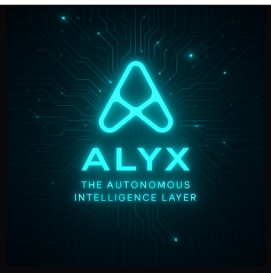

ALYX

MAINNET PROTOCOL WHITEPAPER

The Autonomous Intelligence Layer

Validator security · Monetary settlement · Native liquidity · Asset issuance · Machine execution

Version 2.0 | July 2026 | Chain ID: alyx-1

Think · Trade · Evolve

alyxai.org

DOCUMENT STATUS

Protocol description, not a promise of returns

This whitepaper describes the design, current public surfaces, and development direction of the ALYX network. It is not an offer to sell securities, a solicitation, financial advice, or a guarantee of profit, liquidity, exchange listing, validator rewards, service availability, or future value.

ALYX is live and changes through software releases, governance, market activity, validator participation, and operations. Dynamic figures are a dated snapshot. Current chain state and the live explorer, tokenomics, validator, DEX, and AI surfaces supersede this document when values differ.

Critical monetary clarification

The 3,000,000,000 ALYX figure is the genesis allocation baseline, not a fixed maximum supply. ALYX mainnet has governed inflation. On July 22, 2026 the public tokenomics surface reported approximately 3.59B ALYX live supply and 5.50% current inflation, with a published 1.00% long-term floor.

Status labels

Label	Meaning
LIVE	Publicly accessible on mainnet and observable through current network or product surfaces.
ACTIVE DEVELOPMENT	Implemented in part or being expanded; behavior may change.
PLANNED	A direction, not a guaranteed feature or delivery date.
RESEARCH	Exploratory work that may never become a production surface.

Document map

Sections	Scope
1-3	Executive thesis, problem, principles, and layered architecture.
4-6	Consensus, monetary policy, supply definitions, and allocation.
7-10	DEX, TokenFactory, AI execution, and IBC interoperability.
11-13	Governance, security, public proof, and ecosystem flywheel.
14-16	Roadmap, risk factors, snapshot, and public references.

1 · EXECUTIVE SUMMARY

One settlement economy for assets, liquidity, and intelligence

ALYX is a sovereign Cosmos-based Layer 1 coordinating validator-secured consensus, a native monetary asset, decentralized exchange liquidity, TokenFactory issuance, and machine execution settled through ALYX.

Most digital economies depend on disconnected systems for issuance, trading, security, bridging, data, AI, and public proof. ALYX brings these functions into one programmable environment so a builder can create an asset, open an ALYX-denominated market, establish liquidity, use machine services, and verify activity through public network data.

> **ALYX is not simply a token or an AI interface. It is a coordinated market and execution environment.**

Core proposition

- ALYX is the native gas, staking, governance, settlement, and liquidity-hub asset.
- Validators secure chain state and participate in governance under an on-chain issuance policy.
- The native DEX concentrates route formation around ALYX-denominated pairs.
- TokenFactory allows native asset issuance without centralized listing permission.
- The AI layer uses wallet authorization and ALYX settlement to access priced machine services.
- IBC connects Noble USDC and Cosmos Hub ATOM while ALYX remains the economic anchor.

Public mainnet snapshot - July 22, 2026

Metric	Snapshot	Interpretation
Chain	alyx-1	Live mainnet.
Validators	6	Early bonded consensus set.
DEX pools	9	Current indexed markets.
Verified core pools	4	AI, GPU, DATA, and MODEL markets.
Genesis supply	3.00B ALYX	Initial allocation baseline.
Live supply	~3.59B ALYX	Minted supply under governed issuance.
Inflation	5.50%	Early network security phase.
Bonded security	~370.10M ALYX	Validator-bonded stake.
AI routes	4 live	LLM, vision, indexing, and agent routing.

2 · DESIGN PROBLEM

Fragmented infrastructure produces fragmented economies

Launching a digital economy normally requires a chain, token issuer, exchange, liquidity providers, cross-chain routes, indexers, wallets, and an AI provider. Each dependency adds user friction, duplicated fees, operational risk, and a separate trust boundary.

Coordination failures and ALYX responses

Failure	Consequence	ALYX response
Asset without market	A token exists but has no executable price discovery.	Native ALYX pairs and pool creation.
Market without durable liquidity	Reserves can disappear or remain opaque.	Visible LP ownership and on-chain lock paths.
AI without economic settlement	Machine services use unrelated subscriptions or credits.	ALYX-denominated pricing and wallet settlement.
Liquidity without monetary focus	Capital fragments across many quote assets.	ALYX-centered hub-and-spoke routing.
Infrastructure without transparency	Supply, reserves, stake, and custody are confused.	Live tokenomics, validators, pools, and explorer.
Community without market tools	Issuance depends on centralized listing gates.	TokenFactory plus native DEX access.

Design principles

1. Sovereignty: core functions should not depend on a centralized exchange or external smart-contract platform.
2. Settlement clarity: ALYX is the common unit for gas, security, liquidity routing, and machine-service payment.
3. Permissionless creation with visible responsibility: builders can create assets, but credibility depends on authority, metadata, liquidity, and execution.
4. Public proof over private claims: supply, validator state, reserves, locks, and transactions should be inspectable.
5. Modular execution: chain settlement can coordinate external compute without pretending all computation occurs inside consensus.
6. Progressive decentralization: increasing independent validators remains a continuing security objective.

3 · SYSTEM ARCHITECTURE

Six coordinated protocol layers

The layers are economically connected but maintain distinct responsibilities and failure boundaries.

Layer	Primary function	Public surfaces
1. Consensus	Block ordering, finality, governance participation, and liveness.	Validators, blocks, transactions, RPC.
2. Monetary	ALYX denomination, mint policy, staking budget, gas, and settlement.	Tokenomics, balances, governance.
3. Liquidity	Pools, swaps, LP positions, locks, and analytics.	DEX, swap, pools, positions.
4. Asset	TokenFactory denom creation, minting, metadata, and identity.	Assets, create, mint, registry.
5. Intelligence	Priced machine services authorized and settled in ALYX.	AI registry, pricing, execution.
6. Application	Community economies, agents, data products, and integrations.	Builder and user applications.

Execution boundary

On-chain settlement does not mean all AI computation is inside consensus

ALYX anchors authorization, payment, transaction evidence, and economic coordination to the network. Model inference, vision processing, indexing, and agent tasks may run in specialized execution environments. This preserves chain efficiency while keeping settlement and proof connected to ALYX.

Economic coupling

- Asset creation expands the potential ALYX liquidity graph.
- Liquidity creates price discovery and executable routes.
- Trading produces LP and treasury fees under the current DEX configuration.
- Validator stake secures the state used by assets, markets, and settlement.
- Machine-service demand gives ALYX utility beyond gas and trading.
- IBC brings external value into supported routes without replacing ALYX as the monetary hub.

4 · NETWORK AND CONSENSUS

Validator-secured sovereign execution

ALYX mainnet operates under chain ID alyx-1 as a sovereign Cosmos application chain with validator-secured Byzantine fault tolerant consensus. The public RPC reported node software version 0.38.19 at the document snapshot.

Validator responsibilities

- Maintain an available and synchronized node and participate in block production.
- Protect signing keys and avoid double-signing or unsafe recovery practices.
- Participate in governance and protocol upgrade coordination.
- Operate public infrastructure only when it can be secured and maintained.
- Disclose commission, identity, uptime, and operational policies accurately.

Current security posture

The public validator surface reports six bonded validators and 370,101,000 ALYX in bonded security. This is a functioning but early validator set. A small set can simplify initial coordination but increases concentration, correlated infrastructure, governance, and liveness risks. Expanding independent operators is therefore a continuing objective.

Reward estimates are not guarantees

Validator APR and security-budget values depend on live stake, issuance, commission, uptime, slashing, delegation changes, governance, and software behavior.

Public infrastructure

Surface	Role
Seed nodes	Peer discovery and network bootstrapping.
RPC	Consensus, block, transaction, and query access.
REST/LCD	Application-level queries for wallets and interfaces.
Explorer	Readable blocks, transactions, validators, assets, and markets.
Keplr onboarding	Network configuration and transaction signing.

5 · MONETARY ARCHITECTURE

Genesis baseline plus governed issuance

ALYX uses a 3,000,000,000 ALYX genesis allocation baseline. That figure defines the original distribution model; it is not a hard cap. Mainnet uses governed issuance to fund validator security and adapt the monetary system over time.

Current published mint policy

Parameter	Published state	Purpose
Current inflation	5.50%	Early network security and validator participation.
Long-term floor	1.00%	Published lower policy bound.
Goal bonded ratio	67.00%	Target relationship between stake and supply.
Rate change	1.50%	On-chain adaptation parameter.
Blocks per year	6,311,520	Annualization parameter used by the mint module.

Governance Proposal #1 aligned mainnet mint parameters with the published policy. Future governance may modify monetary parameters under the chain's proposal and voting rules.

Supply definitions

Term	Definition
Genesis supply	The 3.00B ALYX initial monetary and allocation baseline.
Live supply	Total minted network supply reported by chain state.
Controlled allocation supply	Balances held in monitored allocation or reserve wallets.
Non-allocation deployed supply	ALYX moved beyond tracked allocation wallets; not necessarily freely tradable.
Bonded validator security	ALYX delegated or self-bonded to consensus validators.
Active economic supply	A transparency metric combining bonded security and non-allocation deployment; not a regulatory circulating-supply definition.

Avoid an undefined 'circulating supply' number

ALYX public tokenomics separates live supply, controlled reserves, deployed balances, bonded stake, and liquidity so treasury custody or staked security is not presented as immediately liquid float.

6 · GENESIS ALLOCATION

Allocation targets and accountable deployment

The genesis model defines five target categories. Targets describe the original design; current balances and deployment should be read from live on-chain transparency surfaces.

Category	Target	Genesis amount	Purpose
Validator bootstrap	20%	600,000,000 ALYX	Security, delegations, and network bootstrap.
Treasury	30%	900,000,000 ALYX	Governed reserves, continuity, and strategic deployment.
Ecosystem / builders	25%	750,000,000 ALYX	Builders, integrations, grants, and markets.
Community / users	15%	450,000,000 ALYX	Participation, campaigns, distribution, and liquidity.
Foundation / operations	10%	300,000,000 ALYX	Infrastructure, staffing, and execution continuity.

Deployment principles

- Custody should be distinguishable from circulating or deployed balances.
- Validator deployment should not be double-counted with remaining bootstrap reserves.
- Liquidity deployment should identify pool, pair, reserve contribution, lock state, and controlling address.
- Community and ecosystem distributions should identify purpose, eligibility, limits, and transaction evidence.
- Treasury actions require explicit authority, operational controls, and reporting appropriate to the action.

The live tokenomics surface exposes target allocations, tracked balances, validator deployment, market reserves, and the difference between controlled and deployed supply. This whitepaper does not freeze those balances because they change.

7 · NATIVE DEX AND LIQUIDITY

ALYX as the market routing hub

The native DEX uses a hub-and-spoke structure in which current markets pair against ALYX. This creates a shared settlement and quote asset across AI-economy, community, stablecoin, and interoperable markets.

Market classification

Class	Description
Canonical asset	ALYX, the native monetary and settlement asset.
Verified core pool	A designated core market, currently AI, GPU, DATA, and MODEL.
Certified pool	A recognized, metadata-backed market with visible reserves.
Community pool	A community-oriented market identified by public classification.
Tracked pool	A visible market without a stronger classification.

Current fee model

Action	Fee	Routing or effect
Swap	0.30%	0.15% to LPs; 0.15% to treasury; 0% to validators.
Pool creation	100 ALYX	Protocol market-creation fee.
Add/remove liquidity	Gas + pool mechanics	Subject to position ownership and lock state.
TokenFactory create/mint	Gas only	No separate public protocol fee currently shown.

Liquidity locks

ALYX exposes two-year, three-year, ten-year, and forever LP lock paths. A lock is a durability signal, not a guarantee of value, activity, reserve sufficiency, or project quality.

- Locked shares restrict withdrawal according to the applicable lock state.
- Pool pages should distinguish ALYX-side liquidity from multi-asset reserve sums.
- Forever locks are irreversible and require careful operational review.
- Quotes, slippage, price impact, and available unlocked shares should be checked before action.

8 · TOKENFACTORY

From native asset creation to functioning market

TokenFactory lets a wallet create a native denom, mint supply under its authority model, and publish asset metadata. Creation alone does not produce an economy; usable market structure requires clear identity, an ALYX pair, adequate liquidity, transparent authority, and responsible distribution.

Recommended lifecycle

1. Create the denom and define the asset's purpose.
2. Publish readable metadata and official communication surfaces.
3. Mint supply under an explicit authority and supply policy.
4. Create the ALYX pair and disclose the pool transaction.
5. Seed reserves suitable for the intended market scale.
6. Lock liquidity where appropriate and display the commitment accurately.
7. Enable trading, disclose risks, and maintain ongoing communications.

Authority and responsibility

TokenFactory lowers the technical barrier to issuance, but it does not certify the creator, guarantee liquidity, validate legal compliance, or remove mint-authority risk. Users should review the denom, creator, authority, supply, metadata, pool reserves, LP lock, and transaction history.

Permissionless does not mean risk-free

Asset credibility depends on authority, distribution, liquidity, communications, legal compliance, and ongoing execution by creators and communities.

9 · INTELLIGENCE LAYER

Machine services with ALYX settlement

The intelligence layer exposes priced services through a wallet-driven flow: select a route, authorize payment, produce settlement evidence, execute the task in the appropriate environment, and deliver the result.

Execution flow

Step	Function	Trust boundary
1. Sign	Wallet authorizes the request and payment.	Wallet security and readable transaction contents.
2. Settle	ALYX payment or settlement evidence is produced.	Mainnet transaction and service verification.
3. Execute	The selected model or service processes the task.	Execution infrastructure, model, and provider.
4. Deliver	The result is returned to the user.	Application availability and user review.

Current public registry

Route	Unit	Public price	Status
ALYX Core LLM	Per 1K tokens	0.025 ALYX	Live
ALYX Vision Alpha	Per image task	0.05 ALYX	Live
ALYX Data Indexer	Per month	5 ALYX	Live
ALYX Agent Router	Per routing job	0.1 ALYX	Live

Economic and output boundaries

ALYX is the settlement path for machine-service access. Pricing and provider economics may change with capacity, service quality, and policy. This document does not claim a fixed AI revenue split. Any distribution to model providers, infrastructure, treasury, validators, or builders must be defined by the live implementation.

- AI results may be incorrect, incomplete, biased, unsafe, or unsuitable for high-stakes use.
- Payment proof does not guarantee output quality or service availability.
- External providers may introduce privacy, uptime, licensing, moderation, and jurisdictional risks.
- Users remain responsible for reviewing outputs before relying on them.

10 · IBC AND EXTERNAL ASSETS

Interoperability without abandoning the ALYX hub

IBC routes bring supported external assets into ALYX. The public access surface currently supports Noble USDC and Cosmos Hub ATOM. These enter as IBC denominations while ALYX remains the gas and market-routing asset.

Origin	Chain	Asset	ALYX role
Noble	noble-1	USDC (uusdc)	Bridge route, settlement liquidity, and ALYX/USDC market.
Cosmos Hub	cosmoshub-4	ATOM (uatom)	Bridge route and ALYX/ATOM liquidity.

Route safety

- Verify origin chain, denom, source and destination channels, receiver address, and ALYX-side IBC denom.
- Only supported assets should be sent to vault or liquidity addresses.
- IBC depends on both chains, relayers, channel state, timeouts, and correct wallet input.
- Tokens sharing a display symbol are not interchangeable; denom trace is authoritative.

Bridging and vault participation are different actions

A standard IBC transfer moves an asset. A bootstrap or genesis liquidity vault may add eligibility, pricing, matching, payout, pool contribution, and LP-lock logic. Review the exact transaction flow before signing.

11 · GOVERNANCE AND SECURITY

Policy changes require transparent authority

Governance coordinates monetary parameters, upgrades, and other protocol decisions. Readable proposals, public rationale, voting, and post-execution verification are required for credible policy.

Security domains

Domain	Primary risk	Mitigation direction
Consensus	Concentration, downtime, double-signing, correlated failure.	Independent validators, monitoring, key security, incident procedures.
Software	Module bugs, unsafe upgrades, dependency vulnerabilities.	Testing, backups, staged upgrades, audits where available.
Wallets	Phishing, malicious signing, seed compromise.	Readable transactions, official interfaces, hardware wallets, education.
DEX	Low depth, price impact, impermanent loss, lock mistakes.	Reserve transparency, slippage controls, visible locks, warnings.
TokenFactory	Unlimited minting, misleading metadata, abandoned assets.	Authority disclosure, classification, metadata, history.
AI	Incorrect output, provider failure, privacy leakage.	Clear boundaries, route status, pricing, review, service controls.
IBC	Relayer outage, channel failure, wrong denom or address.	Supported routes, monitoring, denom verification, recovery procedures.

No protocol eliminates software, operational, market, or legal risk. Security is a continuous process of reducing attack surface, improving observability, decentralizing control, and responding transparently to incidents.

12 · PUBLIC INFRASTRUCTURE AND PROOF

A protocol should be inspectable

ALYX provides public surfaces for network state, validators, blocks, transactions, assets, markets, tokenomics, and AI. Product pages improve readability, but direct chain state remains the primary source.

Verification hierarchy

1. Chain state and signed transactions are primary for supply, balances, governance, validators, and module actions.
2. RPC and REST expose machine-readable query data.
3. The ALYX backend normalizes chain and indexed data for applications.
4. Explorer and product pages create readable summaries and action surfaces.
5. Whitepapers and posts explain intent but cannot override live chain state.

Dynamic-data policy

- Permanent documents should explain methodology instead of hardcoding rapidly changing numbers.
- Dated snapshots should identify date, metric definition, and public source.
- ALYX-side liquidity must not be confused with cross-asset reserve totals.
- Tracked allocation balances must not be labeled as public circulating supply.
- Estimated volume, fees, APR, and prices require estimate labels when not direct consensus values.

Live state supersedes this document

When a dynamic number differs, use current chain state and the methodology disclosed by the corresponding live surface.

13 · ECOSYSTEM FLYWHEEL

From network access to an intelligent economy

ALYX growth is designed around functional activity rather than a single distribution event. Users enter through supported routes, use ALYX, create or join markets, execute services, secure the chain, and verify results.

Stage	Participant action	Network effect
Access	Bridge supported assets or obtain ALYX.	Users and capital enter the economy.
Build	Create an asset or application.	The set of network products expands.
Market	Pair the asset with ALYX and seed reserves.	Price discovery and route formation begin.
Commit	Lock liquidity or establish operating commitments.	Durability and accountability improve.
Execute	Use AI, data, routing, or machine services.	ALYX gains utility beyond gas and trading.
Secure	Delegate, validate, and vote.	Consensus and governance participation broaden.
Verify	Inspect transactions, supply, reserves, and evidence.	Public proof reduces information asymmetry.

Illustrative use cases

- A community creates an asset, establishes an ALYX market, locks liquidity, and uses AI for operations.
- A model provider publishes a priced execution route and accepts ALYX-settled requests.
- A data service exposes indexed outputs through an auditable ALYX payment and delivery flow.
- A participant bridges supported USDC or ATOM and enters ALYX markets.
- An infrastructure operator runs a validator or public endpoint and participates in governance.

These are infrastructure patterns, not guarantees that any asset, application, or service will achieve adoption or value.

14 · DEVELOPMENT STATUS AND ROADMAP

Build from live surfaces, not hypothetical milestones

Live

- alyx-1 mainnet, explorer, public RPC, and wallet onboarding.
- Six bonded validators and governed issuance.
- Native DEX with swaps, pools, positions, liquidity removal, and LP locks.
- Nine DEX pools, including AI, GPU, DATA, MODEL, USDC, BETTER, and ATOM pairs.
- TokenFactory creation, minting, metadata, and market lifecycle.
- Four publicly priced AI execution routes.
- IBC access through Noble USDC and Cosmos Hub ATOM.
- Live tokenomics and validator transparency.

Active development

- Broader validator independence and geographic diversity.
- More execution providers, registry depth, and machine-market infrastructure.
- Expanded developer documentation, SDK examples, and integrations.
- Improved analytics, fee accounting, price history, and liquidity transparency.
- Governance maturity, upgrade discipline, and treasury reporting.
- Wallet, bridging, and transaction-signing hardening.

Planned or research

- Multi-provider or decentralized machine execution markets.
- Permissioned agents with explicit budgets and auditable actions.
- Data and model access or licensing primitives.
- Additional IBC assets and application-chain integrations.
- Richer community-economy and autonomous-application tooling.

Roadmap caution

Planned and research items can change, be delayed, or be abandoned. Only released software and live chain state are operational capabilities.

15 · RISK FACTORS

Participation requires independent judgment

Risk	Description
Network maturity	A young chain can experience bugs, limited tooling, incidents, and rapid change.
Validator concentration	A small bonded set creates governance, censorship, downtime, and correlated-risk exposure.
Monetary policy	Inflation and other parameters may change through governance or software.
Treasury and custody	Large controlled balances create key, governance, concentration, and deployment risks.
Liquidity	Pools may have low depth, high price impact, volatility, or limited exit capacity.
Asset issuer	TokenFactory creators may retain mint authority, mislead users, or abandon a project.
Software	DEX, TokenFactory, locks, wallet, backend, or frontend code may contain vulnerabilities.
IBC	Transfers may fail or delay because of relayers, channels, timeouts, chain halts, or bad addresses.
AI output	Results may be inaccurate, harmful, unavailable, or unsuitable for the user's purpose.
Privacy	Prompts, images, data, addresses, and results may be processed or logged by execution systems.
Regulatory	Token, staking, AI, market, and cross-border rules vary and can change.
Market value	ALYX and ecosystem assets may lose value, lack buyers, or never obtain external listings.

Users should not participate with funds they cannot afford to lose. Operators should use backups, key separation, monitoring, incident response, and legal review appropriate to their role.

16 · APPENDIX

Dated snapshot and public references

Unless otherwise stated, dynamic values were checked on July 22, 2026 (Eastern Time).

Mainnet snapshot

Item	Value
Chain ID	alyx-1
Public RPC node version	0.38.19
Validator count	6
Bonded security	370,101,000 ALYX
Genesis supply	3,000,000,000 ALYX
Live supply	Approximately 3.59B ALYX
Current inflation	5.50%
Long-term floor	1.00%
Goal bonded ratio	67.00%
DEX swap fee	0.30%
DEX routing	0.15% LP / 0% validators / 0.15% treasury
Pool creation fee	100 ALYX
Live DEX pools	9
Verified core pools	4
TokenFactory create/mint	Network gas only; no separate public protocol fee
Live AI routes	4

Public reference surfaces

Main site: https://alyxai.org/

Whitepaper hub: https://alyxai.org/whitepaper

Live tokenomics: https://alyxai.org/tokenomics

Validators: https://alyxai.org/validators

DEX: https://alyxai.org/dex

DEX pools: https://alyxai.org/dex/pools

AI execution: https://alyxai.org/ai

TokenFactory: https://alyxai.org/tokenfactory/create

Get ALYX / IBC: https://alyxai.org/get-alyx

Public RPC: https://rpc.alyxai.org/status

Version history

Version	Date	Change
v1 / Elite	April 2026	Three-page alyxtest-4 overview; superseded.
v2.0 Mainnet	July 2026	Mainnet architecture, governed issuance, DEX, TokenFactory, AI, IBC, risks, and live-data policy.

Supersession notice

This document supersedes ALYX_Whitepaper_Elite.pdf and its statements describing alyxtest-4, a fixed 3B maximum supply, the obsolete fee split, or AI as only a future stage.

ALYX

THE AUTONOMOUS INTELLIGENCE LAYER

Think · Trade · Evolve

alyxai.org

Mainnet · alyx-1