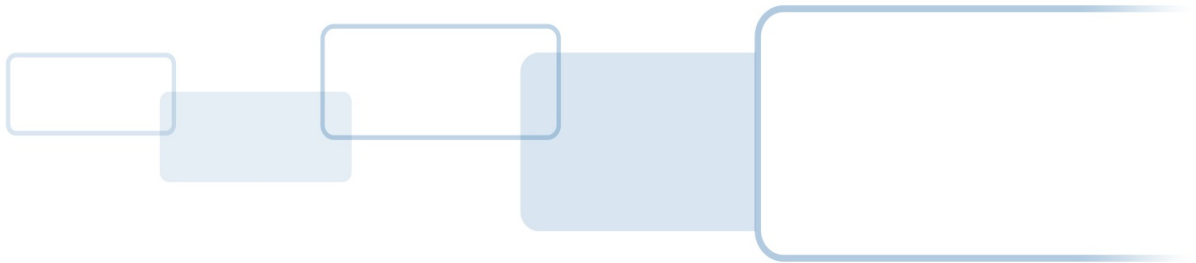




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## iCLASS SE Encoder FAQs

Encoder Platform for Programming Contactless Credentials

### APPLICATION NOTES

PLT-01657, Rev. A.0

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## FAQ

### What is the iCLASS SE Encoder?

The iCLASS SE<sup>®</sup> Encoder provides a solution for organizations to encode and manage credentials as well as configuration cards for readers. The encoder provides ultimate versatility in key management with the option of allowing HID Global to manage keys directly or an organization can securely define and manage keys locally by themselves.

### What form factors are available for the iCLASS SE Encoder?

The initial market launch provides a desktop encoder form factor which is USB connected and measures 71mm x 93mm x 16mm. A reader board will be available during Q4 2013 providing the facility for embedding into third party devices such as in-line card printers.

### Which technologies can I program with the iCLASS SE Encoder?

Support for different card technologies are provided for in the iCLASS SE Encoder with “technology applets” The table below provides full details of the technology applets available at launch along with additional information on Keys and Formats

		Standard	iCLASS Elite (HID managed key)	C-1000 and Tracked	Custom Keys (managed by Customer - Elite Type Seed 2key)	Custom Keys (managed and generated by customer)
Single Technology only	iCLASS (Standard)	✓	✓	✓	✓	✓
	iCLASS SR (Standard + SIO)	✓	✓	✓	✓	✓
	iCLASS SE (SIO)	✓	✓	✓	n/a	✓
	iCLASS Seos	✓	✓	✓	n/a	✓
	HID MIFARE™ Classic (Not Indala Flexmark)	✓	n/a	n/a	n/a	✓
	MIFARE™ Classic	n/a	n/a	n/a	n/a	✓
	SIO® Solution for MIFARE™ Classic	✓	✓	n/a	n/a	n/a
	Mifare DESFire™	n/a	n/a	n/a	n/a	✓
	SIO® Solution for MIFARE DESFire™	✓	✓	n/a	n/a	n/a
	HID Prox	✓	n/a			

Due to the flexible architecture provided by applets further technologies can be implemented on customer demand.

### Can I encode credentials that have not been purchased from HID?

Yes, the iCLASS SE Encoder introduces the concept of “Credential Credits” which allow the encoding of Genuine HID and third party credentials. Credential credits must be available on the Encoder for each technology that needs to be supported. The Credential credits are also categorized as Genuine HID or Third Party Credential Credits for each of the supported technologies

### What happens when the encoder runs out of Credential Credits?

Each technology has its own Credential Credit Counter and credits should be ordered to ensure there are sufficient to encode the credentials required. Once a counter reaches zero it will not be possible to encode further credentials of that credential type, when this occurs (or preferably before) further credential credits must be ordered from HID. This is done by submitting an order to HID providing the following information:

- The specific part number for the technology required (ensure Genuine HID or Third party credential type is also specified correctly)
- Encoder Engine ID (available in the software GUI)
- Email address where secure SNMP file containing the credential credits should be sent

### If I have more than one encoder, can the credential credits ordered be split between the encoders?

No, due to security separate orders for each encoder must be placed for the required credential credits. The secure SNMP file containing the credential credits is “tied” to a specific encoder using the unique Encoder Engine ID number. The file can also only be used once.

### What formats are supported by the iCLASS SE Encoder?

All formats are available for the iCLASS SE Encoder including Corporate 1000, Open Tracked and Proprietary Formats. H103101 26 bit Wiegand is loaded as standard

**Note:** When ordering C1000 and Proprietary formats, the appropriate authorization must be provided.

### Can I create configuration Cards with the iCLASS SE Encoder?

Yes, the iCLASS SE Encoder can create configuration cards that will configure Rev D and Rev E iCLASS Readers. Configuration options currently supported are Key provisioning and Reader data mapper parameters.

Note:

The data mapper configuration card is only compatible with Rev D or Rev E readers equipped with R8 firmware.

The key provisioning configuration card is compatible with Rev D or Rev E readers equipped with R7 or R8 firmware.

Two configuration cards are supplied with the Encoder to facilitate Key provisioning and Reader data mapper configuration, additional configuration cards can be purchased using the following part numbers:

0501500295-READER	iCLASS Data Mapper Configuration Card
0501500295-ELITE	iCLASS Elite Preparation Card

Further configuration options are planned to be released in the future.

### Can I Program Non-Genuine HID Prox Credentials?

No, the encoder detects the presence of Non-Genuine HID Prox credentials and will not allow encoding of these devices.

### Can I Program Indala Prox?

The first release of the iCLASS SE Encoder does not include support for encoding Indala Prox. It is intended to add this functionality at a later date and will be carried out by the release of a new technology applet. This will provide compatibility without the need to update the iCLASS SE Encoder firmware.

### Can I migrate from CP400 High Security to the iCLASS SE Encoder?

The first release of the iCLASS SE Encoder does not provide the capability to migrate from the CP400 High Security Encoder. There will however, be a new applet released that will be dedicated to this particular function to allow smooth migration to the new iCLASS SE Encoder.

### Does the iCLASS SE Encoder include any user management that allows restriction of using certain functions depending on the Users access rights?

The iCLASS SE Encoder provides Operator and Admin rights. An Administrator can use all iCLASS SE Encoder functions whilst an Operator can only execute existing Work Orders and does not have access to Key Management or creation/editing of Work orders or Work Instructions.

### Is it possible to Revoke the Elite key in a deployed iCLASS SE Encoder?

The owner of the iCLASS Elite Key is ultimately responsible for ensuring that the Encoder held by their supplier has Keys de-activated in the case that they no longer wish their supplier to supply credentials and any legal steps that would be required to ensure this happens is always the responsibility of the End User, HID do however have a mechanism that can be invoked to revoke keys and this is employed by the use of a "blacklist" that is loaded into the encoder whenever credential credits are loaded.

### If migrating from CP400, CP600 or HID Prox Encoders, is there any functionality that the CP1000 does not offer?

The CP1000 offers a drop in replacement for the vast majority of applications where a CP400, CP600 or HID Prox programmer is already in use. The table below provides a summary of the major feature comparison of the encoders.

		iCLASS SE Encoder	iCLASS CP400	iCLASS CP400 HS	iCLASS CP600	HID Prox Encoder	ProxSmith Indala Encoder
Technology and Security	iCLASS (Standard)	✓	✓	✓	-	-	-
	iCLASS SR (Standard + SIO)	✓	-	-	-	-	-
	iCLASS SE (SIO Only)	✓	-	-	-	-	-
	iCLASS Elite	✓	-	✓	-	-	-
	iCLASS Seos	✓	-	-	-	-	-
	MIFARE Classic	✓	-	-	-	-	-
	MIFARE DESFire EV1	✓	-	-	✓	-	-
	HID MIFARE Classic	✓	-	-	-	-	-
	Indala Flexsmart	-	-	-	-	-	-
	Corporate 1000	✓	✓	✓	-	✓	-
	HID Prox	✓	-	-	-	✓	-
	Indala Prox	-	-	-	-	-	✓
	Custom Keys (managed by customer - Elite Type Seed2Key)	-	-	✓	-	-	-
	Custom Keys (managed and generated by customer)	✓	-	-	✓	-	-
	Key Management Config Cards (Rev A, B & C iCLASS Readers)	-	✓	✓	✓	-	-
	Key Management Config Cards (Rev D & E Readers)	✓	-	-	-	-	-
	I/O Functionality Config Cards	-	-	-	-	-	-

The following is a summary of some of the more minor features that are not supported by the CP1000

- CP600 has ability to configure CSN output by the reader (MIFARE® Classic, MIFARE DESFire EV1®, iCLASS)
- CP600 can configure autonomous technology output for rev A,B,C readers (MIFARE Classic, MIFARE DESFire EV1, iCLASS)
- CP1000 can only create configuration cards (Elite preparation and data mapper) for Rev D/ Rev E readers

#### **Is the CP1000 capable of creating configuration cards to control LED and buzzer behavior?**

The creation of configuration cards is currently limited to Key provision and data mapper functionality. In common with existing encoders (CP400, CP600, Prox Programmer) the CP1000 does not offer configuration card creation to control I/O functionality, however this is on the roadmap for inclusion in future configuration card applets

#### **Can I order additional configuration cards?**

Yes, the CP1000 is supplied with two configuration cards; additional cards can be purchased as follows:

- |                   |   |
|-------------------|---|
| 0501500295-READER | - Reader Configuration Card – Data Mapper       |
| 0501500295-ELITE  | - Reader Configuration Card – Elite Preparation |

#### **Do Credential Credit counters decrement every time a credential is encoded?**

Yes, the counter is associated with every technology type and every time a credential is successfully encoded the appropriate counter is decremented, once a counter reaches zero no further credentials of the associated counter can be encoded.

#### **The Encoder is loaded and supplied with credential credits, how many are there and what technologies are they associated with?**

There are 30 credits loaded in the encoder for each of the following technologies:

- |  |           |
|--|-----------|
| Genuine HID iCLASS Credential with Standard Encoding       | - CRDT-A0 |
| Genuine HID iCLASS Credential with SIO Encoding            | - CRDT-A3 |
| Genuine HID Seos Credential with SIO Encoding              | - CRDT-D3 |
| Third Party MIFARE Classic Credential with Custom Data     | - CRDT-F5 |
| Third Party MIFARE DESFire EV1 Credential with Custom Data | - CRDT-G5 |
| Genuine HID Prox   | - CRDT-K0 |
| Configuration Card Creation                                | - CRDT-J0 |

#### **Where in the system are the credential credit counters stored?**

The credential credit counters and other stored items (Keys, formats) are securely stored in the iCLASS SE Processor in the Desktop Encoder itself.

#### **Is the Engine ID “tied” to the host PC where the desktop Encoder is plugged in?**

No, the software can be installed on a new PC however to do so will require the administration keys to be supplied that were used when the Encoder was first installed, this process is detailed in the User Guide and is important for the End user to refer to in order to avoid issues when moving the Encoder to a new PC.

**Can the CP1000 be used for high volume (automation friendly) credential programming?**

The CP1000 like the CP400 Encoder provides the facility for batch programming where an operator can quickly encode a large batch of cards, this is however an entirely manual process and may not be suitable for extremely large batches of cards. When the SDK is available later in Q4 2013 this will allow integration into devices that would allow automation of this process.

**Can a partner create a new plugin applet to extend the iCLASS SE Encoder and add other technologies?**

No, for compatibility and security reasons all applets must be digitally signed by HID. If a partner requires additional technology support, or a customized applet please contact your HID sales representative.

**Are there language translations available for the iCLASS SE Encoder?**

Currently the iCLASS SE Encoder is available in English.

**Using the iCLASS SE Encoder can I program a Standard iCLASS or iCLASS SR card to be an iCLASS SE (SO only) credential?**

No, iCLASS SE credentials are initialized in a specific way which can only be completed by HID production only blank iCLASS SE credentials can be used to create programmed iCLASS SE credentials

**What are the warranty terms for the iCLASS SE Encoder?**

The warranty for the CP1000 Encoder is 2 Years.

**What are the pre-issuance requirements for 3rd party MIFARE Classic and MIFARE DESFire cards to successfully be loaded with SIOs.**

For third party MIFARE Classic and MIFARE DESFire EV1 the credentials must be in a "virgin" state and/or MIFARE sector 0 has not been changed and/or MIFARE DESFire Master App Key 0 is a default value. If the credential has a custom MIFARE Sector 0 Key B or MIFARE DESFire Master App Key 0 then the iCLASS SE Encoder cannot program the cards.

**When adding an SIO to a third part MIFARE Classic or MIFARE DESFire EV1 credential does HID assume control of the media key?**

Customers can opt to write to the credential using Standard, Elite or custom keys thereby providing the flexibility to use custom keys or a managed HID solution.

**Can SIOs cohabitate with other applications and data on the same MIFARE DESFire key, each used by its respective business application?**

Yes

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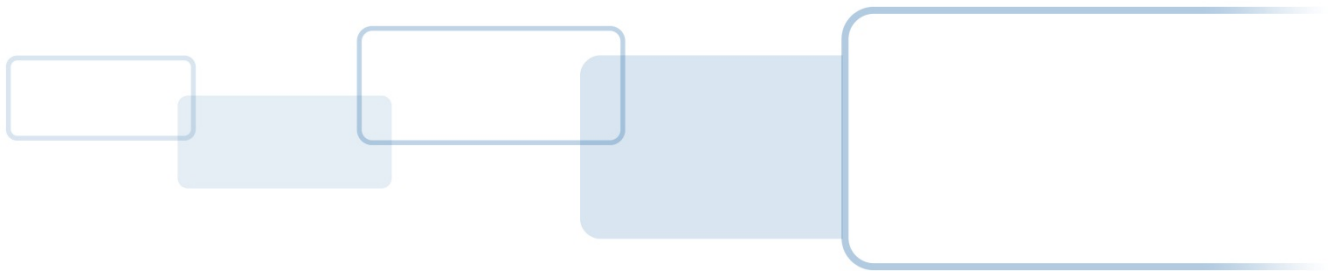
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