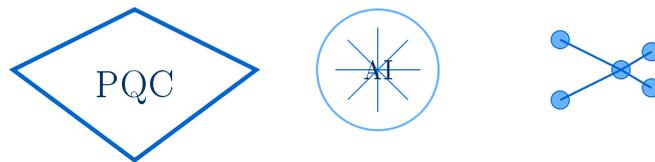# QoreChain

Community Whitepaper

The Quantum-Safe AI-Native Blockchain

Your Guide to QoreChain — Simplified for Everyone

PQC   AI

Version 2.0 — Community Edition

March 2026

Built for Users, Validators, Developers, and the Blockchain Community

Abstract

QoreChain is a next-generation Layer 1 blockchain designed to protect your digital assets from one of the biggest emerging threats in technology: quantum computing. By combining quantum-safe cryptography, AI-powered tools, and seamless connectivity to other blockchains, QoreChain offers a platform that is built for today's needs and tomorrow's challenges.

This community whitepaper is your guide to understanding what QoreChain is, how it works, and how you can participate. Whether you are a first-time crypto user curious about the project, a developer looking for powerful tools, a validator interested in running infrastructure, or a community member wanting to earn rewards through the QoreChain Dashboard — this document is written for you.

What makes QoreChain different:

- **Quantum-safe from day one** — built with NIST-standardized algorithms that protect against both today's and tomorrow's threats

- **AI-powered tools** — QCAI helps you create, audit, and deploy smart contracts using plain English

- **Three virtual machines in one chain** — developers from Ethereum, Cosmos, and Solana can deploy without rewriting their code

- **Connected to 25+ blockchains** directly, and 120+ more through the IBC protocol

- **A gamified community dashboard** with quests, badges, rewards, and an upcoming arcade

- **Designed for 5,000+ transactions per second** with sub-second finality

Target Audience: Everyone. This whitepaper explains QoreChain's technology and ecosystem in plain language, with minimal technical jargon. For the full technical details, please refer to the QoreChain Whitepaper v4.0.

Contents

Chapter 1

Welcome to QoreChain

1.1   What Is QoreChain?

QoreChain is a blockchain — a decentralized digital ledger where transactions are recorded securely, transparently, and permanently. But QoreChain is not just any blockchain. It is designed from the ground up to solve two problems that most other blockchains have not yet addressed: the coming threat of quantum computers and the need for smarter, AI-powered tools.

Think of QoreChain as a next-generation highway for digital assets and applications. It is fast (designed for over 5,000 transactions per second), secure (protected by the same type of quantum-safe algorithms that governments are adopting), and connected (able to communicate with dozens of other blockchains).

QoreChain was founded by Liviu Epure and is registered as a Swiss association (CHE-484.963.998) in Rolle, Switzerland, providing a strong regulatory and legal foundation.

1.2   The Three Pillars

QoreChain is built on three core pillars that work together:

1.2.1   Pillar 1: Quantum-Safe Security

Today's blockchains — Bitcoin, Ethereum, and nearly every other chain — rely on cryptographic algorithms (like ECDSA) that will eventually be broken by quantum computers. While large-scale quantum computers are still years away, the threat is already real. Governments and intelligence agencies have confirmed a strategy known as **"Harvest Now, Decrypt Later"**: adversaries are collecting encrypted data today, planning to decrypt it once quantum computers are powerful enough.

QoreChain uses **NIST-standardized post-quantum cryptographic algorithms** across its entire protocol:

- **ML-DSA-87** (also known as Dilithium-5) for digital signatures — this is how transactions are verified

- **ML-KEM-1024** (also known as Kyber) for key exchange — this is how secure connections are established

- **SHAKE-256** for hashing — this protects the integrity of all data stored on-chain

These are the same algorithms mandated by the U.S. National Security Agency (NSA) for government use by 2030. QoreChain is one of the only blockchains that applies these protections across the entire stack — not just in one small area.

1.2.2 Pillar 2: AI-Native Intelligence (QCAI)

QoreChain embeds artificial intelligence directly into its protocol through **QCAI** (QoreChain AI). Unlike other projects that simply add AI as a marketing buzzword, QCAI is a working system that operates at every level of the network:

For the network: QCAI continuously analyzes conditions to route transactions through the fastest and cheapest path, predict demand spikes before they cause congestion, and detect security threats in real time.

For developers: QoreChain Studio lets you describe a smart contract in plain English, and QCAI generates production-ready code for any of 17 supported blockchains. It also audits contracts for security vulnerabilities and suggests gas optimizations.

For everyone: The QoreChain Dashboard at https://dashboard.qorechain.io puts QCAI's power in your hands — create smart contracts, audit code, and interact with the blockchain through an intuitive interface.

QCAI operates in three tiers:

- **QCAI Fast** — optimized for speed, available to all users

- **QCAI Balanced** — the standard tier balancing quality and speed

- **QCAI Advanced** — the most capable tier, available to Premium subscribers

1.2.3 Pillar 3: Universal Interoperability

The blockchain world is fragmented. Ethereum users cannot easily interact with Solana. Cosmos chains are isolated from Bitcoin. QoreChain solves this by acting as a **hub** that connects to multiple blockchain ecosystems:
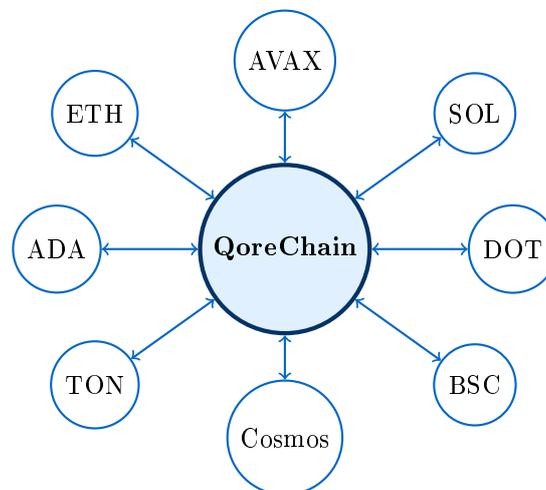
The **QoreChain Bridge (QCB)** connects directly to **25 Layer 1 blockchains** including Ethereum, Solana, Cardano, Polkadot, NEAR, TON, Avalanche, BSC, and many more. Through the integrated **IBC protocol** (Inter-Blockchain Communication), QoreChain also reaches over **120 additional networks** in the Cosmos ecosystem.

1.3 Why It Matters to You

If you hold crypto today, your assets may be at risk. Every ECDSA-signed transaction recorded on a traditional blockchain is a candidate for future quantum decryption. By using QoreChain — or bridging your assets to it — you gain quantum-safe protection automatically.

If you are a developer, QoreChain gives you access to the most powerful AI-assisted development tools in blockchain, supporting 17 chains from a single platform, with three virtual machine environments (EVM, CosmWasm, and SVM).

If you want to participate and earn, the QoreChain Dashboard offers a full gamified experience with quests, badges, a leaderboard, and an upcoming blockchain arcade where your activity earns real rewards.

Chapter 2

How QoreChain Works

This chapter explains QoreChain's technology in simple terms. For the full mathematical and engineering details, refer to the QoreChain Whitepaper v4.0.

2.1 Quantum-Safe Security — Explained Simply

2.1.1 The Problem

Today's blockchains use a type of cryptography called **elliptic curve cryptography** (ECC). It is very secure against today's computers, but quantum computers use fundamentally different physics that can break ECC efficiently. Experts estimate that quantum computers capable of breaking blockchain cryptography could arrive between 2030 and 2035.

The real danger is happening *now*: adversaries are storing encrypted blockchain data today, waiting to decrypt it later. This is called the **"Harvest Now, Decrypt Later"** attack, and it has been confirmed as an active strategy by the U.S. Department of Homeland Security, the NSA, the UK's National Cyber Security Centre, and EU cybersecurity agencies.

2.1.2 QoreChain's Solution

QoreChain uses **post-quantum cryptography (PQC)** — algorithms specifically designed to resist both classical and quantum attacks. These algorithms are based on mathematical problems (called *lattice problems*) that even quantum computers cannot solve efficiently.

QoreChain's PQC protection covers everything:

- Every transaction you sign

- Every connection between validators

- Every cross-chain bridge transfer

- Every piece of data stored on-chain

The system also supports a **hybrid mode** during the transition period: both classical and quantum-safe signatures can be used simultaneously, ensuring backward compatibility while the ecosystem migrates.

2.1.3 Cryptographic Agility

What if a better algorithm is discovered in 2030? QoreChain is prepared. The protocol includes **hot-swappable cryptographic modules** — meaning new algorithms can be activated through a community governance vote without requiring a network fork or disrupting existing applications.

2.2   QCAI: Your AI Assistant

QCAI is QoreChain's built-in AI layer. It is not a separate product or add-on — it is woven into the fabric of the network itself.

2.2.1   What QCAI Does for the Network

- **Smart transaction routing** — QCAI analyzes network conditions every 100 milliseconds and routes your transaction through the fastest, cheapest path

- **Demand prediction** — by learning patterns in network usage, QCAI pre-allocates resources before congestion occurs

- **Anomaly detection** — AI models monitor for suspicious activity (Sybil attacks, DDoS attempts, flash loan exploits) and respond automatically

- **Consensus optimization** — QCAI helps select the best validators for each block, improving speed and reliability

2.2.2   What QCAI Does for Developers

QoreChain Studio is the developer-facing tool powered by QCAI:

- **Smart Contract Creator** — describe your contract in plain English, and QCAI generates production-ready code for any of 17 supported blockchains (QoreChain, Ethereum, Solana, Cosmos, Avalanche, Arbitrum, Optimism, Polygon, BSC, Cardano, Polkadot, NEAR, TON, Tezos, Sui, Aptos, TRON)

- **Security Auditor** — paste any smart contract and receive a detailed vulnerability report with a security score (0–100), risk level, and specific fix recommendations, including a quantum safety score for QoreChain contracts

- **Gas Optimizer** — QCAI suggests code improvements to reduce transaction costs

- **Test Generator** — automatically generates comprehensive test suites for your contracts

2.3   Triple-VM: One Chain, Three Languages

Most blockchains support only one smart contract environment. Ethereum has the EVM (Solidity). Cosmos chains use CosmWasm (Rust). Solana uses the SVM (Rust/C). If you are a developer on one ecosystem, switching to another means rewriting all your code.

QoreChain runs **all three virtual machines** within a single unified state:

- **EVM** — deploy Solidity and Vyper contracts without modification; use MetaMask, Hardhat, and Remix

- **CosmWasm** — write smart contracts in Rust with the actor-model security guarantees of WebAssembly

- **SVM** — run Solana-native programs using BPF execution

These virtual machines can **talk to each other natively**. An EVM contract can call a CosmWasm module, which can trigger an SVM program — all within a single atomic transaction. QoreChain is the only blockchain where developers from all three major ecosystems can deploy without rewriting their contracts.

2.4 The QoreChain Consensus Engine

QoreChain uses a **Byzantine Fault Tolerant (BFT) consensus mechanism** enhanced with post-quantum cryptography and AI optimization. Here is what that means in simple terms:

- **Validators** are participants who stake QOR tokens and run nodes that verify transactions and produce blocks

- A block is finalized when more than two-thirds of validators agree on it

- **Finality is instant** — once a block is committed, it cannot be reversed (no waiting for "confirmations" like on Bitcoin or Ethereum)

- QCAI optimizes which validators propose blocks based on their performance history, network latency, and current conditions

    Target performance:
- Designed for **5,000+ transactions per second**

- Targeting **sub-second finality**

- Up to **175 active validators** at launch, scaling to 300

2.5 Light Node Network

Not everyone can run a full validator node (which requires significant hardware). QoreChain introduces a **Light Node Network** — a way for anyone to participate in securing the network with minimal resources.

    Light nodes come in two editions:

- **SX Edition** — a lightweight server daemon for VPS or dedicated hardware (2–4 GB RAM)

- **UX Edition** — a web-based dashboard that runs directly in your browser

    Light nodes validate transactions, relay network state, and strengthen decentralization. In return, they receive a dedicated **3% share of all network transaction fees** — creating real economic incentives for participation at every level.

2.6 Cross-Chain Bridge

The **QoreChain Bridge (QCB)** is how assets move between QoreChain and other blockchains. It supports:

- **25 direct connections** to major chains (Ethereum, Solana, Cardano, Polkadot, NEAR, TON, Avalanche, Arbitrum, Optimism, Polygon, BSC, and more)

- **120+ additional chains** through the IBC protocol

- **Quantum-safe protection** on every bridge transfer — your assets become quantum-safe the moment they land on QoreChain

    Bridge security is maintained by **licensed QoreChain validators** who serve a triple role: they produce blocks on QoreChain, watch connected chains for cross-chain events, and operate the bridge infrastructure. This cross-network validator model extends QoreChain's security across the entire multi-chain ecosystem.

Chapter 3

The QoreChain Dashboard

The QoreChain Dashboard (https://dashboard.qorechain.io) is your central hub for interacting with the QoreChain ecosystem. It is a full-featured web application available in **10 languages** (English, Turkish, French, German, Romanian, Spanish, Arabic, Italian, Korean, and Japanese) with dark and light theme support.

3.1   Getting Started

Creating an account is simple. You can sign up using your Google, Facebook, Apple, or Amazon account. Once logged in, you gain access to the full suite of tools.

3.2   Wallet Management

Your wallet is where your QOR tokens live. The dashboard provides a complete wallet experience:

- **Create a wallet** — the dashboard generates a secure 24-word recovery phrase and derives your unique QoreChain address (starting with `qor1...`)

- **Import a wallet** — bring an existing wallet using your recovery phrase

- **Multiple wallets** — manage several wallets from a single account

- **Send and receive** — transfer QOR tokens to any QoreChain address, with QR code support for receiving

- **View your assets** — see your native QOR balance, tokens, and NFTs in organized tabs

- **Contact book** — save frequently used addresses for quick transfers

3.3   Block Explorer

The built-in block explorer gives you a real-time window into the QoreChain network:

- **Network overview** — latest block height, transaction count, active validators, and total staked QOR

- **Block details** — view any block's transactions, proposer, gas usage, consensus data, and PQC proof validation status

- **Transaction details** — see full transaction information including cross-chain routing for bridge transfers, with source and destination network display

- **Address lookup** — check any account's balance and transaction history

- **Validator list** — browse active validators with their voting power, commission rates, and performance badges

- **Real-time updates** — configurable refresh interval from 3 to 60 seconds

3.4   Smart Contract Creator (QCSC)

This is where QCAI's developer power becomes accessible to everyone:

1. **Describe what you want** — type a natural language prompt (e.g., "Create a token contract with 1 million supply and a burn function")

2. **Choose your blockchain** — select from 17 supported chains

3. **Select the contract type** — Token, NFT, DAO, DeFi, or Custom

4. **Watch QCAI generate your code** — real-time streaming with syntax highlighting

5. **Review, edit, and deploy** — use the built-in code editor, download the contract, or deploy directly to the network

   Premium subscribers get access to QCAI Advanced for higher-quality code generation with larger token limits.

3.5   Smart Contract Auditor

Security is critical in blockchain. The auditor tool lets you:

- Paste any smart contract code and select the blockchain

- Receive a **security score** (0–100) with color-coded risk levels (Critical, High, Medium, Low, Safe)

- Get a detailed **vulnerability report** with descriptions, code locations, and fix recommendations

- See **gas optimization suggestions** and best-practice compliance checks

- For QoreChain contracts, receive a **quantum safety score**

- Export the full audit report as a PDF

- Browse your complete audit history with search and filtering

3.6   DEX and Trading

The dashboard includes a built-in decentralized exchange (DEX) based on an automated market maker (AMM) model:

- **Swap** — exchange between 20+ supported tokens (QOR, USDC, WETH, WBTC, ATOM, SOL, BNB, and more) with live price impact and slippage controls

- **Liquidity pools** — browse available pools, see reserves and APY, or create new pools

- **Add liquidity** — provide token pairs to earn LP tokens and trading fees

- **Positions** — track your liquidity positions and accumulated earnings

3.7 Testnet Faucet

During the testnet phase, anyone can claim **1,000 QOR** tokens for free every 12 hours. Simply enter your QoreChain address (or select a wallet from your account) and claim. The faucet is available without login and automatically completes related quests.

3.8 Premium Subscription

QoreChain offers two service tiers:

Feature	Standard (Free)	Premium
AI model tier	QCAI Fast / Balanced	QCAI Advanced
Generation quality	Good	Best available
Audit depth	Standard	Deep analysis
Monthly credits	15	75 (5x)
Priority queue	—	✓
Premium badge	—	✓
Priority support	—	✓

Table 3.1: Dashboard subscription tiers

Premium is paid in QOR tokens and auto-renews from your connected wallet.

3.9 Educational Content

The dashboard also helps you learn about QoreChain:

- **Whitepaper viewer** — read the full whitepaper with section navigation

- **Learning quiz** — test your knowledge with a 5-question quiz and earn a badge

- **Intro video** — watch an overview video with transcript

- **FAQ** — browse 30+ answers organized by category (Explorer, Wallet, Smart Contracts, Audit, Trading, Rewards)

Chapter 4

Community and Gamification

QoreChain is not just a blockchain — it is a living community. The dashboard includes a full gamification system designed to reward participation, encourage learning, and make interacting with the network genuinely fun.

4.1 Eigenvalue (Lambda) Points

At the heart of the reward system is the **Eigenvalue** point, represented by the lambda (λ) symbol. You earn Lambda points by completing quests, participating in the community, trading on the DEX, creating smart contracts, and more.

Lambda points can be **converted to QOR tokens**, giving them real economic value. Your Lambda balance and QOR balance are both visible on the Rewards page.

4.2 Rank System

As you accumulate Lambda points, you climb through five ranks, each with an increasing reward multiplier:

Rank	Points Required	Multiplier	Benefit
Bronze	0	1.0x	Base rewards
Silver	1,000	1.2x	20% bonus on all earnings
Gold	5,000	1.5x	50% bonus on all earnings
Platinum	15,000	2.0x	Double rewards
Diamond	50,000	3.0x	Triple rewards

Table 4.1: QoreChain rank system

The higher your rank, the more you earn from every quest, badge, and activity. This means early and active participants benefit the most.

4.3 Level System

Beyond ranks, there is a **50-level progression system**. Each level requires exponentially more points (starting at 100 and increasing by 1.5x per level), providing long-term goals that keep the experience engaging over months and years.

4.4 Quests and Tasks

Quests are specific activities you can complete to earn Lambda points and QOR tokens. They are organized into categories:

- **Onboarding** — create your first wallet, claim tokens from the faucet

- **Trading** — execute your first swap, add liquidity to a pool

- **Social** — follow QoreChain on X (Twitter), join the Telegram community

- **Community** — refer friends, submit feedback

- **Learning** — complete the quiz, read the whitepaper

- **Daily tasks** — recurring activities that refresh every 24 hours

- **Weekly challenges** — larger goals that reset each week

Each quest shows its reward amount, difficulty level (Easy, Medium, or Hard), and progress status. Many quests are verified automatically — for example, creating a wallet or claiming from the faucet is detected instantly. Social quests (like following on X) use verification through the platform's API.

4.5 Badges and Achievements

Badges are collectible achievements that appear on your profile and on the leaderboard. They come in multiple tiers (Special, Bronze, Silver, Gold, Platinum) and are organized into series:

- **Quantum Series** — awarded for quantum-related milestones

- **Developer Series** — for contract creation and auditing achievements

- **Community Series** — for referrals, feedback, and social engagement

- **Trading Series** — for DEX activity milestones

- **Social Series** — for connecting and sharing across platforms

- **Seasonal Series** — limited-time badges tied to special events

Your badge collection is displayed on your profile and contributes to your standing on the leaderboard.

4.6 Leaderboard

The **Leaderboard** is a public, real-time ranking of all QoreChain community members by their Lambda points. The top three users receive prominent Gold, Silver, and Bronze podium positions. The full leaderboard is searchable by name or address, paginated, and shows each user's rank, avatar, display name, points, and badge collection.

4.7 Referral Program

Every user receives a unique referral code and shareable link. When someone signs up using your code:

- **You (the referrer)** earn 100 Lambda points

- **They (the referee)** earn 50 Lambda points as a welcome bonus

- Up to **10 referrals** are rewarded per user (though you can refer more — they just count without point rewards beyond the cap)

4.8 User Profile

Your profile is your identity on QoreChain. It displays:

- Your avatar, display name, and social links (GitHub, X, Discord, Telegram)

- A stats bar showing your Lambda points, contracts created, contracts audited, contracts deployed, and membership date

- Your complete contract creation, audit, and deployment history

- Your badge collection

- Security settings including two-factor authentication (TOTP) and passkey support

Chapter 5

Future Developments

QoreChain's dashboard and community features are under active development. This chapter outlines the upcoming additions that will expand the platform's capabilities and deepen community engagement.

5.1 Light Node Registration Interface

A dedicated dashboard page will allow anyone to register and manage a light node directly from their browser:

- **One-click registration** — choose between SX Edition (server daemon) or UX Edition (browser-based) and register your node on-chain

- **Node monitoring dashboard** — track your node's uptime, blocks validated, and network contribution in real time

- **Reward tracking** — see your share of the 3% light node fee allocation, with historical earnings charts and claim functionality

- **Performance metrics** — view your node's latency, validation success rate, and comparison to network averages

- **Automatic quest integration** — registering a light node will unlock new quests and badges in the gamification system

The light node interface will lower the barrier to network participation, allowing community members to contribute to QoreChain's security and decentralization while earning rewards — all without needing to run heavy infrastructure.

5.2 Validator Licensing and Registration

QoreChain validators serve a unique triple role: block production, cross-chain watching, and bridge operation. A new dashboard section will provide a complete validator management experience:

- **License application** — apply for a cross-network validator license by posting the required QOR bond directly through the dashboard

- **Role selection** — choose which connected chains you want to watch and validate (from the 25 directly connected Layer 1 blockchains)

- **Bond management** — monitor your bond status, top up or withdraw, and view slashing history

- **Performance dashboard** — track your validator's uptime, attestation accuracy, bridge operations completed, and earned rewards across all roles

- **Commission management** — set and adjust your commission rate with transparent history

- **Delegator overview** — see who has delegated to your validator and manage your delegator relationships

This interface will make the process of becoming a QoreChain validator transparent and accessible, attracting a broader set of validators to strengthen the network.

5.3 QoreChain Arcade

The **QoreChain Arcade** will be a dedicated section of the dashboard featuring blockchain-native games where players earn Lambda (λ) points:

5.3.1 Vision

The Arcade brings entertainment to the QoreChain ecosystem while serving a practical purpose: games introduce users to blockchain concepts (wallets, transactions, gas, staking) in a fun, low-stakes environment. Every game interaction generates real on-chain activity, contributing to network usage and testnet validation.

5.3.2 Game Categories

- **Puzzle games** — logic and strategy games where solutions are recorded on-chain and rewards scale with difficulty

- **Trading simulations** — practice DEX trading with simulated markets to learn price impact, slippage, and liquidity concepts before using real assets

- **Prediction challenges** — make predictions about network metrics (next block time, daily transaction count, validator performance) and earn Lambda points for accuracy

- **Blockchain trivia** — timed quizzes on blockchain, cryptography, and QoreChain-specific knowledge

- **Competitive challenges** — time-limited tournaments with leaderboards and exclusive rewards for top performers

5.3.3 Reward Structure

- All games award **Lambda (λ) points** based on performance, skill, and completion

- Your rank multiplier applies to Arcade earnings (Diamond players earn 3x)

- **Arcade-specific leaderboards** track top gamers separately from the main leaderboard

- **Exclusive Arcade badges** reward milestones within each game

- **Seasonal tournaments** with limited-edition rewards encourage recurring participation

5.4   Expanded Badges and Quests

The gamification system will grow significantly with new content:

5.4.1   New Badge Series

- **Light Node Series** — badges for registering a node, achieving uptime milestones, and validating block count thresholds

- **Validator Series** — badges for obtaining a license, completing bridge operations, and maintaining high attestation accuracy

- **Arcade Series** — badges for game achievements, tournament placements, and multi-game mastery

- **Explorer Series** — badges for discovering network milestones (viewing the 1 millionth block, finding specific transaction types)

- **Bridge Pioneer Series** — badges for cross-chain transfers across different connected blockchains

5.4.2   New Quest Categories

- **Light node quests** — register a node, maintain 24-hour uptime, validate your first 1,000 blocks

- **Validator quests** — apply for a license, complete your first bridge attestation, achieve 99% uptime

- **Arcade quests** — play your first game, win a tournament, achieve a high score

- **Cross-chain quests** — complete a bridge transfer, interact with contracts on multiple chains

- **Governance quests** — vote on your first proposal, submit a proposal, participate in multiple governance votes

5.5   Seasonal Events and Campaigns

Inspired by the most engaging community models in blockchain and gaming, QoreChain will introduce **time-limited seasonal events**:

- **Themed seasons** — multi-week campaigns (e.g., "Quantum Winter," "Bridge Builder Summer") with unique quests, badges, and rewards that are only available during the event

- **Exclusive seasonal badges** — collectible badges that can never be earned again after the season ends, creating genuine scarcity and a sense of achievement

- **Season passes** — optional progression tracks with milestone rewards throughout the season

- **Escalating rewards** — daily login bonuses that grow the longer your streak lasts, encouraging consistent participation

5.6 Community Challenges

Community Challenges are collective goals where the entire QoreChain community works together toward a shared target:

- **Network milestones** — "Process 1 million testnet transactions this month" or "Reach 10,000 active wallets"

- **Shared rewards** — when the community hits the target, everyone who participated receives bonus Lambda points

- **Progress tracking** — a live dashboard widget shows how close the community is to the goal

- **Tiered rewards** — larger contributions earn proportionally larger shares of the community reward pool

5.7 NFT Achievement Badges (Soulbound Tokens)

Top-tier badges will be converted into **on-chain soulbound tokens (SBTs)** — non-transferable NFTs that live permanently on the QoreChain blockchain:

- **Verifiable proof of contribution** — anyone can verify your achievements by looking at your on-chain SBT collection

- **Portable reputation** — your achievements are linked to your wallet address, not just a dashboard database

- **Governance weight** — in the future, SBT holders may receive additional weight in governance votes, rewarding active community participants

- **Exclusive access** — certain SBTs may unlock access to beta features, private channels, or early token distributions

5.8 Guild and Team System

A **Guild system** will allow users to form teams and compete together:

- **Create or join a guild** with a name, logo, and description

- **Guild leaderboard** — teams are ranked by their combined Lambda points

- **Guild-exclusive quests** — cooperative challenges that require multiple guild members to contribute

- **Guild badges** — special badges awarded to the team as a whole for collective achievements

- **Inter-guild competitions** — periodic tournaments where guilds compete head-to-head

5.9 Streaks and Daily Login Rewards

To encourage consistent daily engagement:

- **Login streaks** — consecutive daily logins build a streak counter visible on your profile

- **Escalating multipliers** — the longer your streak, the higher your daily Lambda bonus (e.g., Day 1: 10λ, Day 7: 25λ, Day 30: 100λ)

- **Streak badges** — earn badges at milestone streaks (7 days, 30 days, 100 days, 365 days)

- **Streak protection** — a limited number of "streak shields" prevent a single missed day from resetting your counter

5.10   Specialized Leaderboards

Beyond the main Lambda leaderboard, new specialized rankings will track achievements in specific areas:

- **Arcade leaderboard** — top gamers ranked by Arcade points and tournament wins

- **Trading leaderboard** — most active DEX traders ranked by volume and number of swaps

- **Developer leaderboard** — ranked by contracts created, audited, and deployed

- **Validator leaderboard** — ranked by uptime, attestation accuracy, and blocks produced

- **Guild leaderboard** — teams ranked by combined member performance

5.11   Tools Page

A new **Tools** section on the dashboard will provide direct access to on-chain governance and network management features:

- **Governance proposals** — browse active, passed, and rejected proposals; read proposal details and community discussion; cast your vote (Yes, No, Abstain, No With Veto) directly from the dashboard; deposit QOR to back proposals you want to see reach voting stage

- **Proposal creation wizard** — a guided interface for drafting and submitting governance proposals (parameter changes, software upgrades, community spend requests, or text/signal proposals), with QCAI-assisted impact summaries

- **Staking management** — delegate QOR to validators, redelegate between validators, and undelegate, all with clear visualizations of reward projections and unbonding timelines

- **Reward claiming** — view and claim accumulated staking rewards with a single action

- **IBC transfers** — initiate Inter-Blockchain Communication transfers to and from other Cosmos ecosystem chains with guided channel selection

- **Token vesting tracker** — for team, investor, and ecosystem participants, a clear dashboard showing vesting schedules, unlocked amounts, and upcoming milestones

- **Network parameter viewer** — an at-a-glance view of all current on-chain parameters (gas prices, staking minimums, slashing conditions, governance thresholds) so community members can stay informed

- **Fee calculator** — estimate transaction costs for different operation types (transfers, contract deployments, bridge transfers, governance votes) before executing them

The Tools page is designed to make the more advanced aspects of blockchain participation — governance, staking, and cross-chain operations — accessible to everyone, not just technical users.

Chapter 6

QOR Token and Governance

6.1 The QOR Token

`QOR` is the native token of the QoreChain network. It powers everything — from paying transaction fees to participating in governance decisions. The smallest unit is called `uqor` (1 QOR = 1,000,000 uqor).

6.1.1 What QOR Is Used For

- **Transaction fees (gas)** — every transaction on QoreChain requires a small amount of QOR. Average fees are designed to be very low ($0.01–0.05 per transaction)

- **Staking** — validators must stake QOR to participate in consensus. Delegators can stake their QOR with validators to earn rewards

- **Governance** — staked QOR holders vote on protocol upgrades, parameter changes, and community fund allocations. Voting power scales with lock duration (1x–2x multiplier)

- **AI services** — access to QoreChain Studio's premium AI features (QCAI Advanced) is paid in QOR. Studio tiers range from Free (10 AI generations/month) to Pro (100 QOR/month) and Enterprise (1,000 QOR/month)

- **Bridge fees** — cross-chain transfers through the QoreChain Bridge require QOR fees

6.1.2 Key Figures

Parameter	Value
Total supply	4,500,000,000 QOR (fixed)
TGE price	$0.02
Initial circulating supply	~16% (~721M QOR)
Launch market cap	~$14.4M
Fully diluted valuation	$90M

Table 6.1: QOR token key figures

6.1.3 Where Transaction Fees Go

Every transaction fee on QoreChain is split across five destinations:

The 30% burn means that QOR becomes scarcer over time as the network is used — a built-in deflationary mechanism that benefits long-term holders.

Destination	Share	Purpose
Validators	37%	Rewards for block production and validation
Burned	30%	Permanently removed from supply (deflationary)
Treasury	20%	Funds development and ecosystem growth
Stakers	10%	Rewards for delegators who stake QOR
Light nodes	3%	Rewards for light node operators

Table 6.2: Transaction fee distribution

6.1.4   Token Allocation

Category	Amount	% Supply
Community Distribution	1,170,000,000	26.0%
Ecosystem & Protocol	1,080,000,000	24.0%
Team & Advisors	720,000,000	16.0%
Investors	675,000,000	15.0%
Treasury & Operations	360,000,000	8.0%
Marketing & Partnerships	270,000,000	6.0%
Community Programs & Governance	135,000,000	3.0%
Reserves & Burns	90,000,000	2.0%
Total	**4,500,000,000**	**100.0%**

Table 6.3: QOR token allocation

Community Distribution is the largest single category at 26%, reflecting QoreChain's community-first philosophy. Of the tokens circulating at TGE, over 65% are held by community participants — airdrop recipients, public sale buyers, and launchpad contributors.

Vesting schedules protect against excessive sell pressure at launch:

Category	TGE Unlock	Cliff	Vesting
Core Team	0%	12 months	48 months linear
Seed Investors	0%	12 months	24 months linear
Private Investors	0%	9 months	21 months linear
Strategic Investors	5%	6 months	18 months linear
Public Sale	50%	None	3 months linear

Table 6.4: Vesting schedules by category

All insider rounds (Seed, Private, Core Team) have 0% unlocked at TGE with 9–12 month cliffs, ensuring long-term alignment between the team, investors, and the community.

6.1.5   Staking Rewards

QOR holders who stake their tokens earn rewards for helping secure the network. Estimated APY ranges depend on total staking participation:

Key staking parameters: minimum validator stake of 100,000 QOR, minimum delegator stake of just 10 QOR, and a 21-day unbonding period.

6.1.6   Deflationary Mechanisms

QOR features multiple burn mechanisms that reduce supply over time:

Period	Estimated APY
Year 1	8–12%
Year 2	6–10%
Year 3–4	5–8%
Year 5+	Governance-determined

Table 6.5: Staking rewards schedule

- **Gas fee burns** — 30% of every transaction fee is permanently burned

- **TGE burn** — 33.75M QOR from the Burn Reserve is burned at launch

- **Studio service burns** — 50% of QoreChain Studio fees are burned

- **Milestone burns** — one-time burns triggered when the network reaches adoption milestones (e.g., 1M and 10M transactions)

- **Treasury buybacks** — periodic buyback-and-burn programs funded by the treasury

- **Governance burns** — deposits from spam proposals are burned

Projected total burn over the first three years is approximately 86–131 million QOR (1.9–2.9% of total supply), depending on network adoption milestones achieved.

6.2 Governance

QoreChain uses **on-chain governance**, meaning that staked token holders directly control the future of the protocol through voting.

6.2.1 Voting Power

Your voting power is determined by two factors: how many QOR you stake, and how long you lock them:

Lock Period	Voting Multiplier
No lock	1.0x
3 months	1.2x
6 months	1.4x
12 months	1.7x
24 months	2.0x

Table 6.6: Governance voting power multipliers

For example, staking 1,000 QOR with a 12-month lock gives you 1,700 votes (1,000 × 1.7x). This rewards long-term commitment to the network.

6.2.2 How Proposals Work

1. **Submit a proposal** — any holder with at least 10,000 staked QOR can propose changes (parameter adjustments, software upgrades, treasury spending, or signal proposals)

2. **Deposit period** — the community has 7 days to back the proposal with the required minimum deposit

3. **Voting period** — 7 to 14 days (depending on the proposal type) for staked token holders to vote Yes, No, Abstain, or No With Veto

4. **Execution** — if the proposal passes (with at least 10% quorum of staked supply and the required approval threshold), it is automatically executed on-chain

Different proposal types have different requirements — for example, a simple parameter change requires 51% approval, while a protocol upgrade requires 75% approval. Successful proposal creators receive a 1,000 QOR reward.

A strong "No With Veto" response (33% or more) not only rejects the proposal but burns the deposit, discouraging spam proposals.

6.2.3   Progressive Decentralization

QoreChain follows a phased approach to decentralization over 24 months:

- **Phase 1 (Months 0–6):** Foundation-led with community input for rapid response to critical issues

- **Phase 2 (Months 7–12):** Hybrid governance: Foundation + DAO advisory council

- **Phase 3 (Months 13–24):** DAO-led governance with Foundation support

- **Phase 4 (Month 25+):** Fully decentralized DAO governance

Chapter 7

Participating in QoreChain

There are many ways to participate in the QoreChain ecosystem, from casual engagement to running infrastructure.

7.1 For Users

7.1.1 Getting Started

1. Visit https://dashboard.qorechain.io and create an account

2. Create a wallet (the dashboard generates your secure 24-word recovery phrase)

3. Claim free testnet QOR tokens from the faucet

4. Complete onboarding quests to earn your first Lambda points and badges

5. Explore the Smart Contract Creator, Auditor, DEX, and Arcade

7.1.2 Supported Wallets

- **QoreChain Dashboard Wallet** — built-in, full-featured

- **Keplr** — popular Cosmos ecosystem wallet

- **Leap Wallet** — Cosmos ecosystem

- **MetaMask** — via QoreChain's EVM compatibility layer

7.2 For Developers

QoreChain is a developer-first platform with tools designed to accelerate your workflow.

7.2.1 Development Environments

- **CosmWasm** — write smart contracts in Rust with the secure actor model

- **EVM** — deploy Solidity contracts using Hardhat, Remix, and MetaMask

- **SVM** — run Solana-native BPF programs

7.2.2 Quick Start Example

Here is a simple example of interacting with QoreChain using the TypeScript SDK:

Listing 7.1: Connecting and querying with the QoreChain SDK

```typescript
import { QoreChainClient } from '@qorechain/sdk';

// Connect to the network
const client = await QoreChainClient.connect(
    'https://rpc.qorechain.io'
);

// Query a smart contract
const response = await client.queryContractSmart(
    'qore1contract...xyz',
    { get_count: {} }
);

console.log('Count:', response.count);
```

7.2.3 Developer Resources

- **Documentation (Portal, API, Tutorials):** https://docs.qorechain.io

- **GitHub:** https://github.com/qorechain

- **Discord #dev-help:** https://discord.gg/qorechain

7.3 For Validators

Validators are the backbone of QoreChain. They produce blocks, validate transactions, and (with a license) operate the cross-chain bridge.

7.3.1 Requirements

- **Hardware:** 8 CPU cores, 32 GB RAM, 2 TB NVMe SSD, 1 Gbps network

- **Minimum stake:** 100,000 QOR

- **Uptime target:** 99.9%

- **DDoS protection** recommended

7.3.2 Rewards

- Target APY: 8–12% in Year 1, decreasing over time (6–10% Year 2–3, 4–8% Year 4+)

- Validators earn 37% of all transaction fees

- Licensed validators earn additional fees from bridge operations

- Set your own commission rate (earned from delegators)

7.3.3 Slashing

Validators are penalized for misbehavior: 5% stake slash and permanent jail for double-signing or Byzantine behavior; 0.01% and 10-minute jail for excessive downtime. These penalties protect the network and honest validators.

7.4   For Light Node Operators

Light nodes provide an accessible way to participate without validator-grade hardware:

- **SX Edition:** Runs as a lightweight server daemon (2–4 GB RAM)

- **UX Edition:** Runs in your web browser

- **Rewards:** Share of the 3% light node fee allocation

- **No minimum stake required**

Chapter 8

Roadmap

8.1 Phase 1: Foundation (2026)

Q1–Q4 2026 focuses on establishing QoreChain as a production-grade blockchain:

- Testnet operation with active validators and community participation

- Dashboard with full gamification, wallet, explorer, DEX, and AI tools

- **Mainnet launch (Q4 2026)** with full PQC, QCAI, and triple-VM capabilities

- 200+ validator consensus set targeting 5,000+ TPS

- Pre-launch security audits by independent firms

- IBC enabled for Cosmos ecosystem connectivity

- Ethereum and Solana bridge launch

- Developer grants program

8.2 Phase 2: Ecosystem Growth (2027)

- DeFi ecosystem launch (lending, borrowing, advanced DEX features)

- QoreChain Arcade with initial game titles

- Light node registration interface on the dashboard

- Validator licensing and management interface

- NFT marketplace with quantum-safe digital assets

- Mobile wallet release (iOS and Android)

- Guild system and seasonal events

- 10,000+ active developers and 100,000+ active addresses

8.3   Phase 3: Multi-Chain Maturity (2027–2028)

- Full bridge coverage across all 25 directly connected chains

- Cross-chain DEX aggregation

- Enterprise blockchain solutions and institutional custody

- Soulbound token (SBT) achievement badges

- Advanced governance with SBT-weighted voting

- Layer 2 ecosystem (rollups, state channels)

- Full decentralization (Phase 4 governance)

- 1,000,000+ active addresses

Chapter 9

Competitive Positioning

9.1 How QoreChain Compares

Capability	QoreChain	Ethereum	Algorand	Bitcoin	Cosmos Hub
Full-stack PQC	✓	Proposal	Partial	BIP proposal	No
NIST FIPS aligned	✓	Planned	Falcon	Not specified	No
AI-native protocol	✓	No	No	No	No
Triple-VM	✓	EVM only	AVM only	No	CosmWasm
Light node tier	✓	No	No	No	No
Cross-network validators	✓	No	No	No	No
Direct cross-chain	25 L1s + IBC	Via L2s	Limited	No	IBC only
Gamified dashboard	✓	No	No	No	No

Table 9.1: QoreChain competitive positioning as of early 2026

9.2 What Makes QoreChain Unique

1. The only Layer 1 with full-stack post-quantum cryptography. Most blockchains are still "researching" quantum resistance. Algorand has implemented Falcon-1024 for a single transaction type. Ethereum formed a PQC team in January 2026 with proposals under review. QoreChain applies NIST-standardized PQC across the entire protocol: signatures, key exchange, state proofs, cross-chain packets, and bridge operations.

2. AI as a working protocol component, not a marketing label. QCAI operates at every level — consensus optimization, transaction routing, developer tooling, and security monitoring. QoreChain Studio allows anyone to generate and audit smart contracts for 17 blockchains using plain English.

3. Three virtual machines in one chain. EVM, CosmWasm, and SVM within a single unified state. Cross-VM calls are atomic. Developers from Ethereum, Cosmos, and Solana deploy without rewriting code.

4. A gamified community from day one. QoreChain is not just a blockchain — it is a community platform with ranks, quests, badges, leaderboards, referrals, and an upcoming arcade. This engagement model creates a vibrant, active ecosystem that benefits everyone.

Conclusion

QoreChain is building the blockchain that the post-quantum era demands: secure against tomorrow's threats, intelligent enough to optimize itself, and connected to every major ecosystem. But technology alone is not enough. QoreChain is also building a *community* — one where every participant, from casual users completing quests to validators securing cross-chain infrastructure, plays a meaningful role and earns meaningful rewards.

Whether you want to protect your assets with quantum-safe security, build the next generation of decentralized applications, earn rewards through the gamified dashboard, or help secure the network as a validator or light node operator — QoreChain has a place for you.

Get Involved:

- **Dashboard:** https://dashboard.qorechain.io

- **Discord:** https://discord.gg/qorechain

- **X (Twitter):** @QoreChain

- **Telegram:** https://t.me/QoreChainCommunity

- **GitHub:** https://github.com/qorechain

- **Website:** https://qorechain.io

This whitepaper presents QoreChain's technology, community platform, and vision as of March 2026.
For full technical specifications, refer to the QoreChain Whitepaper v4.0.

QoreChain Association
CHE-484.963.998, Rolle, Switzerland
https://qorechain.io
contact@qorechain.io

Version 2.0 — Community Edition
March 2026