CREDENTIALS

Understanding HID Credentials

What should I know about security keysets?

iCLASS SE readers and iCLASS Seos / iCLASS SE credentials offer two keyset security schemes, HID Elite and Standard.

The **HID Elite Security Program** supports a unique keyset on a per site/company basis.

The keyset governs a variety of keys, including:

- Media (credential) keys for iCLASS SE, SIO-encoded iCLASS, MIFARE Classic (SIO) and MIFARE DESFire EV1 (SIO) credentials
- SIO authenticity and privacy keys (media independent)
- Configuration programming keys (for programming reader configuration, also media independent)

When utilizing HID's standard key set for the above keys, all standard keyed credentials work with all standard keyed readers. Additionally, any Standard Security configuration card configures a Standard Security reader (only accomplished during the first five (5) seconds after reader powers-up). Conversely, when utilizing the HID Elite program, only site/company specific HID Elite credentials and programming cards work with matching readers.

The **Standard Security Program** provides universal keysets that offer maximized compatibility by keying readers and cards with matching security for use in the general population. This allows for maximized compatibility because readers and cards are not keyed on a per site/company basis but rather all keyed the same. This offers the advantage to the integrator as a standard stock of readers and cards will interoperate for a variety of sites/companies, rather than needing different stocks of readers and cards for each individual site. iCLASS SE readers provide two Standard Security Keysets that offer compatibility with the following credentials:

Standard Security Keyset	Compatibility with these Credentials
Version 1	iCLASS Seos (+ Prox) iCLASS SE (+ Prox) iCLASS SR (+ Prox) iCLASS (+ Prox) MIFARE Classic (+ Prox) MIFARE DESFire EV1 (+ Prox)
Version 2	iCLASS Seos (+ Prox) iCLASS SE (+ Prox) MIFARE Classic (+ Prox) MIFARE DESFire EV1 (+ Prox)

How can I order HID Elite configured credentials?

- Direct customers of HID must be authorized to purchase components with HID Elite keys. If you are not authorized, you must have the key owner authorize you through the Authorization form.
  See http://www.hidglobal.com/services/secure-identity/credential-programs/iclass-elite-and-se-elite.
- Ensure the HID Elite flag is set in the part number (of readers, credentials and programming cards).
- All Purchase Orders for HID Elite components must be ordered with the HID Elite reference number (starts with ICE or MOB).

How can I migrate from my current credential technology?

- **iCLASS Existing Sites:** When deploying credentials to an existing site with standard iCLASS credentials and readers the following steps provide a guideline to a recommended path:
  1. Purchasing iCLASS Seos + iCLASS cards along with iCLASS SE Readers - Standard profile with Maximum compatibility credential support (supporting iCLASS cards), as this provides full interoperability with HID's latest credential and reader platform, as well as supporting installed iCLASS base.
  2. This provides options to upgrade security in the future without rip-and-replace of the newly purchased readers
  3. Once all readers on site are iCLASS SE the customer can begin ordering iCLASS Seos only cards.
  4. Once all cards in the population are iCLASS Seos, readers can be configured to support only iCLASS Seos cards.
- **125 kHz Existing Sites:** Deploying credentials to an existing 125 kHz site with HID Prox/Indala Proximity credentials and readers (HID, Indala, AWID, and EM4102), purchase multi-technology iCLASS Seos or iCLASS SE Credentials, along with multiCLASS SE Readers for full credential and reader interoperability, and a relaxed migration timeline.

What is the difference between iCLASS Seos, iCLASS SE and iCLASS credentials?

iCLASS Seos credentials deliver enhanced security, data confidentiality and stronger authentication for user data. Seos comprises a generic card edge (card command interface) to meet the growing demand for interoperability; a secure messaging protocol to protect data transmission. In addition, Seos provides an open software architecture that is portable to a range of mobile devices and microprocessors. The credential offers enhanced privacy protection by delivering data confidentiality and integrity between the smart card and the reader to prevent sensitive/personal data from being intercepted or cloned. iCLASS Seos credentials are only delivered with a single access control data payload, the SIO, and are **not** backwards compatible with iCLASS readers.

iCLASS SE credentials come with a single access control data payload, the SIO. iCLASS SE credentials are designed to work in an installation of iCLASS SE readers only and are **not** backwards compatible with iCLASS readers.

iCLASS credentials are offered either with or without an encoded SIO. For the SIO encoded option, this card will come with two access control data payloads: the SIO and iCLASS access control data payload. These credentials provide backward compatibility with currently deployed systems, maximizing compatibility. iCLASS credentials encoded with SIO should be purchased when the site needs legacy application support, or when the site plans to eventually migrate to SIO security. iCLASS credentials encoded with SIOs were previously marketed as iCLASS SR credentials.

iCLASS credentials are designed to work in an **existing** installation of standard iCLASS readers. iCLASS credentials are compatible with both iCLASS readers and iCLASS SE readers.*

Credential Type		Works with iCLASS SE Readers*	Works with iCLASS Readers	Advantage
	iCLASS Seos	Yes	No	Best-in-class security and privacy protection, programmable card, portability, interoperability (standards based) and usability (read range).
	iCLASS SE	Yes	No	Increased Security
	iCLASS, SIO encoded (Previously called iCLASS SR)	Yes (reading SIO or standard iCLASS access control application)	Yes (Reading standard iCLASS access control application)	Increased Security when reading SIO, maximum compatibility - works with both iCLASS and iCLASS SE readers.
	iCLASS, without SIO encoding	Yes	Yes	

*Reader support depends on reader model and configuration selected.

Credentials Marking

The following external card designations are used on HID credentials.

Model Number	Description	External Card Designation
2000	iCLASS 2k	©HID iCLASS JH
2001/2002	iCLASS 16k	©HID iCLASS JH
2003/2004	iCLASS 32k	©HID iCLASS JH
2020	iCLASS 2k + Prox	©HID iCLASS Px JAH
2021/2022	iCLASS 16k + Prox	©HID iCLASS Px JAH
2023/2024	iCLASS 32k + Prox	©HID iCLASS Px JAH
2100	iCLASS 2k Composite	©HID iCLASS JH XT
2101/2102	iCLASS 8k Composite	©HID iCLASS JH XT
2103/2104	iCLASS 16k Composite	©HID iCLASS JH XT
2120	iCLASS 2k + Prox Composite	©HID iCLASS Px JAH XT
2121/2122	iCLASS 8k +Prox Composite	©HID iCLASS Px JAH XT
2123/2124	iCLASS 16k + Prox Composite	©HID iCLASS Px JAH XT
2320xM	iCLASS 2k + MIFARE Classic 1K	©HID iCLASS MF JBH
2321xN / 2322xN	iCLASS 16k + MIFARE Classic 4K	©HID iCLASS MF JCH
2323xN / 2324xN	iCLASS 32k + MIFARE Classic 4K	©HID iCLASS MF JCH
2321xK / 2322xK	iCLASS 16k + MIFARE DESFire EV1 8K	©HID iCLASS DF JDH
2323xK / 2324xK	iCLASS 32k + MIFARE DESFire EV1 8K	©HID iCLASS DF JDH
2420xM	iCLASS 2k + MIFARE Classic 1K Composite	©HID iCLASS MF JBH XT
2421xN / 2422xN	iCLASS 16k + MIFARE Classic 4K Composite	©HID iCLASS MF JCH XT
2423xN / 2424xN	iCLASS 32k + MIFARE Classic 4K Composite	©HID iCLASS MF JCH XT
2421xK / 2422xK	iCLASS 16k + MIFARE DESFire EV1 8K Composite	©HID iCLASS DF JDH XT
2423xK / 2424xK	iCLASS 32k + MIFARE DESFire EV1 8K Composite	©HID iCLASS DF JDH XT
2520xMP	iCLASS 2k + MIFARE Classic 1K + Prox	©HID iCLASS MF pX JBAH
2521xNP / 2522xNP	iCLASS 16k + MIFARE Classic 4K + Prox	©HID iCLASS MF pX JCAH
2523xNP / 2524xNP	iCLASS 32k + MIFARE Classic 4K + Prox	©HID iCLASS MF pX JCAH
2521xKP / 2522xKP	iCLASS 16k + MIFARE DESFire EV1 8K + Prox	©HID iCLASS DF pX JDAH
2523xKP / 2524xKP	iCLASS 32k + MIFARE DESFire Ev1 8K + Prox	©HID iCLASS DF pX JDAH
2620xMP	iCLASS 2k + MIFARE Classic 1K + Prox Composite	©HID iCLASS MF pX JBAH XT
2621xNP / 2622xNP	iCLASS 16k + MIFARE Classic 4K + Prox Composite	©HID iCLASS MF pX JCAH XT
2623xNP / 2624xNP	iCLASS 32k + MIFARE Classic 4K + Prox Composite	©HID iCLASS MF pX JCAH XT
3000	iCLASS SE 2k	©HID iCLASS JH SE
3003 / 3004	iCLASS SE 32k	©HID iCLASS JH SE
3050	iCLASS SE 2k Composite	©HID iCLASS JH SE XT
3053 / 3054	iCLASS SE 32k Composite	©HID iCLASS JH SE XT
3100	iCLASS SE 2k + Prox	©HID iCLASS JAH SE
3103 / 3104	iCLASS SE 32k + Prox	©HID iCLASS JAH SE
3150	iCLASS SE 2k + Prox	©HID iCLASS JAH SE XT
3153 / 3154	iCLASS SE 32k + Prox	©HID iCLASS JAH SE XT

Model Number	Description	External Card Designation
3400	SIO-Enabled Technology for MIFARE 1K	©HID MIFARE BH SE
3406	SIO-Enabled Technology for MIFARE 4K	©HID MIFARE CH SE
3450	SIO-Enabled Technology for MIFARE 1K Composite	©HID MIFARE BH SE XT
3456	SIO-Enabled Technology for MIFARE 4K Composite	©HID MIFARE CH SE XT
3500	SIO-Enabled Technology for MIFARE 1K + Prox	©HID MIFARE BAH SE
3506	SIO-Enabled Technology for MIFARE 4K + Prox	©HID MIFARE CAH SE
3550	SIO-Enabled Technology for MIFARE 1K + Prox Composite	©HID MIFARE BAH SE XT
3556	SIO-Enabled Technology for MIFARE 4K + Prox Composite	©HID MIFARE CAH SE XT
3700	SIO-Enabled Technology for MIFARE DESFire EV1 8K	©HID DESFire DH SE
3750	SIO-Enabled Technology for MIFARE DESFire EV1 8K Composite	©HID DESFire DH SE XT
3800	SIO-Enabled Technology for MIFARE DESFire EV1 8K + Prox	©HID DESFire DAH SE
3850	SIO-Enabled Technology for MIFARE DESFire EV1 8K + Prox Composite	©HID DESFire DAH SE XT
5005	iCLASS Seos 16K Composite	©HID iCLASS Seos JH XT
5006	iCLASS Seos 8K Composite	©HID iCLASS Seos JH XT
5105	iCLASS Seos 16K + Prox Composite	©HID iCLASS Seos JAH XT
5106	iCLASS Seos 8K + Prox Composite	©HID iCLASS Seos JAH XT
5206	iCLASS Seos 8K + iCLASS 2k + Prox Composite	©HID iCLASS Seos Px JJAH XT
600	SIO-Enabled Technology for UHF Composite	©HID UHF GH XT
601	SIO-Enabled UHF+ iCLASS SE Composite	©HID UHF GCH XT

Announcement Regarding Credentials Marking

As a part of our commitment to continuous enhancements of world-class products and solutions, HID Global is transitioning to the most innovative card marking technology available.

Effective immediately, HID Global is moving from ink jet card marking to the new laser engraving card marking technology for all Genuine HID® cards, fobs and authentication tokens. This state-of-the-art laser engraving technology will result in a more appealing look and feel and reduce the ecological footprint of card production.

All relevant orders in the United States and Canada are affected immediately.

Key benefits:

- Marking quality and durability of the cards will be enhanced and more consistent
- New engraving technology reflects HID Global's commitment to sustainability by eliminating the use of solvents
- Improved Proof of Authenticity since engraved markings cannot be removed or modified.
- The enhanced design will be available at no additional charge. The laser-engraving surcharge for Genuine HID Proximity and Contactless Credentials will be removed in November.

Depending on the fulfillment center, customers may receive either inkjet or laser marked cards during the transition period of October 2014 - June 2016. All ID1 cards (Clamshell Cards included), key fobs (including Microtags, Keytags and Microprox) and authentication tokens will have the enhanced laser engraving design immediately.

Notes:

- The numbering scheme and part number will not change. Please contact your sales representative to see the new design and get sample cards.
- Due to the 3D nature of laser engraved markings, printing over these markings is not recommended as it may impact print quality.
- For all relevant Credentials ordered and/or shipped out of North America, the laser-etched version supersedes all ink jet card part numbers.
- For further details on the printing areas, please contact HID Global.

Please contact HID Customer Service or Sales Representative if you have additional questions regarding this notice.