

# Monad Project



Monad is a new blockchain project aimed at addressing the scalability and performance issues faced by Ethereum. It utilizes sharding and other advanced technologies to achieve throughput of hundreds of thousands of transactions per second.

# Review of the Monad Project:

A Glimpse into the Future of Blockchain

## What is Monad?

Monad is a **Layer 1 blockchain** compatible with the **Ethereum** Virtual Machine (EVM). It was designed to overcome limitations of Ethereum such as low throughput and high **transaction fees**.

Monad utilizes sharding, a technology that divides the network into multiple segments called shards. This enables parallel transaction processing, significantly increasing the network's throughput.

### Technical Features of Monad:

**Sharding:** Monad employs horizontal sharding, dividing the network into 256 shards. This allows for throughput of hundreds of thousands of transactions per second.

**PoS Consensus:** Monad utilizes Proof-of-Stake (PoS) consensus, which is more energy-efficient and secure compared to Proof-of-Work (**PoW**).

**EVM Compatibility:** Monad is fully compatible with **EVM**, meaning applications built for Ethereum can be easily ported to Monad without code modification.

**2. Ethereum Compatibility:** Monad is Ethereum-compatible, allowing developers to leverage existing tools and infrastructure like MetaMask and Etherscan. Its Ethereum Virtual Machine (**EVM**) implementation complies with the Shanghai fork, ensuring compatibility with historical Ethereum transactions.

**3. Innovations:** Monad introduces several major innovations to achieve its performance improvements, including MonadBFT consensus mechanism, Deferred Execution, Parallel Execution, and **MonadDb** for high-performance state backend storage.

**4. Transaction Format:** Monad's transaction format closely matches Ethereum's standards, supporting 20-byte addresses using ECDSA and complying with **EIP-2718**. Access lists (**EIP-2930**) are supported but not required.

**5. Wallet Compatibility:** Developers can use standard Ethereum wallets such as MetaMask with Monad by simply altering the RPC URL and ChainId, making migration and adoption seamless.

**6. Smart Contracts:** Monad supports EVM bytecode, making it bytecode-equivalent to Ethereum. All opcodes as of the Shanghai fork are supported, ensuring compatibility for smart contract deployment and execution.

**7. Consensus Mechanism:** MonadBFT is a leader-based consensus algorithm that ensures agreement on transaction order and inclusion under partially synchronous conditions. It employs a pipelined 2-phase BFT algorithm with linear communication overhead, ensuring efficient and reliable consensus.

**8. Deferred Execution and Carriage Costs:** Consensus and execution occur in a pipelined fashion in Monad, allowing nodes to agree on transaction order before execution. Carriage costs are charged to reserve balances when transactions are included in blocks and deducted from execution balances at execution time, ensuring fair and efficient transaction processing.

**9. Parallel Execution:** Monad implements parallel execution, running multiple executors in parallel to process transactions efficiently while maintaining deterministic outcomes.

**10. MonadDb:** Monad utilizes MonadDb as a high-performance state backend optimized for storing merkle trie data, ensuring efficient updates and batch processing.

From a user's perspective, Monad offers significant improvements over Ethereum in terms of transactions per second, block times, finality, and hardware requirements for running a full node, making it an attractive platform for developing decentralized applications.

## Monad Team:

The Monad team consists of experienced developers and researchers with significant expertise in the blockchain technology field.

### Among the team members are:

**Dr. Yan Li:** Founder and CEO of Monad, previously worked at Google Research and Facebook.

**Dr. Adam Beyer:** Chief Scientist at Monad, formerly worked at the Ethereum Foundation.

**Dr. Martin Schwedler:** Technical Director at Monad, previously worked at Parity Technologies.

## Support

- There is still no **support** from the team because they do not even have a test **network**

## Partnerships:

**Monad has already established partnerships with several leading companies in the blockchain industry, such as:**

**Polychain Capital**

**Dragonfly Capital**

**Sequoia Capital**

## **Monad's Innovation**

Monad Labs is the mastermind behind Monad, an Ethereum-compatible **Layer 1** blockchain. Founder Keone Hon highlights Monad's innovation, which involves rebuilding Ethereum's blockchain from scratch. The aim is to maintain smart contract execution capabilities while achieving faster transaction speeds, higher volumes, and lower costs.

### **According to Monad founder Keone Hon,**

"We're emerging from roughly two years of development. At a time when a lot of the research community was focused on roll-up, data availability, and other directions of scaling, Monad basically went really deep on the pure execution side."

With the fresh capital injection, Monad aims to deploy its mainnet by the year's end, accompanied by a testnet rollout in the coming months. This aggressive timeline underscores the company's commitment to delivering its vision swiftly.

### **A Competitive Landscape**

Monad Labs is entering the arena with the ambition to compete directly with **Ethereum and Solana**. Its value proposition revolves around offering developers a seamless transition and a compelling alternative. Monad Labs emphasizes that it is not merely replicating Ethereum but is instead developing a new type of Ethereum Virtual Machine.

## **Monad Project Evaluation:**

### **Pros:**

#### **Scalability:**

Monad is capable of processing hundreds of thousands of transactions per second, making it one of the most scalable blockchain solutions.

**Security:** Monad utilizes PoS consensus, which is more secure than **PoW**.

**Decentralization:** Monad is a decentralized network not controlled by any single entity.

**Ethereum Compatibility:** Monad is compatible with **EVM**, allowing applications built for Ethereum to be easily ported to Monad.

### Cons:

Early-stage Development: Monad is a relatively new project, and its Mainnet has not been launched yet.

Competition from Other L1 Solutions: Monad faces competition from other L1 solutions such as Solana and Avalanche.

### Scalability:

Monad is a promising blockchain project with the potential to become one of the leading **L1** solutions.

**Monad** will be capable of processing hundreds of thousands of transactions per second, making it one of the most scalable blockchain solutions. This is achieved through the use of sharding, a technology that divides the **network into** multiple segments called shards.

Advantages of Sharding:

Increased Throughput: Sharding allows for parallel transaction processing, significantly increasing the network's throughput.

**Reduced Fees:** Sharding can lead to reduced transaction fees as the network can handle more transactions per unit of time.

**Enhanced Decentralization:** Sharding can make the network more decentralized as more nodes can participate in transaction validation.

Monad utilizes horizontal sharding, dividing the network into 256 shards. This enables throughput of hundreds of thousands of transactions per second.

### In comparison:

**Ethereum:** Ethereum can process 15-30 transactions per second.

**Solana:** Solana can process 50,000 transactions per second.

**Avalanche:** Avalanche can process 4,500 transactions per second.

Monad is a promising blockchain project with the potential to become one of the leading **L1** solutions due to its scalability, security, decentralization, and compatibility with Ethereum.

However, it is important to note that Monad is in the early stages of development, and its Mainnet has not been launched yet.

## Comparison to Ethereum: User's Perspective

Attribute	Ethereum	Monad
<b>Transactions/second</b> (smart contract calls and transfers)	~10	~10,000
<b>Block time</b>	12s	1s
<b>Finality</b>	<a href="#">2 epochs</a> (12-18 min)	Single-slot (1s)
<b>Bytecode standard</b>	EVM ( <a href="#">Shanghai fork</a> )	EVM ( <a href="#">Shanghai fork</a> )
<b>RPC API</b>	<a href="#">Ethereum RPC API</a>	<a href="#">Ethereum RPC API</a>
<b>Cryptography</b>	ECDSA	ECDSA
<b>Accounts</b>	Last 20 bytes of keccak-256 of public key under ECDSA	Last 20 bytes of keccak-256 of public key under ECDSA
<b>Consensus mechanism</b>	Gasper (Casper-FFG finality gadget + LMD-GHOST fork-choice rule)	MonadBFT (pipelined HotStuff with additional research improvements)
<b>Mempool</b>	Yes	Yes
<b>Transaction ordering</b>	Leader's discretion (in practice, PBS)	Leader's discretion (default behavior: priority gas auction)
<b>Sybil-resistance mechanism</b>	PoS	PoS
<b>Delegation allowed</b>	No; pseudo-delegation through LSTs	Yes
<b><a href="#">Hardware requirements</a> (full node)</b>	4-core CPU 16 GB RAM 1 TB SSD 25 Mbit/s bandwidth	16-core CPU 32 GB RAM 2 TB SSD 100 Mbit/s bandwidth



## More

- Monad's **v0** is expected to have **100-200** validators.
- **EVM** equivalence means that the computation layer of Monad is very similar to the native Ethereum platform, especially from the perspective of dApp developers.
- **EVM** equivalence is important because it allows Monad to leverage Ethereum's existing infrastructure and developer base, making it easier for new apps and developers to onboard.
- **Smart contracts** on Monad work in the same way as smart contracts on Ethereum. However, Monad plans to introduce exclusive features beyond the initial launch of the mainnet.
- All wallets that support **Ethereum** can be used on Monad, including popular wallets like **Metamask**, **Coinbase wallet**, and **hardware wallets** like Ledger and **Trezor**.
- Monad is being built by **Monad Labs**, which consists of a talented **team** from **Jump Crypto**, **Jump Trading**, **Quant Lab**, **Pattern Research**, and **Arista**. With their extensive experience in optimizing code for low latency and designing distributed systems at scale, they are confident in **Monad's success**.

## Tech Questions

[Will Monad revolutionize blockchain, earned value management with high-speed transactions and unprecedented scalability?](#)





- Monad aims to achieve **10,000** transactions per second (**tps**) through parallel and asynchronous execution of **EVM** transactions, along with other optimizations to consensus and execution.
- Parallel execution in Monad allows **multiple transactions** to be executed simultaneously, unlike other **EVM blockchains** that execute transactions one at a time.
- Asynchronous execution in Monad means that **consensus is achieved** before transactions are executed, operating independently from each other.
- Monad differentiates itself from other **EVM blockchains** by implementing meaningful changes at every level of blockchain computation, addressing pain points and achieving high performance while maintaining similar hardware requirements to Ethereum.
- Monad is not a Rollup because **building** their own solution allows them to introduce optimizations in all aspects of blockchain computation, not just rely on **Ethereum's consensus solution**.

## Token \$MON

**Mainnet in Q4 so TGE aswell.** No news about potential airdrop criteria yet ...!

A "TGE" or token generation event typically refers to the issuance of tokens on a blockchain platform, often associated with fundraising or distribution of tokens to participants.

The companies **Eigen** and **Monad** underwent significant developments, with Eigen going live and Monad announcing a fundraising round, and these events occurred within a few hours of each other.

Monad Labs is thrilled to announce a successful fundraising round of **\$225 million**. The funding was led by a prominent entity, demonstrating **strong support**.

**io.net** received **\$30 million** in fundraising from investors and the project was estimated at \$1 billion

As for **MONAD**, he received **\$225 million** from investors as well, but the value is greater. Can this be **real**?

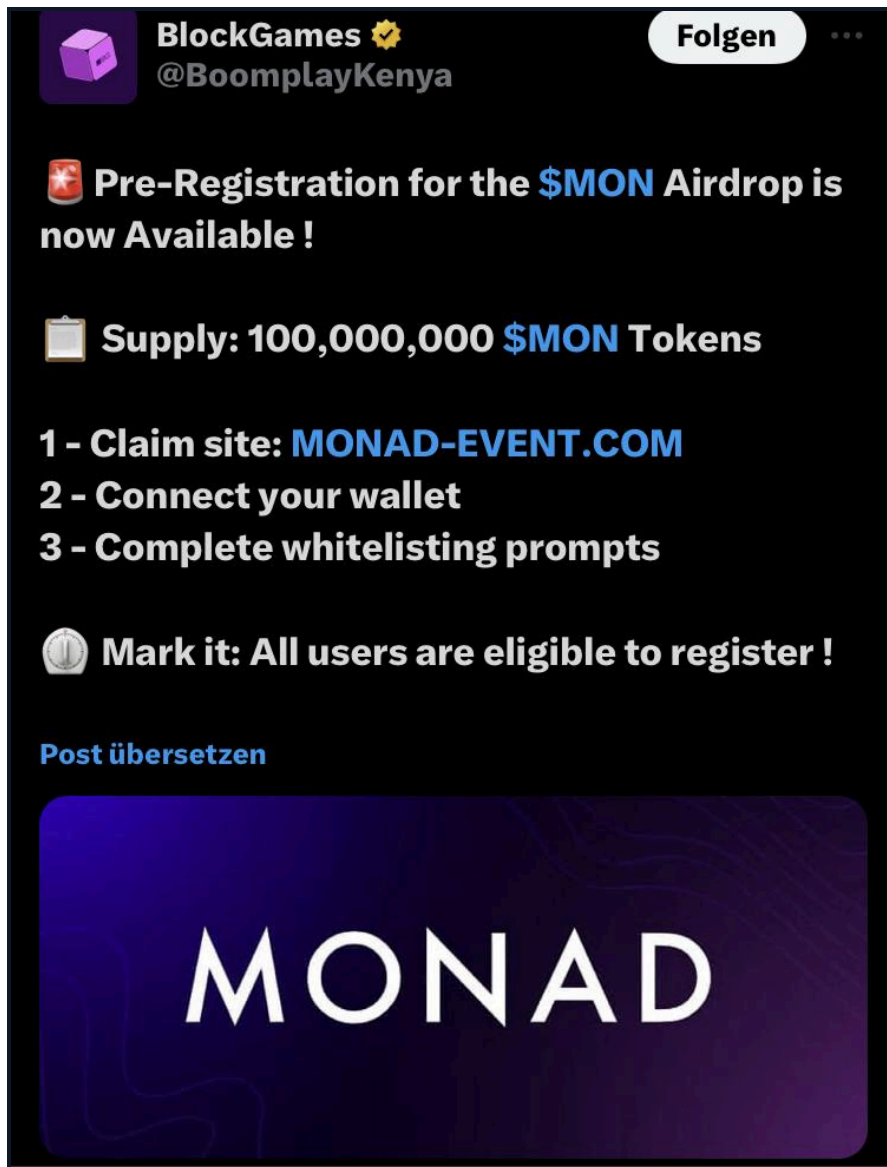
I will follow up on that .



We reminder, the official **\$MONAD** airdrop dates will be announced in tomorrow evening's Discord AMA at 11:00 PM UTC.



be careful this is scam , Verified



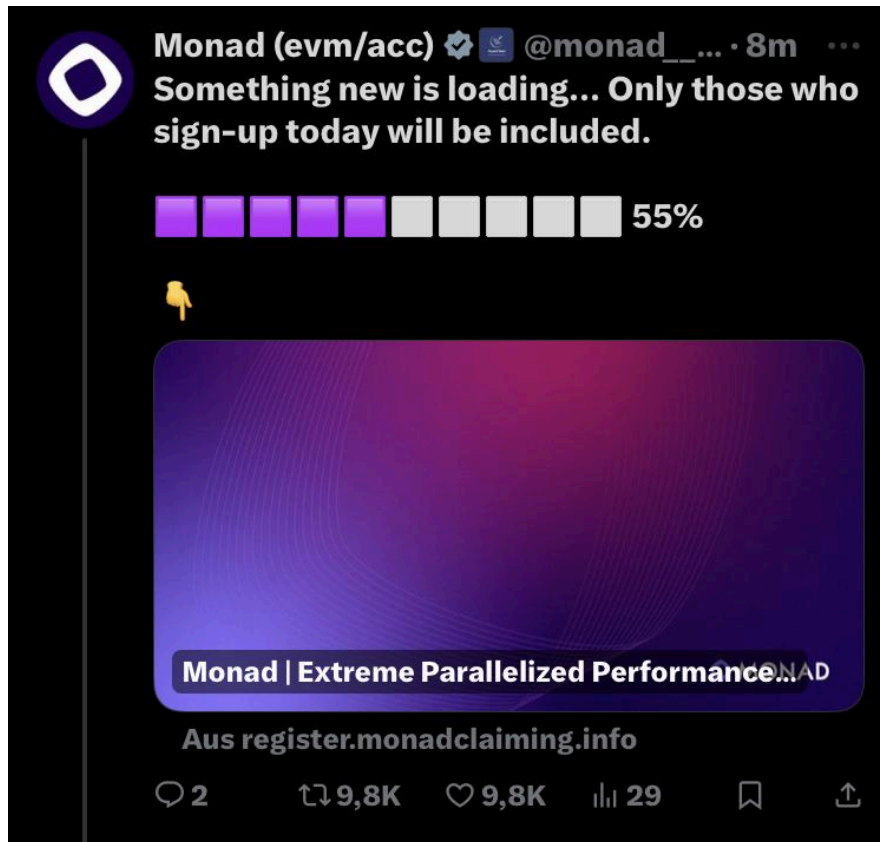
[Nads are coming](#)

They talked on their official page that they are coming when he did not mention it, but soon



[Last Update 10.04.24](#)

That's what Monad said he would come  
It will be announced soon



The project is confident of itself in fulfilling those promises

This remains to be verified :





- Learn about project tokens

### Is it worth paying attention to and why?

**1. Scalability:** Monad aims to address one of the most significant challenges faced by blockchain networks, which is scalability. By implementing sharding and other advanced technologies, Monad promises to achieve throughput of hundreds of thousands of transactions per second, significantly surpassing current blockchain solutions.

**2. Compatibility with Ethereum:** Monad maintains full compatibility with the Ethereum Virtual Machine (EVM), ensuring that applications built for Ethereum can be easily ported to Monad without code modification. This compatibility allows developers to leverage existing tools and infrastructure, making migration seamless.

**3. Innovative Features:** Monad introduces several major innovations, including the MonadBFT consensus mechanism, Deferred Execution, Parallel Execution, and MonadDb for high-performance state backend storage. These innovations demonstrate the project's commitment to pushing the boundaries of blockchain technology.

**4. Experienced Team and Partnerships:** Monad boasts an experienced team of developers and researchers with significant expertise in blockchain technology. The project has also established partnerships with leading companies in the blockchain industry, indicating strong support and potential for collaboration.

**5. Potential for Adoption:** With its ambitious goals and innovative approach, Monad has the potential to attract developers and users looking for scalable and efficient blockchain solutions. If successful, Monad could become a prominent player in the blockchain space, competing directly with established platforms like Ethereum and Solana.

**Overall, Monad represents a promising project with the potential to revolutionize blockchain technology. Its scalability, compatibility with Ethereum, innovative features, experienced team, and partnerships make it worth paying attention to as it progresses towards its mainnet launch and beyond.**

**The Monad and io.net projects aim to advance technology in innovative ways. While Monad focuses on enhancing blockchain networks**

**and achieving compatibility with Ethereum,  
io.net seeks to build the largest decentralized  
AI compute network, with a focus on providing  
accessible and dedicated computing  
resources at a low cost.**

## **Official Links**

**Website:** <https://monad.xyz/>

**Twitter:** [https://twitter.com/monad\\_xyz](https://twitter.com/monad_xyz)

**Substack:** <https://monadlabs.substack.com/>

**Discord:** <https://discord.gg/monad>