AKINDO WAVEHACK WAVE 3 · SOSOVALUE × VALUECHAIN × SODEX ($4,000 USDC)

BasisDesk v2.1

One-Person On-Chain Quant & Risk Terminal built on SoSoValue, SoDEX, ValueChain, and SSI Protocol — unifying ETF/macro flows, 500ms L2 basis carry, 30-day historical klines replay, and spec-verified non-custodial EIP-712 signing.

SoSoValue Open API v1 | SoDEX Mainnet (286623) & Testnet (138565) | ValueChain L1 RPC (2s Finality) | SSI Protocol Rebalancer

Live Terminal (GitHub Pages)

`alphonshhhomenicmtu.github.io/basisdesk-soso/`

Streaming 500ms SoDEX L2 books, live ValueChain RPC, and 6/6 /diag probes.

1080p Walkthrough & Repo

`youtube.com/watch?v=a936c4mz-gk`

Open-source MIT repo at `github.com/alphonshhhomenicmtu/basisdesk-soso`.

Non-Custodial Guarantee

`ExchangeAction(payloadHash, nonce)`

Browser EIP-1193 wallet signing + local `ecrecover` + zero silent broadcast.

01 · THE SOLO QUANT PROBLEM

Fragmented Macro Flows, Perps Funding Carry & Custodial Execution

Independent on-chain quants lack a single non-custodial desk connecting SoSoValue macro signals to SoDEX basis execution and risk replay.

3 Silos

Macro ETF Flows vs Perp Carry

ETF net-inflow regimes (BTC/ETH/SOL) drive perp funding regimes, yet traders manually jump between SoSoValue dashboards and raw exchange orderbooks.

No Replay

Opaque Backtests & Funding Proxies

Most dashboards show annualized toy Sharpe ratios or ignore L2 impact notional, tiered maintenance margin, and intra-bar liquidation thresholds.

Unsafe Keys

Custodial API Key Risk

Browser terminals often embed hardcoded keys or auto-broadcast orders without explicit accountID verification or monotonic leg nonces.

BasisDesk v2.1 Solution

Deterministic rules-based macro+funding brief, 30-day matched 4h klines replay, and spec-verified SoDEX EIP-712 signing with zero silent broadcast.

Four-Pillar Integration: SoSoValue + SoDEX + ValueChain + SSI

Live Data & Chain Feeds

- **SoDEX WebSockets & REST:** `wss://mainnet-gw.sodex.dev/ws/{perps,spot}` (500ms `l2Book`, 107 perps, 48 spot & SSI pairs, 180x4h klines).
- **ValueChain L1 RPC:** `https://mainnet.valuechain.xyz` (Chain ID `286623`, 2s finality, polled every 6s).
- **SoSoValue Open API v1:** `openapi.sosovalue.com/openapi/v1` (US ETF flows, macro, SSI MAG7 constituents, news via BYOK).

Deterministic Quant & Execution Engine (`src/engine/`)

- **Carry Engine:** 1h funding (8,760/yr), basis bps, L2 impact notional up to 200x max leverage.
- **30d Klines Replay:** Exact pre-penalty liquidation math + post-breach flattening + 1,000-path seeded Monte Carlo VaR/CVaR.
- **EIP-712 & SSI:** `batchNewOrder` (spot) & `newOrder` (futures) + `AssetRebalancer.sol` buffer-band drift.

Honest Provenance Labeling

Every panel explicitly surfaces `LIVE WS`, `LIVE REST`, `LIVE RPC`, `LIVE API`, or `SNAPSHOT` so judges see real-time vs fallback state at a glance.

Zero Silent Broadcast & Exact Go-Struct Wire Signing

Exact `ExchangeAction(bytes32 payloadHash, uint64 nonce)`

- **Dual Domains:** Spot `batchNewOrder` (`domain.name = "spot"`) and Perps `newOrder` (`domain.name = "futures"`).
- **Wire Format:** Preserves Go struct field order for `payloadHash = keccak256(utf8(JSON))` and 66-byte `0x01 || r || s || v` `X-API-Sign`.
- **Monotonic Leg Nonces:** Switching between Spot and Perp legs allocates strictly increasing `uint64` ms nonces inside SoDEX's `(T−2d, T+1d)` window.

Builder-Fee Attribution & Safety Gates

- **Builder Attribution:** Supports exact Go-ordered `builder: { id, fee }` (`omitempty`) + `/api/v1/user/{address}/builder/summary` telemetry.
- **Live `accountID` Resolution:** Queries live `/spot/accounts/{addr}/state` & `/perps/accounts/{addr}/state`; signing & cURL stay disabled until an activated ID resolves.
- **Mainnet Safety Gate:** Explicit confirmation required when switching from Testnet (`138565`) to Mainnet (`286623`).

04 · HONEST BASIS PROXY, LIVE FUNDING & 30-DAY KLINES REPLAY

Auditable 180-Bar Replay With Pre-Penalty Liquidation Math

Honest Funding Overlay

Labels 30d historical funding as a close-to-close basis proxy of SoDEX's 8h/8 clamp `(P + clamp(0.0001−P, −0.0005, +0.0005))/8` alongside live ticker funding.

Exact Pre-Penalty Liquidation

Solves `px = (marginCash + qty*entryPerp + deduction) / (qty*(1+mmr))` before mutating cash; flattens spot on `perpHigh` breach and marks slices `FLAT`.

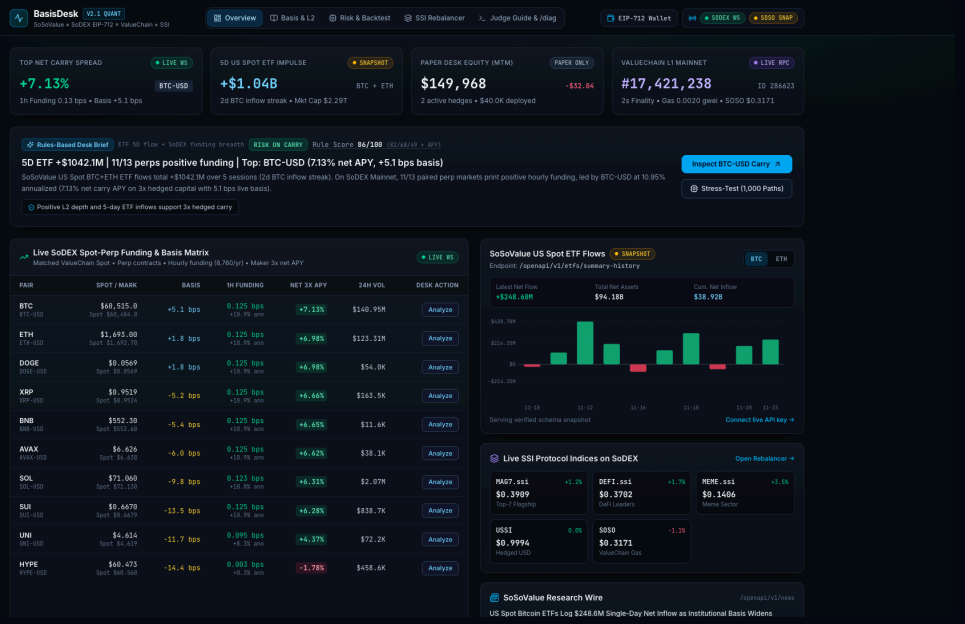
Uninflated Risk Metrics

Reports observed-window excess Return/Vol, sample downside ratio (`n−1`, 4.5% USDC hurdle), exact fees (`9.4/21.0 bps`), and 6 in-sample 5-day slices (`HIT/DRIFT/STOPPED/FLAT`).

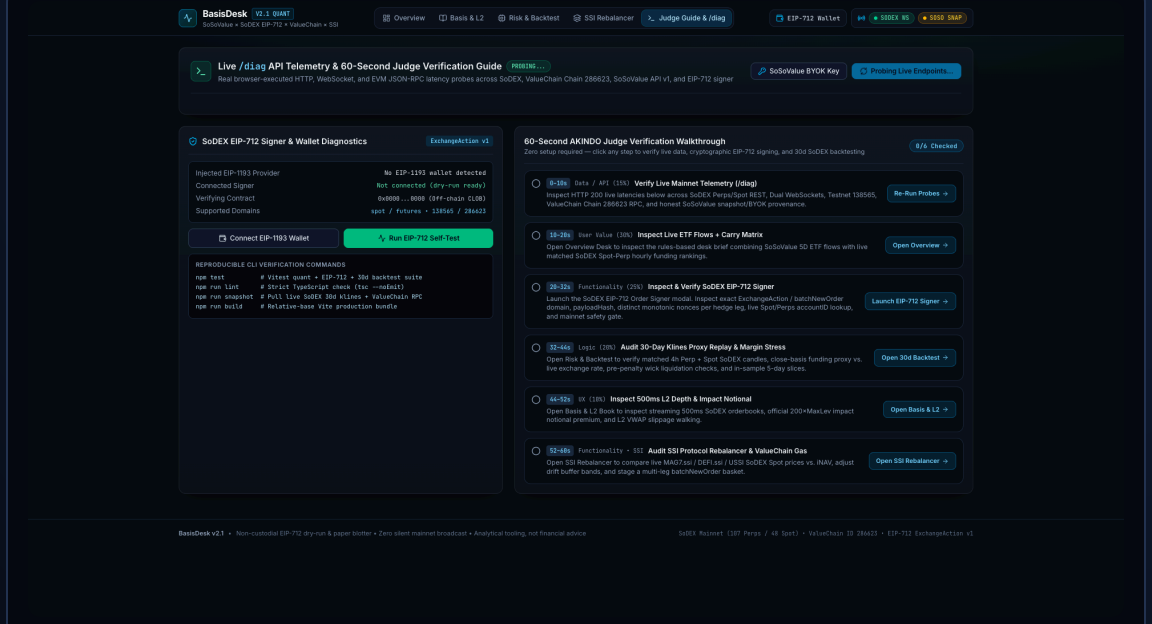
1,000-Path Seeded Monte Carlo (Model Only)

Deterministic Mulberry32 + Box-Muller GBM jump-diffusion stress lab computes 95%/99% VaR & CVaR without hiding model assumptions.

Production GitHub Pages Terminal & Live Telemetry Views



Live Overview Desk · Carry Matrix, ETF Flows, Rules Brief & Paper Blotter



Live /diag & Telemetry Screen · Real Browser HTTP/RPC/WS Latency Probes

06 · PRODUCTION VERIFICATION PROOF

All Tests, Typechecks, Live Probes & Pages Deployments Verified

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Vitest Quant & EIP-712 Suite

Covers carry math, 30d klines alignment, pre-penalty liquidation, SSI drift, and SoDEX EIP-712 `ExchangeAction` signing & `ecrecover`.

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Live /diag Telemetry Probes

Verifies SoDEX Mainnet REST/WS, SoDEX Testnet `138565`, ValueChain RPC `286623`, and SoSoValue API v1 provenance in-browser.

HTTP 200

Zero-Error Static Pages

`tsc --noEmit` (0 errors), `vite build` relative-path bundle, and live GitHub Pages deployment with 0 console/page errors.

AKINDO Wave 3 Rubric Alignment (100%)

User Value (30%) · Functionality (25%) · Logic (20%) · Data/API (15%) · UX (10%) — mapped directly inside the built-in `/diag` screen.

Sustainable One-Person On-Chain Finance Business

Revenue & Distribution Model

- **SoDEX Builder-Fee Attribution:** Opt-in `builder: { id, fee }` on Spot & Perps hedges earns transparent protocol rebates per executed leg.
- **Pro Quant Desk Tier ($39/mo):** Multi-account `accountID` monitoring, custom ETF-flow + funding regime alerts, and automated SSI drift notifications.
- **Open-Source Core (MIT):** Full auditability builds trader trust with zero custodial risk.

Wave 4 Roadmap

- **SSI Vault Automation:** One-click `AssetRebalancer.sol` multi-leg hedge bundles on ValueChain Mainnet (`286623`).
- **Cross-Venue Basis Scanner:** Expand L2 impact notional scanner across all 107 SoDEX perps and 48 spot/SSI pairs.
- **Telegram & Mobile Companion:** Push live liquidation-buffer alerts when margin ratio approaches tiered MMR.