



KADDEX

Litepaper

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Abstract

In this day and age, all Decentralised Exchanges (DEXes) suffer from the same lack of usability, driven by gas costs and vulnerability of protocols. This issue limits users that want to partake in trading and providing liquidity to those with financial or technical ability. In order to ensure a truly open marketplace which anyone can participate in – the ultimate Decentralised Finance (DeFi) promise – a solution must be created to lower financial barriers of entry and to reduce inefficiencies that are detrimental to traders.

Kaddex achieves exactly this by building the first DEX built upon Kadena, the first truly scalable Proof-of-Work (PoW) layer-1 blockchain network and utilizing the same Automated Market Maker (AMM) model as Uniswap. Through the power of Kadena's braided chain framework, the possibility of Miner Extracted Value (MEV), frontrunning and gas auctions is all greatly reduced, ensuring faster and cheaper transactions in the process, while being settled by the globalized security that only PoW can provide. Kadena also offers the paradigm-changing ability to offload gas payments to a third party via gas stations. This enables Kaddex to deliver a gas-free liquidity pooling and trading experience while also allowing for novel approaches to liquidity provisioning and slippage controls.

Besides the technical advantages brought to DeFi, Kaddex introduces its utility token - KDX - to establish true democracy and community ownership of Kaddex's ecosystem and to implement the first financially sustainable Liquidity Mining programme. This allows the community to steer the development of the platform, achieving a collective vision, while also incentivising participation in certain pairs, and therefore improving the overall users swapping experience.

All together, these technologies create a DEX and a DeFi tool suite that is positioned to not only support the Kadena ecosystem, but to create DeFi in the way it was supposed to be: open to all, community owned, simple to use and cheap to participate in.

1. Why Kaddex

Kaddex's innovation is defined by the juxtaposition of the current state of DeFi; by the costs and trade-offs accepted by its users. To understand the depth of what Kaddex achieves, we must first understand the shortcomings of the current DeFi ecosystem.

At a high level, Kadena's multi-chain driven scalability with Kaddex gas stations means:

Table 1 – Kaddex competitive advantages

No gas costs	Subsidized by Kaddex through gas stations
No gas prioritization	No mempool ¹ queues
Lightning-fast trades	On a Layer-1 blockchain
PoW security	Made stronger with braided chains
Infinitely scalable	Able to meet any future throughput demand
Fair token launch	No Venture Capital investors (VCs) involved
Liquidity mining 2.0	Sustainable KDX rewards emission
Run by a DAO	Truly democratic and open to all

1.1 Problems In DeFi

The problems currently plaguing today's DEXes are, for the most part, not caused by any technology issues specific to the platforms themselves. The reason why people do not trade on them or do not lend them their liquidity lies in the high gas costs associated with doing so. At the time of this paper, an average Ethereum-based DEX user would find transaction fees unsustainable for small and medium size tickets. This makes it not practical for small trades and it creates limits on who can participate and make use of the decentralised finance promises.

Unfortunately, these scalability and gas-driven problems bring in some unintended consequences, such as bots and miners reprioritizing or creating transactions that benefit from market movement at the cost of the average user. In order to fix many of these issues, blockchain networks have been moving toward different security models: opting for PoS as a solution to increase scalability and speed, while lowering transaction costs. This has worked in some ways but still faces the same PoW challenges. As adoption grows, the network gets congested and consequently causes increasing transaction costs.

¹In blockchain terminology, a mempool is a waiting area for the transactions that haven't been added to a block and are still unconfirmed. This is how blockchain nodes manage and order transactions that have not yet been included in a block

At the same time, security levels are sub-optimal compared to PoW networks that provide provable financial security. Ultimately, it seemed impossible to simultaneously have scalability, speed and security.

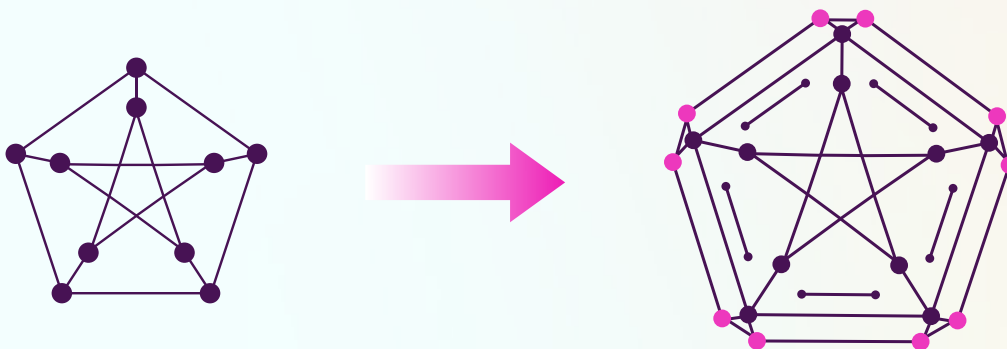
Kadena has proven to be the only blockchain able to solve this infamous trilemma.

1.2 Solution: Long Term Scalability

One of the keys to solving the trilemma is in achieving long term scalability. Many projects proposit scalability with their low transactional costs, only to see them rise with adoption. Kadena is the first and only PoW Layer-1 blockchain that has managed to permanently address scalability, accomplishing what all others (such as BTC and ETH) have failed to.

Kadena's Layer-1 blockchain protocol, Chainweb, functions as a braided blockchain data structure, progressed via a parallelized consensus mechanism; a unique architecture that enables infinite scalability while preserving the power of PoW security without sacrificing decentralisation. This framework minimizes the number of hops to get to the farthest chain (referred to as diameter) and the number of edges (the hashes that link the blocks from other chains – referred to as degree). This minimizes the network overhead required to maintain a completely linked structure of chains. In 2021, Kadena successfully expanded from 10 to 20 chains. This 20-chain configuration (as shown below) has degree 3 and diameter 3. Therefore, a wait time of only 3 blocks is required after a transaction confirmation before the whole network's hash power is securing it. After 3 blocks, coins are considered fully confirmed and can be transferred from one chain to any other chain.

Figure 1 – Kadena Chainweb Scalability



By leveraging this breakthrough technology and infrastructure, Kaddex can truly satisfy any throughput demand, being the first infinitely scalable and secure DEX. Kaddex will not face any risk of market congestion by users' activity or volume and can instead focus on technologies that increase profitability to users.

1.3 Solution: Gas-Free

Kadena, through the novel concept of gas stations, offers the ability to specify a gas payer for smart contract interactions. This allows Kaddex to subsidize all gas fees while interacting with our DEX. That's right, gas free, forever, whether you are adding or removing liquidity or swapping. No longer will users be required to have a separate token to pay gas or even consider gas costs when using the DEX.

1.4 Solution: Slippage Control

The gas problem affects more than just performance and economics. Miner Extracted Value, frontrunning and gas auctions all take advantage of the underlying blockchain's inability to properly scale in order to take advantage of users and their trades. This often results in massive amounts of gas being spent to eke out every bit of profit opportunity, failing users' transactions in their wake. Users then worry more about the cost of their transactions failing than their want to trade.

Kadena, with its multichain architecture, offers a unique opportunity to minimize this into oblivion by being able to scale any time there is a threat of mempool queues. Kaddex uses this to create a DEX with no transaction wait times (lightning fast), giving little opportunity for others to frontrun, increasing the success rate of trades, while giving the users industry leading slippage control to maximize profit.

1.5 Solution: Decentralised Infrastructure

Kaddex believes in the true vision of DeFi: decentralise everything and open to all. From liquidity provisioning, pricing to swapping, to ownership and organization, to websites and front-ends - if it can be run on-chain, it is; if it can't, then we ensure there is no central authority or service.

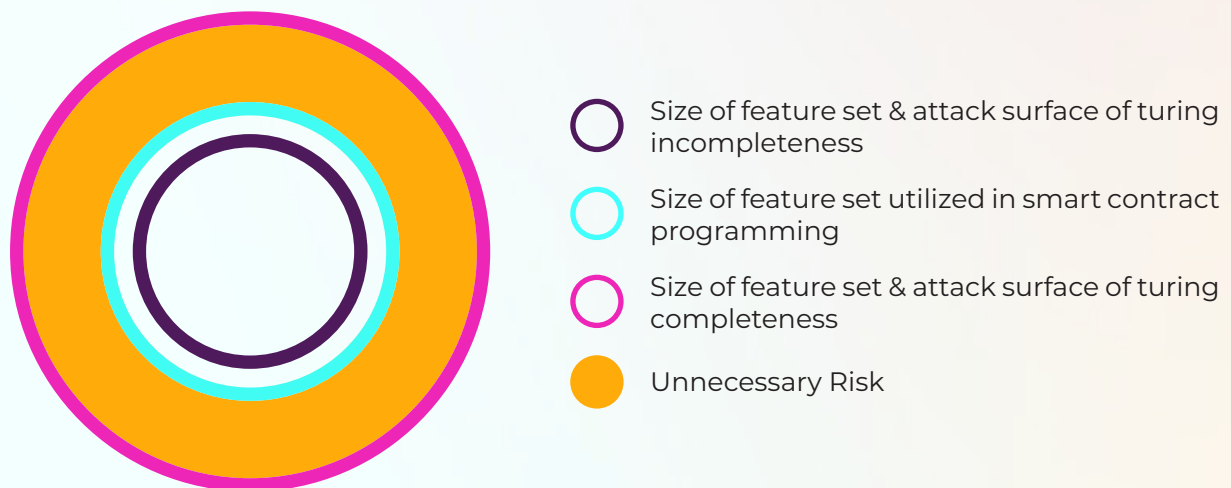
This idea is often brought to the very edge with not actually going all the way, with DEXes maintaining control of their interface and centrally hosting their website and front-end. Not Kaddex. From our website and front end being hosted on Flux, to everything in our Kaddex code being owned by the DAO, we are DeFi.

1.6 Solution: Secure Smart Contracts

Half of the time DeFi is in the news is because of hack that has caused a massive leak of funds from a DeFi protocol. No matter the size of the attack and whether or not it was fixed, the project and protocol never recover. Many of these vulnerabilities are direct consequence of the language they were developed in, Solidity, being Turing complete.

Turing completeness describes the ability of the language to express all tasks accomplishable by computers. This sounds powerful in theory, creating no bounds to what could be done on the blockchain (if we ignore gas). But what started as a powerful idea has actually turned into a problem. With this open-ended ability came hard to anticipate attack vectors. To date, there are 16 known attack vectors in Solidity, which much of the DeFi ecosystem is built upon, most of which would not be possible if Solidity was Turing incomplete.

Figure 2 – Unnecessary risk associated with turing completeness



Kadena's smart contract language, Pact, seeks to improve on this problem by designing a language with the known limitations of blockchain in mind, resulting in a Turing incomplete language that is purpose driven to produce easy to read, secure and efficient smart contracts. This is amplified by the built-in support of formal verification, giving developers immediate feedback on possible bugs that would otherwise go unnoticed. This overlooked detail ensures Kaddex will be not only secure transactionally via PoW but also secure from attack.

2. Industry Outlook

Decentralised Finance has been growing at an explosive rate with most of the developments and new projects being small incremental improvements upon broken systems that are institutionalizing inefficiencies that drive high cost and risk to users. Despite all this, the DeFi industry continues to grow. This mix of ecosystem growth with fundamental technological gaps create a perfect opportunity for Kaddex to deliver a solution that will change the course of DeFi.

2.1 DEX Market Potential

Market data shows that since the so-called DeFi Summer of 2020, decentralised finance has become increasingly mainstream. The considerable amount of volume traded on DEX-es highlights the opportunity that Kaddex faces, a project that not only addresses the weaknesses and deficiencies of the traditional financial industry, but also those of Kaddex's existing competitors.

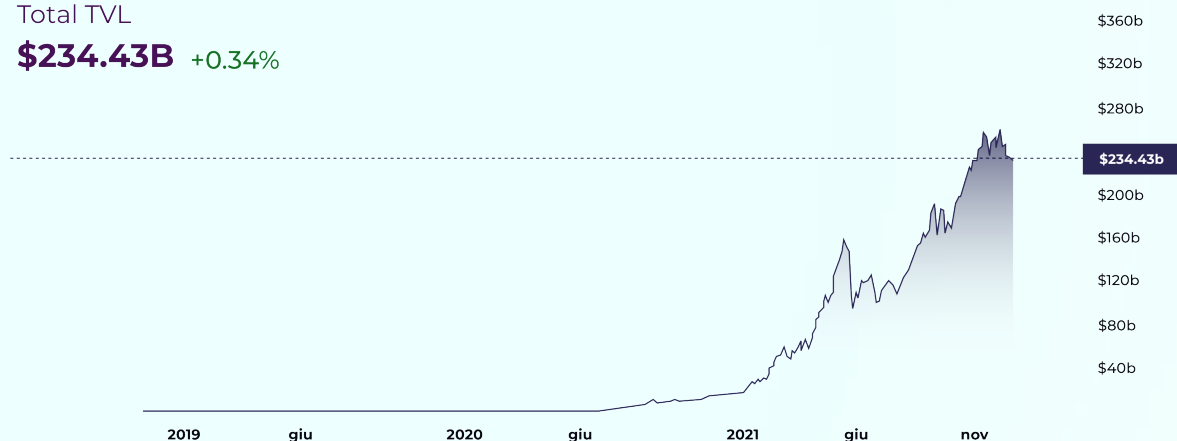
DeFi is still in the early stages of existence. However, as of October 2020, over \$11 billion was deposited across multiple decentralised finance protocols – a figure that represents a more than tenfold growth over the course of 2020. In the wake of this explosive trend, Nasdaq decided to create a stock market index (DEFX) to keep track of the largest DeFi products. There are currently about 200 DeFi projects, 90% of which use the Ethereum network.

Figure 2 – Total Value Locked in DeFi Protocols

defillama 20.12.2021

Total TVL

\$234.43B +0.34%



Since January 2020, DEXes yearly volume have experienced an over 2,000% increase, currently accounting for \$4.2 billion in swap fees. These numbers show that investors have a strong forward-looking interest in DEXes and possible alternatives to traditional finance.

2.2 Kaddex: The Next Generation Of DEXes

Many of Kaddex's competitors, namely those that proposit the same benefits in cost and scalability, are based on PoS blockchain technologies. In such systems, transactions are validated based on tokens owned and staked on the blockchain. Thus, by its very nature, PoS tends to centralise tokens in the hands of very large nodes (either directly or via delegation). In general, centralisation means efficiency, but it goes against the original fundamental blockchain philosophy of decentralisation and disintermediation. PoS is not substantially different from the way fiat money systems work, wherein major stakeholders have a quasi-monopoly control over the whole system. Actors with larger deposits hold the responsibility for controlling how transactions are validated and how much new money is created (concentration dominance).

The possible involvement of financial institutions in PoS-based blockchains is a tangible risk and is ultimately the reason why PoS does not work. It essentially pays the rich to be rich and functions as an authorization-based system – therefore not decentralised. The integrity of a blockchain network relies on total decentralisation and the PoS model currently undermines this quality.

PoW, on the other hand, has been used extensively for a decade, showing itself to be provably secure as a function of the amount of computing power required to influence the network. This inherently means that PoS and PoW do not hold the same level of confidence and reliability. The risk of hacking and cyber-attacks is a factor that cannot be overlooked when discussing blockchain security. To date, there have been a total of 54 relevant hacking events, with funds lost totaling at around \$2.4 billion at the time of these hacks.²

The origins and rise of PoS projects are linked to a fundamental technological deficiency of PoW Layer-1 blockchains. Before Kadena, no blockchain had been able to offer a secure, decentralised platform that solved the problem of scalability. This left room for temporary tactical solutions that never fully addressed the core issues. Now because of Kadena, users benefit from a blockchain network that provides all the advantages of PoW consensus, while being infinitely scalable and maintaining decentralisation.

² [Cryptosec.info/exchange-hacks](https://cryptosec.info/exchange-hacks) (20.12.2021)

It is this ability to scale along with novel improvements to smart contract logic that enables Kaddex to bring the security of PoW in a scalable and gas-free environment to DeFi. This strong departure from the traditional Ethereum based model will revolutionise the face of DeFi, delivering tools that are truly open and accessible to all.

Table 1 – Average fees for swaps on different DEXes when running on Ethereum

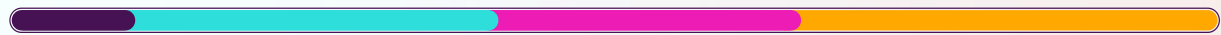
Crypto.com - 17.12.2021.

DEX	Blockchain	Gas Fees
Kaddex	Kadena	\$0
Uniswap V2	Ethereum	\$66.17
SushiSwap	Ethereum	\$59.17
Curve	Ethereum	\$47.08
Mooniswap	Ethereum	\$62.49
Balancer	Ethereum	\$86.28

3. Tokenomics

KDX is Kaddex's utility token – a programmatic scarce resource with a limited supply of 1 billion tokens – that enables Kaddex to enforce decentralised governance and to attract LPs. DAO contributors can take advantage of the large portion of allocated token to enhance DAO participation through grants and bounties, and to, in parallel, grow the network and swap volume. Additionally, KDX holders can stake their tokens to claim 0.05% of every swap, proportionally to the KDX stake owned. KDX liquidity mining programme aims at incentivising users' participation and deepening pools' liquidity, while at the same time keeping the KDX vesting schedule predictable and sustainable in the long term.

3.1 KDX Distribution



Team – 5%

Team tokens only account for 5% of KDX total supply, in order to strengthen the overall decentralisation and to ensure long term market stability of the KDX token. Team tokens have a rigid unlocking schedule³ to avoid any risk of market flooding in the delicate infant phase of the DEX.

Community Sales – 30%

Tokens allocated to the community sales account for 30% of the overall supply, in order to empower network participants from the start and to guarantee an organic and decentralised platform growth. At the same time, the large allocation dedicated to early supporters is crucial to finance Kaddex development and operations.

Community Rewards – 25%

Community Rewards account for 25% of the KDX supply, in order to guarantee users a long-term DAO and community-led vision. The DAO will fund future operations and developments - in a completely decentralised fashion – through the deployment of grants and bounties, open to everyone. Community initiatives range from ecosystem growth, Tokenomics impulse, marketing, IT and Smart Contract (SC) development and anything related to long-term Kaddex success.

Network Rewards – 40%

Network Rewards account for 40% of the KDX total supply, in order to attract users, LPs and investors. In Kaddex, users are empowered through gas-free transactions, while LPs are incentivised via a programmatic emission schedule of rewards to be claimed in KDX as a booster. In this way, KDX inflation rate can be controlled and adjusted according to market participation: measured by Volume and Total Value Locked (TVL) in the platform.

³ 2nd year: 50% - 3rd year: 75% - 4th year: 100%

3.2 KDX Liquidity Mining 2.0

Liquidity Mining – the process of attracting liquidity through distribution of native KDX tokens – is at the core of Kaddex's success. Kaddex technology allows users to swap instantaneously with no gas costs nor additional fees. Therefore, this creates an unprecedented incentive for users to come and trade on Kaddex. On the other hand, Kaddex Tokenomics – with the larger portion of tokens allocated for network rewards (40%) – can generate lucrative pool boosters for early LPs.

Many DEXes in the industry have failed by creating a non-sustainable relationship between the inflation rate – emission schedule of rewards in Kaddex case - and token demand. Kaddex tackles this issue by initially allocating only 5% of tokens to the core team, meaning that a larger portion of incentives can be later distributed to LPs. Additionally, the rewards emission schedule of Kaddex is programmatic and self-adjusting according to market conditions.

The DEX industry has seen many projects quickly disappear after consuming all their liquidity incentives. Naturally, the end of extra incentives for LPs leads to a loss in the overall value of the DEX, as LPs will just migrate to the new and more lucrative options. This results in a difficult multivariate equation of attracting liquidity (with higher incentives) and implementing a sustainable rewards emission schedule. Kaddex solves this multivariate equation by being both lucrative and sustainable. Lucrative for LPs with a logarithmic programmatic vesting schedule to distribute extra incentives and Sustainable as users are economically driven to swap where it is free, fast and secure.

4. Governance

KDX is a means for Kaddex supporters to play a central role in the DAO governance, which is designed to be perfectly and totally community driven. The gas-free environment allows all users to participate in the DAO governance freely, breaking down the voting cost barrier present in all Kaddex's competitors.

Being a Kaddex DAO contributor means being rewarded for your effort and participation based on KPIs assigned to you at the outset. This system will ensure that votes from users with a higher-level role will carry more weight, as well as providing them with different functions within the community. Also, members who meet certain requirements can be voted into more important roles, which consequently requires a higher overall confidence score.

Kaddex uses a dual means of governance in the form of a social currency called "Vibedust". Vibedust is a purely social currency and exists within Discord as a means to signal trust from contributors within the community. As users participate actively within the DAO they will naturally accrue "Vibes" from their peers, resulting in a discernible trust score that other users can reference when interacting with each other. This provides a few benefits. The main being that a user's DAO participation and level is not tied exclusively to the amount of KDX voting power they have, and the second being that users are recognized for the sum of their actions, not the size of their bags. "Vibedust" is not considered during the actual voting process, but instead should be taken into account when proposals are being discussed. This is a way to identify good, and bad actors within a community. "Vibedust" works to ensure that all participants in the Kaddex DAO, and overall ecosystem have a visible reputation and place within the community.

Voting within the Kaddex DAO will work as a function of staked KDX, a user's voting power will be dependent on two factors: how long they are staking for, and the total amount of KDX they stake. Unstaking leads to voting power that diminishes over time at a faster rate than it is accrued. The rate of voting power decreasing is significantly faster than accrual. Users can halt this process by re-staking, which allows for re-accrual of voting power. Voting power accrues non linearly, with a quick progression to 1x Voting power at 3 months, and a steady increase after that. As long as a user remains staked in the system, their voting power will increase. With a multiplier that approaches 2.5x. In this it is ensured that users who remain aligned with the system through supporting it have their support recognized, while still allowing new users to enter the system and have meaningful impact.

4.1 DAO Architecture

The DAO architecture will be characterised by a hierarchical structure articulated in 4 roles (1 being the lowest level role and 4 being the highest).

Role 1: Recruit

This is the entry level for any user who wants to participate in the DAO. It is assigned to users who have the project's best interests at heart and want to contribute to the system and community in beneficial ways. Users may request this role. Role 1 users will have free reign to work on projects for the DAO via a grant program or bounty board. Users do not need to have this role to complete grants or bounties and are encouraged to work on projects to show their alignment with Kaddex, prior to formally applying to the DAO.

Role 2: Scribe

This role comes with additional responsibilities and powers, including the ability to establish a working group within a specific section of the DAO. Marketing, for example, could have its own working group, with members of the Kaddex Core Team working as advisors. Role 2 users will be able to nominate members of the community that they consider as strong contributors to the system, to take on a role in their specific working group. In this way, trust can be decentralised, ensuring that qualified users are running the DAO through a process of community vetting.

Role 3: Noble

This is the final role within the Kaddex DAO. Role 3 users hold the ability to submit proposals for voting, create bounties, develop grants and much more. These are the power users that have proven themselves to the community and built trust through the system. They will collectively run the DAO and work to manage Kaddex. Maintaining this role will require a user to keep their KDX staked, putting their money where their mouth is. If a user stops staking their KDX, not only will their voting power decrease, but their role will also be removed.

Role 4: Pioneers

The Kaddex Core Team will initially hold the Role 4. This is effectively the same as a Role 3 but will also allow for some safety features. As the goal of the Core Team is to progressively decentralise, over time this role will be depreciated, and the Core Team will transition to Role 3 as well. All of this is to be done to empower the community to run Kaddex in a truly democratic fashion, wherein the protocol is run by its constituents.

4.2 Governor Prime (Alexandria)

Governor prime - Alexandria - acts as the primary Governance Smart Contract suite for Kaddex, and will be open sourced for the greater community to utilize if they wish. We feel that creating strong infrastructure for Kadena is an important part of building Kaddex itself. Governor Prime adds to Kadena through a modular set of smart contracts that can be used for plug and play voting with other projects. Through combining Pact's fantastic ability to work with large data sets, we can ensure that regardless of how a user is utilizing their KDX, they are still awarded voting power. The system is fairly simple, and uses two Smart Contracts. The Librarian, and The Lexicon.

The Librarian reads through the data obtained by the Lexicon. The Lexicon is a smart contract that can be pointed to datasets to aggregate different amounts of data. In the case of Kaddex, the Lexicon references the Staking, Vaulting, and Public Sale Smart Contracts, and gathers 3 points of data per k:account interacting with these contracts.

AmountKDX, InitialBlock, CurrentBlock

From there the Librarian calculates a value based on these three variables to determine the associated amount of voting power with each k: account. Based on the number of blocks determined by subtracting the initial block from the current block, a multiplier based on a users position on the voting curve is assigned

CurrentBlock - InitialBlock = BlockCount

BlockCount ∩ VotingCurvePos = VotingMultiplier

*AmountKDX * VotingMultiplier = TotalVotingPower*

Through the use of the Delegator, individual k: accounts can also assign the accrued voting power of their Staked, Vaulted, or Purchased KDX to other k:accounts that have also interacted with these contracts. Both k:accounts must remain interacting with at least one of these contracts, if the delegate unstakes, then voting power is returned to the delegator, if the delegator unstakes, then voting power is removed from the delegate. The amount delegated is based on the delegator's position in the voting curve.

5. Vision

The world of DeFi has proven to be the first tangible and concrete blockchain use-case. Various projects have developed a vast and innovative ecosystem of technologies that have quickly outpaced Traditional and Centralised Finance solutions (CeFi).

Kaddex exists to deliver the true vision of decentralised finance by creating financial tools that are accessible to all and entirely decentralised. This means accessibility in cost and simplicity, decentralisation of everything from the website and swap platform, to the establishing of the DAO that is created to take it all over, to creating sustainable liquidity mining programs. Achieving this vision goes well beyond the first version of Kaddex as a gas-free DEX platform and is about positioning Kaddex to scale toward future adoption and to provide tools and technologies that propel DeFi, as an ecosystem, forward.

Kadena, with its multichain framework paired with gas stations arms Kaddex with the ability to create novel scaling technologies that provide fine grained liquidity provisioning and slippage controls that reduce risk and increase profitability for all users, all while maintaining fast and gas-free transactions. These technologies will be part of future iterations of the Kaddex DEX.

Beyond the initial V1 of the swap platform, Kaddex will be expanding the DeFi tool suite to include a professional trading platform, analytics tools, and a lending platform, all in the name of delivering tools to satisfy every need and to onboard both retail and institutional parties, on the most decentralised DeFi platform, built upon the only scalable PoW layer-1 blockchain, Kadena. These technologies will make Kadena the home of DeFi, and Kaddex the leader of the space.

Annex

Definition Table

Acronym	Name	Definition
AMM	Automated Market Maker	AMMs allow digital assets to be traded without permission and automatically by using liquidity pools instead of a traditional market of buyers and sellers.
DAO	Decentralized Autonomous Organization	A DAO is a blockchain-based organization that is democratically managed by members through self-enforcing open-source code and typically formalized by smart contracts. DAOs lack centralised management structures. All decisions are voted upon by network stakeholders. DAOs often utilize a native utility token to incentivise network participation and allocate proportional voting power to stakeholders based on the size of their stake. As DAOs are built on top of blockchains, their transactions are executed transparently on the underlying blockchain.
dApps	Decentralised Applications	dApps make use of blockchain technology to address use cases ranging from investment to lending to gaming and governance. Although dApps may appear similar to web applications in terms of user experience, dApp back-end processes eschew centralised servers to transact in a distributed and peer-to-peer fashion. Rather than using the central Hypertext Transfer Protocol (HTTP) to communicate, dApps rely on wallet software to interact with automated smart contracts on networks.
DeFi	Decentralised Finance	DeFi is a major growth sector in blockchain that offers peer-to-peer financial services and technologies built on blockchain technologies. DeFi exchanges, loans, investments, and tokens are significantly more transparent, permissionless, trustless, and interoperable than traditional financial services, and trend towards decentralised governance organizational methods that foster equitable stakeholder ownership.
DEXes	Decentralized Exchanges	A DEX is a financial services platform for buying, trading, and selling digital assets. On a DEX, users transact directly and peer-to-peer on the blockchain without a centralised intermediary. DEXes do not serve as custodians of users' funds and are often democratically managed with decentralised governance organization. Without a central authority charging fees for services, DEXes tend to be cheaper than their centralised counterparts.
KDX	Kaddex Token	KDX is the native Kaddex utility token and has a fixed supply of 1 billion tokens. KDX is used to incentivise all the liquidity stakeholders on the Kaddex platform, while also rewarding its holders for supporting the network.

LPs	Liquidity Providers	A LP is a user who deposits tokens into a liquidity pool. In return for supplying liquidity, users are typically awarded LP-tokens that represent the share of the liquidity pool the user owns.
MEV	Miner Extracted Value	MEV is a measure of the profit a miner (or validator, sequencer, etc.) can make through their ability to arbitrarily include, exclude, or re-order transactions within the blocks they produce.
PoS	Proof of Stake	PoS is emerging as one of the most widely used blockchain consensus mechanisms. PoS networks incentivise participants to stake native coins in a network of validator nodes. Upon the close of a transaction block, validator nodes are eligible to be randomly chosen to validate block data, thus generating the subsequent block, and earning native coins as a reward. A robust nodal network offers increased network security, resiliency, and computational power. PoS systems also generally enable validator nodes to contribute democratically to decentralised platform governance through voting on key updates and decisions.
PoW	Proof of Work	PoW is a blockchain consensus mechanism first popularized by the Bitcoin blockchain network. PoW systems rely on a process of mining to maintain the network. Miners provide computer hardware that competes to solve the complex cryptographic puzzles required to confirm data transacted on the network and are rewarded for doing so with the network's underlying cryptographic token for doing so. PoW blockchain systems are decentralised and secure as compared to other network consensus methodologies, but typically struggle to achieve the network scalability needed for widespread global enterprise adoption.
TVL	Total Value Locked	TVL is a metric that measures the aggregate value of all crypto assets locked in decentralised finance protocols via smart contracts. It was popularized by DeFi Pulse in 2019, but with price data that goes back to DeFi's genesis in 2017. TVL can also refer to the amount locked on a specific protocol (such as Aave or Uniswap). TVL data can also be further broken down and measure the DeFi value locked by purpose or type (such as lending and derivatives).
UI	User Interface	UI is the point at which human users interact with a computer, website or application. The goal of effective UI is to make the user's experience easy and intuitive, requiring minimum effort on the user's part to receive maximum desired outcome.
UX	User Experience	UX encompasses all aspects of the end-user's interaction with a company, its services, and products. UX design is mainly concerned with the user's expectations. The ultimate goal of UX is to locate and solve problems customers are struggling with.

VCs	Venture Capital	VC is a type of private equity financing that is provided by a venture capital firm to start-up businesses that are deemed to have high growth potential. VC is usually provided by high net-worth individuals (HNWIs), investment banks, or large enterprises that invest in a specific industry. Often VC firms specializing in blockchain only invest in startups that are designing blockchain-specific businesses. Venture capital funding also sometimes entails technical or managerial expertise. VC firms often provide funds to companies during their initial stages, such as seed round funding.
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