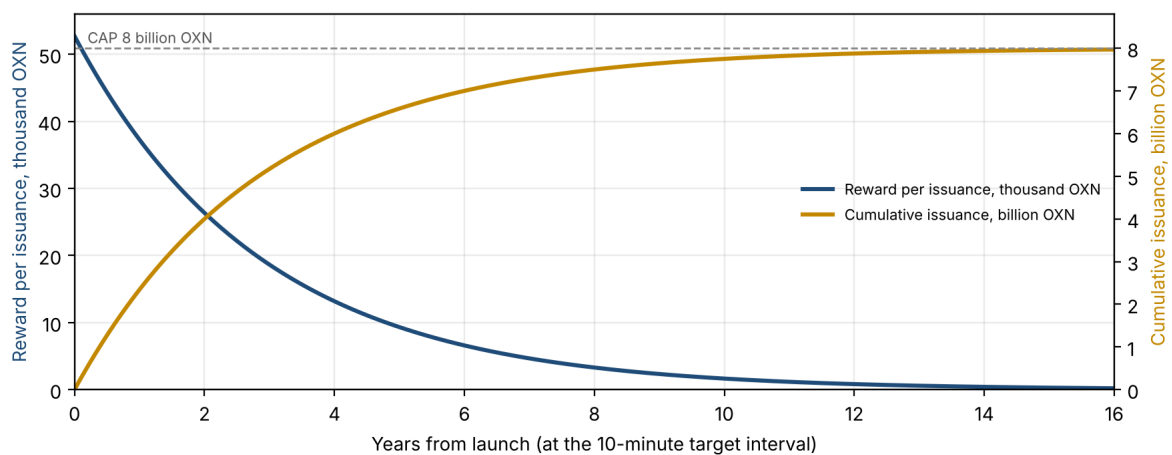


White Paper

Oxano (OXN)

A utility token bridging businesses and users

A token for settlements and rewards between businesses and users. Issued only through Proof-of-Work mining, with no premine and no initial distribution.



The reward declines along a geometric curve with no sharp steps; cumulative issuance asymptotically approaches the cap. The chart is plotted from the contract parameters at the 10-minute target interval; the first 16 of ~119.6 years are shown.

8 billion max supply | 0 initial supply | BNB Smart Chain | ERC-20 (BEP-20) | Fair Launch

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Abstract

Oxano (OXN) is an ERC-20 (BEP-20) utility token with ERC-20 Permit support on BNB Smart Chain. It combines mining, market circulation and practical use across a growing partner network, in which the token serves as a common digital asset for payments, transfers, rewards and other forms of interaction.

New OXN are issued exclusively through Proof-of-Work mining. Maximum issuance is capped at 8 billion OXN, with no premine, no airdrop and no team allocations. The mining reward gradually declines, slowing the rate at which new tokens enter circulation: it decreases smoothly after every successful mine, with no halvings, and halves roughly every 2 years. About 50% of the maximum supply is issued in the first ~2 years and about 99.6% within ~16 years, while the full issuance under the contract spans approximately 119.6 years. The capped issuance is therefore the foundation of the token's disinflationary model: additional tokens cannot be issued in response to growing demand.

Tokens are created at the moment of claim directly in the user's wallet and belong to the user: the project provides the technology and is not a holder or custodian of users' tokens. At launch a single project pool operates — the Official OXN Pool; as total hashpower grows and becomes more distributed, mining is planned to be opened to independent pools, and pool admission is planned to be handed over to on-chain voting by OXN holders (DAO).

The smart contracts have been audited by Hexens (August–September 2026): no critical or high-severity vulnerabilities were found, and all findings have been fixed.

The Oxano economic model links three groups: miners issue new OXN through computational work, users receive and use the token, and businesses create additional demand through its practical application.

Expanding the partner network is the key driver of OXN's development: more partners mean more areas of use and higher demand from users and companies.

Token Overview

Name	Oxano
Ticker	OXN
Network	BNB Smart Chain (BSC)
Standard	ERC-20 (BEP-20) + ERC-20 Permit
Decimals	18
Maximum supply	8,000,000,000 OXN
Initial supply	0 OXN
Issuance mechanism	Proof-of-Work (mining)
Target issuance interval	600 seconds (10 minutes)
Reward half-life (H)	105,192 issuances (~730.5 days, about 2 years at the target interval). The reward declines continuously after every issuance; there are no halvings
End of issuance	After 6,289,925 successful mines (~119.6 years at the target interval)
Premining / Airdrop	None (Fair Launch)
Team / private sale / foundation allocation	None

Pool fee	2% of the reward mined through the Official OXN Pool. The project has no fixed share of total issuance
Token recipient on claim	The user's wallet: tokens are minted directly to it
Transfer tax, rebasing / reflection	None
Contract upgradeability	Not upgradeable (no proxy)
Audit	Hexens, final report 10 September 2026

1 Problem and Solution

1.1 Problem

Businesses constantly need new customers. Today they are acquired mainly through advertising platforms, aggregators and affiliate networks. Competition for attention drives up acquisition costs, while discounts and promotions erode margins.

To attract, retain and win back customers, businesses use cashback, bonuses and referral programs. But traditional loyalty infrastructure requires in-house accounting, payout and integration systems, and the bonuses earned usually remain locked within a single company or platform.

For the user, this means limited choice: the reward is tied to a specific brand, its terms and its rules of use.

For the miner, issuing crypto assets through Proof-of-Work does not guarantee their economic value: the cost of electricity and equipment does not in itself mean that the mined token will find a buyer or generate income. Moreover, the link between mining, real demand and everyday consumer scenarios often remains limited.

1.2 Solution

OXN brings businesses, users and miners together in a single economic model in which each participant plays its own role.

For businesses

OXN is a tool for acquiring and incentivizing customers. Businesses purchase tokens and use them for cashback, referral payouts and other rewards, directing part of their marketing budget straight to customers. Batch transactions at the smart-contract level make it possible to distribute rewards to a large number of users at lower transaction cost.

For users

Instead of spending advertising budgets on promotion, network partners channel them directly to customers as OXN rewards for target actions — from purchases to likes, reviews and other micro-activities. Users gain real value from interacting with brands rather than just seeing their ads. And OXN is not bonus points tied to a single company, but a transferable on-chain asset that can be accumulated, used with different network partners or exchanged on a DEX.

For miners

New OXN are issued through Proof-of-Work. Miners receive tokens for verified computational work, while demand from businesses comes from purchasing OXN for partner programs and rewards.

OXN thus provides a sustainable economic model: businesses get a tool for working with their audience, users get a reward usable in an unlimited range of scenarios, and miners get a token

that is used in the economy of the partner network. As new partners join, OXN's use cases expand and create additional demand for the token.

2 Token Design and OXN Tokenomics

2.1 Issuance and Fair Launch

- Issuance mechanism: exclusively Proof-of-Work (PoW) mining. Arbitrary additional issuance is technically impossible.
- Fair Launch: no premining, no airdrop and no hidden allocations; no allocations to the team, a foundation or private investors.
- Maximum supply: 8,000,000,000 OXN, hard-capped by the smart contract. Initial supply is 0 OXN.
- Issuance schedule: the mining reward declines smoothly along a geometric curve, producing an effect similar to halving but without sharp steps: each successful mine yields approximately 0.00066% less than the previous one, and over 105,192 issuances (about 2 years) the reward halves. Cumulative issuance asymptotically approaches 8 billion OXN and cannot exceed this limit.
- Accrual: the reward is determined by mining results. No tokens are created on a successful mine: the smart contract records in the vault the reward accrued to the pool and the Merkle root. Tokens are created on-chain when the user receives them via claim and are minted directly to the user's wallet, bypassing pool and project addresses.
- Stable issuance rate: mining difficulty adjustment is built into the smart-contract logic and targets one issuance (successful mine) every 10 minutes — about 144 issuances per day. The initial reward per issuance is about 52,714.65 OXN.

2.1.1 Time scales and the reward curve

OXN issuance involves three different time scales that should not be confused: 10 minutes — the target interval between successful mines; about 2 years — the step over which the reward halves (this is not the mining period: the steps follow one after another); about 119.6 years — the formal end of issuance under the contract.

Parameter	Value at the target interval	What it means
Interval between successful mines	10 minutes	Issuance rate. Maintained by automatic difficulty adjustment
Reward halving step (H)	105,192 mines $\approx$ 2 years	Duration of one step of the curve, not the mining period
50% of maximum supply issued	$\approx$ 2 years	First half-life period
$\sim$ 99.6% of maximum supply issued	$\approx$ 16 years	Eight half-life periods
End of issuance	6,289,925 mines $\approx$ 119.6 years	The reward rounds down to zero; mine() is no longer accepted

Reward formula: $\text{reward}(n) = R_0 \times \text{decayWad}^n$, where n is the number of issuances that have already taken place, $R_0 \approx 52,714.65$ OXN, $\text{decayWad} = 999993410669092047$ (in WAD format, $1.0 = 1e18$). R_0 is not set at deployment but is computed by the contract from CAP and decayWad , so the sum of rewards over all issuances converges exactly to CAP. The decline is tied to the number of successful issuances, not to blocks or calendar time.

Checkpoints of the reward curve and cumulative issuance:

Year (≈)	Reward per issuance	Protocol issuance per day*	Cumulative issuance	Share of max supply
0	~52,714.65 OXN	~7,590,909 OXN	0 OXN	0%
2	~26,357.32 OXN	~3,795,455 OXN	~4.0 billion OXN	50%
4	~13,178.66 OXN	~1,897,727 OXN	~6.0 billion OXN	75%
6	~6,589.33 OXN	~948,864 OXN	~7.0 billion OXN	87.5%
8	~3,294.67 OXN	~474,432 OXN	~7.5 billion OXN	93.75%
10	~1,647.33 OXN	~237,216 OXN	~7.75 billion OXN	96.875%
12	~823.67 OXN	~118,608 OXN	~7.875 billion OXN	98.4375%
14	~411.83 OXN	~59,304 OXN	~7.9375 billion OXN	99.21875%
16	~205.92 OXN	~29,652 OXN	~7.969 billion OXN	~99.61%

* At the 10-minute target interval (144 issuances per day). The table is limited to the first 16 years, but issuance does not end there: the reward keeps halving every period until issuance ends — in approximately 119.6 years. By the formal end of issuance, the reward per issuance falls to 52,714 wei ($\approx 5.3 \times 10^{-14}$ OXN), after which it becomes zero due to rounding. However, long before that point the reward per issuance becomes smaller than the gas cost of the mine() transaction and the cost of the issuance itself, so mining in the tail of issuance ceases to make economic sense.

These figures describe protocol rewards only and are not a forecast of user returns, token price or available liquidity.

2.1.2 Smooth decline instead of halving

In the classic halving model (for example, in Bitcoin), the reward stays constant for several years and then halves at a single moment. OXN has no such date: the reward declines by less than 0.1% per day and by about 2.8% per month. Miners adapt to the decline gradually, without a one-off shock to mining economics.

Hashpower and reward are linked through difficulty. New miners joining does not increase issuance or change the reward curve: the same reward is shared among a larger number of participants. This describes the issuance mechanics and is not a price forecast.

The years in the tables are a calculated projection at the 10-minute target interval. OXN runs as a smart contract on BNB Smart Chain rather than as a separate blockchain, so difficulty is recalculated only when the contract is called and changes by no more than ~5% per adjustment. A sharp rise in hashrate temporarily accelerates issuance over time; a sharp drop temporarily slows it down. The reward curve by number of successful mines and the maximum supply remain unchanged.

2.2 Economic model

2.2.1 Mining and issuance

New OXN are mined by miners on real hardware. Mining is the only mechanism for creating new tokens.

2.2.2 Distribution and circulation

Oxano acts as a technology provider of mining and ecosystem infrastructure. Partners purchase OXN on the open market to reward users and settle within the network. No separate issuance is provided to cover operating expenses for partners or holders.

2.2.3 Token use

OXN serves several functions in the ecosystem:

- rewarding users for target actions;
- paying for partners' goods and services;
- free transfer, exchange, sale and P2P transactions;
- accumulation as a transferable digital asset.

2.2.4 Demand and limited supply

The supply of OXN is capped at 8 billion tokens, and the rate at which new tokens are issued gradually declines.

Demand comes from partners purchasing OXN to acquire and incentivize customers, and from users using the token to pay for goods and services.

As the partner network and use cases expand, potential demand for the token grows, while its supply remains limited by the issuance rules.

2.2.5 Token acquisition by partners

No premine, special reserves or separate issuance are provided for partner programs. OXN for rewards must either be mined by miners or purchased by partners on the open market.

Funding of partner programs therefore depends on the volume of OXN already issued and being mined.

2.3 Official OXN Pool: launch pool, service fee and opening of mining

At launch, mining takes place through the Official OXN Pool. Its purpose is to carry the network through the early stage, when it is most vulnerable: total hashpower is low and the reward per issuance is at its maximum. The launch pool addresses three tasks: balanced growth (phased onboarding, limits per account, wallet or device), fair distribution under uniform public rules, and protection against concentration of mining among large players.

At the launch stage, a single pool operates, its operator is appointed by the project, and independent (community) pools and solo mining are not available. This is a deliberate temporary arrangement for the launch, not the target state.

Pool fee

The Official OXN Pool fee is 2% of the reward mined through this pool: 98% goes to user distribution and 2% to the project's operational reserve.

The 2% fee:

- is not a premine, a hidden allocation, a transfer tax, a DEX swap tax or additional issuance (it is included in the CAP and the reward curve);
- is calculated at the pool level when mined OXN are distributed;
- goes to the operational reserve to support the operation of the infrastructure — pool software, monitoring, publication of claim data and claim tools; in addition, it may be used to provide initial liquidity for the token. It is received at a disclosed public address in the same way as user rewards — via claim; the fee does not accumulate at the pool address.

The fee is not a source of commercial profit for the project. The project's economic interest lies not in OXN issuance or in a rise in its price, but in the token's applicability in business: in the development of the partner network, integrations and services through which companies use OXN for settlements and rewards.

Opening mining to independent pools

A single pool is the launch configuration, not a permanent one. As total network hashpower grows and becomes distributed among a larger number of participants, the project plans to open mining to independent pools.

Stage	State	What happens
1. Launch	A single project pool — the Official OXN Pool	Phased onboarding of participants, limits and anti-abuse rules, 2% pool fee, publication of data for claims and for verifying the distribution
2. Opening of pools	The project pool and independent pools	Pool software is published as open source: any participant can deploy their own pool. Independent operators' addresses receive MINTER_ROLE; each pool keeps its own accounting and sets its own participation terms and fee
3. DAO governance	Pool admission is decided by the community	Adding and removing pools is decided by on-chain voting of OXN holders; the admin role is transferred to the voting contract

The transition criterion is not a calendar date but the state of the network: total hashpower must be sufficient that no single large participant or pool can obtain a dominant share of issuance. New pools do not increase issuance: pools compete for the same reward. Stages 2 and 3 describe the project's intentions, not a commitment with fixed deadlines; until the DAO is launched, pool admission is handled by the project's admin multisig.

2.4 Key supply definitions

Term	Definition
Max supply	Maximum issuance limit: 8,000,000,000 OXN
Total supply	The sum of all OXN actually created on-chain. Grows as users claim their rewards
Accrued by pool	Total reward committed to a pool based on mining results; tokens have not yet been created
Unclaimed	Committed but not yet received via claim. Tokens have not been created and are not included in total supply
Circulating supply	Total supply minus OXN held at disclosed project addresses: the operational reserve and OXN in liquidity pools owned by the project
Operational reserve	OXN received through the 2% Official OXN Pool fee, held at a disclosed project address

3 PoW Issuance Economics and OXN Architecture

3.1 The economic basis of Proof-of-Work

OXN issuance is based on Proof-of-Work (PoW): issuing each new token requires verifiable computational work on physical hardware and real energy expenditure. Unlike tokens whose issuance is determined by an administrative decision of the team, OXN issuance is conditional on meeting protocol conditions.

The PoW economic model comprises three elements:

- **Resource base.** Producing OXN requires electricity, computing hardware and the operating costs of running it.
- **Cost base.** The cost of mining is made up of electricity costs, hardware depreciation and infrastructure operating expenses. This creates an economic cost of issuance but does not guarantee the token's market price or that it will match the cost of production.
- **Issuance independent of demand.** Additional demand does not make it possible to increase issuance by decision of the team. The mining reward declines along a predefined geometric curve, and issuance is determined by protocol rules and verified work.

3.2 Technological constraints on issuance

OXN issuance is constrained by the smart contract's program conditions and by the PoW mechanism.

- **Verification:** issuance is possible only when a valid PoW proof is submitted.
- **Access control:** the issuance function is available only to holders of MINTER_ROLE and only when the verification conditions are met; there is no unrestricted public mine().
- **No arbitrary issuance:** the contract architecture provides no administrative free-minting function and no mechanisms for bypassing the PoW check.
- **Binding to the pool:** at the smart-contract level, each address with MINTER_ROLE is a separate pool with its own accounting. A PoW solution is bound to the address of the pool that found it, so it is impossible to intercept a solution and submit it on behalf of another pool.

Thus, the authority to technically call the issuance function does not make it possible to create OXN without verified computational work or beyond the issuance formula and the hard cap. At the same time, the MINTER_ROLE holder builds the Merkle root, i.e. determines among which addresses the pool reward is distributed (see Section 7.5).

3.3 Accessibility of mining

OXN mining is designed for the mass user and offers easy entry through software that requires no special technical skills. Participation does not require purchasing expensive hardware or ASIC farms, or setting up industrial infrastructure. The core principle is installing and launching the program in a few clicks, without complex configuration and without having to connect to pools manually.

Main participation scenario:

- start mining through user software without setting up nodes or smart contracts or connecting to pools;
- track mining progress and accumulated rewards through the user interface;
- receive accrued OXN via the claim mechanism.

A simple user interface lowers the technical barrier to entry while preserving the basic principle of issuance: new OXN are issued exclusively within the PoW mechanism.

3.4 Organic scarcity model

OXN scarcity results from limited issuance and a declining issuance rate, not from artificial token burning.

Key mechanisms:

- new OXN must be mined through PoW — arbitrarily increasing supply in response to growing demand is not possible;
- the reward per issuance steadily declines along a geometric curve — halving roughly every 2 years;

- mining difficulty adapts to the network's actual hashpower in both directions (by no more than $\pm 5\%$ per adjustment) and does not fall below the minimum set at deployment;
- difficulty is recalculated automatically on each successful mine; in addition, once the adjustment interval has elapsed, any address can trigger it via the public readjust() function — this protects the remaining miners if a large amount of hashpower suddenly leaves the network. The caller chooses neither the value nor the direction: the new difficulty is calculated by the contract;
- the token's applicability expands as partners join and new use cases are added.

The economic model combines limited supply, adjustable mining difficulty, a declining reward per issuance and growing demand driven by the expansion of the partner network and the token's use cases.

3.5 Architectural barriers against manipulation

The OXN distribution model eliminates a number of sources of privileged token concentration at the project's launch.

Mechanism	Economic consequence
No early investors with token allocations	No obligations to provide exits for funds that received tokens on special terms.
No premine	The team does not receive a pre-reserved share of issuance before the public launch.
Minting directly to the user's wallet	The pool holds no balance of users' tokens that could be withheld, lost or misappropriated: an unclaimed reward is an accounting record, not tokens in anyone's wallet.

OXN enter circulation through mining, purchases on the open market, or rewards for participating in partner programs.

These mechanisms reduce the risks of manipulation associated with privileged allocations and token concentration among early participants. They do not rule out market concentration later on and do not eliminate volatility, low liquidity and other risks typical of crypto assets (see Section 12).

3.6 Micro-divisibility and micropayments

The smallest unit of account of OXN is 0.000000000000000001 OXN (10^{-18}) — one quintillionth of a token. For comparison, bitcoin is divisible only to 0.00000001 BTC — OXN's unit is 10 billion times smaller.

Divisibility alone does not make micropayments cost-effective: if each accrual is made as a separate transaction, the network fee may exceed the reward amount. That is why OXN's micro-divisibility works together with batch settlement:

- precise accounting — accruals are recorded with an accuracy of 10^{-18} OXN for every second, action or interaction;
- accumulation — accruals are summed for each recipient over the settlement period;
- batch settlement — final amounts for many recipients are settled in a single batch transaction, so the fee is shared among all participants in the batch and the cost per recipient falls as their number grows (see Section 7.5).

This combination makes economically viable scenarios that are poorly suited to banking systems and individual on-chain transfers:

- Pay-per-second — paying for seconds of digital service consumption;
- micro-tips and rewards for likes, reviews and other actions;
- accruals for individual steps, interactions and micro-activities.

This expands the possibilities for using OXN in partner loyalty programs and digital services with frequent transactions and small reward amounts.

4 Use Cases

OXN is a standard ERC-20 (BEP-20) token on BNB Smart Chain. It can be used in existing EVM products and payment infrastructure without issuing a proprietary token. OXN transfers carry no built-in fees; the contract does not recalculate holders' balances (no rebasing or reflection).

Use case	How it works
Payment for goods and services	Settlements in OXN within partner services.
Mass payouts	Batch transactions for simultaneously crediting OXN to a large number of recipients.
Rewards and cashback	Crediting OXN for purchases, referrals and other target actions.
Referral programs	Rewarding users for bringing in new customers.
Exchange and transfer	Transferring OXN between users and exchanging it for other assets through supported infrastructure.
Partner offers	Discounts, special terms and other incentive mechanics linked to the use of OXN.
Payment solutions	Accepting OXN through crypto processing and other integrations.
Mining	Obtaining OXN through Proof-of-Work without necessarily purchasing specialized hardware.
Card payments (future)	Integration of OXN with physical cards through payment partners.

OXN can thus be used both to acquire and reward users and directly for settlements. The specific terms of use are set by the partner.

5 B2B Ecosystem and Value for Partners

5.1 Value for businesses

OXN is a ready-made settlement and reward instrument for acquiring, incentivizing and retaining customers. Partners use a single token for cashback, referral programs, activity rewards and payment for goods and services, without issuing their own token or building separate loyalty infrastructure.

Portable rewards instead of closed points. A partner channels its marketing budget directly into rewarding customers in OXN for target actions — from purchases and referrals to activity and micro-interactions. The user receives an asset that can be used with other services in the ecosystem, not only with the company that credited it.

For businesses this means:

- reallocating advertising budget toward direct customer rewards;
- access to an audience of OXN holders and miners who are already familiar with digital assets;
- additional scenarios for acquisition, repeat purchases and customer retention;
- mass crediting through batch transactions without developing a proprietary points system.

5.2 Onboarding and how it works

OXN is built on the ERC-20 standard and compatible blockchain infrastructure. Partners can integrate the token through standard interfaces or crypto payment solutions, without issuing their own asset.

Typical workflow:

- **The partner sets the terms.** It chooses the target action and the reward amount: a purchase, a referral, a subscription renewal, a review or other activity.
- **Purchases and credits OXN.** It buys tokens on the open market and distributes them to customers, including via batch transactions.
- **The user receives OXN.** The tokens arrive at the user's address and belong to the user regardless of further participation in the partner's program.
- **The reward is used in the network.** The user pays for goods and services, receives discounts and special offers from other partners, or transfers or exchanges the tokens.

The ecosystem's partner showcase provides an additional channel for placing offers and attracting customers. OXN acts as the settlement instrument, while specific discounts, terms and the availability of goods or services are determined by the partners themselves.

5.3 Benefits for users

In traditional loyalty programs, points are tied to a specific service, and their use, expiry and exchange rate are set by the company. OXN changes this model:

Traditional points	OXN
Usable within one program only	Usable with different partners that accept OXN
Rules and terms are set by the program issuer	The token belongs to the user on-chain
Points may expire and terms may change	The token itself has no built-in expiry
Rewards limited to one company's offers	Exchange, transfer and various use cases are available

OXN may have a market price and be exchanged for other digital assets on supported venues. However, market value, liquidity and convertibility to fiat depend on the availability of relevant markets and services and are not guaranteed by the protocol.

Even if an individual partner ceases operations, the user retains control over their tokens, but the availability of that partner's specific goods, discounts and services ends in accordance with its terms.

5.4 Main areas of application

E-commerce and SaaS	Cashback on purchases, referral rewards, subscription payments, access renewals and upgrades.
Travel and ticketing	Rewards for bookings, payment for transfers, ticket discounts and special partner offers.
Web3 games and gamification	Payouts for tournaments, achievements, in-game activities and cross-project rewards.
Payments and digital services	Accepting OXN through crypto payment gateways; payment for premium features, service fees and digital goods.
Mining and reward distribution	Connecting to mining through accessible interfaces and mass crediting of OXN for user actions.

Bank card payments	Integration with crypto cards and payment providers is being considered for the future, allowing OXN to be used for offline purchases.
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6 Liquidity and Compatibility

OXN is issued as a standard ERC-20 (BEP-20) token on BNB Smart Chain. Once tokens are on the market, participants can create OXN trading pairs with other assets and provide liquidity through BSC AMM protocols. The project does not provide for a premine or a separate token allocation for market making. Initial liquidity may be formed by the project from already-mined OXN received into the operational reserve through the 2% Official OXN Pool fee. The planned base trading pair is OXN / USDT; the quote asset (USDT) is provided by the project, and information about the specific venue will be disclosed separately.

Wallet compatibility

EVM compatibility allows OXN to be used with wallets that support BNB Smart Chain, such as MetaMask, Trust Wallet, Coinbase Wallet, Binance Web3 Wallet, SafePal, Ledger, Trezor and others, and to integrate the token into custodial solutions and payment services. Specific support depends on the provider and on the token being added to its interface.

OXN therefore requires no separate infrastructure standard: basic token operations — storage, transfer, exchange and connection to compatible services — work through existing EVM infrastructure.

7 Technology Architecture

7.1 Blockchain network

OXN runs on BNB Smart Chain (BSC), one of the largest EVM-compatible blockchain networks. BSC was chosen for its low fees, high throughput, fast finality and broad infrastructure support. The token is implemented to the ERC-20 (BEP-20) standard, ensuring compatibility with Web3 wallets, DEXs/CEXs and a wide range of applications on the BNB network. The target interval and the difficulty adjustment window are set in the contract in seconds, so the issuance schedule does not depend on the network's block time.

7.2 Technology stack

Component	Solution	Purpose
Network	BNB Smart Chain	High-speed EVM blockchain
Token standard	ERC-20 (BEP-20)	Compatibility with wallets and DEXs/CEXs
Contract language	Solidity 0.8.35	Implementation of token and mining logic
Libraries	OpenZeppelin	Audited security standards and role-based access
Gasless approvals	ERC-20 Permit (EIP-2612)	Signed off-chain approvals without a separate approve transaction
Zero-knowledge proofs	Groth16 (BN254)	Efficient ZK proofs for batch payouts
Development framework	Foundry	Testing, fuzzing and contract deployment

The smart contract is written in Solidity using audited OpenZeppelin libraries. The protocol is built on a modular architecture with separation of responsibilities and relies on a role-based access model with two roles — administrator (DEFAULT_ADMIN_ROLE) and minter (MINTER_ROLE). The contract is non-upgradeable: the token and vault contracts are deployed without a proxy, and the logic is immutable after deployment.

DEFAULT_ADMIN_ROLE on the token and vault contracts is assigned to a multisignature wallet (multisig Safe) with a 4-of-7 scheme: the wallet has seven independent key holders, and any administrative action requires signatures from at least four of them. An unauthorized action would require control over four keys at the same time. After deployment, the deployer key holds no roles. Assigning MINTER_ROLE is the pool admission mechanism (see Section 2.3).

7.3 Contract architecture

The protocol consists of four independent but coordinated components:

- **OXN-coin** — the main token contract: the ERC-20 implementation and the Proof-of-Work issuance logic in a single contract. Issuance of new tokens is available only to holders of the corresponding role and occurs only upon verified computational work.
- **ProductionVault** — the reward distribution contract with isolated accounting for each pool. It stores payout state and verifies ZK proofs on-chain; a ring buffer of roots (the last 10 Merkle roots for each pool and epoch) limits the attack surface on historical states. The vault is an accounting module: it keeps records of unclaimed balances and Merkle roots, not the tokens themselves, and is not a project treasury. The vault is set at deployment and cannot be replaced.
- **Verifier** — an auto-generated ZK verifier (Groth16/BN254). It is used only to verify proofs and contains no mutable business logic.
- **BatchVerifier** — an auto-generated batch proof verifier (Groth16/BN254). An immutable dependency of ProductionVault: without it, the batch payout mode described in Section 7.5 is not available.

This modularity architecturally allows partner reward pools to be connected without touching the token contract itself, while ensuring guarantees for moving OXN between services. This capability is not offered at launch: only the Official OXN Pool operates.

7.4 Contract guarantees

- New tokens are created only as a result of miners' verified computational work (PoW); arbitrary issuance is impossible.
- The transfer, balanceOf and allowance functions conform to the ERC-20 standard; there are no hidden functions for mass withdrawal of funds.
- The contract logic does not allow holders' funds to be unilaterally frozen.
- The invariant $\text{totalSupply} \leq \text{totalCommitted} \leq \text{CAP}$ holds: tokens issued via claim do not exceed the amount committed to pools through mining, and that amount does not exceed the maximum supply.
- The administrator cannot increase the maximum supply, change the reward curve or reward size, replace the vault or change the contract code.
- Revoking MINTER_ROLE stops further issuances by that key, but already published roots are preserved and the pool's participants retain their right to claim.

7.5 Two-layer payout delivery

Reward delivery is split into Settlement (on-chain execution of the payout) and Data Availability (publication of the source snapshot).

Settlement is permissionless. Any address with a valid Groth16 proof can settle a payout for itself or for a third-party recipient. The on-chain verifier makes no discretionary decisions.

Data Availability is the project's obligation. The snapshot and the combined batch are published regularly for all addresses entitled to a payout; submission can be performed by any third party. The full data tree is not stored on the blockchain: the pool operator publishes and retains the Merkle root, the list of addresses, cumulative balances and the data needed to build proofs. Each participant can find their record in the published data and verify that it is included in the root recorded on the blockchain.

Modes. Single — a proof for one address; submission can be performed by a third party without handing over the recipient's private key. Batch — a single proof settles many recipients (exactly 256 records; an incomplete batch is padded with empty records) in one transaction: the total cost grows sublinearly, and for large N the cost per recipient decreases.

Proof validity period. A root is published only via mine(), in the same transaction as the reward. A proof is accepted while its root is among the pool's last 10 roots for the given epoch; with a single pool and a 10-minute interval this is on the order of an hour and a half. If the root is evicted, the unclaimed amount is preserved: it is reflected in a newer root, and the proof must be rebuilt.

Regulatory implication. Pool operators, aggregators and front ends that initiate submission do not receive or hold the recipient's crypto assets — funds are issued directly to the address specified in the proof: the vault calls the token to mint to that address, while the verifier only checks the proof and does not handle funds. The non-custodial model may reduce risks related to safekeeping of funds and licensing, depending on the jurisdiction and the operator's model.

8 Security and Audit

The security of user funds is the project's priority. A Defense in Depth strategy is implemented: cryptographic guarantees, verifiable code and independent review of the contracts.

Internal verification

A multi-layer code analysis stack is used: static analysis (Slither), invariant and fuzz testing (Foundry, Echidna), and symbolic verification of key properties (Halmos). Mutation testing (Gambit) has been launched as a pilot and is not yet part of the mandatory checks. This makes it possible to detect defects before going on-chain and to maintain consistent code quality between releases.

External audit

An independent audit of the critical components was carried out by Hexens from 10 August to 10 September 2026 (final report — 10 September 2026). Scope: mining difficulty adjustment, issuance, reward accounting, and the ZK implementation of single and batch claims.

Critical	High	Medium	Low
0	0	2	2

ID	Severity	Summary	Status
OXN1-1	Medium	The estimate of work performed overstated difficulty and slowed issuance relative to the target interval	Fixed
OXN1-2	Medium	Outdated BSC and Polygon block times in the configuration accelerated issuance (by about 6.7× on BSC)	Fixed
OXN1-3	Low	A pool could hold difficulty near the minimum by alternating bursts of mining with idle periods	Fixed
OXN1-4	Low	The ZK proof format for batch claims was incompatible with the contract, so batch claims failed	Fixed

All vulnerabilities identified by the audit were fixed before the contracts were deployed. The source code is verified on the block explorer, allowing anyone to independently check the deployed bytecode against the public codebase. Hash of the audited version (SHA-256): 4eb982ad210009bb4c97980e44b2fe4c752d913029389e80e7cfab2a6e57b346. The audited configuration included the BNB Smart Chain and Polygon networks; deployment is on BNB Smart Chain only.

Rug-pull protection architecture

- Limited issuance — only through PoW; arbitrary token creation is ruled out.
- No backdoors — there are no hidden administrative functions for bypassing the rules.
- Role-based access model — two roles are used: the administrator assigns and revokes roles, the minter submits mining results. The administrator cannot change the reward curve or the issuance cap, or issue OXN outside the protocol rules. The admin role is held by a multisig with a 4-of-7 scheme.
- Inherited BSC security — block finality is provided by the BSC network.
- Deterministic payout execution — the payout amount is determined by the pool's published root and the amount already received; the contract cannot pay out more than has been accrued to the pool.
- One-time on-chain payouts — the smart-contract state prevents the same claim from being executed twice; each reward can be paid out exactly once.
- Cryptographic verification of payouts — mass claim operations are confirmed by ZK proofs verified on-chain; it is impossible to forge or substitute the set of recipients outside the published root.
- Information disclosure — as components become ready, the project publishes the addresses of the token and vault contracts, the admin multisig, significant operational addresses (pool fee, operational reserve, liquidity), the addresses of MINTER_ROLE operators, and claim data.

9 About the Project

OXN combines many years of experience in the digital asset industry, proprietary technology and industrial mining infrastructure.

9.1 Experience and expertise

The team has worked in the digital asset and mining industry since 2011. Over this time it has accumulated hands-on experience in developing and operating industrial-scale mining infrastructure.

9.2 Proprietary technology

The project relies on its own technology stack and deep R&D expertise in blockchain, cryptography and industrial mining. This makes it possible to develop the system's key components in-house and reduce dependence on external technology providers.

9.3 Operational infrastructure

OXN is supported by distributed mining infrastructure based on real computing capacity. The project's own technology and production base provides control over mining processes, operating costs and the conditions of PoW issuance.

OXN is built on a combination of many years of industry experience, proprietary technology and operating industrial infrastructure.

10 Roadmap

Milestone 0 — Foundation

Status: completed

Goal: Build the project's technological, operational and legal foundation.

- A core team has been formed with expertise in blockchain, Solidity/ZK, PoW mining, B2B partnerships, product and legal support.
- R&D of the key ecosystem components has been carried out and the OXN architecture has been chosen.
- The key smart contracts have been developed: PoW issuance, reward accounting, claim mechanics and vault infrastructure.
- An issuance model without premining, airdrop or hidden allocations has been designed.
- The project's legal and IP foundation has been established.
- An initial architecture review and a legal assessment of the reward/loyalty mechanics have been carried out.
- Basic infrastructure for the public launch has been prepared.

Milestone 1 — Genesis Launch

Status: current stage

Goal: Public launch of OXN, mining and the core ecosystem infrastructure.

- An independent external audit of the critical smart contracts has been carried out (Hexens, August–September 2026); identified vulnerabilities were fixed before deployment.
- Deploy and verify the smart contracts on BNB Smart Chain.
- Publish the contract addresses, the repository and technical documentation.
- Launch the mining server infrastructure and the user mining interface.
- Launch the Official OXN Pool.
- Launch the miner access layer for connecting to mining, monitoring accruals and claiming OXN.
- Launch a dashboard of pool statistics, accruals and infrastructure status.
- Introduce monitoring, anti-fraud mechanisms, redundancy and basic incident response procedures.
- Run load testing and verify the resilience of the mining infrastructure.
- Carry out the Fair Launch without premining or hidden allocations.
- Create the conditions for initial AMM liquidity on a DEX.
- Launch the official website and public communication channels.

Milestone 2 — Ecosystem Readiness

Status: planned

Goal: Prepare OXN for use beyond mining — in reward programs, B2B integrations and the first payment scenarios.

- Improve the user journey for receiving, storing and using OXN.
- Prepare B2B tools for crediting OXN for purchases, referrals, activity and other target actions.
- Release documentation and integration materials for partners.
- Prepare legal and compliance materials for B2B integrations.

- Prepare the infrastructure for connecting additional pool operators: publish the pool admission policy and transition criteria, and prepare the pool software for open-source publication.
- Scale batch mechanics for mass distribution of OXN.
- Form and launch the first partner integrations in e-commerce, SaaS, gaming, travel and loyalty.

Milestone 3 — Partner Network Expansion

Status: planned

Goal: Build a network of partners using OXN for rewards, customer acquisition and settlements with users.

- Onboard B2B partners using OXN for cashback, referral and loyalty programs.
- Launch the partner showcase of goods and services.
- Increase the number of services accepting OXN as payment.
- Onboard e-commerce, SaaS, gaming, travel and digital-service platforms.
- Expand the mining network and connect additional pool operators subject to security requirements — as total network hashpower grows and becomes distributed.
- Integrate OXN with crypto processing, billing and payment gateway providers.
- Develop mass mechanics for crediting and distributing rewards.
- Launch joint acquisition and marketing programs with partners.

Milestone 4 — Applicability Network Scaling

Status: planned

Goal: Scale OXN as a portable instrument for rewards and settlements across different partner ecosystems.

- Increase the number of partners accepting OXN and using it for rewards.
- Increase the number of use cases: purchases, subscriptions, cashback, referrals, rewards and digital services.
- Connect new OXN acceptance points through external services and payment infrastructure.
- Expand access to mining through lightweight interfaces once their technical, economic and security feasibility is confirmed.
- Hand pool admission over to on-chain voting by OXN holders (DAO): the admin role that grants and revokes MINTER_ROLE is transferred to the voting contract. This is the project's intention, with no fixed timeline.
- Scale the user base through community- and partner-led acquisition.
- Develop joint programs to encourage the use of OXN.
- Consider integrations with aggregators and centralized venues as the necessary infrastructure and market conditions are met.

Milestone 5 — Payment Utility Expansion

Status: prospective direction

Goal: Expand the use of OXN in payment scenarios, subject to technical, legal and economic conditions.

- Scale payment for goods and services within partner ecosystems.
- Expand integrations with crypto-processing and payment gateway providers.
- Integrate OXN with external payment infrastructure.

- Explore the possibility of using OXN through crypto-card infrastructure for offline payments.
- Hold negotiations with card issuers, Banking-as-a-Service and crypto-card providers.
- Assess KYC/AML, custody and off-ramp requirements, jurisdictional restrictions and unit economics.
- Launch a card pilot once legal, technical and economic feasibility is confirmed.

11 Legal Status

OXN has been developed and is offered as a utility token, not as a security, an investment contract or a financial instrument. The classification takes into account the criteria of MiCA (Regulation (EU) 2023/1114) and the Howey test (SEC). The Fair Launch architecture and the absence of a premine rule out deriving profit from the managerial efforts of third parties, which precludes OXN from being classified as an "investment contract" or a transferable security.

OXN is not a promise of returns, price appreciation, passive income, guaranteed liquidity, mandatory buyback, guaranteed exit from a position or mandatory listing on centralized exchanges. This document does not constitute financial, investment, tax or legal advice.

12 Risks and Disclaimer

OXN is not an investment instrument. The project provides technology: the team has no premine, pre-allocation or reserved share of issuance — every OXN comes into existence only through mining. The project may accumulate OXN operationally solely through the disclosed 2% Official OXN Pool fee, not through a hidden allocation. The smart contract and related services are provided "as is", without any guarantees of returns, price appreciation or liquidity.

Category	Description
Smart contract	Code errors, exploits, immutability of logic after deployment.
Regulatory	Changes in legislation or reclassification of the token; restrictions or bans in certain jurisdictions.
Market	Price volatility; no guarantees of liquidity or future value.
Operational	Unavailability of third-party wallets, exchanges or partner services.
Consensus	Inherited from BSC; failures or attacks at the network level.

The security of the BSC network is not guaranteed by the project. Partner services are not part of the protocol. Holders are solely responsible for complying with the laws of their jurisdiction.

13 FAQ

Token and issuance

What is OXN?

OXN is an on-chain token used for rewards, settlements, referral payouts and loyalty programs in the partner ecosystem. The token is issued through Proof-of-Work and can be transferred between users.

How are new OXN issued?

New OXN are issued exclusively through Proof-of-Work mining. Issuance requires verified computational work; arbitrary issuance by decision of the team is not possible.

What is the maximum amount of OXN?

The maximum supply is capped at 8,000,000,000 OXN. The initial supply is zero, and the issuance rate gradually declines along a predefined geometric curve.

Does OXN have halvings, and how long will issuance last?

There are no halvings: the reward declines smoothly after every successful mine and halves roughly every 2 years (105,192 issuances). About 50% of the maximum supply is issued in the first ~2 years and about 99.6% within ~16 years; under the contract, issuance ends after 6,289,925 successful mines — in approximately 119.6 years at the 10-minute target interval.

Who owns OXN before they are mined?

No one. Tokens do not exist before they are issued. There is no premine, no private sale and no pre-allocation. A portion of the already-mined reward — 2% of what is mined through the Official OXN Pool — goes to the operational reserve under the disclosed fee mechanics.

Who holds my tokens before I claim them?

No one: tokens do not exist before the claim. An unclaimed reward is an entry in the pool's accounting, not tokens in anyone's wallet. On claim, OXN are minted directly to the user's wallet, bypassing pool and project addresses; the project is not a holder or custodian of users' tokens.

Can additional OXN be created outside of mining?

No. The architecture provides no arbitrary mint. New tokens can be issued only when the conditions of the PoW mechanism are met.

Why is issuance based on Proof-of-Work?

PoW ties token issuance to verifiable computational work and real resource costs. At the same time, the issuance rate cannot simply be increased in response to rising demand.

Using OXN

Where can OXN be used?

OXN is intended for use with ecosystem partners: payment for goods and services, cashback, referral rewards, loyalty programs and other user incentive scenarios.

How is OXN different from ordinary bonus points?

Bonus points are usually tied to a specific company and its rules. OXN is a transferable on-chain asset: the user controls the tokens received and can use them with different partners, accept, transfer or exchange them.

Do OXN expire like bonus points?

The token itself has no built-in mechanism for automatic expiry. However, specific validity periods or terms of individual partner offers may be set by the partner.

Can OXN be transferred to another user?

Yes. OXN is a transferable token and can be used for P2P transfers, exchange and other supported on-chain operations.

Can OXN be exchanged for other assets?

Technically, OXN can be used on supported exchange and trading services. The actual availability of markets, liquidity and convertibility to fiat depends on specific venues and providers and is not guaranteed by the protocol.

For partners

How can a company integrate OXN?

Through the token's standard interface in EVM-compatible infrastructure. A partner can use OXN to credit cashback and referral rewards, incentivize activity and settle payments.

Does a partner need to issue its own token?

No. The partner uses the existing OXN and does not need to create its own token or separate blockchain infrastructure for reward mechanics.

Where does a partner get OXN for rewards?

The partner purchases OXN on the open market or uses the volume of tokens available to it. There is no separate issuance of OXN for partners.

What does a user get for interacting with a partner?

A user can receive OXN for target actions: purchases, referrals, subscription renewals, activity, reviews, micro-activities and other actions defined by the partner.

Mining

Do I need to buy expensive hardware to mine OXN?

No, participation does not necessarily require buying your own ASIC hardware or industrial infrastructure. The project's user layer is designed for simplified connection to mining through accessible interfaces and the pool.

What is the Official OXN Pool?

It is the official pool for mining OXN, through which user onboarding and distribution of mined rewards are organized at launch. Of the pool reward, 2% goes to the operational reserve and 98% to pool participants.

Will there be other pools?

A single pool is the launch configuration, not a permanent one. As total network hashpower grows and becomes distributed, the project plans to open mining to independent pools, publish the pool software as open source and hand pool admission over to on-chain voting by OXN holders (DAO). These are the project's intentions, not a commitment with fixed deadlines; at launch, independent pools and solo mining are not available.

What share of issuance will the project receive?

There is no fixed share. The project receives only 2% of the reward mined through the Official OXN Pool, so the outcome depends on what portion of mining goes through the project's pool. The theoretical maximum is 2% of the maximum supply, if all issuance over its entire lifetime goes through this pool.

Security and risks

Has the OXN code been audited?

Yes. An independent audit of the critical smart contracts was carried out by Hexens in August–September 2026 (final report — 10 September 2026): 0 critical, 0 high, 2 medium and 2 low findings. All identified vulnerabilities were fixed before the contracts were deployed. See Section 8 for details.

Does OXN guarantee an increase in value?

No. OXN does not guarantee returns or growth in market value. Price, liquidity and demand are determined by the market and depend on the number of users and partners, available use cases and market conditions.

Glossary

Term	Definition
AML / CTF	Measures and procedures for countering money laundering and terrorist financing.
AMM	Automated Market Maker — a mechanism for automatic market making and token exchange through liquidity pools.
Batch Transaction	An operation that executes a large number of transfers or credits within a single transaction or batch operation.
BSC	BNB Smart Chain — the EVM-compatible blockchain on which OXN is deployed.
Claim	The mechanism by which a user receives accrued OXN at their own on-chain address. Tokens are created (minted) at the moment of claim.
Circulating supply	Total supply minus OXN held at disclosed project addresses: the operational reserve and liquidity pools owned by the project.
DAO	On-chain voting by OXN holders, to which decisions on adding and removing pools are planned to be transferred.
DEX	Decentralized Exchange — a decentralized venue for exchanging digital assets without a traditional centralized intermediary.
ERC-20	The interface standard for fungible tokens on EVM-compatible networks. OXN uses an ERC-20-compatible interface (BEP-20) on BNB Smart Chain.
EVM	Ethereum Virtual Machine — the smart-contract execution environment with which BNB Smart Chain is compatible.
Fair Launch	A token launch without pre-issuance for the team or investors, premining or hidden allocations.
Liquidity Pool	A pool of tokens used to enable swaps on decentralized trading venues.
Merkle root	An on-chain snapshot of pool participants' cumulative balances; it is used to verify the right to claim.
MiCA	Markets in Crypto-Assets Regulation (EU 2023/1114) — the European Union's regulation of crypto assets.
MINTER_ROLE	A technical role for submitting verified mining results to the contract. Each address with this role is a separate pool with its own accounting.
Multisig	A multisignature wallet: an administrative action requires several signatures rather than a single key. The OXN admin multisig operates on a 4-of-7 scheme.
On-chain	An action or data that is recorded and verified directly on the blockchain.
Operational reserve	OXN received through the 2% Official OXN Pool fee, held at a disclosed project address. The project's only OXN reserve.
Reward half-life (H)	105,192 issuances (about 2 years), over which the smoothly declining reward halves. A step of the curve, not the mining period.
PoW	Proof-of-Work — an issuance mechanism in which the creation of new OXN is tied to verified computational work. Consensus of the network itself is provided by BSC.
Premining	Issuance of tokens before the public start of the main issuance mechanism.
P2P	Peer-to-peer — direct interaction or transfer of assets between users without the need for a centralized intermediary.

Term	Definition
Successful mine (issuance)	A single successful call to mine() confirming a found PoW solution. It records the reward in the pool's accounting; no tokens are created at this point.
Utility Token	A token intended primarily for use in specific products, services, settlements or reward programs.
Vault	An accounting module for accrued but not yet claimed rewards: it keeps records of unclaimed balances and Merkle roots, not the tokens themselves, and verifies claim rights. It is not a project treasury.
ZK / Zero-Knowledge	A cryptographic approach that makes it possible to prove that a statement is correct without revealing the underlying data.

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