



## Identifiers

### iCLASS® Seos®



#### HIGH FREQUENCY CONTACTLESS SMART CARD FOR SECURING IDENTITIES

- **Strong authentication** - First enterprise-ready converged card for securing physical access as well as access to IT resources.
- **Increased interoperability** - Open, standards-based solution supports future technologies and can store data for multiple applications.
- **Technology-independent security** - Multi-layered security supports the portable Secure Identity Object (SIO®) data model.
- **Heightened privacy protection** - No traceable identifiers exchanged during card sessions, preventing data associated to a card from being divulged or cloned.

HID® Global's iCLASS® Seos® smart cards are based on a secure, open technology to manage and authenticate identities. The cards primarily address the need for securing identities for the physical access control solution (PACS) market but are also provisioned to support other applications, including One-Time Password authentication (OTP) for login into networks and other IT resources.

iCLASS® Seos® cards are ideal for organizations with stringent security requirements for their credential solution, as well as enterprise and government organizations looking for a cost-effective solution. As part of the iCLASS SE® platform, the cards deliver superior data integrity and privacy protection by leveraging the latest cryptographic algorithms. iCLASS® Seos® cards also utilize a secure messaging protocol to protect data transmission with the off-card applications providing strong authentication mechanisms to protect the communications between card and reader.

Delivering maximum interoperability, iCLASS® Seos® cards include a standards-based application that offers a universal card command interface. The solution also supports an ISO/IEC 7816-4 command set and data model that defines the supported interfaces between an iCLASS® Seos® card and the reader.

iCLASS® Seos® cards provide trusted management of secure identities within HID® Global's iCLASS SE® platform that is based on its Secure Identity Object (SIO®) data model.

The iCLASS SE® platform manages the secure distribution and life span of credentials. iCLASS® Seos® supports multiple SIOs carried on a single credential/device to secure PACS (along with any other application data). This enables applications to provide individual protected data sets for the identities in each application.

For migration purposes, the credential is available as multi-technology card that combines 125 KHz Proximity and a high frequency Seos® contactless microprocessor.

#### TECHNOLOGY FEATURES

- Available in 8K-Bytes or 16K-Bytes memory
- AES-128 bits cryptographic algorithms for data protection
- Mutual authentication protocol with generation of diversified session key to protect each card session (using secure messaging).
- Secure data storage with flexible data model (file system based) using a firewalled architecture for data separation between applications.
- Supports ISO/IEC standards: 7810, 7816 and contactless cards (14443 A).
- Contactless unique identifier: 4 bytes (random value).
- Generic command set based on ISO/IEC 7816-4.
- Hardware chip integrating co-processor with high performance for cryptographic calculations with symmetric keys.
- One Time Password generation using standards-based solution.
- Card customization available: Magnetic stripe, custom text or graphics (requires minimum quantity).

#### SECURITY FEATURES

- Programmable with one or several Secure Identity Objects® (SIOs®) for each application.
- High resistance to common attacks (man in the middle, replay attacks and others).
- Available with anti-counterfeiting features such as holograms, holographic foil, OVI (Optical Variable Ink).

#### SINGLE TECHNOLOGY CONTACTLESS FEATURES

- iCLASS Seos with 8K processor card for standard applications or with extended 16K memory for demanding applications.





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- Leverages SIO data model and security.

### INTEROPERABILITY

- Fully supported by iCLASS SE® and multiCLASS SE® readers that can process SIO-enabled data formats. Only supported by iCLASS SE readers with firmware Revision E or later.

With **HID Mobile Access®**, employees can now use their smartphone, tablet or wearable to access doors, gates, networks and more. This new solution for access control greatly improves user convenience in today's mobile-first world, as well as makes your organization look more modern and professional.

HID Mobile Access, which leverages Seos® as its underlying credential technology, offers these key benefits:

- **User Convenience:** Users are no longer required to carry a card to access facilities and can now use their go-to mobile device instead. Thanks to highly intuitive "Tap" and "Twist and Go" gestures, employees can gain more convenient and efficient access.
- **Operational Efficiency and Cost Effectiveness:** Using HID Global's highly stable online management portal, administrators can create, manage, issue and revoke credentials through the cloud. With the option for subscription billing, customers enjoy a more predictable cost as user licenses can be added or removed. This enables organizations to efficiently scale up or down in response to their business needs.
- **Higher Security:** HID Mobile Access is delivered through a highly secure and reliable cloud platform that is backed with a service level agreement of at least 99.5% service availability, demonstrating HID Global's commitment for uptime and connectivity. Even more, the solution is powered by Seos credential technology and follows best practices in data integrity to bind each mobile ID to the device and protect the data at rest and in motion.

Format	HID® iCLASS® Seos®, HID Mobile Access®
Operating frequency	13,56 MHz, NFC, Bluetooth

