Boing Network — Essentials

> ***One place for the essentials of the Boing blockchain network:*** *the six pillars, design philosophy, priorities, tech stack, and pointers to the rest of the docs.*

What Is Boing Network?

Boing Network is an authentic, decentralized **L1 blockchain** built from first principles. It is optimized for efficiency, free from dependencies on other chains, and committed to **100% transparency** and **true quality assurance** at the protocol layer. This document summarizes the core commitments and where to go for detail.

The Six Pillars

The Boing blockchain prioritizes, in order:

#	Pillar	What it means
1	**Security**	Safety and correctness over speed.
2	**Scalability**	Throughput and efficient resource use.
3	**Decentralization**	Permissionless participation at every layer.
4	**Authenticity**	Unique architecture and identity (not a fork or framework).
5	**Transparency**	100% openness in design, governance, and operations — the foundation for community trust.
6	**True quality assurance**	Top-notch standards with built-in automation: only assets that meet protocol-defined rules and security bar are allowed on-chain. All currently known edge cases are resolved by the automated regulatory QA system (Allow or Reject); **leniency for meme culture** (meme/community/entertainment are valid purposes), with **no maliciousness or malignancy** allowed. The community QA pool is only for genuinely unknown or policy-mandated cases. See QUALITY-ASSURANCE-NETWORK.md.

Design Philosophy

- **Authentic** — Our own architecture, not a fork or framework.
- **Independent** — Core protocol does not depend on another L1 for consensus, execution, or identity.
- **Optimal** — Adopt the best ideas from the ecosystem when they are demonstrably superior.
- **Unique** — A distinct identity and technical story.
- **Decentralized** — Absolute decentralization as a foundational requirement.
- **Transparent** — 100% transparent in how we build, govern, and operate — trust through verifiability, not promises.

Priorities (Order of Precedence)

When trade-offs arise, the network applies this order:

1. **Security** → 2. **Scalability** → 3. **Decentralization** → 4. **Authenticity** → 5. **Transparency** → 6. **True quality assurance**

Tech Stack at a Glance

Layer	Technology
Language	Rust
Hashing	BLAKE3
Signatures	Ed25519
Consensus	PoS + HotStuff BFT
State	Sparse Merkle tree (Verkle target)
Execution	**Boing VM** (stack-based; defined in `TECHNICAL-SPECIFICATION.md` §7; BOING-VM-INDEPENDENCE.md)
Networking	libp2p (TCP, Noise, gossipsub, request-response)
Governance	Phased (proposal → cooling → execution); time-locked

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Crates (Implementation)

Crate	Role
`boing-primitives`	Types, BLAKE3, Ed25519, Transaction, Block, AccountId
`boing-consensus`	PoS + HotStuff BFT
`boing-state`	State store, state root, checkpoints
`boing-execution`	VM, BlockExecutor, TransactionScheduler
`boing-tokenomics`	Block emission, dApp incentives
`boing-governance`	Time-locked governance, slashing appeal
`boing-automation`	Scheduler, triggers, executor incentives, verification
`boing-qa`	Protocol QA: Allow/Reject/Unsure for deployments
`boing-cli`	`boing init`, `boing dev`, `boing deploy`
`boing-p2p`	libp2p networking
`boing-node`	Node binary (RPC, mempool, block producer, chain)

Key Documents

Document	Use it for

TECHNICAL-SPECIFICATION.md	Single source of truth: crypto, data formats, bytecode, gas, RPC, QA rules
BOING-BLOCKCHAIN-DESIGN-PLAN.md	Full architecture, innovations, tokenomics, design decisions
QUALITY-ASSURANCE-NETWORK.md	Sixth pillar: QA rules, automation, community pool, meme leniency, no malice; Appendix A: deployer checklist; Appendix B: canonical malice definition
BUILD-ROADMAP.md	Implementation phases and progress
RUNBOOK.md	Running nodes, RPC, CLI, monitoring, incidents
TESTNET.md	Join testnet, Testnet Portal (registration, quests), Incentivized testnet (readiness, promotion, mainnet migration)
RPC-API-SPEC.md	JSON-RPC methods and error codes
SECURITY-STANDARDS.md	Protocol, network, application, and operational security
DEVELOPMENT-AND-ENHANCEMENTS.md	SDK, automation, vision; network-wide enhancements (implemented and planned)

All docs live in **docs/**. The README in the repo root lists the full doc set.

Quick Reference

Item	Default / convention
RPC port	8545
Address (AccountId)	32 bytes, hex-encoded (64 hex chars; optional `0x` prefix)
Transaction format	Bincode-serialized; signed with Ed25519 over BLAKE3 signable hash
Node binary	`cargo run -p boing-node`
CLI	`boing` (init, dev, deploy, metrics register, completions)

Transparency Commitment

We commit to 100% transparency in:

- **Protocol design** — Open design docs, public specs, auditable code.
- **Tokenomics** — Emission, fee splits, burn — on-chain and documented.
- **Governance** — On-chain proposals, votes, outcomes.
- **Validator & staking** — Clear slashing, reward formulas, distribution.
- **Security & audits** — Audit reports public; known risks disclosed.
- **Development** — Open source; roadmap and trade-offs discussed openly.

Boing Network — Authentic. Decentralized. Optimal. Sustainable. Quality-assured.