



PQBioWallet
POST QUANTUM READY • BIOMETRIC • SECURE • PRIVATE
DIGITAL IDENTITY WALLET

PQ BIO Wallet

A Post-Quantum Biometric Wallet for Safer Digital Asset Ownership

1. Executive Summary

PQ BIO Wallet is a next-generation digital asset wallet designed to protect crypto assets, stablecoins, tokenized assets, and future digital value by combining three security principles:

1. **The user must approve the exact transaction.**
2. **The approval must be tied to the live human owner.**
3. **The authorization layer must be protected for the post-quantum era.**

Most crypto wallets protect access to the wallet. PQ BIO Wallet protects the act of signing and sending assets.

This is the critical difference.

A user may open an app, view balances, or receive assets, but an outgoing transaction cannot proceed unless the user reviews the final transaction details and completes live biometric authorization. That approval is bound to that exact transaction only. If the destination, amount, network, asset, fee, or smart contract request changes, the approval becomes invalid.

The core value proposition is simple:

PQ BIO Wallet helps users protect digital assets from stolen seed phrases, phishing approvals, malicious transaction substitution, device compromise, and future cryptographic risk.

It is not merely another wallet interface. It is a human-verified, transaction-bound authorization wallet designed for the next phase of digital asset adoption.

2. The Problem in Today's Crypto Wallet Market

Digital asset ownership gives users control, but it also gives them direct exposure to loss.

Existing wallets generally rely on one or more of the following:

- seed phrases;
- passwords;
- device unlock;
- browser extensions;
- hardware wallets;
- app-based confirmations;
- two-factor authentication;
- custodial account controls;
- multi-party or institutional custody.

These approaches solve part of the problem, but major weaknesses remain.

2.1 Seed phrases are powerful but fragile

A seed phrase gives full control. If it is stolen, copied, photographed, phished, backed up insecurely, or entered into a fake site, assets may be lost.

Most users are not trained to manage cryptographic secrets safely. [Even sophisticated users can make one mistake.](#)

2.2 App unlock is not transaction approval

Many wallets focus on unlocking the app. But opening a wallet is not the same as authorizing a specific outgoing transfer.

The real security moment is the transaction itself:

- Who is the recipient?
- What amount is being sent?
- Which network is being used?
- What contract is being approved?
- Is the approval unlimited?
- Has the address changed?
- Is the transaction being manipulated?

PQ BIO Wallet focuses directly on that moment.

2.3 Device biometrics are useful but limited

Face ID, fingerprint unlock, and device biometrics can improve convenience, but they are usually tied to the device. They may unlock the wallet app or confirm a local action, but they do not necessarily create a transaction-bound, portable, independently verifiable human authorization.

PQ BIO Wallet is different because the biometric approval is tied to the actual transaction, not just the phone unlock event.

2.4 Hardware wallets improve key protection but still rely on user interpretation

Hardware wallets are valuable, but users still need to understand what they are approving. Blind signing, confusing contract calls, fake sites, address substitution, and poor transaction visibility remain practical risks.

PQ BIO Wallet is designed to make the approval human-verified and transaction-specific.

2.5 Quantum-era risk requires forward-looking protection

Digital assets are long-term stores of value. Users may hold assets for years. A wallet designed only for today's cryptographic environment may not be sufficient for tomorrow's risk environment.

PQ BIO Wallet adds a post-quantum protected authorization layer so the wallet is better aligned with future security expectations.

3. What PQ BIO Wallet Is

PQ BIO Wallet is a consumer digital asset wallet that requires live biometric approval before any outgoing transaction can be signed.

It is designed for:

- crypto assets;
- stablecoins;
- tokenized real-world assets;

- tokenized securities;
- central bank digital currency interfaces;
- digital identity-linked payment flows;
- Web3 and dApp interactions;
- high-value personal wallets;
- family office and executive personal custody;
- cross-border digital asset payments.

The wallet does not simply ask, “Is the app unlocked?”

It asks:

Is the verified human owner approving this exact transaction now?

That distinction is the product.

4. How PQ BIO Wallet Works for the User

The user experience is intentionally simple.

Step 1 — The user creates or imports a wallet

The user may create a new wallet or import an existing one. The wallet protects the user’s signing material, but the user is not asked to rely only on a password, device unlock, or seed phrase.

Step 2 — The user reviews the exact transaction

Before sending, the wallet presents the final transaction details:

- asset;
- amount;
- destination;
- network;
- fee;
- transaction type;
- smart contract or token approval risk where relevant.

The user sees what is being approved before biometric authorization.

Step 3 — The user completes live biometric approval

The user completes live OneBioID biometric verification. This confirms that the authorized human is present and approving the transaction.

The biometric does not become the wallet seed. It does not replace the private key. It authorizes the controlled use of the wallet signing capability for that specific transaction.

Step 4 — A transaction-bound authorization is created

The approval applies only to the transaction shown to the user.

If the destination, amount, network, contract, fee, or transaction content changes after biometric approval, the authorization fails.

Step 5 — The transaction is signed and recorded

Only after valid human biometric authorization does the wallet allow the transaction to proceed.

The wallet can then create a receipt showing that the transaction was reviewed, approved, authorized, and completed through the protected approval path.

5. Core User Benefit

PQ BIO Wallet gives the user a stronger protection model for digital assets.

5.1 Protection against stolen seed misuse

Even if a user's seed phrase risk is reduced through secure storage, traditional wallets still make the seed the ultimate control point.

PQ BIO Wallet introduces an additional human-verified authorization layer before outgoing transactions proceed.

5.2 Protection against transaction substitution

If a malicious site or attacker changes the amount, recipient, network, or contract request after the user review, the prior approval is invalid.

This directly addresses a major weakness in many wallet approval flows.

5.3 Protection against blind approval

The wallet is designed to make the transaction review central to the approval process.

The user is not merely clicking "confirm." The user is biometrically authorizing the specific transaction shown.

5.4 Protection beyond device unlock

PQ BIO Wallet does not rely only on the phone or browser being unlocked. It requires a live human approval event for the transaction itself.

This makes the security model stronger than simple app access control.

5.5 Protection for long-term asset holding

Crypto assets and tokenized assets may be held for many years. A post-quantum protected authorization layer makes the wallet more suitable for long-term digital asset ownership.

6. Where PQ BIO Wallet Can Be Used

PQ BIO Wallet can be applied across multiple digital asset markets.

6.1 Retail crypto wallet

For individuals holding crypto assets who want stronger protection than a standard wallet or browser extension.

Use cases:

- personal asset storage;
- stablecoin transfers;
- token swaps;
- NFT holding;
- dApp interaction;
- recurring Web3 payments.

6.2 Stablecoin payments

Stablecoin transactions are fast and irreversible. PQ BIO Wallet can help users confirm that each stablecoin payment is intentional and human-approved.

Use cases:

- USDC payments;
- merchant settlement;
- cross-border transfers;
- family remittances;
- freelancer payments;

- treasury-to-user disbursements.

6.3 Tokenized real-world assets

As real estate, funds, carbon credits, commodities, and securities become tokenized, wallets will need stronger identity-linked transaction authorization.

Use cases:

- tokenized fund holdings;
- tokenized bond transfers;
- private market assets;
- tokenized property interests;
- high-value asset transfers.

6.4 Executive and high-net-worth custody

Executives, founders, family offices, and high-net-worth individuals need stronger controls without losing personal custody.

PQ BIO Wallet can provide a premium self-custody experience with human-verified transaction approval.

6.5 Web3 and dApp safety

Many Web3 risks arise from users approving unclear or dangerous smart contract actions.

PQ BIO Wallet can help by showing the transaction risk and requiring biometric approval for the specific contract interaction.

Use cases:

- token approvals;
- staking;
- DeFi transactions;
- bridge transactions;
- DAO voting;
- gaming asset transfers.

6.6 CBDC and regulated digital money interfaces

Future digital money systems may need strong user authorization, identity confidence, and transaction accountability.

PQ BIO Wallet can support user-controlled digital money where human approval and post-quantum readiness are important.

7. How PQ BIO Wallet Is Different

7.1 Different from standard software wallets

Standard wallets usually focus on storing keys and signing transactions.

PQ BIO Wallet focuses on whether the verified human owner approved the exact transaction.

Standard Wallet	PQ BIO Wallet
Unlock wallet/app	Approve exact transaction
Seed/private key controls assets	Seed remains separate; BIO approval controls transaction authorization
User confirms transaction	User biometrically authorizes transaction
Approval may be reused indirectly through session risk	Authorization is single-use and transaction-bound
Limited future cryptographic protection	Post-quantum protected authorization layer

7.2 Different from hardware wallets

Hardware wallets protect keys well, but they can still leave users exposed to confusing approvals, blind signing, phishing, address substitution, or poor transaction visibility.

PQ BIO Wallet is not positioned as simply replacing hardware wallets. It adds a human-verified transaction authorization layer that can complement or improve the user approval experience.

Hardware Wallet	PQ BIO Wallet
Protects key storage	Protects transaction authorization
User approves on device	User completes live biometric approval
Still depends on user reading transaction details	Transaction approval is bound to exact displayed details
Device possession is central	Human verification is central

Hardware Wallet

Strong key custody

PQ BIO Wallet

Strong human transaction control

7.3 Different from device biometrics

Device biometrics usually unlock the device or app.

PQ BIO Wallet uses biometric verification to authorize the transaction itself.

Device Biometric Unlock

Unlocks phone/app

Device-centric

May not bind to final transaction details

Often convenience-focused

Limited portability

PQ BIO Wallet

Authorizes specific outgoing transaction

Human identity-centric

Bound to exact transaction context

Security and authorization-focused

Designed for recovery and human continuity

7.4 Different from two-factor authentication

Two-factor authentication can confirm that a user has a code or device, but it does not necessarily prove that the live human owner reviewed and approved the transaction.

PQ BIO Wallet provides a stronger approval model because the live biometric step is part of the transaction authorization itself.

7.5 Different from custodial exchanges

Custodial platforms require users to trust the platform with asset control.

PQ BIO Wallet is designed for users who want more control while still gaining stronger protection around outgoing transfers.

It provides a bridge between simple self-custody and stronger identity-based authorization.

8. Why PQ BIO Wallet Is Better for Users

8.1 It protects the real risk moment

The highest-risk moment in a wallet is not viewing a balance. It is sending assets or approving a contract.

PQ BIO Wallet protects that moment.

8.2 It reduces reliance on memory and manual seed discipline

Users should not have to be security experts to protect digital assets.

PQ BIO Wallet gives users a more intuitive protection layer: review the transaction, approve with live biometric verification, and proceed only if the transaction remains unchanged.

8.3 It makes approvals harder to manipulate

If a malicious interface tries to substitute an address or alter a transaction after the user approval, the approval does not match and the transaction should not proceed.

8.4 It supports safer recovery

Many users fear losing access to their wallet. PQ BIO Wallet can support recovery through live identity verification and controlled recovery policies, while avoiding a model where the biometric becomes the seed.

8.5 It improves trust for mainstream adoption

Mass adoption of digital assets requires a wallet experience that feels safer, more understandable, and more accountable.

PQ BIO Wallet can help ordinary users, financial institutions, and digital asset platforms move toward safer participation.

8.6 It is designed for the post-quantum era

Digital assets are not only a present-day security problem. They are a long-term security problem.

PQ BIO Wallet introduces a post-quantum protected authorization layer so users can adopt a wallet designed with future cryptographic risk in mind.

9. The Core Differentiator: Human-Verified Transaction Authorization

The central innovation is not simply “biometric login.”

The central innovation is:

Live human biometric verification bound to the exact transaction before signing is permitted.

This means the wallet is not just asking:

Can this user open the wallet?

It is asking:

Did the verified human owner approve this exact transaction at this moment?

That is the difference between access security and transaction security.

PQ BIO Wallet is built around transaction security.

10. User-Facing Value Proposition

For everyday users

PQ BIO Wallet makes crypto safer and easier to trust.

Users receive stronger protection without needing to understand complex cryptography.

For crypto holders

PQ BIO Wallet adds protection against seed theft, phishing approvals, and transaction manipulation.

For stablecoin users

PQ BIO Wallet adds confidence to fast, irreversible digital payments.

For high-value users

PQ BIO Wallet provides a stronger control model for meaningful asset transfers.

For Web3 users

PQ BIO Wallet makes smart contract approvals more accountable and harder to abuse.

For future digital asset ecosystems

PQ BIO Wallet provides a human-authenticated, post-quantum ready authorization model for tokenized value.

Summary

PQ BIO Wallet addresses one of the most important gaps in digital asset security: the gap between wallet access and transaction approval.

Existing wallets generally protect keys, devices, or app sessions. PQ BIO Wallet protects the outgoing transaction itself through live biometric authorization and post-quantum protected approval.

PQ BIO Wallet is designed for the next generation of digital asset ownership, where users need both control and protection.

Its core promise is simple:

No verified human approval for the exact transaction means no outgoing transfer.