

Universal CryptoWALLET[™] (UCW[™])



Splend has crafted and made available now the Universal CryptoWALLET[™] (UCW[™]) application, a complete and comprehensive crypto-wallet solution. In addition to its unprecedented speed, UCW[™] provides a 12-layer security shield against any malicious attempts.

Splend's UCW[™] platform, based on IBA[™], provides a seamless experience for all users to access digital currencies and perform near-instant, inexpensive and secure crypto transactions.

UCWTM PLATFORM

Unprecedented Speed

- End-user application powered by Splend's IBA[™] Technology
- **Uncompromised Security**
- Industry First, 12 levels of security
 Complete & Comprehensive Solution
 - Supports Desktop, iOS & Android
 - Telegram Support
 - Supports decentralized exchanges worldwide
 - Supports all ERC20 compatible tokens
 - Supports popular non-ERC20 tokens

12 LEVELS OF SECURITY

- 1. User's dashboard password
- 2. User's private key
- 3. Splend's private key
- 4. Two Factor Authentication (2FA)
- 5. U2F hardware security
- 6. Email & SMS notifications
- 7. One-time password (OTP)
- 8. IP address detection
- 9. Verified ID (VID) security module
- 10. Fingerprint & face recognition
- 11. Login alert
- 12. Strong password check

UCW[™] KEY FEATURES

- 1. Available as a hot wallet, on web interface and mobile app
- 2. Fully compatible with iOS, Android, desktop web browsers
- 3. Telegram Support
- 4. QR Code for user's wallet address
- 5. Contact List Access from Dashboard
- 6. Decentralized exchanges support/Location agnostic
- 7. Multi-language support
- 8. Full ERC20 token compatibility
- 9. Support for all popular non-ERC20 tokens

Unprecedented Speed – Fast, near-instant wallet

UCW[™] is powered by the IBA[™] Flash Network, the first implementation of the Splend's Integrated Blockchain Architecture[™], making it possible for UCW[™] be a fast, near-instant crypto wallet. The IBA[™] Flash Network is a disruptive technology intended to solve the problems of scalability and transaction settlement time. While the Bitcoin blockchain can perform about 3 transactions per second, and the Ethereum blockchain -- about 30 transaction per second, the IBA[™] Flash Network is targeting to perform 1 million transactions per second.

IBA[™] Flash Network is a decentralized network which utilizes the IPFS protocol of peer-to-peer method of storing data. It is an off-chain scaling solution which allows for instant, low-fee and scalable transactions. IBA[™] Flash Network adopts IPFS and the sharding mechanism to allow scalability for IBA[™], while maintaining security and decentralization. It is layered on top of the Ethereum blockchain. The Flash Network is available in the Preferences setup by selecting the Flash Network option.

Uncompromised Security – World's most secure wallet

Splend **UCW[™]** implements 12 levels of security features, including the user's dashboard password, user's private key, and Splend's private key. Splend utilizes the Two-Factor Authentication scheme for user account protection. For users with U2F hardware security devices, Splend implements the new U2F authentication standard where these devices integrate directly with the web browser or mobile device to prevent credential theft techniques such as keylogging, phishing, and man-in-the-middle-attacks. Splend **UCW[™]** also uses email and SMS notifications to authenticate users. For mobile users, additional fingerprint scan and face recognition features are available. The user can always deselect all the security options with a few exceptions as noted below. The full Feature list of the 12 security features are detailed below:



1. Dashboard Password

A user password is required to open the CryptoWallet[™] each time. This password is set upon initial setup by the user.

2. Login Alert

The user is alerted via email, SMS or Push notification (alerts can be selected in the CryptoWallet[™] Preferences setup) when a user login is detected by the CryptoWallet[™].

3. Mail/SMS/Push Notification

The user is alerted via email, SMS or Push notification in two instances: (i) when a CryptoWallet[™] login is detected and (ii) when a transaction is completed. This same feature is also used to authenticate users if the two-factor authentication (2FA) is enabled by the user.

4. One Time Transaction Password (OTP)

For each transaction, a one-time password (OTP) is required and has an automatic time out (5 minutes) if the transaction is not carried out. This feature is intended to safeguard against replay attacks and <u>cannot</u> be disabled by the user.

5. Two-factor Authentication (2FA)

The two-factor authentication is an extra layer of security for users prior to making a transaction. The first factor or step is the OTP outlined in #4 above. By enabling this 2FA feature, the user will then be prompted for a second factor or step, whereby they will be required to provide another piece of information. In the Splend CryptoWallet[™], users will have an option of either having a passcode sent to their mobile phone number on their account or simply answering the mobile phone. In the first instance, the passcode will have to be input into the login window.

6. User Key (Private Key)

The user will need a private key, known only to the wallet owner, to conduct a transaction and this key is stored in the wallet. The private key of a wallet serves as the digital signature and finalizes each and every transaction associated with that wallet. The wallet owner must keep the private key secret and protected since anyone who has access to the private key also has access to the entire cryptocurrency account. If the private key is lost, the wallet owner will not be able to access the funds in the wallet. It is highly recommended that the wallet owner creates a backup private key and keeps it in a safe and protected place. Additionally, the user will also be able to import and export his Keystore file. A Keystore file allows the user to secure his private key and access it easily. It requires a passphrase as input, and its output is the user's private key. This feature <u>cannot</u> be disabled by the user.

7. Splend Key (Public Key)

The UCW[™] stores public and private keys and interacts with the Ethereum blockchain to enable users to send and receive digital currency. The public key (Splend Key) is available to anyone to

transact in cryptocurrencies with the UCW^M. The wallet address is a hashed version of the public key. The public key can be sent to another user wishing to make a financial transaction using the CryptoWallet^M (similar to wire transfer information for fiat currency). This feature <u>cannot</u> be disabled by the user.

8. Universal Second Factor (U2F) Authentication

The Universal 2nd Factor (U2F), hosted by FIDO Alliance, is an open authentication standard that strengthens and simplifies the two-factor authentication (2FA) mentioned above and uses a specialized USB or NFC device similar to the security technology found in smart cards. This feature is intended to prevent credential theft techniques such as keylogging, phishing, and manin-the-middle-attacks.

9. Strong Password Check

Splend CryptoWallet[™] uses a Strong password to ensure maximum security consisting of at least six characters that are a combination of letters, numbers and symbols (@, #, \$, %, etc.). Additionally, passwords are case-sensitive.

10. *IP Detection*

Splend's UCW[™] detects the IP address location at each login. Should the IP location change from the previous login, the user will need to re-authenticate.

11. ID Verified (VID)

Splend's Universal CryptoWALLET[™] uses the Verified ID technology that will allow the user to withdraw funds from the Splend Universal CryptoWALLET[™] on the blockchain even if all of Splend's servers were down or not operational.

Splend VID is a unique feature of UCW[™], a revolutionizing technology that provides users connected to the Splend's financial services the power of being in control of all the crypto funds in their UCW[™] at all times. VID allows the user to withdraw all crypto funds from the UCW[™] in

the event that all Splend servers were shut down globally. Splend Universal CryptoWALLET[™] is a multi-signature wallet. Both the user's private key and Splend's private key are required for each transaction on the Splend Ecosystem. Splend's private key is required to validate each transaction, and it also prevents double spending and hacking. In order to be verified, the user will need to provide a form of ID such as passport number, Social Security number, or driver's license. Once a VID is issued, this information is stored on the blockchain. After the VID is issued, it can never be issued again for the same Splend Universal CryptoWALLET[™]. Every Splend user's cryptocurrency funds are stored on the blockchain and not on the Splend's platform. To override Splend's private key, the user will need to provide his private key and VID. The smart contract will authenticate both the user's private key and VID. Once authenticated, the user will be able to withdraw all the crypto funds in his Splend's Universal CryptoWALLET[™] without needing Splend's private key. Splend's VID is powered by the IBA[™] Flash Network's VID technology within the IBA[™].

12. Fingerprint & Face Recognition

As an additional security, users can opt-in or enable the fingerprint and face recognition on their mobile device. Once activated, the CryptoWallet[™] will then use these two features for Dashboard login (#1) instead of entering a strong password.

Complete & Comprehensive CryptoWallet™ end-user application

Telegram Support

Splend's IBA[™] Open Source APIs are able to communicate with other external applications like the messaging platform Telegram. The Splend IBA[™] Telegram Bot allows Splend's UCW[™] features to run inside Telegram in both inline and keyboard modes.

Decentralized Exchange Support/Location Agnostic

The CryptoWallet[™] will seamlessly connect to decentralized exchanges in the local jurisdiction, which adhere to local laws and regulations. So, whether you are in Europe today and then travel to Asia tomorrow, you can seamlessly conduct financial transactions with

Splend's CryptoWallet^M. The CryptoWallet^M is location agnostic when used with decentralized exchanges.

Multi-language Support

Besides English, the CryptoWallet[™] also supports Chinese. Soon, we will be announcing other supported languages such as Korean, Japanese, etc.

Easy Contact List

For ease of use, the user can send crypto funds through either the wallet address, email address, or phone number stored on the user's Splend Dashboard's contact list.

ERC20 Tokens & Splend's SPL token support

Currently CryptoWallet[™] supports all ERC20 tokens as well as Splend's SPL[™] ^[1] token.

Non-ERC20 Tokens Support (Coming soon in Q1, 2019)

The CryptoWallet[™] will support the following Non-ERC20 tokens:

BTC BCH BSV XLM MOBI XRP EOS LTC USDT ADA XMR TRX NEO ETC VET DOGE BTG DGB BCD OCT LBTC VIPS LV FAB GAT MIR HNDC HLP RPD

CryptoWallet[™] Use Case Illustration:

Using Splend's desktop or mobile CryptoWalletTM, the user can easily send SPL^[1], ETH, and all other ERC20 as well as popular Non-ERC20 cryptocurrencies. The user will first need to log in with his/her dashboard password. From the dashboard, the QR code of the user's wallet address will be displayed, and it could be shared with other users. The user's balances will be displayed.

The user selects the symbol of the cryptocurrency to send, such as SPL or ETH. For the wallet address, the user can select the recipient's wallet address from the Contact List, select from a scanned QR code, or by manually pasting or typing in the recipient's wallet address, email address, or phone number. Next, the amount to send needs to be entered. The user's private key will also be required.

After clicking Send, the status of the transfer will be displayed, such as Pending or Successful. The user can also verify the transfer through Etherscan and Flashscan. The app keeps a history of all the transfers for the user.

[1]: SPL is Splend's utility token