

securosys

# SUCCESS STORY

## CRYPTO STORAGE AG

Managing blockchain-based assets and their related private keys with cutting-edge security standards without single point of failure, while not compromising on end-user experience



CRYPTO STORAGE



# ABOUT CRYPTO STORAGE

Crypto Storage AG, a subsidiary of Crypto Finance AG, enables the secure storage of blockchain-based assets for financial intermediaries and corporates on an institutional-grade infrastructure platform. Clients are supported with a full implementation for their custody business model and with tailored solutions and potential blockchain application projects. Furthermore, Crypto Storage AG provides advisory services for crypto asset technology, operations, and risk management. The company's processes and governance are SOC-2 / ISAE 3000 (type 2) compliant, with an audit by Ernst & Young. This, together with other audits and certifications, underlines the high level of professional services Crypto Storage offers.

The infrastructure solution raises market standards by introducing a new security paradigm, with two layers of dedicated and redundant hardware devices. This setup allows for an independent and highly flexible multi-signature framework. All transactions can be independently reviewed and approved on these tamper-proof hardware. The hardware security module and the hardware used for the tamper-proof signing device are provided by leading Swiss hardware security module provider Securosys.

# STARTING POINT

Crypto Storage was looking for a technology stack that would support the drive to create a platform for financial intermediaries that need to manage blockchain-based assets and associated private keys with state-of-the-art security standards - without single point of failure and without compromising the end-user experience.

The Crypto Storage partnership with Securosys led to two patent applications. The result: Crypto Storage was able to meet all of the requirements they defined for the solution, and do so with superior development efficiency than any other solution on the market. The partnership allowed Crypto Storage to get to market and onboard the first client within 6 months of the idea inception. As a result, Crypto Storage could put the focus on the clients' market-demand priorities, usability requirements, and operational scalability.

“

Today, **the Crypto Storage infrastructure solution enabled by the Primus HSM platform** – hardware that is already used to secure \$100 billion in transactions daily in the Swiss banking sector – is on track to become the new standard in hardware security for crypto asset applications.



# DETAILS

Within Crypto Finance AG, the parent company of Crypto Storage AG, their mission was to provide the most secure crypto asset custody solution for their clients, meeting the highest standards expected by the Swiss financial sector and drawing on the experience of the global technology and blockchain community.

## Securosys' goals

1. Highly secure and sophisticated control over the use of assets
2. Physical multiple authorization of transactions
3. Operational scalability across different types of assets and number of accounts and addresses
4. Tight security architecture to avoid single point of failure
5. Complete cryptographic audit trail
6. Ease of use for end users

With **Securosys' Smart Key Attributes (SKA)**, developed in collaboration with Crypto Storage, Crypto Storage is able to use defined asset key usage policies that are superior to traditional multi-signature or even modern multi-party computation. Furthermore, Securosys' achievement of the support for the BIP32 derivation scheme provides virtually unlimited capacity for asset keys within the HSM.

In addition, Securosys was looking for components that would help achieve these goals while providing Crypto Storage with the best possible developer and administrator experience.



Thanks to the partnership and close collaboration with Securosys, Crypto Storage was able to offload much of the security requirements to the **Primus Hardware Security Module platform** and the **Decanus Terminal**.

## Crypto Storage's success in achieving its goals

1. Crypto Storage used the tamper-protected Securosys Decanus approval terminal with Crypto Storage's own firmware to provide physical end users with multi-authorization for each transaction.
2. Since SKA's are universally deployable, the secure deployment of new types of crypto assets is made easy and enabled Crypto Storage to respond efficiently to the needs of the market and their clients.
3. When combined, the multi-authorization capabilities and the auditable, signed and tamper-proof crypto logs from Securosys HSMs provide a cryptographically verifiable audit trail for any type of unexpected event.
4. The universal applicability of the SKA combined with the large, convenient touch screen of the Decanus Approval Terminal makes it easy to create a unified experience across all assets. As a result, Crypto Storage was able to provide the ease of use required by any modern financial application.

Such partnerships also require a substantial level of trust, and Crypto Storage appreciated Securosys' policy of providing its customers and partners with a full audit of the design, code and manufacturing process.

# CONCLUSION

Crypto Storage continuously strives to meet and exceed the ever-growing security standards of the maturing crypto asset sector. The partnership with Securosys enables Crypto Storage to master the current threats and protect its clients from them. Crypto Storage is convinced that the continuous close cooperation with Securosys will enable them to make the most of the new developments and, together with Securosys, to meet the evolving needs of the financial sector.



# securosys

## HEADQUARTERS

Securosys SA  
Förrlibuckstrasse 70  
8005 Zürich  
SCHWEIZ  
+41 44 552 31 00  
info@securosys.com  
www.securosys.com

## GERMANY & EU

Securosys  
Deutschland GmbH  
Darrestrasse 9  
87600 Kaufbeuren  
DEUTSCHLAND  
+49 8341 438620  
info@securosys.de  
www.securosys.de

## APAC

Securosys  
Hong Kong Ltd.  
Unit 704B Sunbeam Centre  
27 Shing Yip Street  
Kwun Tong  
Hong Kong  
+852 8193 1646  
info-apac@securosys.com

**www.securosys.com**