



Hydranet Litepaper

A New Era of Crypto Trading

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Introduction

Blockchains were created to address the issues of **centralization** and the reliance on intermediaries in traditional financial systems. Yet paradoxically, centralized exchanges continue to dominate the **cryptocurrency trading landscape**, accounting for close to **90% of the spot trading volume** in 2024 according to CoinGecko's annual crypto report.

Centralized exchanges are not to blame for this trend and the reason is simple - decentralized solutions struggle to compete with the **user-friendliness, fast trade processing, cost-effectiveness, and multi-chain support** that centralized exchanges offer, even to the extent that we are willing to give up **custody of our funds** and leave them entirely in the hands of **external entities** to control.

While this trend deviates from the core principles of crypto, it underscores that the blockchain trilemma of **security, scalability, and decentralization** is not an easy task to solve. But remember this - technology evolves rapidly. Who knows what the future holds...



This Is Hydranet

Hydranet introduces the future of decentralized finance through its next-generation **multi-chain off-chain network**, powered by state channels. This is a network not confined to the scalability limits of modern blockchains, nor does it compromise self-custody in exchange for low transaction costs and fast settlements, even when transacting and trading across fundamentally different blockchains.

Through the combination of highly scalable state channel protocols, Hydranet delivers a solution that ensures scalability and interoperability between blockchains for years to come, while embracing each blockchain's unique functionality and use.

With Hydranet's solution, decentralized trading becomes effortless, seamlessly combining the **speed** and **convenience** of centralized trading with the **security** and **privacy** of decentralized trading – full control of user funds, free from network delays and costs.

And as if this wasn't enough, Hydranet goes beyond trading. It offers a comprehensive suite of features and services, including the most cost-effective solution for bridging assets between different blockchains and the potential to evolve into a global off-chain payment network. Users can perform fast, cost-efficient off-chain crypto payments, while merchants benefit from a trustless solution for accepting crypto payments, including the ability to instantly and automatically convert volatile assets into stablecoins upon receipt, minimizing their risks and ensuring financial stability.



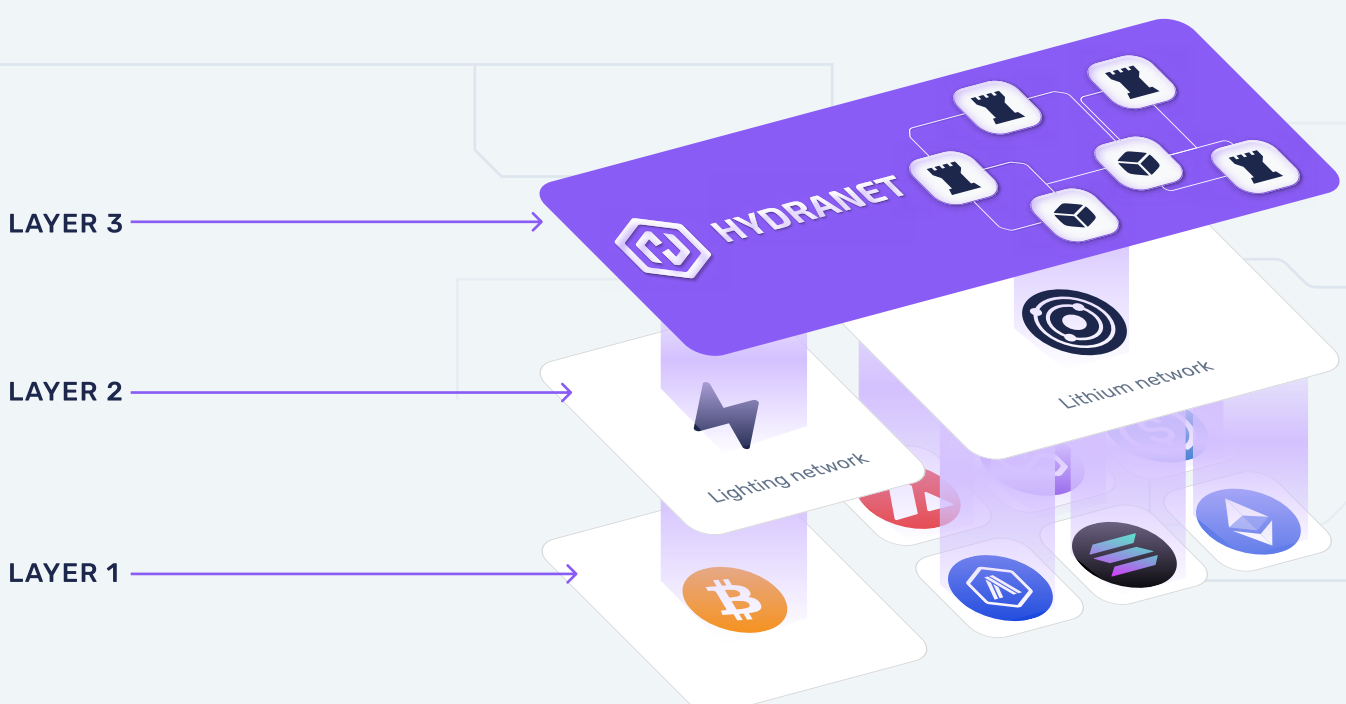
The Off-Chain Layer

Hydranet's multi-chain off-chain network is a unique combination of Layer 2 state channel protocols, crafted into a single solution that allow these protocols to interact. By doing so, Hydranet efficiently unites blockchains of different origins, whether it's Bitcoin, Ethereum, Solana, Arbitrum, Base, or others, making trading, bridging, and payments between them effortless. **This is Layer 3 - the off-chain layer where interoperability is truly unlocked.**

State channel protocols refer to a set of frameworks and standards that define the procedures for conducting transactions off-chain, outside the blockchain. Unlike on-chain transactions, which necessitate miners' confirmations, off-chain transactions are distinguished by their near-instant transaction times, minimal-to-no transaction fees, high level of privacy and trustless operations. These attributes make them particularly useful for frequent interactions and scenarios where real-time responsiveness is crucial, and thereby an excellent choice for a new age of trading platforms.

The Lightning Network is the most well-known state channel protocol for off-chain Bitcoin transactions. Hydranet seamlessly integrates Lightning using advanced SDKs from leading developers, ensuring instant, trustless BTC payments within its ecosystem.

For Ethereum-compatible blockchains, Hydranet has developed its own state channel protocol: Lithium. Unlike existing solutions, Lithium enables multi-hop transaction routing across multiple off-chain nodes, for a truly decentralized network. It also supports trustless off-chain lending pools for efficient channel balance management, making it the first off-chain scaling solution tailored for ERC-20 assets. This innovation enables gas-free, near-instant transactions across Ethereum's ecosystem and, when integrated into Hydranet's off-chain network, bridges the gap between Bitcoin and DeFi.



Decentralization At Its Core

The Hydranet Network is what powers the future of decentralized finance, enabling seamless off-chain trading and transactions. This decentralized network is upheld by three key entities - **Titans** and **Guardians** - each playing a vital role in maintaining and securing the ecosystem.



Titans

At the core of the Hydranet Network stands Titans, dedicated to maintaining the network's stability and continuous operation. Titans run Hydranet's off-chain communication protocol and are responsible for providing network users with the necessary infrastructure for successful off-chain trades and transactions. They do this by running full blockchain and off-chain nodes, hosting Hydranet's order book and matchmaking engine, and acting as a state channel liquidity provider for the supported assets in the network.



Guardians

Guardians stand as the protectors of the network, ensuring its integrity and safe operation. To uphold this role, they operate monitoring services, known as watchtowers, for the relevant state channel protocols. They oversee the behavior of all participants, whether it be Titans, other Guardians, or Hydranet users, and enforce penalties on those who violate the network's rules.



Take Back Control

Self-custody of funds is one of the cornerstones in the realm of cryptocurrencies, and with Hydranet, **you will never have to compromise on this principle again.** Hydranet empowers you with complete control over your crypto and peace of mind knowing your financial future is firmly in your hands, regardless if you're a seasoned investor or just starting your crypto journey.

Not only are you in complete control of your private keys when storing and transacting off-chain, but Hydranet also employs atomic swaps, meaning the entire trading process is handled by the trading peers themselves, without any intermediaries or centralized entities. This establishes Hydranet as trustless as a trading platform can be. For Hydranet, trustlessness isn't just a feature - **it's a guarantee.**

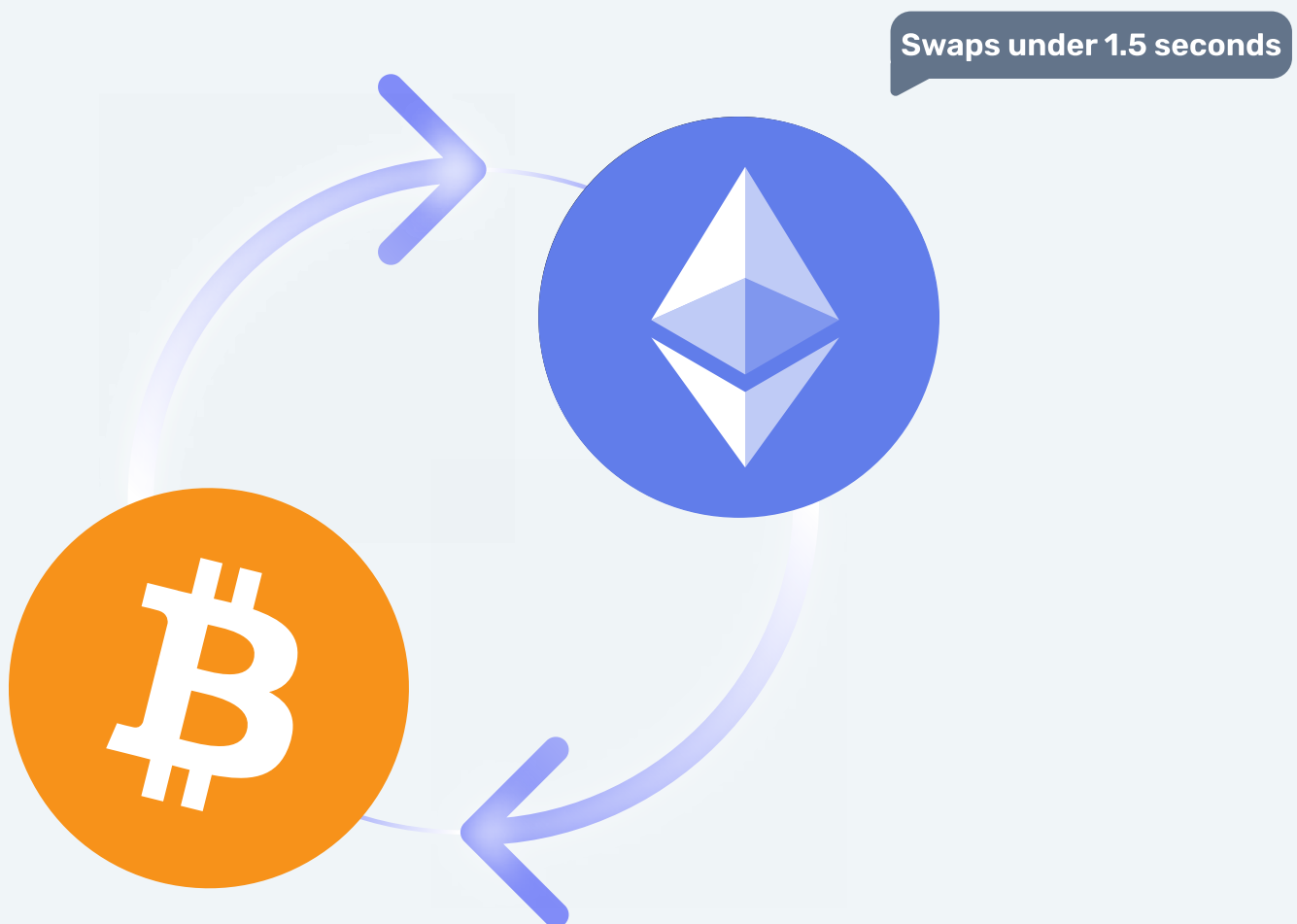
YOUR KEYS,
YOUR COINS,
ALWAYS.



Trade Faster

In the fast-paced world of trading, every second counts. While today's on-chain decentralized exchanges struggle with blockchain limitations, leading to missed opportunities, Hydranet's solution stands apart - free from Layer 1's drawbacks while still benefiting from its security and decentralization.

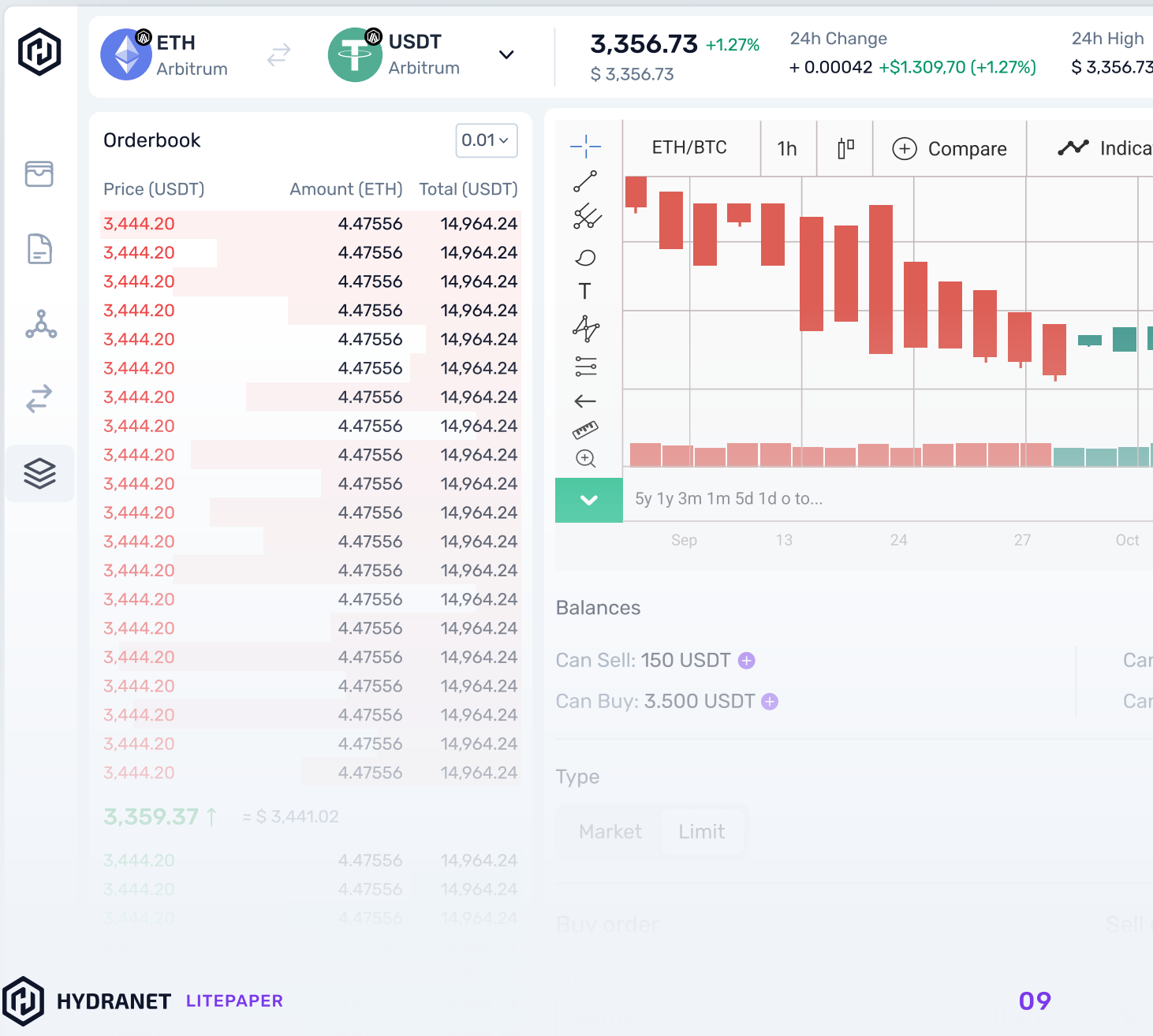
Leveraging state channel protocols, Hydranet executes trades near-instantly, regardless of how congested the underlying blockchains are. Imagine trading BTC for ERC-20 tokens, non-custodially, in just seconds. With Hydranet, you can - **trustless, without delays, and free from high fees.**



Trade Wiser

With just a few on-chain transactions to fund your state channels, Hydranet enables you to **trade as many times as you want without the need for constant on-chain interactions**, incurring only a minimal trade fee.


No other decentralized exchange offers this level of efficiency, and the costs for depositing and withdrawing to your state channels are comparable to moving funds to and from a centralized exchange. By timing your state channel management with periods of low blockchain activity, you can further optimize your costs, ensuring maximum profitability for every trade.



Trade Simpler

For a more streamlined trading experience, Hydranet provides solutions to automate the entire trading process—from opening to closing of state channels—effectively mirroring the functionality and **ease of use** of traditional decentralized exchanges.

Despite this simplicity, all transactions and trades are still executed off-chain, **shielding** you from **frontrunning attacks** that could otherwise put your profitability at risk.

 HYDRANET

Home

Receive

Swap


Send

Transactions

Settings

Swap

Swap from

 **ETH**
Arbitrum

3,0012|
= \$3,124,48

Balance: 7.011123 ETH

↕


25%

50%

75%

MAX

Swap to

 **USDT**
Arbitrum

3.124,48
= \$3.124,48

⚙️

 Advanced options

Network Fee

\$0,0004

Slippage Tolerance

0,3%

Exchange Fee

Free

Estimated completion

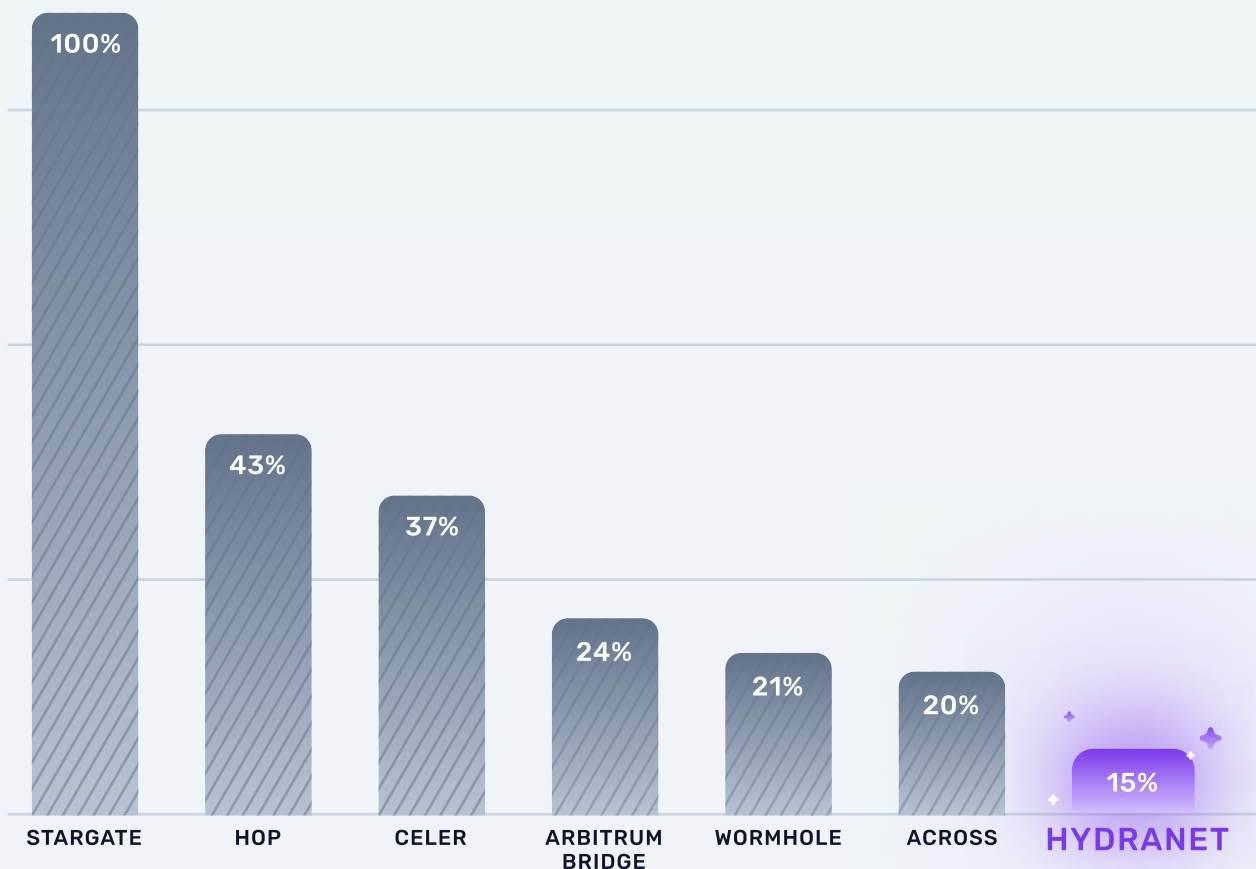
1 minute

Swap

Bridge Cheaper

Hydranet is not only a leader in decentralized trading but also excels as a bridging solution. Powered by its blockchain-agnostic off-chain network, Hydranet seamlessly interacts with and connects many modern blockchains, turning it into an **ideal blockchain bridge** for crypto investors looking to capitalize on the unique advantages offered by different blockchains.

Using Hydranet to move funds between blockchains ensures that you maintain in complete control over your funds throughout the entire process, instead of having to rely on centralized solutions or questionable smart contract-based bridges. Beyond security, Hydranet also offers a significant cost advantage, reducing expenses by **up to 85%** compared to competing solutions. This makes Hydranet one of the most efficient ways to transfer funds across blockchains.



Profitable Liquidity Management

Hydranet stands out as the optimal choice for market making due to several compelling reasons. Firstly, it offers a **decentralized limit order book**—a rarity in decentralized finance—allowing you to place limit and market orders on both the buy and sell sides. Secondly, Hydranet's order book operates off-chain, **eliminating** all **blockchain interactions** when adjusting liquidity and allows you to quickly respond to changing market conditions.

In contrast, today's decentralized exchanges are normally built on the principles of Automated Market Making (AMM). While this approach has gained popularity because of its simplicity, it also faces the major limitations of blockchain scalability and lack flexibility when you seek to capitalize on strategic opportunities in the market.

3,359.37 ↑ ≈ \$ 3,441.02

3,444.20	4.47556	14,964.24
3,444.20	4.47556	14,964.24
3,444.20	4.47556	14,964.24
3,444.20	4.47556	14,964.24

Buy order

Price

3,0012

USDT

Amount

1,5

ETH

25%

50%

75%

MAX

Total

3,120,00

USDT

Fees Estimate: 0.05 USDT

Buy ETH

Sell order

Price

15

USDT

Amount

0,0045

ETH

25%

50%

75%

MAX

Total

3,120,00

ETH

Fees Estimate: 0.05 USDT

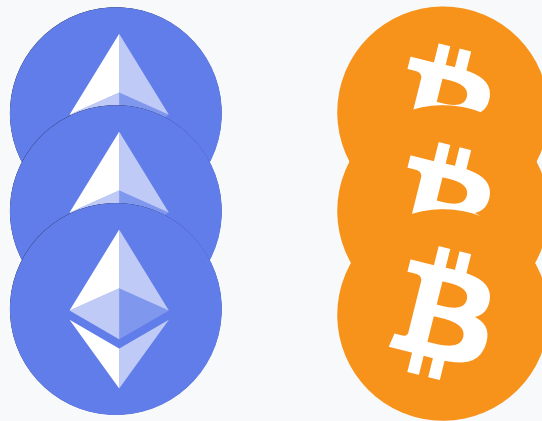
Sell ETH

Price (USDT)	Amount (ETH)	Total (USDT)
3,444.20	4.47556	14,964.24
3,444.20	4.47556	14,964.24
3,444.20	4.47556	14,964.24
3,444.20	4.47556	14,964.24

Off-Chain Lending Pools

Participating in the Hydranet Network as a Titan allows you to serve as a state channel liquidity provider, effectively offering an off-chain liquidity lending service. By temporarily allocating funds, you increase users' inbound liquidity, enabling them to receive off-chain payments. This on-demand liquidity service plays a crucial role in optimizing network efficiency and transaction flow. In return, liquidity providers earn fees for their contributions, creating a sustainable and incentive-driven ecosystem.

Best part, state channel liquidity on Hydranet is **always returned to its rightful owner**, completely **free from liquidation risk**. This provides a secure and seamless way to earn interest on your cryptocurrency while holding.



Tomorrow's Crypto Payments

Can crypto payments be as fast and simple as credit card payments? **Hydranet's off-chain communication protocol makes this possible.** By enabling instant, low-cost transactions on virtually any blockchain, Hydranet bridges the gap between everyday crypto payments and the convenience of traditional payment systems.

By using Hydranet as an off-chain payments provider, merchants gain access to a scalable system designed to meet the growing demand for blockchain transactions, along with the ability to instantly, free of network fees, and trustlessly convert volatile assets into stablecoins. Meanwhile, users enjoy a seamless and secure payment experience, bringing crypto payments closer to the simplicity of traditional credit cards.



Hydranet's Token - HDN

Hydranet's token, HDN, serves three distinctive and important purposes - Fee Reduction, Collateral, and Governance.

Fee Reduction

Hydranet is committed to the concept of profitable decentralized trading. By holding HDN tokens, Hydranet users gain the added advantage of reduced trading fees, making their trading experience even more rewarding.

Collateral

Participants seeking involvement in the Hydranet Network must collateralize Hydranet's token. Game theory incentivizes contributors to act truthfully, fostering the longevity of the network.

Governance

Hydranet token holders are in control, steering the future trajectory of Hydranet through governance mechanisms. Tokens are equivalent to voting power for a fair democratic decision-making process, ensuring a decentralized and community-driven evolution of the network.



Market Opportunities

The cryptocurrency trading market represents massive and rapidly growing opportunities. In 2024 alone, the spot trading volume on the 10 top centralized and decentralized exchanges exceeded **\$19 trillion***, which is an increase by more **than 100%** compared to 2023. Despite this growth, decentralized exchanges (DEXs) face significant barriers to mass adoption, including high network fees, transaction delays, and scalability limitations.

Hydranet addresses these challenges head-on with its unique multi-chain off-chain network. By combining the speed and cost-efficiency of CEXs with the decentralization and self-custody of DEXs, Hydranet eliminates the trade-offs that have hindered the industry's progress for years.

Beyond trading, the Hydranet Network has limitless potential as a global off-chain payments solution. It enables instant, trustless, and network fee-free crypto payments, positioning Hydranet not only as a leader in decentralized trading but also as a pioneer in the future of daily crypto payments.

\$2T

Annual Bridging volume + Annual DEX volume

\$150M

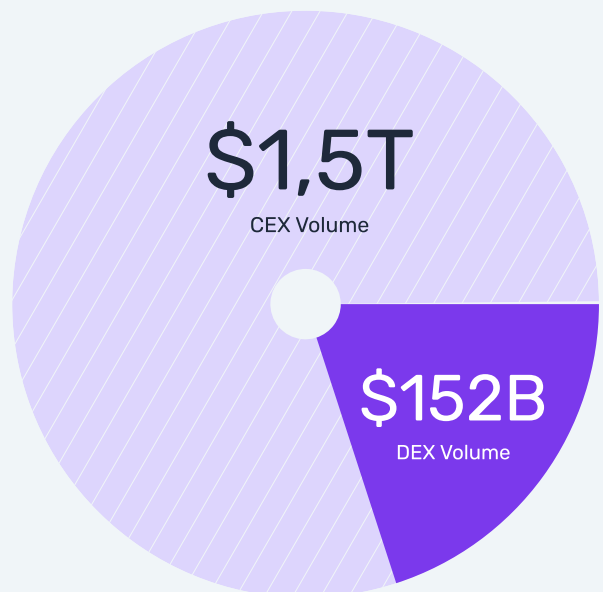
HDN ARR Opportunity @ \$50B annual turnover

2024 Monthly Cross-Chain Bridging Volume¹



Hydranet outperforms Stargate by up to **85% in cost**

2024 Monthly CEX and DEX Volume²



Hydranet combines the **user experience** of CEXs with the **security** and **privacy** of DEXs

¹ Source: DefiLlama, Bridge Volume

² Source: CoinGecko, 2024 Crypto Report

Hydranet Foundation

Living up to the values of decentralization, Hydranet operates as a Decentralized Autonomous Organization (DAO), driven by community governance and supervised by its elected representatives.

Hydranet is owned by everyone, exemplifying a collective ownership that empowers each participant in its community.





Stay connected with the network

Join the community

