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Brochure of  
CONTENTS

- 01 – Overview
- 04 – Introduction
- 05 – Technical problems & solutions
- 06 – Use cases problems & solutions
- 08 – XEP technical specs & coinomics
- 09 – Smart Contracts & Public Smart Chain
- 11 – Software details
- 12 – Meet with team members
- 13 – Disclaimer



The World's Fastest  
Decentralized Blockchain

Electra Protocol is an ecosystem for near real-time transactions at almost no cost. Upcoming features include multicurrency payments and smart contracts that will empower anyone to create their own solutions. Simply put: Instant payments without needing a bank account.

INTRODUCTION

Cryptocurrency and Blockchain technologies are gradually advancing in awareness globally, delivering solutions that make financial and data management easier, faster, and less costly. Electra Protocol has been at the forefront of transmitting how the world views payments through cryptocurrency and blockchain technologies.

Electra Protocol is a framework that provides a set of tools (blockchain, cryptocurrency, wallets, payment solutions, smart chain, etc.), which enable use cases in:

- Online payments solutions
- Artificial Intelligence
- Smart Contracts
- Cross-border payments
- Healthcare
- Data processing
- Digital ID
- Gaming
- Supply Chain
- Metaverse
- Web3
- NFT

Customers and merchants get to enjoy a safe and secure payment option using the Electra Protocol blockchain. Transaction fees are virtually at 0% with instant transactions worldwide. There are no foreign exchange fee charges and customers also enjoy staking rewards on the Electra Protocol network. The core currency for payments is our native coin XEP which is one of the fastest, most secure, least expensive and energy efficient cryptocurrencies available.

XEP will fuel entire blockchain solutions provided by the Electra Protocol ecosystem. By the proof-of-stake consensus, it is also one of the most environmentally friendly cryptocurrencies currently in existence. Several hundred worldwide distributed decentralized nodes ensure the strength of the Electra Protocol network anyone can join and become one of them. As a member of the Electronic Transactions Association (ETA), Electra Protocol is supported by several companies actively building solutions and products on the Electra Protocol blockchain.

Anyone can build solutions on top of XEP that can be ISO 20022, ISO 27001 and ISO 14000 compliant.

Energy consumption & hardware requirements

Lots of novel blockchains try to drastically reduce their node consumption, nevertheless, they often require a significant investment cost in hardware for running validator nodes.

Why is XEP different?

**Minimal power consumption through proof-of-stake:** A fully decentralized network at enterprise-scale running on its own blockchain. Anyone can run a node using minimal requirements. A node (standard or validator) can be run 24/7 on light devices such as Raspberry Pi or NAS. Electra Protocol will have instant transactions with the validator nodes, at almost no cost (~0.0002 XEP per transaction). To imagine the cost, you can imagine that if XEP value is \$1, then the cost is \$0.02 per transaction. The transaction fee could be reduced in the future.

USE CASES PROBLEMS AND SOLUTIONS

**Payments:** Our economies are getting increasingly global and goods and people move around the world faster than ever before. Yet, payments remain expensive and sometimes slow. It's time to change that. Payment solutions provided by companies that use the Electra Protocol to provide online merchants and physical stores a payment functionality. This will allow customers to pay using XEP, BTC, and other supported cryptocurrencies. Additionally, users may also be able to pay using selected fiat currencies (Euro, U.S. Dollar, etc) while complying with regulations. Furthermore, the XEP Wallet enables users to instantly send and receive XEP and OmniXEP custom currencies. Atomic swap is active in the Electra Protocol blockchain and accessible to any third party. All payments will use XEP under the hood to perform transactions.

**Digital Identity:** More and more transactions are carried out through blockchains. However, most crypto projects fully preserve anonymity of its users which is likely to cause problems with regulations sooner or later. Solutions built on Electra Protocol can use digital ID functionalities in order to comply with applicable laws. This will enable merchants and users to participate in transactions which can be compliant with KYC and AML requirements, regardless if the user transactions are in the future with any supported cryptocurrency or fiat money using Electra Protocol. However, anonymous transactions are enabled by default. **⚠️ Digital IDs are data solutions built using the smart layer, the transactions will forever stay anonymous on the XEP layer.**

TECHNICAL PROBLEMS AND SOLUTIONS  
The Trilemma issue

Blockchains are often forced to make trade-offs that prevent them from achieving all three aspects:

DECENTRALIZATION

Creating a blockchain system that does not rely on a central point of control.



SECURITY

The ability of the blockchain system to operate as expected, defend itself from attacks, bugs, and other unforeseen issues.



SCALABILITY

The capability of a blockchain to handle an increasingly growing number of transactions.



XEP TECHNICAL SPECS & COINOMICS

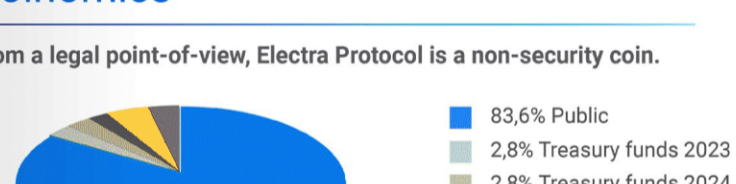
Electra Protocol is open source and 100% crowdsourced. The blockchain is built by contributions of volunteers aiming to create a complete environment of blockchain tools that can instantly handle a wide range of applications at very low cost.

Technical Specifications

Ticker	XEP	ISO 4217 Compliant
Block time & size	80 sec   up to 10 MB	
Consensus	SHA256   POS v3.0e	Secure & energy efficient
TPS	1,500+	Sufficient for any scenario
Transaction fee	0.0002 XEP	
Transaction	Ultrafast	
Transaction validation	1 block (instant with VN)	Full node generates blocks. Validator node validates instantly (WIP).
Staking reward	3% APY	Coin maturity: 12 hours
Validator nodes	Work in Progress	
Electronic Payments	Yes	Ability to pay with native wallet
Atomic Swaps	Yes	Enables multi-currency payments
Lightning Network	Yes	Enabled, will allow 1 million + TPS
SegWit Integration	Yes	Enhanced technical features, improves TPS
Taproot	Yes	Improves confidentiality, scalability & security
Staking Quantum resistant	Yes	Improves security
Smart Contracts	WIP, UTXO model	OmniXEP, built-in Tokens & NFT process, Smart-EP, EVM Smartchain
Rosetta API integration	Yes	

Coinomics

From a legal point-of-view, Electra Protocol is a non-security coin.



The developers (and anyone else working on the project) are not paid. In fact, every team member is a voluntary contributor to the project, which helps in keeping the costs low. Being a community-based project has allowed the pre-mined funds to cover all costs dedicated to XEP operations (server, hosting, liquidity) and visibility (listings, marketing, etc.). Treasury is spent extremely carefully and responsibly.

SMART CONTRACTS & PUBLIC SMART CHAIN

Smart contracts are developed with Solidity language, and two "Layer 2" types of smart contracts will be available:

- Layer 2 OmniXEP, built-in Tokens and NFT process.
- Layer 2 Smart-EP, EVM Smartchain (Ethereum Virtual Layer).

OmniXEP and Smart-EP gas, known as XEP, are used to pay fees for all transactions.

**XEP - Layer 1**

- Nodes/wallets verify and confirm transactions, add them to blocks, and append blocks to the chain.
- Validator Nodes instantly verify and confirm transactions without waiting for a new block.
- Electra Protocol blockchain handles data transactions like traditional transactions.
- Each network node reads, verifies, and validates/ rejects submitted transactions.
- The network integrates valid transactions from both layers into new blocks using PoS consensus.

**OmniXEP: Layer 2**

- Each smart node/wallet of the OmniXEP is independent. There is no connection between OmniXEP wallets of the network.
- The OmniXEP wallet runs its own computing system using hard coded smart-contracts.
- Reads all transactions from blocks -> extracts and computes the Smart chain transactions -> adds them to the Smart ledger.
- The wallet computes the Smart data to the Electra Protocol format, then submits it to the blockchain for validation.

Layer 2 OmniXEP, built-in Tokens and NFT process

OmniXEP contains hardcoded smart-contracts, tokens and NFTs. They are pre-programmed and remove the need to develop your own smart contract to use them. It is way easier to generate, send and manage tokens and NFTs.

Security/advantages of OmniXEP:

- For reference, Omni technology was the first smart-chain for the USDT token integration.
- OmniXEP brings a superior security level over custom smart-contracts as the contracts are hardcoded, and cannot be modified, altered or hacked.
- The creation, transaction, and burning functionalities of tokens are hardcoded, eliminating the need for a security audit for each token creation.
- The creation of tokens comes with several options, such as burn or generate options for example.
- Token/NFT creation and management in OmniXEP matches the large majority of needs. This allows anyone to use token and NFT technology on their own behalf, as individuals or a company.
- Name squatting is not an issue in this technology. Tokens are not identified by their name alone. Multiple tokens can have the same name but belong to different chains/projects. OmniXEP assets have a unique ID (integer) automatically assigned upon creation, ensuring accurate identification. Sharing the ID is simpler than sharing a long string of characters for token info. For example, the first created asset could be represented as "01". This significantly reduces the user's risk of making mistakes.

Layer 2 Smart-EP, EVM Smartchain

Smart-EP is a complete structure running on XEP, allowing custom solidity smart-contracts, such as ETH and BSC smart-contracts.

SOFTWARE DETAILS

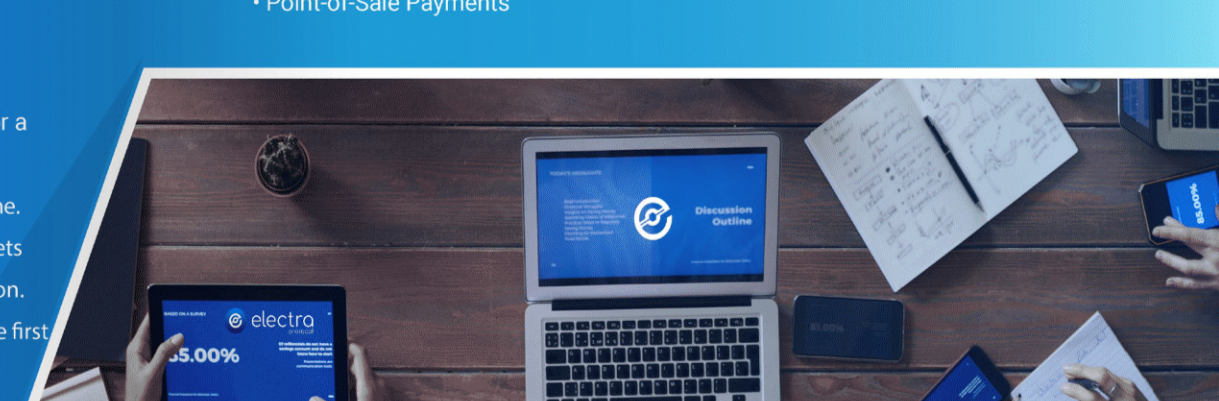
**XEP Desktop Wallets (Pro & Classic)**  
 The XEP Pro Wallet App is the latest and recommended desktop wallet. Both wallets (Pro & Classic) only work for XEP coins, not for Wrapped XEP tokens. Keeping the wallet unlocked enables staking rewards, earning and strengthening the network.

**XEP Mobile Wallet**  
 The XEP Mobile Wallet is a money bag; it is used to perform payments only. The mobile wallet does not store a blockchain copy (like the XEP Desktop Wallet does). As a result, you are not able to stake your XEP coins with it: <https://www.electraprotocol.com/wallets/>

**Public Smart Chain**  
 The public smart chain enables any entity to build blockchain solutions on the Electra Protocol layer-1 blockchain.

**Other solutions currently being built on XEP by private companies**

- Payment Management System
- Multicurrency Payments
- Prestashop Plugin
- Point-of-Sale Payments
- Private Websites
- Woocommerce Plugin
- Magento Plugin



Meet with  
TEAM MEMBERS

Electra Protocol is a community-driven project, which did not conduct any financing to launch or run its blockchain ecosystem. All innovations are delivered by its volunteering members. Anyone who understands the future impact of the Electra Protocol and is motivated to help, can actively participate.

More information about team and contributors:  
<https://www.electraprotocol.com/members-and-teams>



DISCLAIMER

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<https://www.electraprotocol.com>  
 Foundation: <https://www.electra.foundation>  
 Explorer: <https://electraprotocol.network>

**Main communication channels**  
<https://www.electraprotocol.com/social-media>

**Contact core team**  
<https://www.electraprotocol.com/contact>

**Additional channels**  
 Telegram: <https://t.me/ElectraProtocol>  
 Facebook: <https://www.facebook.com/Electraprotocol>  
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