Cryptocurrency Wallet

Hardware-based Wallet for Emerging Digital Assets

Cryptocurrency Cold Wallet
Securely Store Emerging Digital Assets

Over the past five years, an increase in the number of cryptocurrency hacks has raised the alarm about security breaches in transaction and deposit. The public started to dive into the mechanism and realized transaction is approved through cryptography.

As the underlying mechanism, cryptography and blockchain, became salient, awareness of private key was raised. The private key is bound to an account. It is used to sign a transaction block for the approval of asset transfer. If it is known by others, assets are likely to be stolen.

The cryptocurrency wallet platform aims to provide building blocks for customers who intend to design "cold wallet" to securely store private keys. We offer know-how in cryptographic algorithms, key generation, key establishment, key exchange; that is the entire life cycle of key management and cryptographic functions.

With IKV's expertise, our customers has achieved mass production in only few years without any security breach exposed. The products we collaboratively designed won the 2020 CES Innovation Award and eventually become the global top players.
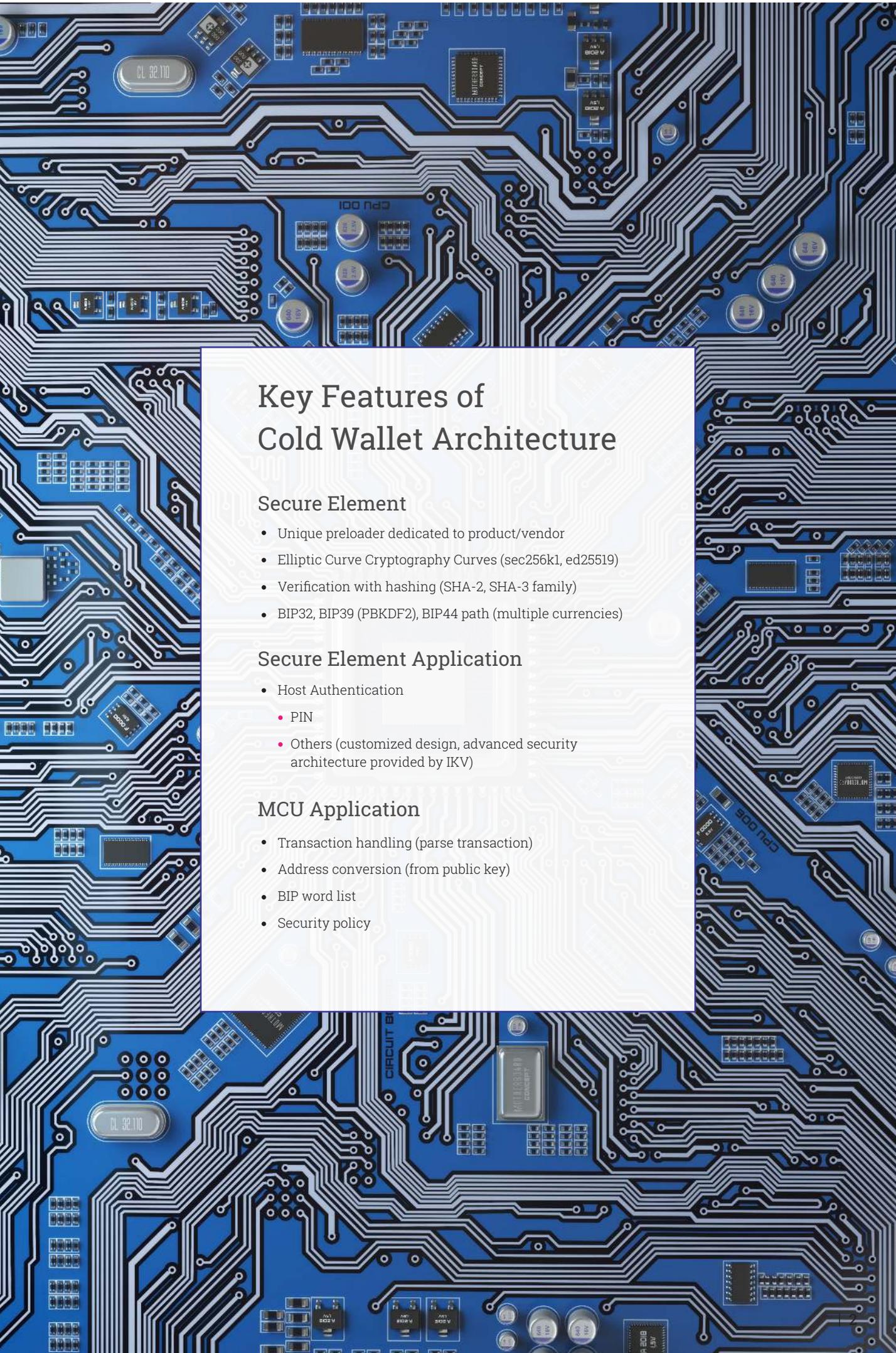
Key Features of
Cold Wallet Architecture

Secure Element

- Unique preloader dedicated to product/vendor
- Elliptic Curve Cryptography Curves (sec256k1, ed25519)
- Verification with hashing (SHA-2, SHA-3 family)
- BIP32, BIP39 (PBKDF2), BIP44 path (multiple currencies)

Secure Element Application

- Host Authentication
  - PIN
  - Others (customized design, advanced security architecture provided by IKV)

MCU Application

- Transaction handling (parse transaction)
- Address conversion (from public key)
- BIP word list
- Security policy

Leverage
IKV Expertise

For systems processing transaction, confidential data and digital content, IKV aims to construct a pertinent subsystem, which can grant possessors complete control over the digital assets in transit and at rest.

Typically, users store keys in their computers to transact. Under the circumstance, hackers' trick can be
  > spreading modified wallet software so as to transfer users' coins to their accounts
  > using malware and appropriating users' keys, wallet files and passwords.

To address the issues mentioned above, storing keys in a secure hardware device is the trend of designing cryptocurrency wallets. The wallet is activated on a need-basis only, ensuring most of the time it is offline and will not be connected to public network. Since the wallet isolates private keys from "hot" connected environments, it is called "cold wallet".

₿ bitcoin

IKV cold wallet

hosted wallets and exchanges

Usability

desktop wallet

cold storage

paper wallet

Security
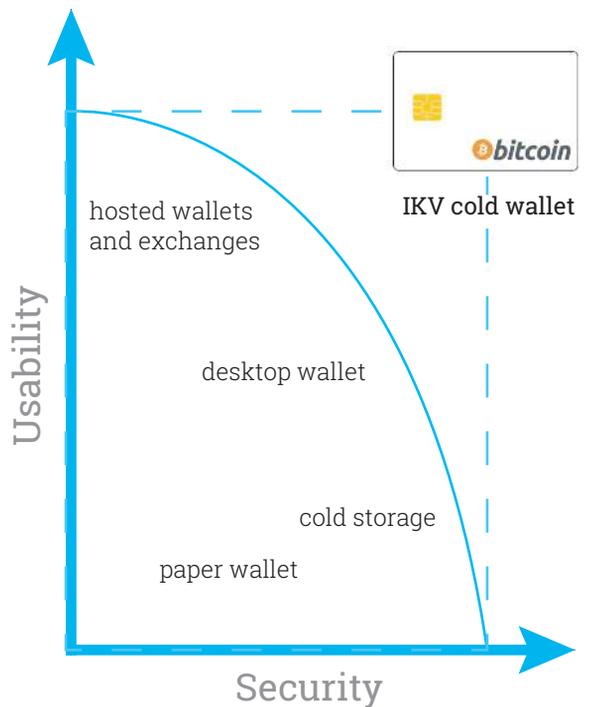
I. Supported Cryptocurrencies

Bitcoin

Litecoin

ERC20/ Ethereum

Bitcoin cash

II. Success Stories

AUTHENTREND

SecuX

CoolBitX
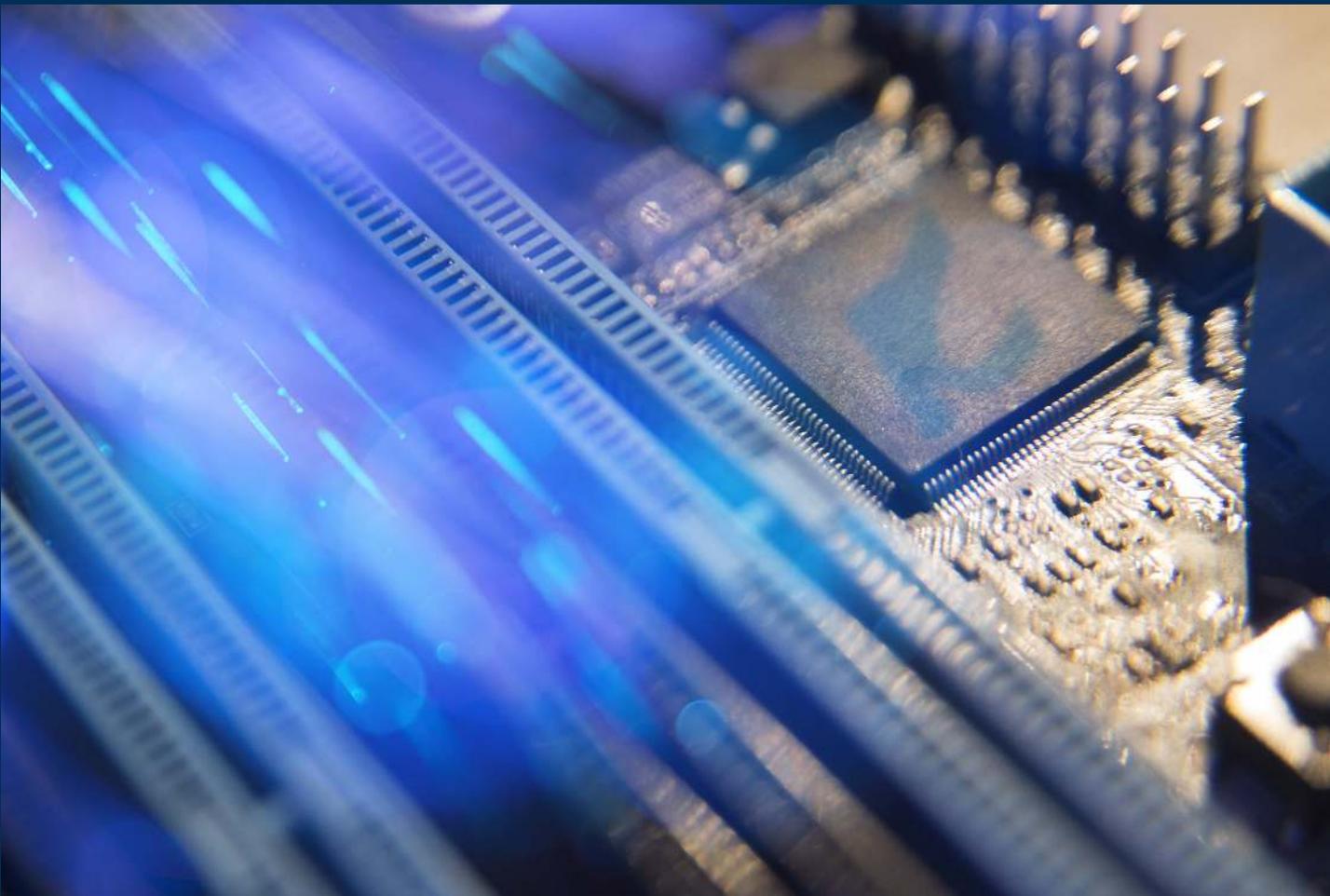
Secure Vault at your fingertips

With IKV-Tech expertise, a wide range of applications can attain tailor-made security leveraging the cryptocurrency wallet platform. We help customers optimize their existent security mechanism and enable security and usability to go hand in hand. Our mission is to secure customers' business operation seamlessly in space and time, especially in an era where attacks always keep abreast.

About InfoKeyVault Technology

InfoKeyVault Technology (IKV-Tech) is a service company in embedded security, also an independent design house for security solutions from global security chip vendors, such as Infineon and Microsemi. IKV-Tech specializes in cryptographic implementation, software, firmware and hardware protection, cryptographic key management and countermeasures against hardware attacks so as to secure customers' digital assets and intellectual property.

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