



V-OS SMART TOKEN

The Most Secure Seamless Authentication Solution Trusted by Millions



Making Soft Tokens Smart

The V-OS Smart Token family is a versatile and highly secure second-factor authentication and authorisation solution for mobile devices. They are a flexible and cost-effective alternative to traditional hardware One Time Password (OTP) tokens and OTP generated sms.

With organisations moving towards Two -Factor (2FA) and Multi-Factor Authentication (MFA), a simple password is just not enough when it comes to security. Unfortunately, SMS OTPs have been proven to be insecure, being vulnerable to interception and phishing attacks. Hardware tokens are expensive to deploy, can get lost or stolen, are not user-friendly, and require regular replacement.

Soft tokens, such as those used by the V-OS Smart Token family of solutions, offer a number of advantages. As environments become more mobile and cloud-based, soft tokens are able to adapt and keep a good balance between user experience and security. They are also cost-effective (e.g. no additional cost of rolling out each new token), can be distributed more easily, and are less likely to be lost or forgotten like hard tokens. More importantly, they can be updated remotely so that they are always up to date.

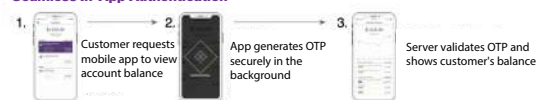
Why is it Smart?

However, not all software tokens are created equal. Only the V-OS Smart Token family is protected by V-Key's internationally-patented V-OS, the world's first Virtual Secure Element, whose advanced cryptographic and cybersecurity protections comply with global standards (Common Criteria EAL 3+ rating and FIPS 140-2) previously reserved only for expensive hardware solutions. V-OS Smart Token solution also provides a unique identity for the user of an application – protecting it from phishing and other social engineering attacks. With built-in protection against the now widely-reported Trust Gap issue, it is arguably even more secure than hardware-based solutions. Moreover, once V-Key's V-OS Smart Tokens are activated, they can work even without internet connectivity. They are also available as a Platform-as-a-service solution on V-OS Cloud (<https://cloud.v-key.com/>).

How does the V-OS Mobile Smart Token work?

Most software token solutions provide only basic security. The V-OS Smart Token family takes shadow authentication to another level, with secure storage, personalisation, device binding, in OTP or PKI, to protect against phishing and social engineering attacks.

Seamless In-App Authentication



Push-based Authentication



WHAT WE DO

V-Key is a software-based digital security company whose technology powers security solutions that deliver the highest level of defence and control for digital identity, user authentication, access and authorisation -- without compromising the user experience. It is trusted by government, banking, and mega-app clients across the region to connect people, organisations, and devices everywhere by securing the global digital economy.

OUR MISSION

To provide a secure Universal Digital Identity to power trusted digital services globally.

V-Key provides trusted, reliable, and secure Digital ID services that enable people to truly and safely participate in the modern economy.

FOR MORE INFO ON SMART TOKENS:



Contact insidesales@v-key.com

V-OS VIRTUAL SECURE ELEMENT • V-OS APP IDENTITY • V-OS MOBILE APP PROTECTION
V-OS SMART TOKEN • V-KEY SMART AUTHENTICATOR • V-OS BIOMETRIC IDENTITY

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V-OS Virtual Secure Element

At the heart of V-Key's solutions is V-OS, the world's first Virtual Secure Element to be FIPS 140-2 (US NIST), achieve FIDO security targets, and be Common Criteria EAL3+ certified. It has also been accredited by the Infocomm Media Development Authority of Singapore (IMDA). V-OS creates an isolated virtual environment within mobile applications to safely store cryptographic keys and other important information.

V-Key Smart Authenticator

The V-Key Smart Authenticator provides a strong and flexible, yet less expensive MFA solution using a fully customisable, one-touch passwordless mobile authenticator that is ideal for small and medium sized businesses. It can be used with built-in face biometrics for even more convenient access.

FOR MORE INFO ON
V-KEY SMART AUTHENTICATOR:



V-OS Smart Messenger

Deployed with our PKI, OTP and FIDO2 solutions, V-OS Smart Messenger provides a secure communication channel to the end user by encrypting in-app notifications.

The V-OS Mobile Smart Token Family

| V-OS Smart OTP Token | V-OS Smart PKI Token | V-OS Smart FIDO2 Token |
|---|--|--|
| The V-OS Smart OTP token effectively turns your device into an OTP (One Time Password) generator as part of 2FA and MFA authentication. It is one of the simplest methods to deploy and use for both admins and users -- particularly if using only to provide point solution access to a VPN or a limited number of applications. Another plus is that they can also be used even if a wireless signal is not available. | The V-OS Smart PKI Token is a certificate-based solution using public key cryptography to provide secure storage for digital certificates and private keys (without the risk of leaking the private key information). PKI-based certificates offer stronger identity authentication and are extremely scalable across a multitude of devices and use cases, such as secure messaging and document signing. However, they need a communication channel to transmit authentication data. | The V-OS Smart FIDO2 Token offers a level of high-security that is also based on public key cryptography but using specifications set by the FIDO (Fast Identity Online) Alliance. A typical user of FIDO2 tokens is a large enterprise whose employees or customers use a mix of hardware and software-based FIDO2 tokens for authentication. |

V-OS Mobile Smart Token Features (PKI, OTP and FIDO2)



Sample Use Cases:

Easy hardware token replacement for Government, Banking, and Fintech apps

Passwordless shadow authentication

Worry-free Push Auth to replace costly and insecure SMS OTP for gaming, e-health, and other apps

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