granting the community full control over the network without any central entity holding influence over the token supply.

2.2 Fixed Supply and Non-Inflationary Model

The **\$APUS** token has a fixed supply of **1 billion** tokens, ensuring that no additional tokens will ever be minted, making it a **non-inflationary** asset.

This fixed supply is crucial for maintaining the long-term value of the token. As the network evolves and moves towards full decentralization, the DAO will have the ability to introduce additional burn mechanisms, further enhancing the deflationary model.

2.3 Utility of the \$APUS Token



Network Fees

Users rely on \$APUS tokens to pay for AI inference calls on models hosted within the Apus Network.

This ensures an efficient allocation of computational resources, allowing GPU node operators and other service providers to be fairly compensated for their contributions to the network.



Pool Sub-Staking

Participants can delegate their AO-yielding assets (such as aoETH or aoDAI) to the Apus Network in exchange for \$APUS token rewards.

Additionally, sub-staking allows \$APUS holders to allocate their \$APUS tokens to specific AI model pools.

In return, participants receive financial compensation based on the model's usage, incentivizing them to actively contribute to the network's growth and ensuring the sustainable operation of AI models.



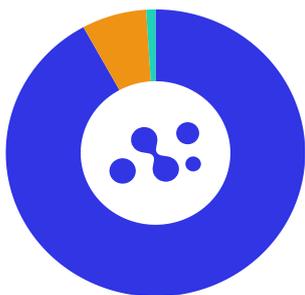
Governance

As Apus Network transitions towards full decentralization, \$APUS tokens will serve as the governance mechanism within the DAO.

Token holders will have voting power proportional to the amount of \$APUS they hold, allowing them to participate in key decisions regarding protocol upgrades, resource allocation, and other important network proposals.



3. Distribution



- **Community: 92%**
 - 80% (TGE 0%) : AO Yield, 4-year halving
 - 12% (TGE 0%) : Pool Substake
- **Ecosystem: 7%**
 - 2% (TGE 100%): TestNet
 - 5% (TGE 100%): Pool Bootstrap
- **Liquidity: 1%**
 - TGE 100%

3.1 Community Allocation

92% of the total supply of \$APUS tokens will be allocated to the community, ensuring fair distribution and decentralization. The community distribution supports the staking and sub-staking mechanisms within the network, and is divided as follows:

- 80% for delegating AO assets (such as aoETH, aoDAI) to the Apus Network, contributing to the network's security and stability.
- 12% for sub-staking pools, encouraging users to sub-stake \$APUS tokens to specific AI model pools for additional rewards.

3.2 Ecosystem Development

7% of the \$APUS token supply will be allocated for ecosystem development, primarily incentivizing the TestNet and liquidity pool bootstrap. This allocation helps attract developers and users to contribute to the growth of Apus Network:

- 2% for TestNet incentives, encouraging developers and users to participate in network testing and improve its functionalities.
- 5% for liquidity pool bootstrap, ensuring sufficient liquidity in the early stages of the network to facilitate smooth transactions and token usage

3.3 Liquidity Provision

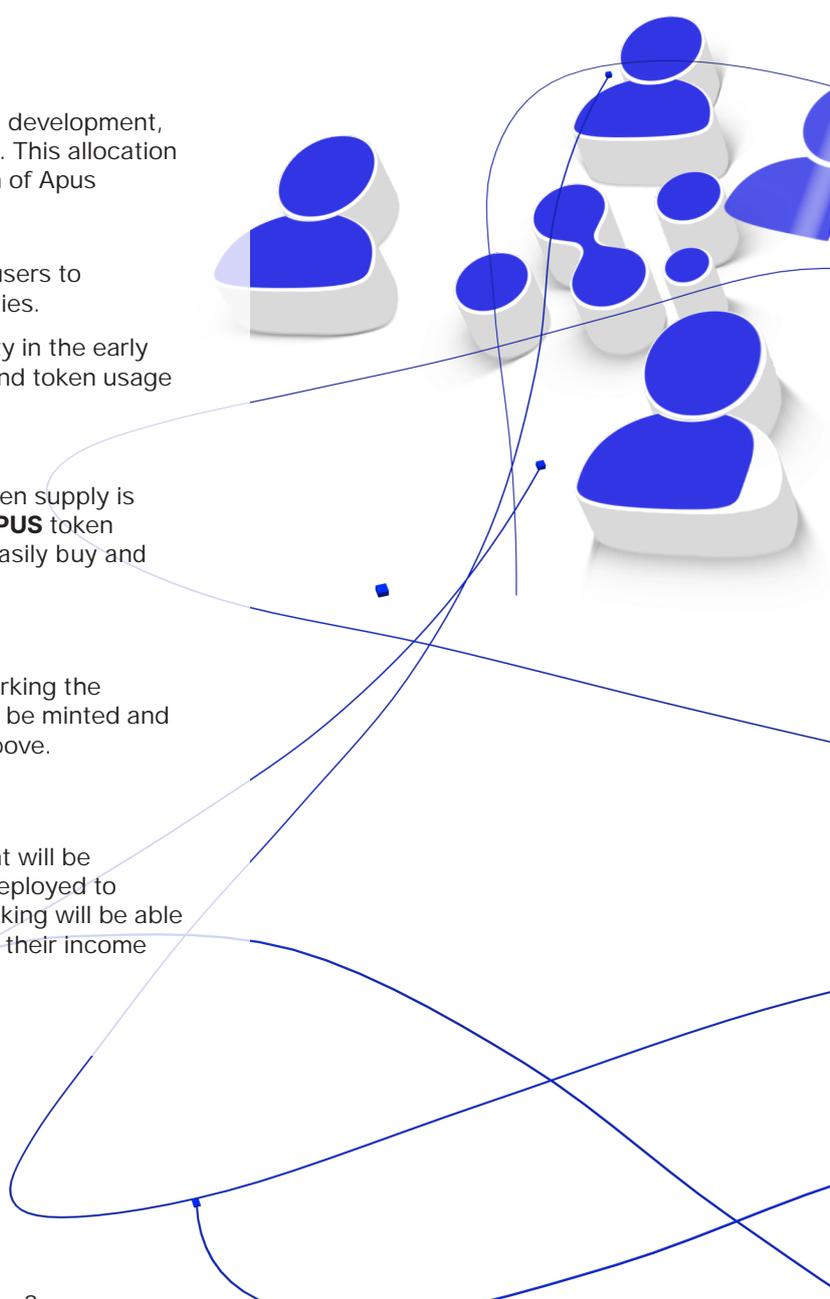
To ensure initial liquidity for the network, 1% of the \$APUS token supply is reserved for liquidity provision. This allocation will support \$APUS token trading on decentralized exchanges (DEX), allowing users to easily buy and sell the token.

T0: Token Generation Event (TGE)

- T0 represents the initial generation of \$APUS tokens, marking the token's inception. At this point, 8% of the total supply will be minted and distributed according to the allocation plan mentioned above.

TN: Liquidity Trigger Event

- When AO yields reach a designated amount, the TN event will be triggered. At this stage, 1% of the initial liquidity will be deployed to decentralized exchanges. Additionally, participants in staking will be able to trade their earned \$APUS tokens and further increase their income through the sub-staking mechanism.



4.Roadmap

17% in the First Year, then Four-Year Halving

The **\$APUS** token emission curve for the community allocation starts by releasing **17%** of the community's portion in the first year, ensuring sufficient initial liquidity to drive early adoption and participation. Afterward, the token issuance for the community will halve every four years. This design effectively controls the token supply allocated to the community, maintaining long-term scarcity and value stability.

The First Year Breakdown

The first year aims to distribute 17% of the total token supply. Here's a breakdown of the strategy:

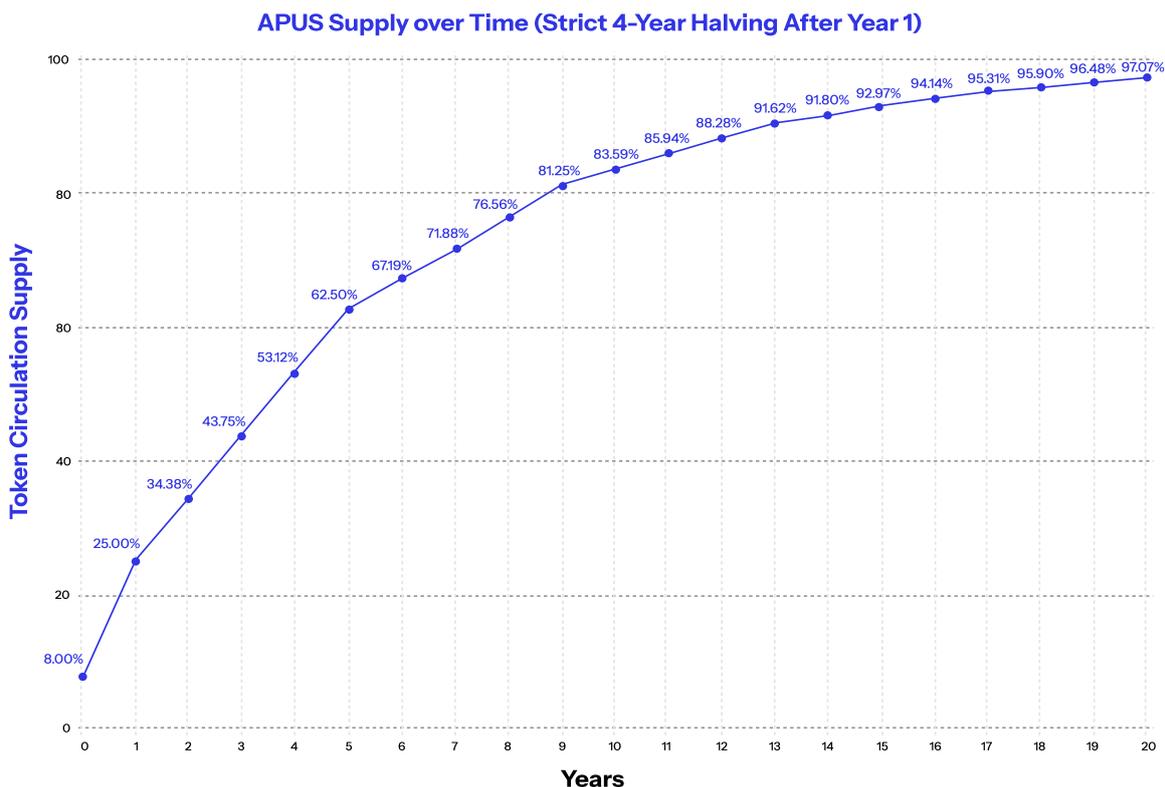
- 1. Initial boost:** The plan starts with a higher release rate of **1.55%** in the first month, providing initial liquidity and encouraging early adoption.
- 2. Gradual decrease:** Each subsequent month sees a slight reduction in the release percentage, creating a smooth downward curve.
- 3. Monthly breakdown:**

Month 1 1.55%	Month 2 1.52%	Month 3 1.50%	Month 4 1.48%	Month 5 1.45%	Month 6 1.43%
Month 7 1.40%	Month 8 1.38%	Month 9 1.36%	Month 10 1.33%	Month 11 1.31%	Month 12 1.29%

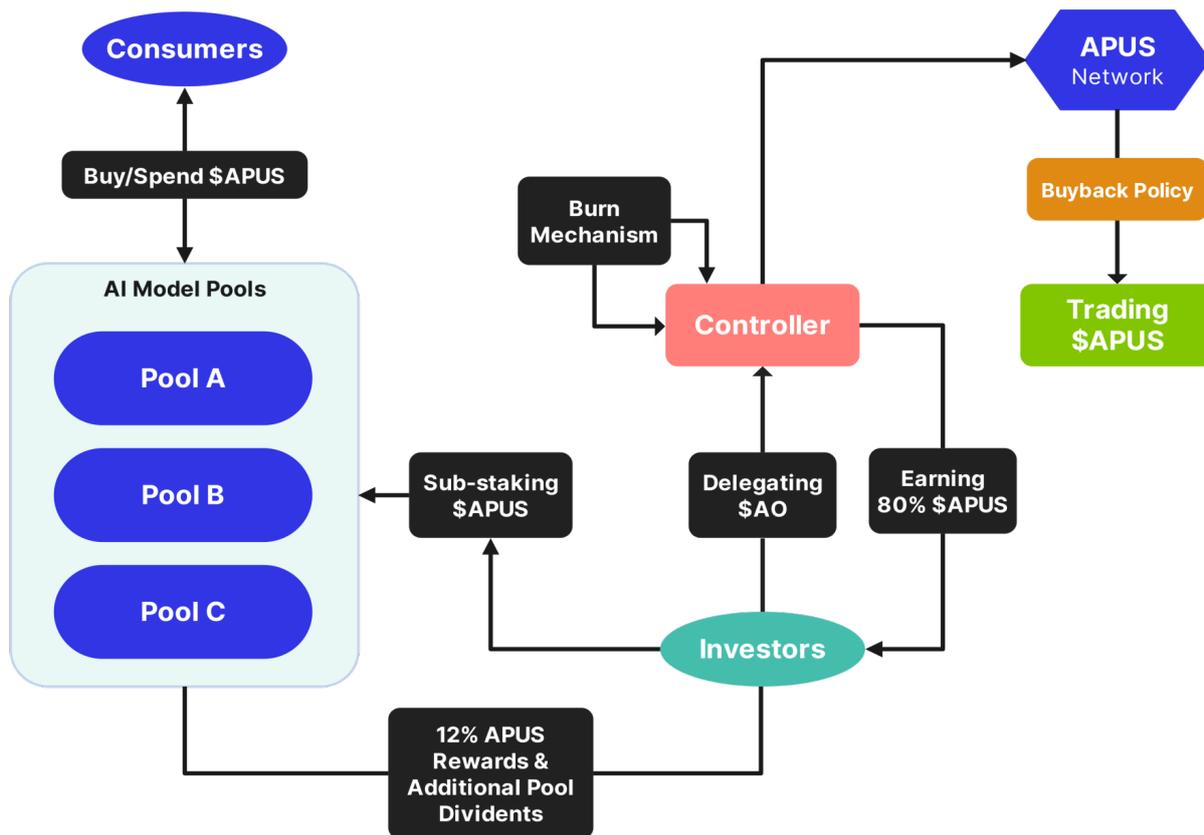


Yearly Breakdown after the First Year

- By the end of Year 1: Achieve a total release of **25%**(= **8%** + **17%**)
- During Years 2-5: Increase by **37.5%**
- During Years 6-9: Increase by **18.75%**
- During Years 10-13: Increase by **9.375%**
- During Years 14-17: Increase by **4.6875%**
- Subsequent Years: Continue halving the growth increment



5. Delegating and Sub-staking



5.1 Delegating Mechanism

The Apus Network allows investors to delegate some of their AO assets (such as aoETH and aoDAI) to earn **\$APUS** tokens.

The delegating rewards are based on the AO yield proportion, meaning investors will receive **\$APUS** tokens in line with the amount of AO assets they have delegated and the AO yield generated.

This mechanism not only helps secure and stabilize the network but also provides investors with an opportunity to grow their token holdings.

5.2 Sub-staking Mechanism

The sub-staking mechanism allows investors to allocate their **\$APUS** tokens to specific AI model pools.

By sub-staking, investors can earn additional **\$APUS** rewards (total **12%**) and become eligible for future dividends based on the performance of the pools they have staked into.

This mechanism provides investors with higher earning potential while supporting the operation of AI models within the network.

5.3 Sub-staking Enabled After TN Event

After the TN event and when the AI model pool management is ready, the sub-staking feature will be enabled, allowing investors to sub-stake their **\$APUS** tokens to AI model pools.

The reason sub-staking is enabled after the TN event is that only when **\$APUS** tokens are exchangeable on decentralized exchanges (DEX) can we effectively incentivize all participants, including those who build and consume AI model pools.

For example, consumers who want to use the AI models will need to buy **\$APUS** and spend it to access and utilize the models. By making **\$APUS** tokens tradable, the network can offer more attractive incentives to contributors, ensuring the sustainable growth of the ecosystem.

6. Deflation and Buyback

6.1 Automatic Burn Mechanisms

The **\$APUS** token employs automatic burn mechanisms to maintain its deflationary nature. If there is no delegating or sub-staking activity, non-distributed **\$APUS** tokens will be automatically burned, reducing the overall supply.

This ensures token scarcity over time, promoting long-term value retention.

6.2 Future Burn Mechanisms

As the Apus Network continues to evolve, additional burn mechanisms may be introduced to further enhance the deflationary characteristics of the **\$APUS** token.

These future mechanisms will be designed to adapt to market conditions and ensure sustained token scarcity, offering greater long-term value to holders.

6.3 Buyback Policy

The buyback policy is designed to enhance investor confidence by using a portion of AO yields to repurchase **\$APUS** tokens.

This will continue until all early investors' and advisors' commitments are fully met. By regularly buying back tokens, the policy helps stabilize market prices, ensuring the long-term value of **\$APUS**.

This approach signals the project team's dedication to maintaining the token's worth, encouraging long-term holding and participation.

7. Conclusion

The **\$APUS** token is central to the Apus Network, serving as both a governance and utility token. With its fixed 1 billion supply and deflationary mechanisms, it ensures long-term scarcity and value. Importantly, **\$APUS** is a **100%** community-launched token, with no pre-allocation for the team or early investors, ensuring fair and decentralized distribution.

The token emission follows a "17% in the First Year, then Four-Year Halving" model, releasing **17%** in the first year to boost liquidity and adoption, with the issuance halving every four years to maintain long-term value.

Key features like delegating and sub-staking encourage active participation. Additionally, the buyback policy enhances investor confidence, supporting market stability and ensuring early investors commitments are met.

In summary, Apus Network offers a decentralized solution for transparent and fair AI technology, with **\$APUS** ensuring long-term sustainability and rewarding all participants.