HID®

Seos™ / Prox
Embeddable Card

Seos™ / Prox Card

Seos™ + Prox Card

DUAL HIGH/LOW FREQUENCY SOLUTION FOR STREAMLINED MIGRATION

- **Data confidentiality and strong authentication** – State-of-the-art cryptography provides mutual authentication and data encryption to protect communication.
- **Enhanced privacy** – Communicates no traceable identifiers during card sessions to prevent card data from being divulged or cloned by unauthorized parties.
- **Increased interoperability** – Standards-based solution supports future technologies, portability to smartphones and other media.
- **Technology-independent security** – Provides multi-layered security with support for multiple Secure Identity Objects™ (SIOs®) for protection of each application's identity.
- **Radio frequency proximity support** – Includes read/write identification using 125 kHz contactless technology for support in existing deployments.

FEATURES:

- Dual frequency smart card with 13.56 MHz and 125 KHz in the same card body
- Secure data storage with flexible data model using a firewall architecture
- Supports ISO/IEC standards: 7810, 7816, and contactless cards (14443 A)
- High communication speed: up to 848 kbps

HID Global's Seos™ + Prox smart card incorporates secure, standards-based technology to manage and authenticate identities. The card provides a next-generation access control solution with stronger authentication, privacy protection, and a secure processor for increased data protection.

Ideal for security-conscious organizations that need to support proximity technology, the Seos + Prox card enables seamless migration to a future-proof, high-frequency solution. With 125 KHz contactless technology—which supports HID Prox®, Indala®, and EM Proximity—organizations can continue to support low-frequency applications, maximize the value of their investment, and migrate to Seos for higher security at their own pace.

Seos + Prox cards help enterprises and government organizations with identity management policies driven by regulatory compliance meet stringent credential

security requirements. As part of HID Global's iCLASS SE® platform, the cards deliver superior data integrity protection by leveraging the latest cryptographic algorithms and secure messaging protocols (to protect data transmission with off-card applications).

Delivering maximum interoperability, Seos cards include a standards-based application offering a generic, universal card command interface that is portable to multiple platforms. The solution also supports an ISO/IEC 7816-4 command set and data model that defines the supported interfaces between an Seos card and the physical access reader.

For optimum mobility, Seos + Prox credentials are based on an open software application which is portable to a range of microprocessors and mobile devices, including near field communications (NFC) enabled device.

ADDITIONAL PRODUCT FEATURES:

- Large memory for demanding applications.
- High performance microprocessor.
- Mutual authentication protocol with either AES128/2TDEA based on diversified session key to protect each card session.
- Leverages Secure Identity Objects™ (SIO®) data model and security: Programmable with one or several SIOs for each application.
- High resistance to common attacks—man in the middle, replay attacks and others.
- Support other technologies, including Prox for simple migration.

INTEROPERABILITY

- Fully supported by HID Signo Readers.
- Interoperable with iCLASS SE® Readers that can process SIO-enabled data formats.
- Standards-based solution maximizes interoperability with third-party applications, including PACS readers.

OPTIONS

- Card customization, including magnetic stripe, custom artwork, text, or graphics: requires minimum quantity.
- Available with anti-counterfeiting features such as holograms, holographic foil, and Optical Variable Ink (OVI).

SPECIFICATIONS

Base Part Number	510 for standard card; 511 for embeddable card
Operating Frequency	13.56 MHz with ISO/IEC 14443 Type A as well as 125 KHz
Maximum Read Range	3-4", depending on reader, for Seos; 2.5-8" for proximity
Dimensions	2.127" x 3.375" x 0.033" max (5.40 x 8.57 x 0.084 cm)
Construction	Composite with 60% PET/40% PVC
Operating Temperature	-40° to 158° F (-40° to 70° C)
Weight	0.20 oz. (5.5g)
Seos Memory Size	8K or 16K
Seos Privacy Mode	Privacy-preserving mode with encryption of device identifiers
Seos Secure Messaging	EN 14890-1 using AES or 2TDEA
Seos Mutual Authentication Mechanism	Based on ISO/IEC 24727-3 2008 with NIST SP800-56A (for session key derivation)
TUViT SEAL-5 Certified	Yes - Currently available with 16K option only
Seos Write Endurance	Min 500,000 cycles
Seos Data Retention	Min 20 years
HID Proximity	Yes, support for HID Prox, Indala, EM Proximity
Contact Smart Chip Embeddable	Yes
Printable	Yes, white/white card. Usable with direct imaging and thermal transfer printers from HID and other suppliers. Exclusion areas may apply.
Slot Punch	Not available
Secure Identity Services	Customized cards available through HID Identity on Demand
Visual Security Options	Hologram, anti-counterfeiting, holographic foil
Additional Security Options	Corporate 1000, Secure Identity Object (SIO) programming with SE-Elite
Warranty	Lifetime, see complete warranty policy for details