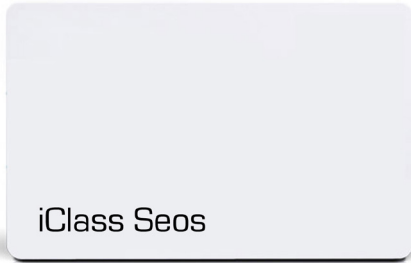


iCLASS Seos



Key Features

- High Frequency Solution for Increased Security, Privacy and Portability
- Data confidentiality and strong authentication – State-of-the-art cryptography providing mutual authentication and data encryption for additional protection of contactless communications between card and reader.
- Strong privacy – No traceable identifier exchanged during card sessions, preventing data associated to a given card from being divulged or cloned.
- Increased interoperability – Open, standards-based solution that supports future technologies; is portable to smartphones and other media; and can store data for multiple applications on a single card or device.
- Technology-independent security – Provides multi-layered security beyond the device technology with support for multiple SIOs in a single credential for individual protection of each application's identity data.
- Encoded Hanwha Techwin own format

| | iCLASS Seos |
|---------------------------------|---|
| Base Part Number | 500 for standard card 501 for embeddable card |
| Operating frequency | 13.56 MHz with ISO/IEC 14443 Type A |
| Typical Maximum Read Range | 3-4" (depending the reader used) |
| 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) |
| Memory Size/ Application Areas | Flexible memory allocation:16 KB available space |
| Privacy Mode | Privacy-preserving mode (with encryption of device identifiers) |
| Secure Messaging | EN 14890-1 using AES or DES3 |
| Mutual Authentication Mechanism | Based on ISO/IEC 24727-3 2008 with NIST SP800-56A (for session key derivation) |
| Write Endurance | Min 500,000 cycles |
| Data Retention | Min 20 years |
| HID Proximity | No |
| Contact Smart Chip Embeddable | Yes |
| Printable | Yes (white/white card) Usable with direct imaging and thermal transfer printers (from HID but also from other suppliers) Exclusion areas for printing may apply in some areas of the card plastic |
| Slot Punch | Not available |
| Secure Identity Services | Customized cards are available through HID Identity on demand |
| Visual Security Options | Optional including 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 |

* The latest product information / specification can be found at hanwha-security.com
 * Design and specifications are subject to change without notice.