# Layer One X: Mainnet Capability Comparison Table:

| Features | Description | Polkadot | Cosmos | Layer Zero | L1X |
|---|---|---|---|---|---|
| Score | | 4/20 | 4/20 | 0/20 | 20/20 |
| Approx. Fully Diluted Market Cap<br>** = pre-launch* | | $8.4 billion | $3.7 billion | 1.1 billion | $500 million* |
| **Layer One Fundamentals** | | | | | |
| **Layer One or a Bridge** | Layer One refers to blockchain protocols that natively support interoperability with other chains, while bridge solutions refer to technologies that connect two different blockchain networks to enable interoperability between them. | Layer One (Compatible via VM not truly Interoperable) | Layer One (Compatible via VM not truly Interoperable) | Bridge | Layer One |
| **Native Protocol Transaction Fees**<br>*(Native protocol transaction fees refer to the fees that are charged by the blockchain platform for processing transactions on its network)* | Low transaction fees are essential for mass adoption, as high transaction fees can discourage individuals and businesses from using interoperability protocols. | $0.10 - $0.50 | $0.10 - $0.50 | Not Applicable | $0.01 |
| **High Scalability Native TPS**<br>*(Native TPS (Transactions Per Second) refers to the maximum number of transactions that a blockchain platform can process on its native protocol per second)* | High scalability is essential for mass adoption, as it allows interoperability protocols to handle a high volume of transactions without experiencing slowdowns or crashes. | Up To 100,000 Transactions Per Second | Up To 100,000 Transactions Per Second | Not Applicable | Up To 100,000 Transactions Per Second |
| **Transaction & Block Finality**<br>*(Block finality refers to the point in time when a block of transactions on a blockchain is considered to be permanently added to the blockchain and cannot be altered or reversed.)* | Faster transaction finality improves security, user experience and use cases | ~ 6 Seconds | ~6-7 Seconds | Not Applicable | ~1-2 Seconds |
| **Native Virtual Machine** | Native Virtual Machine allows a layer one to have its own smart contract compilation process, native interpreter, interface drivers & state management. | Yes | Yes | Not Applicable | Yes |

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| **EVM Compatibility (Direct)**<br>*EVM (Ethereum Virtual Machine) compatibility means that a blockchain platform can run the same type of code as Ethereum. Some existing EVM compatible chains include BSC, Avax, Polygon, Fantom and more.)* | This allows EVM compiled smart contracts to interact with the consensus and state management making it easier for projects to build with the layer one. | No | No | Not Applicable | Yes |
| **Decentralized Consensus Mechanism** | Decentralized consensus is a mechanism by which a layer one blockchain network achieves consensus on the state of its ledger in a decentralized manner, without relying on a centralized authority. | Yes | Yes | Not Applicable | Yes |
| **Consensus Mechanism Proofing Aggregation of Power** | Ability to decentralize the aggregation of power. | Top 10 validators account for 50% of the total staked tokens | Top 30 validators account for 50% of the total staked tokens | Not Applicable | Full Node limit on % staked in terms of approvals & mobile nodes allow for random selection. |

| **Interoperability Fundamentals** | | | | | |
|---|---|---|---|---|---|
| Native Support Interoperability Across **EVM to EVM** Chains (Tokens) | Ability to transfer tokens between EVM-compatible chains. | Yes, but by Building a Bridge on top of it | Yes, but by building a bridge on top of it with customised Validators making it insecure | Yes | Native Support without the need of a bridge |
| Native Support Interoperability Across **EVM to Non EVM** Chains (Tokens) | Ability to transfer tokens between EVM-compatible and non-EVM chains. | No | No | No | Yes |
| Native Support Interoperability Across **Non** | Ability to transfer tokens between non-EVM chains. | No | No | No | Yes |

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|---|---|---|---|---|---|
| **EVM to Non EVM** Chains (Tokens) | | | | | |
| Native Support Interoperability Across **EVM to EVM Chains** (NFT) | Ability to transfer non-fungible tokens (NFTs) between EVM-compatible chains. | Yes but by Building a Bridge on top of it | Yes but by building a bridge on top of it with customised Validators making it unsecure | No | Native Support without the need of a bridge |
| Native Support Interoperability Across **EVM to Non EVM Chains** (NFT) | Ability to transfer NFTs between EVM-compatible and non-EVM chains. | No | No | No | Yes |
| Native Support Interoperability Across **Non EVM to Non EVM Chains** (NFT) | Ability to transfer NFTs between non-EVM chains. | No | No | No | Yes |
| Native Support Interoperability Across **EVM to EVM Chains** (LOGIC) | Ability to transfer smart contract logic between EVM-compatible chains. | No | No | No | Yes |
| Native Support Interoperability Across **EVM to Non EVM Chains** (LOGIC) | Ability to transfer smart contract logic between EVM-compatible and non-EVM chains. | No | No | No | Yes |
| Native Support Interoperability Across **Non EVM to Non EVM** Chains (LOGIC) | Ability to transfer smart contract logic between non-EVM chains. | No | No | No | Yes |
| Additional Features | | | | | |
| Encrypting Smart Contracts Critical Details | Ability to encrypt certain details on the smart contract while still maintaining the ability to function check the working. | No | No | Not Applicable | Yes. Using Homomorphic Encryption. |

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| Real Time Bad Node Detection | Ability to detect bad nodes in real time on the network. | No | No | Not Applicable | Yes. Using Hierarchical Temporal Memory. |
| Decentralized Identity | Decentralized identity solutions can enable users to control their own personal data and identity, potentially increasing the adoption of interoperability protocols. | Single Blockchain Identity | Single Blockchain Identity | Not Applicable | Multiple Blockchain Identity Mapped for Seamless Use of dApps built with Layer One |