WISeprint
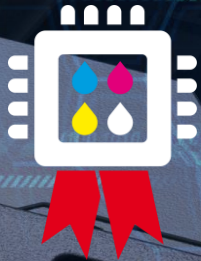## Security for Printer Cartridges

WISeKey

Building Trust in the Connected World

COMPLETE PROTECTION

Counterfeit cartridges and toners lead to bad user experience, damaged printers and potential health issues, in addition to a huge loss of revenue for printer manufacturers. **WISeKey** offers a complete solution to reduce the risk of fraud and secure the business of printer manufacturers. The **WISeprint®** solution includes cryptographic hardware modules and turnkey PKI – as used in high security e-passport applications – as well as services that help printer manufacturers protect their legitimate cartridges.

TRUSTED IDENTITY SYSTEM

A Digital Certificate reliably asserts the identity of an object or person, including cryptographic keys used for electronic signature. The certificate is issued and signed by a Certificate Authority (CA) such as **WISeKey**.

A legitimate cartridge, tagged with a combination of certificate and tamperproof chip, can be authenticated throughout its lifecycle. Because of the PKI security, counterfeit cartridges cannot replicate the cryptographic keys and can easily be identified or blocked from connecting to the printer.

WISeKey is a proven provider of managed Public Key Infrastructure (PKI) services, providing both trusted and vendor-specific Certificate Authority (CA) options tailored to the high-volume and high availability requirements of Internet of Things (IoT) manufacturers.

KEY FEATURES

- Cartridge authentication:
    - Secured unique digital ID
    - Tamperproof VaultIC chip

- Digital ID life cycle management:
    - Proven PKI (Public Key Infrastructure)
    - Suited to high-volume manufacturing

- Real-time detection of fake or black-listed cartridges

- High speed authentication, including multi-cartridges

- Refill detection

- Wired or wireless interface

- Full integration and configuration services

WISeprint ARCHITECTURE
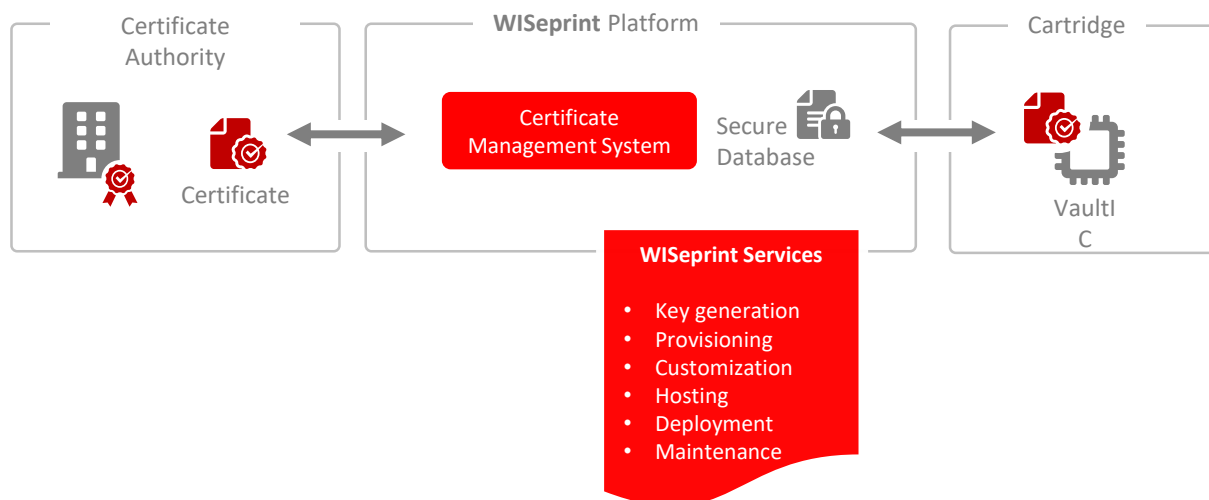
WISeprint PLATFORM

The **WISeprint** Certificate Management Service (CMS) is a software tool with a user-friendly interface and easy-to-integrate API. It manages the lifecycle of Digital Certificates stored in the tamperproof **VaultIC®** secure element, providing a cryptographically-protected cartridge eID.

WISeKey can provide PKI-as-a-Service or customer dedicated Cas and the **WISeKey** CMS can be installed at customer premises, or outsourced to in one of **WISeKey's** regional secure data centers.

As the trusted operator of the International Organization for the Security of Electronic Transaction (OISTE) Global Root, **WISeKey** combines highly-scalable PKI operations with Swiss neutrality, security and privacy laws.

WISeprint VAULTIC

The **VaultIC** security module embeds a complete firmware dedicated to IP protection and anti-cloning. This firmware uses a variety of cryptographic mechanisms such as digital signature generation/verification to provide a number of protection and authentication functions. It embeds on-chip non-volatile data storage capabilities for keys, certificates and customer data.

The robust security features and tamper resistant capabilities make the **VaultIC** compliant to Common Criteria EAL5+ and FIPS 140-2 Level 3 certifications. Its low-power consumption profile makes it a perfect security companion to a printer host processor. The choice between wired or wireless interface suits any printer environment.

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https://www.wisekey.com/solutions/wiseprint/