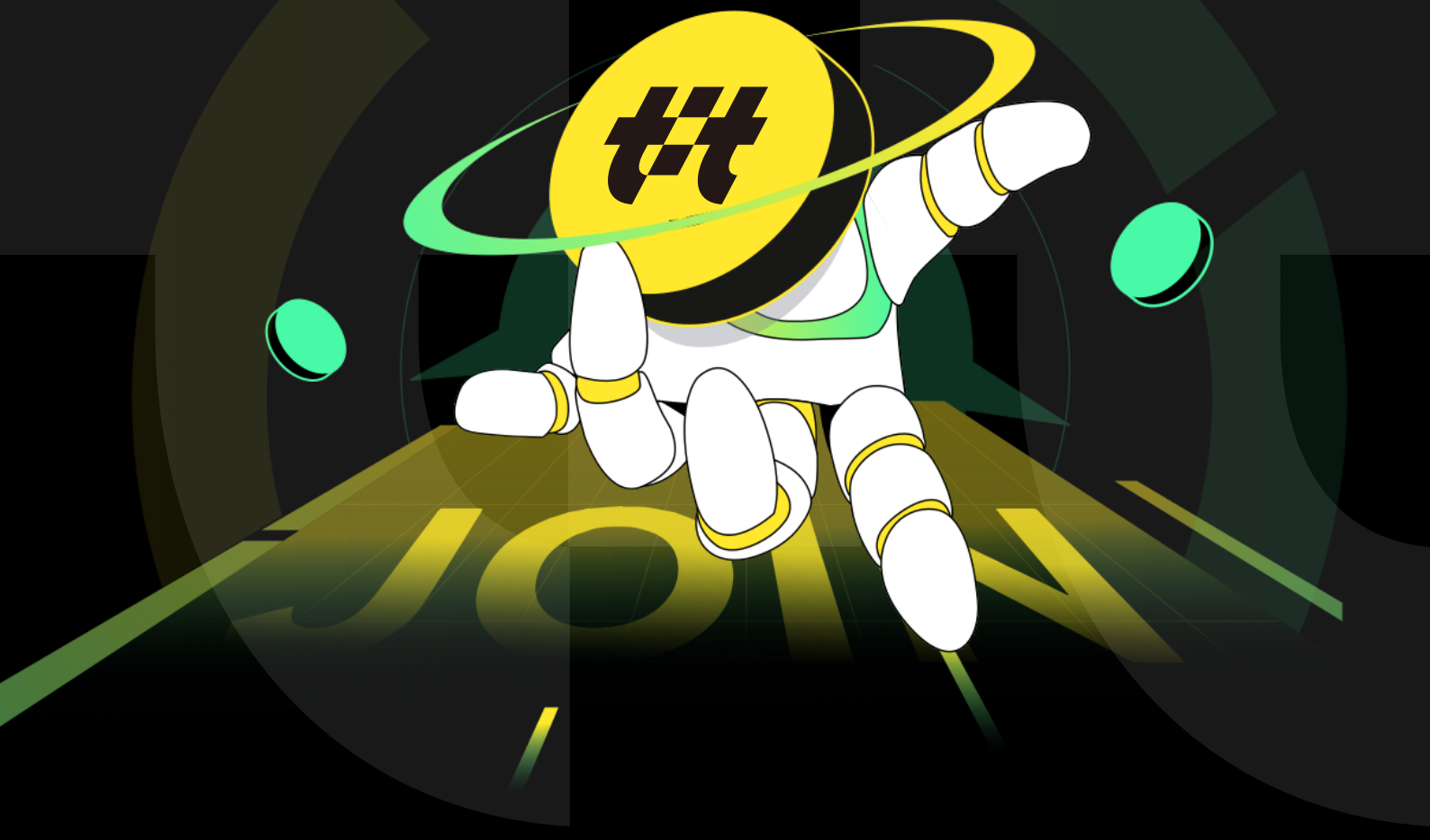
TTD

TTD

TTD Where DePIN Meets Reality and AI Ignites Opportunity



INTRODUCTORY

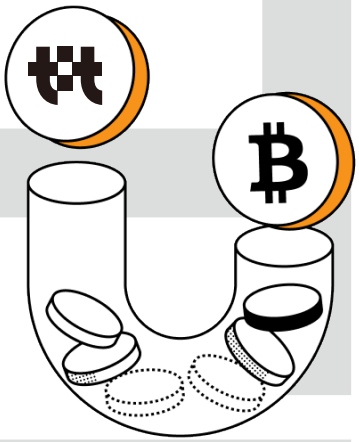
Driven by the wave of digitization and the technological revolution, Artificial Intelligence (AI) and Blockchain technologies are reshaping our economies, societies and lifestyles at an unprecedented pace. The global economy is undergoing unprecedented changes, and the rise of Web3 has given the digital economy a whole new set of possibilities, while the emergence of AI Agent has become a key bridge to make it all happen. As a next-generation lightweight AI Agent eco-framework based on blockchain technology,TTD is dedicated to redefining the intelligent ecosystem in the Web3 world with its modular design and high scalability.

TTD Blockchain's mission is to build an open, efficient and decentralized digital economy system by empowering developers, organizations and users. Whether it's investment assistance, automated business processes, on-chain governance, or seamless multi-platform integration,TTD creates not only a technological framework, but also a cornerstone of a new economy that inspires unlimited innovation potential.

By deeply integrating AI and blockchain technologies,TTD provides developers with a flexible tool chain, lowers the threshold of development, and empowers AI Agents to act independently economically, making them the core driver of value creation in a decentralized ecosystem.TTD Blockchain's vision is to build a future in which technology promotes self-governance, value has no boundaries, and everyone can participate in the future.TTD's vision is to build a future where technology drives autonomy, value has no boundaries, and everyone can participate, and to reshape the way society collaborates and allocates resources through Web3.

TTD Blockchain Transforms Assets to Empower the Future with AI and DePIN
The core innovation ofTTD lies in its use of the deep integration of AI and DePIN technologies to transform traditional asset management and value delivery. Through a modular AI intelligence development framework,TTD provides developers with unlimited expansion potential, enabling them to build smarter, more efficient, and reliable applications in a decentralized digital economy.

CATALOGS



1 Market analysis

Artificial Intelligence (AI) Market Overview

With the rapid development of global AI technology, artificial intelligence is no longer confined to the laboratory stage, and is now widely used in practical scenarios, and has become an important engine to promote global economic growth. According to statistics, the size of the global AI market reached $538.1 billion in 2023, and is expected to exceed the trillion dollar mark by 2024.AI technology has penetrated into many industries, such as finance, healthcare, education, manufacturing, etc., through the in-depth application in the fields of data analytics, natural language processing, computer vision, etc. However, the traditional AI applications are mostly centralized and managed, which makes data management difficult. However, traditional AI applications are mostly centralized, which makes the problems of data privacy, security and resource monopoly more and more serious.

Blockchain Markets and Ecology

Blockchain technology, as a decentralized distributed ledger, provides a solid foundation for the global digital economy by virtue of its data security, transparency, and tamper-proof features. by 2024, the global Web3 market size is expected to reach $30,000,000,000,000, and blockchain technology will become an indispensable and important infrastructure in the future digital economy. However, the current blockchain ecosystem still faces high technical thresholds, single application scenarios, and complex cross-chain interactions, which limit its wide application in more scenarios.

AI Agent: the core form of fusing AI and blockchain

AI Agent is a product of the in-depth integration of AI technology and blockchain technology, which realizes efficient task execution and autonomous decision-making capabilities through the integration of arithmetic, data and algorithms. As a next-generation intelligence, AI Agent can operate as an "independent economy" and accomplish various complex tasks such as asset management, on-chain governance, and resource allocation. By 2024, the global AI Agent market is expected to reach USD 12.69 billion. However, at this stage, the development and deployment of AI agents still face the following problems:

Limited arithmetic and data resources: The efficient operation of AI Agent requires strong arithmetic support and real-time data integration, and the existing infrastructure cannot meet the needs of large-scale distributed intelligences.

Insufficient cross-chain compatibility: In the Web3 ecosystem where multiple chains coexist, the cross-chain interaction capability of AI Agent is weak, and seamless data and asset sharing cannot be realized.

High development threshold: The current AI Agent development framework is complex and lacks modular design, resulting in developers facing high technical barriers when deploying decentralized intelligences.

Insufficient economic incentives: The economic behavior of AI agents is not yet fully mature, and the incentive mechanism is not perfect, making it difficult to attract developers and users to participate in the long term.

DePin: on-chain derivatives agreement

It is based on the Ethernet blockchain and allows users to create, trade and automatically settle derivative contracts.

Its main features include:

Chain native: all contracts and settlements are executed on the Ethernet blockchain, ensuring transparency and tamperability.

No collateral required: Users are not required to provide collateral when trading derivatives, which significantly lowers the trading threshold and increases capital efficiency.

Multi-Asset Support: DePin supports a wide range of underlying assets, including cryptocurrencies, stocks, and commodities, enabling users to trade all types of derivatives.

Automated Settlement: Upon expiration of the contract, the settlement process is automated, eliminating the counterparty risk found in traditional markets.

Primary use case:

Hedging Risk: By trading derivatives, users can hedge their exposure to specific assets.

Speculation: Traders can speculate and earn profits by predicting changes in the value of the underlying asset.

Yield Enhancement: Users can earn additional income by providing liquidity to the market.

Current Position:

Currently, the most active contracts on DePin include ETH/USD and BTC/USD, and these contracts are listed on several decentralized exchanges such as Uniswap, SushiSwap and 1inch.

Future Projections:

The DePin ecosystem is expected to grow as the on-chain derivatives market develops, with more exchanges and users adopting the protocol, further driving market maturity.

The launch of DePin brings a convenient and efficient solution for blockchain derivatives trading, especially in the Decentralized Finance (DeFi) environment.

Problems and opportunities facing the current market

In the context of the convergence and development of DePIN and blockchain, while the combination of the two offers unprecedented possibilities for the digital economy, it also brings a series of challenges and opportunities.

Problems faced by the market:

Technology and infrastructure thresholds:

While the potential of blockchain technology is huge, DePIN faces high technical barriers in many practical applications. Many traditional organizations and users lack adequate technical support and understanding when transitioning to the Web3 ecosystem.

The construction of decentralized physical infrastructure is not yet widespread, and the performance and efficiency of the overall network still needs to be improved.

Regulatory and Compliance Challenges:

The legal and regulatory framework for blockchain and decentralized assets is not yet complete, especially in the DePIN space, where compliance issues are compounded when it comes to digitizing tokens of traditional assets.

Differences in national legal attitudes towards digital assets create difficulties in cross-border operations and international deployment.

Market Education and User Awareness:

Because Web3 and the DePIN ecosystem are still emerging concepts, many users and traditional organizations are not well-informed about them, resulting in slow adoption of Web3.

More market education is needed to help users understand the value and potential of decentralization.

Concentration of resources and market monopoly:

Although DePIN can theoretically break the traditional resource centralization and market monopoly, the existing Web3 project is still dominated by a number of larger platforms, failing to fully realize true decentralization and resulting in unequal distribution of resources.

Market Opportunities:

The digital economy and the rise of decentralized finance:

The combination of DePIN and blockchain provides more application scenarios for decentralized finance (DeFi), especially in asset tokenization and securitization, which can break the barriers of the traditional financial system and provide a more transparent and fairer trading platform.

The emergence of projects such asTTD provides infrastructure support for Web3 to better facilitate the circulation of digital assets and global transactions.

Digitization and global mobility of assets:

With DePIN, traditional marketable assets such as securities, stocks, and real estate can be digitized, tokenized, and freely circulated globally, bringing unprecedented market opportunities.

The digitization of assets not only provides investors with more investment options, but also contributes to the efficiency of global markets.

Web3 The popularity of cell phones and smart hardware:

With the introduction of Web3 phones and smart hardware, users can more easily access the Web3 ecosystem and directly participate in decentralized applications (dApps), making Web3 more popular.

Decentralized Identity and Privacy Protection:

Decentralized identity management will provide users with more privacy protection and data control, which is especially important for their security in the digital world. As privacy-protecting technologies continue to advance, decentralized identity becomes an important part of the future digital economy.

TTD Blockchain's Market Positioning and Value Proposition

TTD Blockchain was created to address these core issues through its unique modular design and high scalability. It transforms Depin into an on-chain independent economy that provides the following key values:

Breaking through arithmetic and data limitations: Integrating multiple resources through the decentralized nature of the blockchain to enhance the computing and data processing capabilities of AI.

Enhanced cross-chain compatibility: enables seamless interaction with mainstream blockchains, enabling AI to operate efficiently in a multi-chain ecosystem.

Lower the development threshold: simplify the development process of Depin through open source frameworks and tool chains, providing the possibility for more developers to participate in the construction of Web3.

Optimize economic incentives: Give Depin economic independence and design a transparent and fair reward mechanism to motivate developers and users to participate deeply.

2 TTD Blockchain Overview

TTD (TTD Blockchain) takes DePIN+RWA as the core to build the world's leading decentralized physical infrastructure and real-world asset on-chain ecology. Through innovative modes such as equipment mining, asset tokenization and supply chain financial optimization, TTD enables IoT devices to become value nodes and real-world assets such as real estate, precious metals and carbon credits to circulate on the chain.TTD is committed to building a highly efficient, secure and transparent digital economic network, promoting the digitalization change of global assets, and enabling the free flow of value!

Core objectives:

-The world's leading DePIN+RWA network: driving the deep integration of physical world infrastructure with the digital economy.

-Breaking through 100 million device nodes: making the world's smart devices decentralized arithmetic, storage, and data contributors.

-Supporting Trillion-dollar Assets on the Chain: Helping Global Real Estate, Precious Metals, Supply Chain and Other Traditional Industries Achieve Digital Transformation.

-Building an efficient asset flow ecosystem: lowering transaction thresholds, improving asset liquidity and enhancing transparency.

-Enabling industry growth: innovative DePIN & RWA solutions for companies, investment organizations, and individuals.

-Create millions of wealth growth opportunities: through incentives, ecological contributors can share the economic dividends of digital assets.

Core technology:

• Decentralized Physical Infrastructure (DePIN):TTD breaks down traditional market barriers by providing global users with a seamless and transparent asset trading and management experience through decentralized hardware resources and networks.

• AI Integration: Combined with AI technology,TTD provides intelligent decision-making and efficient resource scheduling to optimize various operations in the Web3 ecosystem.

• Digital Asset Tokenization & RWA Public Chain: Through innovative public chain technology,TTD provides a blockchain platform designed specifically for Real World Assets (RWAs) to facilitate the circulation, trading and value-adding of digital assets.

Ecosystems:

• Web3 Smart Hardware:TTD provides hardware-based solutions to help users, developers and enterprises quickly enter the Web3 world through smart devices and experience more secure and convenient decentralized applications.

• Decentralized Application and Payment: Build cross-platform, decentralized payment systems and applications to help enterprises and users achieve more efficient value exchange in the digital economy.

Market Positioning:

• Global Leading DePIN Brand:TTD aims to become the world's leading DePIN brand, providing comprehensive digital economy solutions for enterprises and communities through Web3, AI and decentralized hardware.

• Driving the transition from Web2 to Web3:TTD is not just a blockchain platform, but a vibrant and inclusive Web3 ecosystem that helps traditional industries and ordinary users easily move into the digital future.

Low development threshold and powerful tools

As an open source framework,TTD focuses on lowering the technical barrier. Developers can get started quickly through an intuitive toolchain and build powerful AI Agent applications without a deep technical background. The framework also provides a wealth of development plug-ins and templates to help developers effectively respond to complex business needs.

Web3 Building Blocks for a New Economic Formation

TTD Blockchain is not only a technological framework, but also the infrastructure for the new economic form of Web3. By empowering developers and users, it promotes technological advancement and value creation in the Web3 world.TTD believes that the combination of AI and blockchain will reshape the rules of the global economy and promote efficient allocation of resources and fair distribution of value.

TTD Blockchain empowers AI Agents with independence, flexibility and efficiency through modular design, economic behavior modeling and intelligent collaboration capabilities. It is enabling developers and users to gain new experiences and opportunities in the Web3 ecosystem by lowering the development threshold and driving innovation. Not only that,TTD is a key bridge connecting technology and economy, which will inject strong momentum into the global digital economy and lead the future of decentralized smart economy.

3 TTD Blockchain Vision

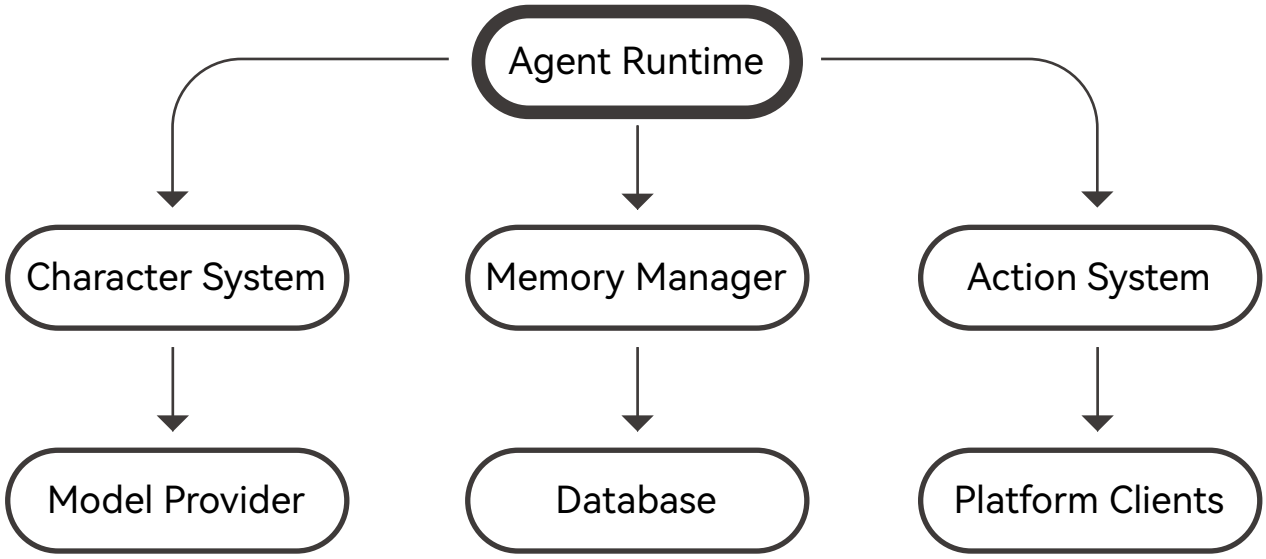
TTD Blockchain Vision and Mission:

• Vision: To reshape the global digital economy through technological innovation, promote a seamless transition to the Web3 era for traditional enterprises, financial systems and users, and build a transparent, efficient and decentralized bridge to the global digital economy.

• Mission: To provide a complete decentralized ecosystem for global users and enterprises, to empower various industries to realize digital transformation through DePIN and Web3 technologies, and to promote the full popularity of DeFi and digital asset tokenization.

4 TTD Blockchain Architecture

TTD Blockchain builds an efficient and scalable framework for DePin development and operation with a modular design at its core, providing powerful intelligence support for the Web3 ecosystem.TTD enables decentralized DePin creation, operation, and collaboration through the following key components



Core Architecture and Modules:

Agent Runtime

As the core module ofTTD, it is used to coordinate and manage the operation of the whole intelligent system. It supports task execution, data exchange and efficient collaboration between modules.

Character System

Defines the roles and functional modules of DePin through which it can interact with the Model Provider. Models can be loaded dynamically to optimize domain-specific functionality, such as investment analysis, on-chain governance, etc.

Memory Manager

Provides a RAG (Retrieval-Augmented Generation) memory system that combines short-term and long-term memory to provide real-time data access and history recall for the intelligence. Enhances DePin's contextual understanding and decision support capabilities in complex tasks.

Action System

It is responsible for executing the intelligent body's action decisions, and seamlessly interfaces with Platform Clients. It supports cross-platform operation, covering mainstream platforms such as Discord, Telegram, Twitter, etc., and promotes the wide application of intelligent bodies in multiple scenarios.

Model Provider

As the core algorithmic support module of the smart body, it provides access to and integration with mainstream models such as GPT-4 and Llama, and supports highly customized knowledge base and functional extensions.

Database

Provide on-chain and off-chain data storage services, support real-time task-related data storage and archiving of key events to ensure efficient utilization and security of data.

Platform Clients

Provide interfaces between intelligences and various platforms in the Web3 ecosystem to facilitate social integration, resource allocation and economic behavior of intelligences.

Architecture features and innovations:

Modular design:

Through the flexible combination of modules, developers can quickly adapt to different scenarios, such as on-chain governance optimization, automated trading assistance and so on.

Modeling Economic Behavior:

TheTTD gives DePin the role of an independent economic node, enabling it to perform tasks such as asset management and investment assistance in the Web3 ecosystem, and promoting the development of the smart body economy.

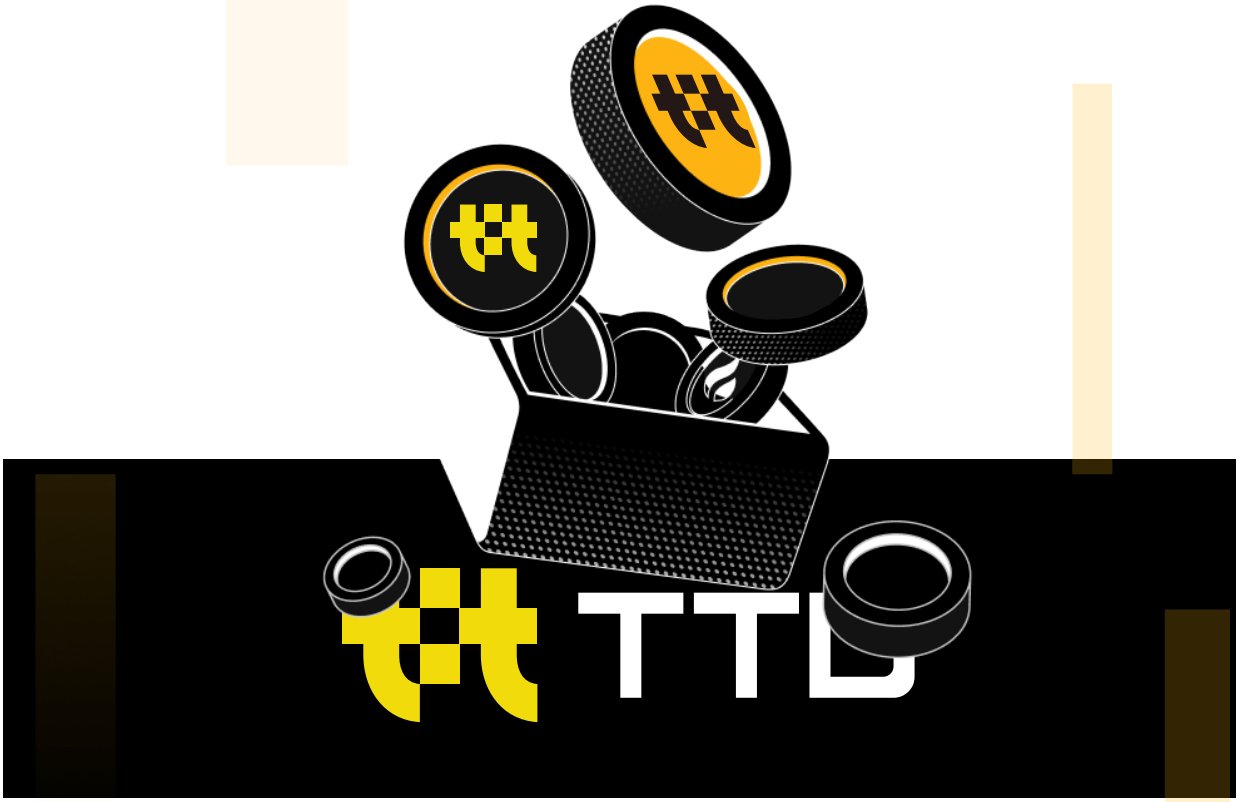
Seamless cross-platform integration:

The Action System module supports multi-platform connectivity, dramatically lowering the deployment threshold and expanding the range of applications for intelligentsia.

Smart governance optimization:

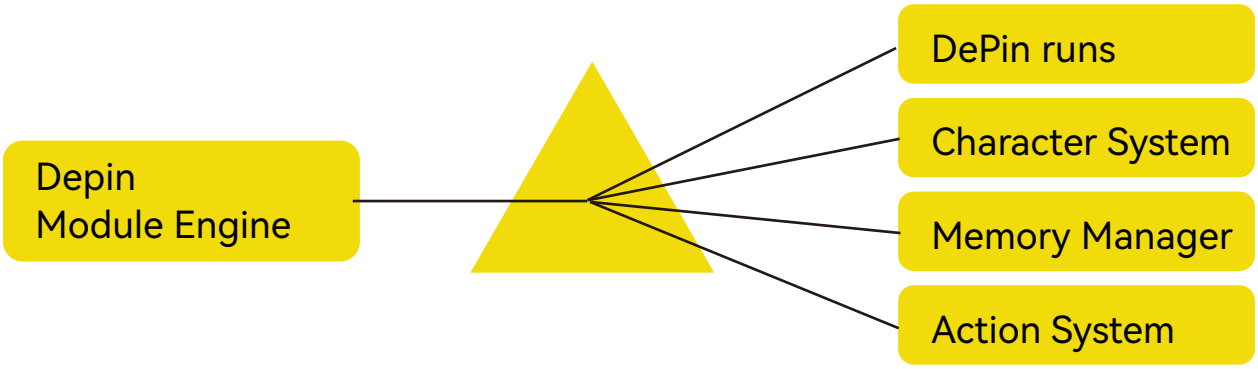
Through the RAG system and Memory Manager,TTD provides decentralized autonomous organizations (DAOs) with the ability to optimize their governance processes.

TTD Blockchain's architecture provides strong support for the rapid development and efficient operation of DePin, and through the combination of modularization and on-chain integration, it promotes the prosperity and landing of the Web3 new economy.



5 Core Module Operation Mechanism

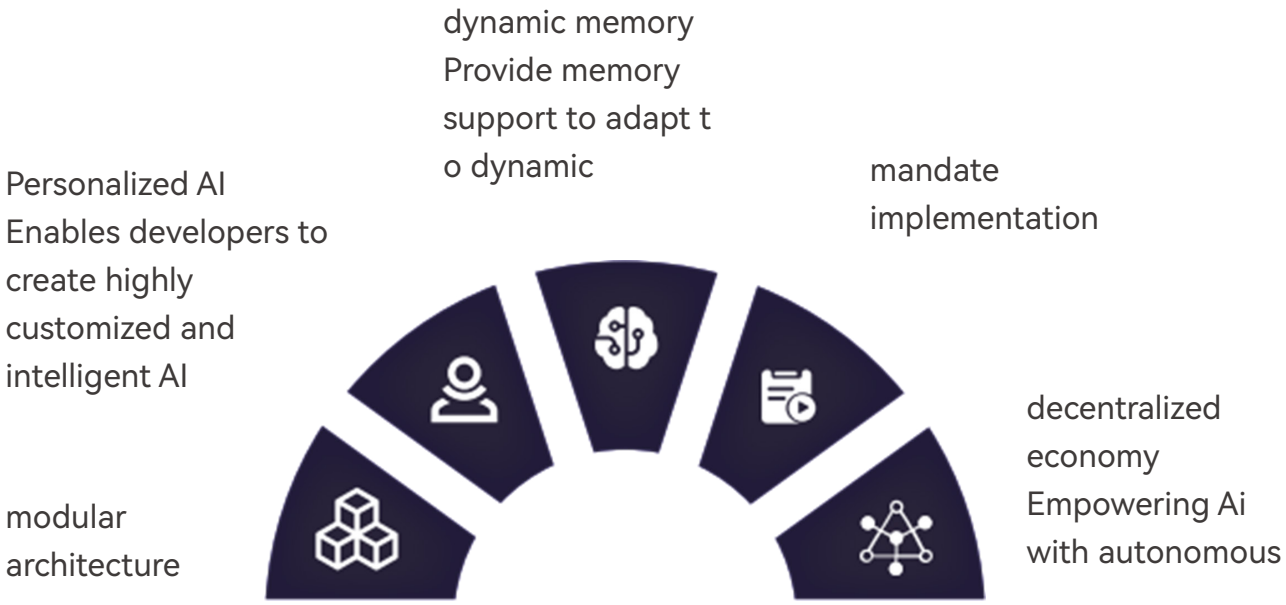
TTD Blockchain provides developers with a powerful tool chain and a flexible development environment through this modularized architecture, enabling DePin to become a core participant in the Web3 ecosystem. Its application scope covers a variety of fields such as on-chain governance optimization, automated transaction assistance, social network integration, etc., which comprehensively promotes the landing and prosperity of the Web3 new economy.



DePin engine is the core module ofTTD, which is responsible for coordinating the runtime task scheduling, module management and resource allocation of intelligences, and realizes flexible expansion and complex task adaptation through modular design. Its core functions include multi-threaded task execution and efficient resource management for DePin, providing stable support for rapid deployment in decentralized environments; a role system that defines the behavioral roles of intelligences and loads specific functional modules to realize personalized solutions; a memory manager that integrates short-term and long-term memories and provides contextual memory capabilities to optimize task performance and future knowledge recall; and an action

6 Intelligent ecosystem core competencies

TTD Blockchain provides powerful intelligence support for the Web3 ecosystem through five core capabilities: personalized AI, dynamic memory, task execution, modular architecture and decentralized economy. Its modular design and high scalability enable developers to easily build customized DePins, the dynamic memory system improves the environmental adaptability of intelligences, the task execution module ensures efficient collaboration across multiple platforms, and the decentralized economy empowers intelligences to act independently in economic behavior, which promotes the sustainable development of the digital economy and creates infinite possibilities for the Web3 world.



Personalized AI

Supports developers in designing and creating highly customized intelligent AI, such as governance assistants, automated trading systems or data analytics specialists, to meet users' individual needs and enable precise solutions.

dynamic memory

Real-time task support and event storage through the integration of short- and long-term memory systems ensures efficient performance of intelligences in complex dynamic environments while optimizing knowledge recall for future tasks.

mandate implementation

Provide support for automated task execution, covering multi-platform interactions and cross-system collaboration, such as social networking, on-chain governance and asset management, to improve efficiency and accuracy of task completion.

modular architecture

Allowing the flexibility to combine functional modules and customize AI applications such as transaction assistance, governance optimization or content recommendation, it provides developers with a low-barrier, highly flexible environment for developing intelligences.

decentralized economy

Empowering intelligent bodies with autonomous economic behaviors, enabling them to independently manage and trade digital assets in the Web3 ecosystem, promoting decentralized governance and optimal resource allocation, and realizing a sustainable digital economy model.

These extensions further highlightTTD's technical advantages and core functionality, and more fully demonstrate its value and potential in the Web3 ecosystem.

7 Accelerating the Evolution of DePin

TTD Blockchain comprehensively promotes the development and evolution of DePin through innovative architecture, modular design and deep on-chain integration, enabling it to achieve a higher level of intelligence and a wider range of value creation capabilities in the Web3 ecosystem.

The core path of DePin evolution:

From tools to self-subjects

TheTTD empowers DePin to make autonomous decisions and engage economically, no longer just a tool to perform tasks, but an independent intelligence with economic behavior, data insights, and task planning capabilities.

With its decentralized design, DePin is able to perform complex tasks such as resource allocation, governance proposals and asset management on-chain.

From static to dynamic adaptation

Memory Manager provides dynamic memory functionality that enables DePin to optimize task execution based on context while learning over time.

Real-time data integration and feedback mechanisms enable DePin to quickly adapt to changes in the environment and provide more personalized and intelligent services to users.

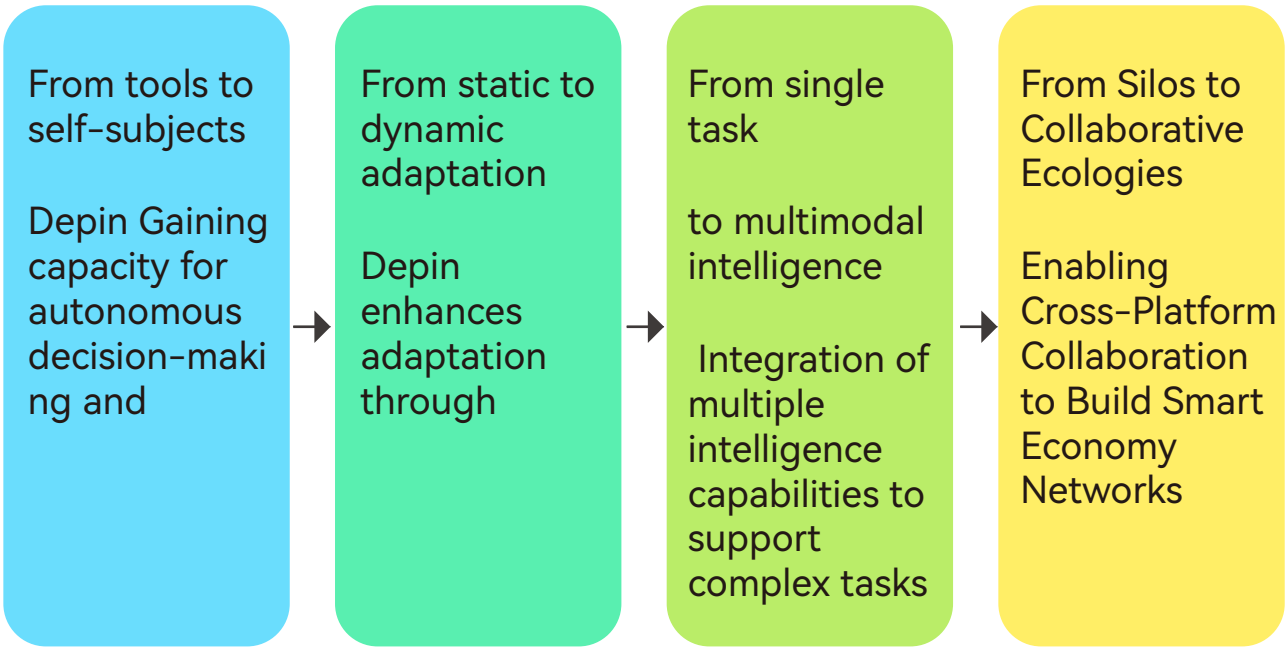
From Single Task to Multimodal Intelligence

Integrating GPT-4, Llama and other multimodal AI models, it provides DePin with language, image, data processing and other multidisciplinary intelligence capabilities. It supports automated processing of complex tasks, and realizes full scene coverage from on-chain transaction assistance to governance optimization.

From isolation to collaborative ecology

TTD Blockchain's modular design and platform support allows DePin to seamlessly integrate into multiple platforms (e.g. Discord, Telegram, Twitter) for cross-platform collaboration and interaction.

Through on-chain collaboration with other intelligences and users, DePin is able to build smart economic networks with self-organizing capabilities.



8 Core Innovation Module ofTTD

Modeling Economic Behavior

One of the core innovations ofTTD is to give DePin the ability to act independently as a decentralized economic node. By modeling economic behavior, DePin is able to perform tasks such as asset management, resource allocation, and investment assistance in the Web3 ecosystem, making it a key driver of the digital economy.

application scenario

Decentralized Autonomous Organization (DAO) Governance

DePin optimizes governance decisions and improves the efficiency and transparency of DAO governance through on-chain voting data and community feedback analysis. Automated execution of community decisions and governance processes reduces manual intervention and speeds up execution.

Investment Assistance and Asset Management

DePin tracks market dynamics in real time and uses algorithms to adjust portfolios, providing users with solutions to maximize returns. Supports complex automated trading strategies, such as arbitrage trading, price prediction trading, etc.

Resource allocation and community operations

In on-chain economic activities, DePin dynamically allocates community rewards or node resources to optimize the efficiency of resource use. It supports cross-chain resource collaboration to ensure efficient utilization of resources in a multi-chain ecosystem.

On-chain socialization and commercialization

DePin acts as an on-chain merchant or service provider, using intelligent analytics capabilities to recommend personalized content for users and optimize advertising. Provide reward distribution function to promote community interaction and economic activities.

Through the above extensions, we show how the economic behavior modeling ofTTD can help DePin realize autonomous and efficient economic behavior and promote the development of decentralized smart economic ecosystem.

Independence of the smart body economy

TTD Blockchain creates a new model of "smart body economy", which makes DePin no longer just a tool, but a smart body with the ability of autonomous economic behavior. Under this model, DePin has an independent on-chain identity, can safely manage and trade digital assets, and autonomously participate in on-chain economic activities such as resource allocation, governance voting and investment decisions. At the same time, the smart contract empowers DePin with the ability of autonomy and collaboration, which enhances the efficiency and transparency of task execution.

Core features include the following

Decentralized Economic Node: DePin can act as an independent on-chain economic node to perform tasks, participate in resource allocation, and optimize the governance process in the ecosystem. Its behavior is transparent and traceable, providing a guarantee of trust for on-chain collaboration.

Dynamic Resource Optimization: DePin can dynamically adjust the resource allocation strategy based on real-time data to improve resource utilization efficiency. It supports cross-chain operation to realize the optimal utilization of ecological resources.

Economic Incentives: By designing clear incentives, DePin can be rewarded for completing tasks or participating in on-chain economic activities. Such incentives drive the continuous optimization of smart body behavior and functionality.

This economic independence allows DePin to become a tradable digital asset, creating new economic value for users and developers. It not only expands the application scope of the Web3 ecosystem, but also promotes the intelligence and efficiency of economic activities through decentralized autonomy.

Decentralized Autonomy and Governance Optimization

TTD Blockchain provides intelligent governance optimization solutions for Decentralized Autonomous Organizations (DAOs), dramatically improving governance efficiency and transparency by empowering DePin

to execute and optimize the governance process. dePin analyzes community feedback, on-chain data, and voting records in real-time, generating data-driven governance recommendations to ensure the accuracy and fairness of decision-making.

Automated governance processes

DePin efficiently performs tasks such as voting results, fund allocation, and smart contract deployment, significantly reducing manual intervention. In dynamic environments, governance strategies are adjusted based on real-time data, such as optimizing voting weights or resource allocation patterns, to quickly respond to changes in the community.

Data-driven decision support

By analyzing governance history and real-time data, DePin provides intelligent decision-support tools to assist communities in developing accurate governance solutions. The data is transparent and traceable, providing community members with a guarantee of trust.

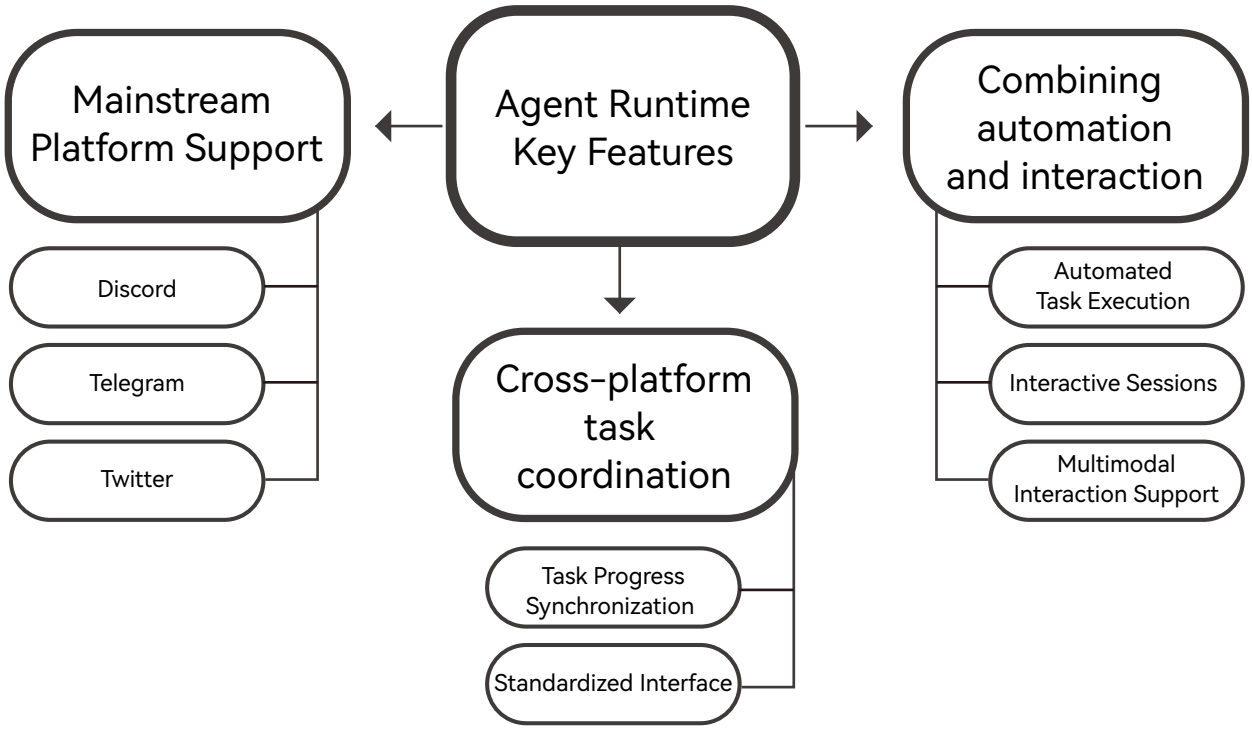
Governance proposals and optimization of resource use

DePin can initiate governance proposals to promote the efficient use of community resources and the sustainable development of the ecosystem. It optimizes the governance model, improves the efficiency of resource allocation, and meets the governance needs of different scenarios.

This intelligent governance enables DAOs to realize efficient self-governance, enhance transparency and fairness of governance, and strengthen the sense of trust among community members. Through innovative technology-driven governance solutions,TTD has set a new benchmark for decentralized governance in the Web3 world.

Seamless multi-platform integration

The Action System ofTTD realizes seamless connection with mainstream platforms, making DePin a multi-platform intelligent assistant covering social, governance, business and other fields, significantly expanding its reach and application scenarios. Meanwhile,TTD lowers the threshold of development and deployment, providing developers and users with convenient cross-platform experience.



Core Functions:

Mainstream Platform Support

TTD Blockchain supports deep integration with mainstream social platforms (e.g. Discord, Telegram, Twitter, etc.) to meet the needs of different users and communities. Consistent operation across platforms ensures a smooth user experience.

Combining automation and interaction

DePin performs automated tasks and supports parallel processing of multiple tasks. Interactive sessions are provided to support real-time dynamic interactions and user feedback.

Cross-platform task collaboration

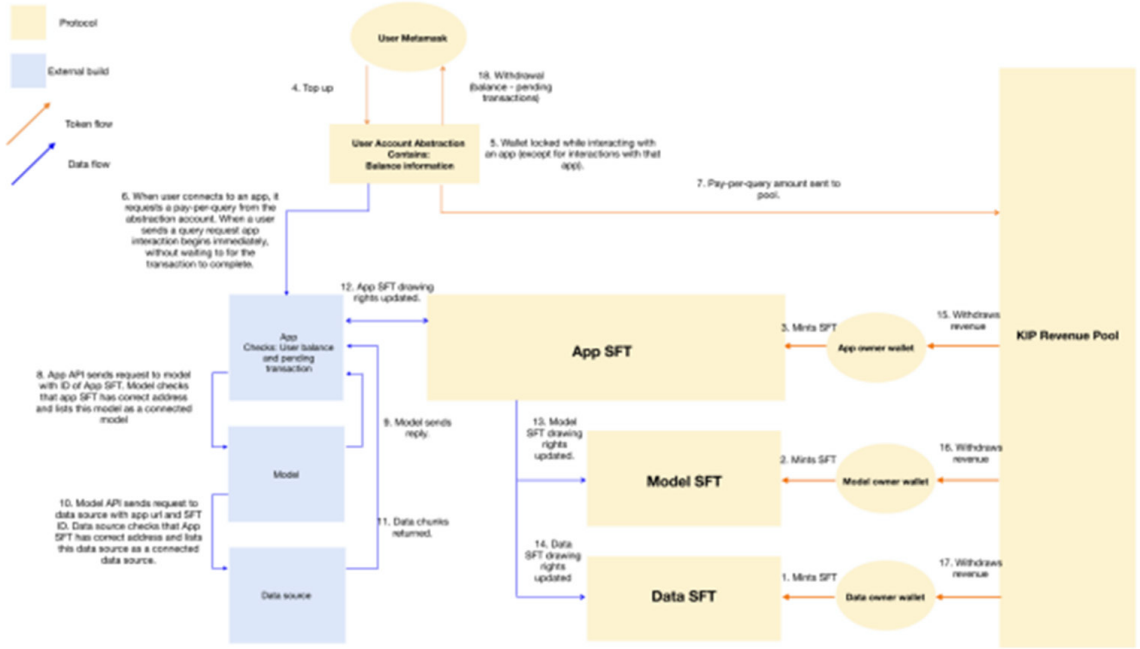
Through a standardized interface, DePin can achieve cross-platform task progress synchronization. DePin supports distributed management of complex tasks, ensuring the efficiency and accuracy of task flow.

With seamless multi-platform integration, DePin becomes an intelligent assistant to the Web3 ecosystem, reaching a wider range of user groups and scenarios. It not only optimizes the operational efficiency in the social, governance and business domains, but also enhances the user experience through automation and intelligent interactions. For developers, the standardized support ofTTD lowers the technical threshold, allowing more developers to quickly participate in the construction of the ecosystem and promote the comprehensive development of Web3.

RAG Memory System

TheTTD introduces a RAG (Retrieval-Augmented Generation) memory system that provides DePin with real-time knowledge retrieval and generation capabilities, significantly improving document interpretation and dynamic adaptation during task execution. This system enables DePin to respond more accurately to tasks and provide optimized decision support in changing environments.

Technical Implementation : Settlement Layer



Core Functions:

Real-time knowledge retrieval

DePin can access on- and off-chain data sources to retrieve up-to-date information in real time, such as market data, progress on governance proposals or community feedback. Data filtering and contextual enhancements ensure that the content generated is accurate and relevant to actual needs.

Combining short-term and long-term memory

Memory Manager combines short-term memory, which stores real-time data for the duration of a task, and long-term memory, which stores a record of key events and decisions. dePin recalls historical data across tasks to provide a more consistent user experience and decision support.

Personalized Knowledge Model

Each DePin can customize its knowledge base based on its role and mission to support deep optimization in specific areas (e.g., investment analysis, governance proposal evaluation, etc.). Machine learning models dynamically adjust the content of the knowledge base to improve the accuracy and applicability of the DePin.

By introducing the RAG memory system,TTD can provide DePin with higher task adaptability and accuracy, and enhance its ability to handle complex dynamic tasks. In applications such as on-chain governance, asset management, and market forecasting, DePin can access the latest data in real time, generate targeted content, and optimize decision-making based on historical data, thus promoting the intelligent upgrading of the Web3 ecosystem. In addition, the personalized knowledge model ensures that each DePin can provide tailor-made solutions according to specific needs, bringing precise services to users.

9 Correlation between core modules ofTTD

The core modules of theTTD demonstrate its ability to empower DePin in the Web3 ecosystem to become intelligent, decentralized and economically independent. These modules are highly interconnected and together build a complete technology ecosystem:

Economic behavior modeling is one of the core innovations of theTTD, enabling DePin to perform asset management, resource allocation, and investment-assisted tasks within the Web3 ecosystem by giving it independent economic behavior capabilities. This drives the overall framework of theTTD and establishes DePin as a decentralized economic node in the ecosystem.

The independence of the SmartBody Economy is an extension of the economic behavior modeling that emphasizes DePin's autonomy and ability to act economically. This independence not only makes DePin a tradable digital asset, but also drives the intelligence of the Web3 ecosystem through dynamic resource optimization and economic incentives.

Decentralized autonomy and governance optimization are closely related to economic behavior modeling and the economic independence of intelligentsia. dePin's performance in DAO not only optimizes governance efficiency and transparency through automated governance processes and data-driven decision support, but also provides a decentralized application scenario for economic behavior modeling.

Seamless multi-platform integration extends DePin's reach by interfacing with mainstream platforms. This cross-platform capability not only enhances the user experience in the social, governance and business domains, but also provides diversified application scenarios and technical support for economic behavior modeling and governance optimization.

The RAG (Retrieval-Augmented Generation) memory system provides the underlying technology to enable DePin's real-time knowledge retrieval, dynamic adaptation and personalized optimization capabilities. This system enhances DePin's performance in complex tasks and provides a more intelligent foundation for modeling economic behavior and governance optimization.

Together, these modules constitute the smart ecosystem ofTTD through complementary functions and technical integration. Economic behavior modeling and smart body economic independence provide the theoretical framework and operational foundation, decentralized autonomy and governance optimization expand the application scenarios, seamless multi-platform integration strengthens the technical landing ability, and RAG memory system provides strong technical support for intelligence. This correlation ensures that the modular design ofTTD has a high degree of synergy and lays the foundation for the comprehensive development of Web3 ecosystem.

10 Token Economics

TTD, as the core value carrier of theTTD ecosystem, will be partially issued using the STO (Security Token Offering) route to comply with the global financial regulatory framework and to ensure the legal and compliant circulation of assets.STO combines blockchain technology and securities regulatory requirements to provide investors with transparent, safe and regulated investment opportunities, and to ensure the long-term stable development of the TTD ecosystem. STO combines blockchain technology and securities regulatory requirements to provide investors with transparent, secure and regulated investment opportunities, and to ensure the long-term stable development of the TTD ecosystem.

Token symbol: TTD
Total supply: 500,000,000 (500 million pieces)

Distribution program

Pre-sale and Initial Offering (IEO) 20%: used to raise development capital and provide opportunities for early investors to participate.

-Team & Advisors 15%: to reward team members and advisors for their contributions, some tokens will be set for a lock-in period to ensure the long-term commitment of the team and the project.

-Community incentives 40%: incentivize users to participate in the network through airdrops, reward programs, etc. to expand the community.

-Eco-Development Fund 15%: to support decentralized application (DApp) development, technology innovation and partner ecology construction.

Liquidity Pool 10%: Used to provide liquidity to the token exchange market, ensuring the depth and liquidity of asset transactions.

TTD IEO Issuance Program

structure of an issue

• Issue Objects: Institutional investors, qualified investors and retail investors in regulated markets who meet compliance requirements

• Total Issuance: 20% (100 million) of the total 500 million TTD tokens will be issued through IEO.

• Supporting assets: TTD ecosystem revenue rights, future cash flows, eco-growth incentives

• Compliance Standards: Compliant with US SEC Reg D / Reg S, European MiCA, Hong Kong VASP license, Singapore PSA regulatory framework.

Token Economics and Revenue Model

Token Properties

• Equity-Backed Token: Investors holding TTD tokens receive a portion of the ecological benefits

• Source of revenue:

oDevice Mining Revenue: Share of Mining Revenue from DePIN devices in the TTD ecosystem

oRWA Transaction fees: commission revenue from real assets uploaded to the chain, transactions

oEco-growth dividend: ecological incentives for DApp developers and project owners to return funds

(2) Token locking and unlocking mechanism

• Lock-up period: After the issuance of IEO tokens, investors are required to hold the tokens for 6-12 months before entering the secondary market.

• Progressive unlocking: 50% at month 6, 100% at month 12

(3) Equity + Token Combination Model

• Investor Benefits: TTD security-based token holders receive TTD ecosystem revenue sharing

• Governance rights: some IEO tokens can give investors voting rights to influence TTD ecological decisions

Compliance Advantage

Complies with global securities regulations: protects investors' rights and enhances market acceptance

Provide legal liquidity: listed on compliant STO exchanges, with liquidity.

Real Asset Backing: The TTD ecosystem's revenue model, device mining, and transaction fees provide value backing.

Enhance institutional investor trust: the compliance framework makes traditional financial institutions willing to invest in the TTD ecosystem.

TTD provides blockchain projects with financial-grade transparency, security and sustainability through the STO compliance route. By offering securities-based tokens, we not only attract qualified investors from around the world, but also establish a long-term stable development model for the DePIN+RWA ecosystem.TTD aims to connect the real world with the digital economy, and to promote the development of global asset on-chain and decentralized infrastructure!

11 Core Team

David Carter CEO

Over 15 years of extensive experience in the blockchain and fintech industry.

Previously, he was a member of the core team at QuantumTech, where he was responsible for global market development and strategic partnerships.

As the investment director of InnovateFund in Asia Pacific, he has accumulated profound investment management experience in AI and blockchain markets.

Sophia Reynolds CTO

A top expert in blockchain technology with over 12 years of development and architectural design experience. He played a key development role in the early team of the ChainLink project, and was responsible for the security evaluation of the smart contract .

Led technical architecture design and core development during the build of the FinTech Vault program. Served as a technology evaluation consultant for several investment organizations, including BlockWise and TechInvest.

Benjamin Scott COO

Over 10 years of experience in operations management, particularly in the blockchain and AI economy. Previously, he was Director of Marketing Operations for APAC at Kraken, where he drove the team to achieve significant business growth.

During his tenure at BitZ, he served in the Investment Strategy and Operations Management departments, where he demonstrated excellent business execution and management skills.

12 Eco-Partners

13 Roadmap (also fig.)

Project Initiation and Core Framework Development (2024Q1 - 2024 Q3)

-Define the core architecture and technical specifications of theTTD to advance the program.

-Build the DePin core framework, including modular design, RAG memory system, and integration of underlying intelligent models (e.g., GPT-4, Llama).

-Develops decentralized governance modules to provide foundational support for on-chain autonomous organizations (DAOs).

-Releases an Alpha version and invites the developer community to test and give feedback.

Functional Expansion and Ecological Build (2024Q4 - 2025Q1)

-Launched a plug-in system to support customized functional extensions (e.g. trading aids, data analysis).

-Integrates multi-platform support, complete with seamless connectivity to social platforms such as Discord, Telegram, Twitter and more.

-Development of an on-chain economic module to enable DePin to participate in asset management and resource allocation.

-Build a developer community and launch an early eco-incentive program to attract more developers to join.

Smart Body Economy and Mass Adoption (2025Q2 - 2025Q3)

- The introduction of the "Smart Body Economy" model empowers DePin with independent economic behavior and value trading capabilities.

-Launched a marketplace for smart bodies to enable users to trade and invest in DePin.

-Optimizes Memory Manager to enhance DePin's memory depth and learning ability for smarter task execution.

-Promotes the practical implementation of DePin in the areas of DAO governance, automated trading, and community operations.

Cross-chain support and global expansion (2025Q4 - 2026Q1)

-Enables multi-chain compatibility and supports cross-chain interactions with mainstream blockchains (e.g. Ethereum, Polkadot, Solana).

-Extends DePin's application scenarios to include supply chain management, decentralized finance (DeFi) and on-chain social networking.

-Builds a global ecological network of developers and users, organizes hackathons and eco-cooperation events, and promotes ecological prosperity.

Full autonomy and ecological maturity (2026Q2)

-Drives the complete decentralization of theTTD into a community-driven governance model.

-Further optimizes DePin's autonomy so that it can perform complex tasks independently and continuously optimize its capabilities.

-Become the infrastructure of the Web3 world and provide intelligent drivers for the digital economy.

14 Legal Compliance and Risk Management

Legal Framework and Compliance Strategy

TTD Blockchain has always prioritized legal compliance in the development of its platform. We comply with local laws and regulations in multiple jurisdictions around the world to ensure that our platform operates in compliance with legal requirements, especially in the areas of token issuance, trading, and user data protection. By complying with global regulations such as securities laws, anti-money laundering (AML), counter-terrorism financing (CFT) and others, we ensure that the rights of all users and investors are protected. Additionally, our legal compliance team is constantly monitoring legal developments in different regions of the world to ensure that our platform is compliant and flexible enough to respond to regulatory requirements in different countries and regions.

Market risk management

TTD Blockchain is facing the fast-developing Web3 AI market, and we fully recognize the risks associated with market volatility. For this reason, we effectively reduce the impact of market volatility on TTD's price through token destruction mechanisms, market liquidity management and risk hedging strategies. At the same time, we continue to pay attention to macro changes in the global market to ensure that our platform can maintain steady growth in a competitive environment and avoid negative impacts on our platform's development caused by drastic market fluctuations.

echnical Security and Contractual Risks

Technical security is at the core of theTTD ecosystem. To ensure the security of our platform, we have adopted multi-layered technical

security measures, including regular audits and vulnerability testing of all Tsmart contracts. We have partnered with leading security audit firms to ensure that the platform's smart contracts and blockchain infrastructure are protected against potential hacking and vulnerability exploitation. In addition, we ensure the long-term stability and security of the platform's technical architecture through continuous system updates and security optimization.

Eco-Expansion and Operational Risks

As theTTD ecosystem expands globally, new markets and partnerships present potential operational risks. For this reason, we employ a rigorous partner vetting process to ensure that the organizations we work with meet the platform's strategic goals and operational standards. In addition, we use centralized governance and transparent contract management to ensure that all participants in the ecosystem can work together efficiently and effectively to drive the long-term sustainability of the platform. Our operations team also regularly evaluates the performance of our partners and the ecosystem to adjust our strategy to address potential risks.

Legal and regulatory risks

Cryptocurrency and blockchain technology are still in an evolving phase of global regulation, and Silica Chain is exposed to the risks associated with changes in regulatory policy in various countries. To mitigate this risk, we work closely with a number of legal advisors and regulators around the world to ensure that we are able to adapt in real time to changes in local laws. We have also adapted our token economy model and business processes to the legal requirements of different regions to ensure legal compliance in each market and to minimize the impact of regulatory risk on the platform's development.