



iCLASS® 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 iCLASS® 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 iCLASS 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.

iCLASS 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, iCLASS 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 iCLASS Seos card and the physical access reader.

For optimum mobility, iCLASS 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/DES3 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

- 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

<b>Base Part Number</b>	510 for standard card; 511 for embeddable card
<b>Operating Frequency</b>	13.56 MHz with ISO/IEC 14443 Type A as well as 125 KHz
<b>Maximum Read Range</b>	3-4", depending on reader, for Seos; 2.5-8" for proximity
<b>Dimensions</b>	2.127" x 3.375" x 0.033" max (5.40 x 8.57 x 0.084 cm)
<b>Construction</b>	Composite with 60% PET/40% PVC
<b>Operating Temperature</b>	-40° to 158° F (-40° to 70° C)
<b>Weight</b>	0.20 oz. (5.5g)
<b>Seos Memory Size</b>	Flexible memory allocation: 16K available space
<b>Seos Privacy Mode</b>	Privacy-preserving mode with encryption of device identifiers
<b>Seos Secure Messaging</b>	EN 14890-1 using AES or DES3
<b>Seos Mutual Authentication Mechanism</b>	Based on ISO/IEC 24727-3 2008 with NIST SP800-56A (for session key derivation)
<b>Seos Write Endurance</b>	Min 500,000 cycles
<b>Seos Data Retention</b>	Min 20 years
<b>HID Proximity</b>	Yes, support for HID Prox, Indala, EM Proximity
<b>Contact Smart Chip Embeddable</b>	Yes
<b>Printable</b>	Yes, white/white card. Usable with direct imaging and thermal transfer printers from HID and other suppliers. Exclusion areas may apply.
<b>Slot Punch</b>	Not available
<b>Secure Identity Services</b>	Customized cards available through HID Identity on Demand
<b>Visual Security Options</b>	Hologram, anti-counterfeiting, holographic foil
<b>Additional Security Options</b>	Corporate 1000, Secure Identity Object (SIO) programming with SE-Elite
<b>Warranty</b>	Lifetime, see complete warranty policy for details

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