



MIFARE DESFire® EV3

How To Order Guide

PLT-05678, A.1
May 2021

Powering
Trusted Identities

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What's new

Date	Description	Revision
May 2021	Minor text changes.	A.1

A complete list of revisions is available in [Revision history](#).

HID Global DESFire EV3 credentials are available with a range of programming profiles to meet high security requirements using the Secure Identity Object™ (SIO), offer compatibility with existing EV1 based infrastructure or meet custom specifications. There are three core programming profiles:

■ **High Security Profile**

A Secure Identity Object (SIO) based DESFire EV3 application that utilizes the latest security features combined with random UID for enhanced privacy protection. Compatible with HID Signo™ Reader firmware 10.0.2.2 or higher.

■ **Compatibility Profile**

Offers the flexibility of backwards compatibility with iCLASS SE® readers and third party readers that rely on static UID through the introduction of an additional legacy EV1 Secure Identity Object (SIO) application. Based on static UID for compatibility.

This options includes:

■ Legacy EV1 SIO Application

- Compatibility: Supported by HID Signo, iCLASS SE and multiCLASS SE readers

■ EV3 SIO Application

- Compatibility: Supported by HID Signo readers with firmware 10.0.2.2 or higher.

■ **Custom Profile**

Available programmed to meet custom specifications, or unprogrammed for full in-field personalization compatible with EV1, EV2 or EV3 compliant solutions.

	Base Part Number		DESFire Compatibility	
	Single Technology	Dual Technology	Readers	CP1000
High Security Profile	802	812	HID Signo Reader (firmware 10.0.2.2 or greater)	Custom Application Programming with Non-Diversified keys
Compatibility Profile	801	811	HID Signo Reader, iCLASS SE, multiCLASS SE	EV1 SIO and Custom Application Programming
Custom Profile	800	810	iCLASS SE "W" Custom Profile, multiCLASS SE "W" Custom Profile	EV1 Custom Application Programming

Dual technology part numbers (810, 811 and 812) support HID Prox and Indala Prox programming. CP1000 supports HID Prox encoding.

MIFARE DESFire EV3 Card: High Security Profile - 802

Best in class security and privacy, programmed with an enhanced Secure Identity Object (SIO) based application that leverages new features of EV3. Introduces Random UID support to ensure privacy of user data.

EV3 SIO Application Compatibility: Supported by HID Signo readers with firmware 10.0.2.2 or higher.

Ensure each required option has been checked with the appropriate choice to fulfill a completed order form.

Base Model **802 Composite** (40% Polyester/PVC)

MIFARE DESFire EV3 Memory Size

F - 8K Bytes

Secure Identity Object Programming¹

P - Programmed with EV3 Secure Identity Object (SIO) application. Based on Random UID for improved privacy of user data.

Front Packaging (Select one option)

- G** - Plain White with Gloss Finish
- C** - Custom Artwork with Gloss Finish - Specify Custom Artwork Number³

Back Packaging (Select one option)

- G** - Plain White with Gloss Finish²
- 1** - Plain White with Gloss Finish with Magnetic Stripe²
- C** - Custom Artwork with Gloss Finish - Specify Custom Artwork Number^{2,3}
- 3** - Custom Artwork with Gloss Finish with Magnetic Stripe - Specify Custom Artwork Number^{2,3}

Card Numbering⁴ (Select one option)

- N** - No Printed Card Numbering, sales number marking only
- A** - Sequential Matching Encoded/Printed (Laser Engraved)
- B** - Sequential Encoded/Sequential Non-Matching Printed (Laser Engraved)
- C** - Random Encoded/Non-Matching Sequential Printed (Laser Engraved)

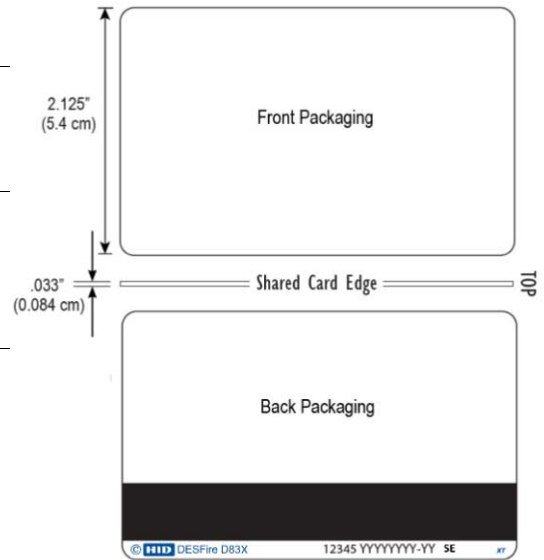
Slot Punch

N - No Slot Punch.

IMPORTANT - 802 credentials do not allow a slot punch due to antenna design. Use a badge holder to attach this card to a lanyard or badge clip.

Option - Custom Artwork³

_____ (Specify Artwork Number - Refer to the Custom Artwork Forms for new Artwork)



12345 = Card ID Number
YYYYYYYY-YY = Sales Order Number

Enter your final card options from check boxes above. Example: 802FPPGGAN

Final Part Number	802	F	P				N	-	(Options #)
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DESFire EV3 Card Programming Information

Format Number	Field Name(s) e.g. Facility Code	Value	QTY	Encoded Start Number	Encoded Stop Number
HID Elite ICE				Printed Start Number	Printed Stop Number

¹ Third party applications are required to support random UID, if in doubt, consult with the application vendor. Card allows free create/delete of third party applications.

² Cards ordered with plain white front and back packaging, with no HID artwork or with custom artwork, will still have a small "HID logo" "HID" and reference number printed in the lower left-hand corner on the back of the card. A custom part number is required to omit all marking.

³ For new artwork files, contact Customer Service for custom artwork number, lead-times, and cost.

⁴ The printed card number is placed in the bottom right-hand corner on the back of the card.

MIFARE DESFire EV3 + Prox Card: High Security Profile - 812

Migration solution from HID Proximity to best in class security and privacy on EV3, programmed with an enhanced Secure Identity Object (SIO) based application that leverages new features of EV3. Introduces Random UID support to ensure privacy of user data.

EV3 SIO Application Compatibility: Supported by HID Signo readers with firmware 10.0.2.2 or higher.

Ensure each required option has been checked with the appropriate choice to fulfill a completed order form.

Base Model **812 Composite** (40% Polyester/PVC)

MIFARE DESFire EV3 Memory Size

F - 8K Bytes

DESFire Secure Identity Object Programming¹

P - Programmed with EV3 Secure Identity Object (SIO) application. Based on Random UID for improved privacy of user data.

Prox Programming (Select one option)

- P** - Programmed with HID Prox or Indala format.
- N** - Unprogrammed HID Prox for iCLASS SE encoder (CP1000)

Front Packaging (Select one option)

- G** - Plain White with Gloss Finish
- C** - Custom Artwork with Gloss Finish - Specify Custom Artwork Number³

Back Packaging (Select one option)

- G** - Plain White with Gloss Finish²
- 1** - Plain White with Gloss Finish with Magnetic Stripe²
- C** - Custom Artwork with Gloss Finish - Specify Custom Artwork Number^{2,3}
- 3** - Custom Artwork with Gloss Finish with Magnetic Stripe - Specify Custom Artwork Number^{2,3}

DESFire Card Numbering⁴ (Select one option)

- N** - No Printed Card Numbering
- A** - Sequential Matching Encoded/Printed (Laser Engraved)
- B** - Sequential Encoded/Sequential Non-Matching Printed (Laser Engraved)
- C** - Random Encoded/Non-Matching Sequential Printed (Laser Engraved)

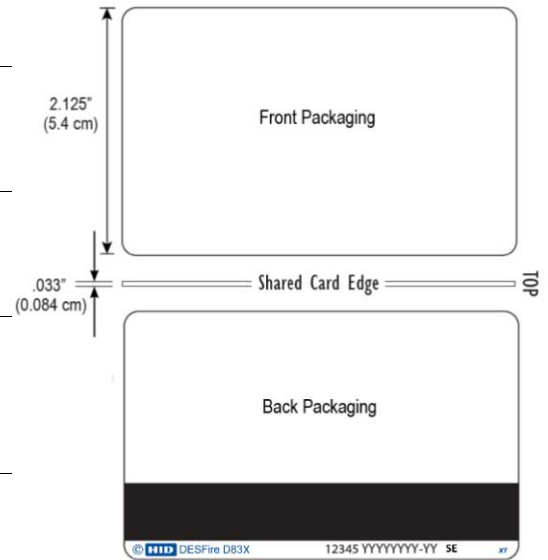
Slot Punch

N - No Slot Punch.

IMPORTANT - 812 credentials do not allow a slot punch due to antenna design. Use a badge holder to attach this card to a lanyard or badge clip.

125 kHz Card Numbering⁴

- N** - No Printed Card Numbering
- A** - Sequential Matching Encoded/Printed (Laser Engraved)
- B** - Sequential Encoded/Sequential Non-Matching Printed (Laser Engraved)
- C** - Random Encoded/Non-Matching Sequential Printed (Laser Engraved)



12345 = Card ID Number
YYYYYYYY-YY = Sales Order Number

Option - Custom Artwork³

_____ (Specify Artwork Number - Refer to the Custom Artwork Forms for new Artwork)

Enter your final card options from check boxes above. Example: 812FPPGGANA

Final Part Number	812	F	P					N		-	(Options #)
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DESFire EV3 Card Programming Information


Format Number	Field Name(s) e.g. Facility Code	Value	QTY	Encoded Start Number	Encoded Stop Number
HID Elite ICE				Printed Start Number	Printed Stop Number

125 kHz Card Programming Information

Format Number	Field Name(s) e.g. Facility Code	Value	QTY	Encoded Start Number	Encoded Stop Number
				Printed Start Number	Printed Stop Number

¹ Third party applications are required to support random UID, if in doubt, consult with the application vendor. Card allows free create/delete of third party applications.

² For new artwork files, contact Customer Service for custom artwork number, lead-times, and cost.

³ Cards ordered with plain white front and back packaging, with no HID artwork or with custom artwork, will still have a small "HID logo"  and reference number printed in the lower left-hand corner on the back of the card. A custom part number is required to omit all marking.

⁴ The Printed card number is placed in the bottom right-hand corner on the back of the card.

MIFARE DESFire EV3 Card: Compatibility Profile - 801

Offers the flexibility of backwards compatibility with iCLASS SE readers and third party readers that rely on static UID through the introduction of an additional legacy EV1 Secure Identity Object (SIO) application. Based on static UID for compatibility.

Legacy EV1 SIO Application Compatibility: Supported by HID Signo, iCLASS SE and multiCLASS SE readers.

EV3 SIO Application Compatibility: Supported by HID Signo readers with firmware 10.0.2.2 or higher.

Ensure each required option has been checked with the appropriate choice to fulfill a completed order form.

Base Model **801 Composite** (40% Polyester/PVC)

MIFARE DESFire EV3 Memory Size

F - 8K Bytes

DESFire Secure Identity Object Programming¹

P - Programmed with legacy EV1 Secure Identity Object (SIO) application **plus** EV3 Secure Identity Object (SIO) application.

V - Unprogrammed for use with iCLASS SE Encoder (EV1 compatible SIO application programming only)

Front Packaging (Select one option)

- G** - Plain White with Gloss Finish
- C** - Custom Artwork with Gloss Finish - Specify Custom Artwork Number³

Back Packaging (Select one option)

- G** - Plain White with Gloss Finish²
- 1** - Plain White with Gloss Finish with Magnetic Stripe²
- C** - Custom Artwork with Gloss Finish - Specify Custom Artwork Number^{2,3}
- 3** - Custom Artwork with Gloss Finish with Magnetic Stripe - Specify Custom Artwork Number^{2,3}

Card Numbering⁴ (Select one option)

- N** - No Printed Card Numbering, sales number marking only
- A** - Sequential Matching Encoded/Printed (Laser Engraved)
- B** - Sequential Encoded/Sequential Non-Matching Printed (Laser Engraved)
- C** - Random Encoded/Non-Matching Sequential Printed (Laser Engraved)

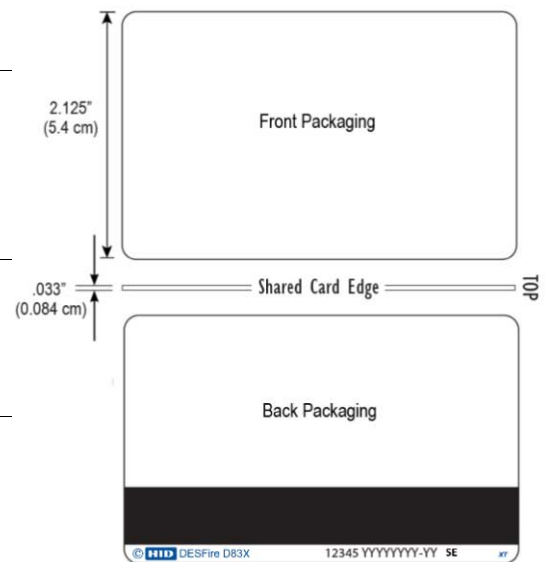
Slot Punch

N - No Slot Punch.

IMPORTANT - 801 credentials do not allow a slot punch due to antenna design. Use a badge holder to attach this card to a lanyard or badge clip.

Option - Custom Artwork³

_____ (Specify Artwork Number - Refer to the Custom Artwork Forms for new Artwork)



12345 = Card ID Number
YYYYYYYY-YY = Sales Order Number

Enter your final card options from check boxes above. Example: 801FPGGAN

Final Part Number	801	F					N	-	(Options #)
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DESFire EV3 Card Programming Information

Format Number	Field Name(s) e.g. Facility Code	Value	QTY	Encoded Start Number	Encoded Stop Number
HID Elite* ICE				Printed Start Number	Printed Stop Number

¹ Card allows free create/delete of third party applications.

² Cards ordered with plain white front and back packaging, with no HID artwork or with custom artwork, will still have a small “HID logo” “**HID**” and reference number printed in the lower left-hand corner on the back of the card. A custom part number is required to omit all marking.

³ For new artwork files, contact Customer Service for custom artwork number, lead-times, and cost.

⁴ The printed card number is placed in the bottom right-hand corner on the back of the card.

MIFARE DESFire EV3 + Prox Card: Compatibility Profile - 811

Migration solution from Proximity that offers the flexibility of backwards compatibility with iCLASS SE readers and third party readers that rely on static UID through the introduction of an additional legacy EV1 Secure Identity Object (SIO) application. Based on static UID for compatibility.

Legacy EV1 SIO Application Compatibility: Supported by HID Signo, iCLASS SE and multiCLASS SE readers.

EV3 SIO Application Compatibility: Supported by HID Signo readers with firmware 10.0.2.2 or higher.

Ensure each required option has been checked with the appropriate choice to fulfill a completed order form.

Base Model **811 Composite** (40% Polyester/PVC)

MIFARE DESFire EV3 Memory Size

F - 8K Bytes

DESFire Secure Identity Object Programming¹

P - Programmed with legacy EV1 Secure Identity Object (SIO) application **plus** EV3 Secure Identity Object (SIO) application.

V - Unprogrammed for use with iCLASS SE Encoder (EV1 compatible SIO application programming only)

Prox Programming (Select one option)

P - Programmed with HID Prox or Indala format.

N - Unprogrammed HID Prox for iCLASS SE encoder (CP1000)

Front Packaging (Select one option)

G - Plain White with Gloss Finish

C - Custom Artwork with Gloss Finish - Specify Custom Artwork Number³

Back Packaging (Select one option)

G - Plain White with Gloss Finish²

1 - Plain White with Gloss Finish with Magnetic Stripe²

C - Custom Artwork with Gloss Finish - Specify Custom Artwork Number^{2,3}

3 - Custom Artwork with Gloss Finish with Magnetic Stripe - Specify Custom Artwork Number^{2,3}

13.56 MHz DESFire Card Numbering⁴ (Select one option)

N - No Printed Card Numbering

A - Sequential Matching Encoded/Printed (Laser Engraved)

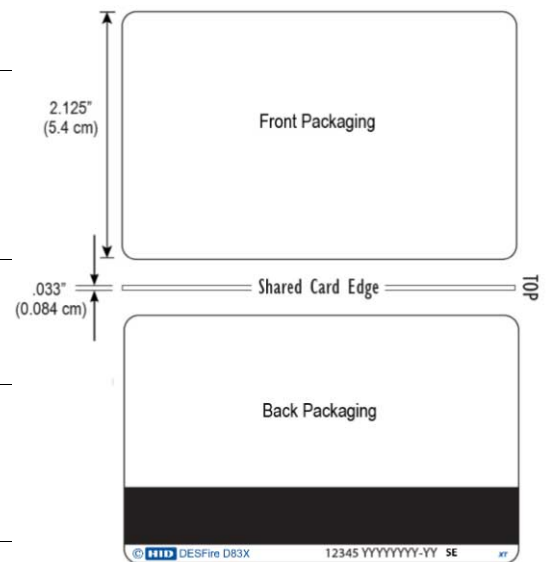
B - Sequential Encoded/Sequential Non-Matching Printed (Laser Engraved)

C - Random Encoded/Non-Matching Sequential Printed (Laser Engraved)

Slot Punch

N - No Slot Punch.

IMPORTANT - 811 credentials do not allow a slot punch due to antenna design. Use a badge holder to attach this card to a lanyard or badge clip.



12345 = Card ID Number
YYYYYYYY-YY = Sales Order Number

125 kHz Card Numbering⁴

- N** - No Printed Card Numbering
- A** - Sequential Matching Encoded/Printed (Laser Engraved)
- B** - Sequential Encoded/Sequential Non-Matching Printed (Laser Engraved)
- C** - Random Encoded/Non-Matching Sequential Printed (Laser Engraved)

Option - Custom Artwork³

- _____ (Specify Artwork Number - Refer to the Custom Artwork Forms for new Artwork)

Enter your final card options from check boxes above. Example: 811FPPGGANA

Final Part Number	811	F						N		-	(Options #)
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DESFire EV3 Card Programming Information

Format Number	Field Name(s) e.g. Facility Code	Value	QTY	Encoded Start Number	Encoded Stop Number
HID Elite ICE				Printed Start Number	Printed Stop Number

125 kHz Card Programming Information

Format Number	Field Name(s) e.g. Facility Code	Value	QTY	Encoded Start Number	Encoded Stop Number
				Printed Start Number	Printed Stop Number

¹ Card allows free create/delete of third party applications.

² Cards ordered with plain white front and back packaging, with no HID artwork or with custom artwork, will still have a small “HID logo” “**HID**” and reference number printed in the lower left-hand corner on the back of the card. A custom part number is required to omit all marking.

³ For new artwork files, contact Customer Service for custom artwork number, lead-times, and cost.

⁴ The Printed card number is placed in the bottom right-hand corner on the back of the card.

MIFARE DESFire EV3 Card: Custom Profile - 800

Available customized for bespoke specifications, or unprogrammed for full in-field personalization compatible with EV1, EV2 or EV3 compliant solutions.

Compatibility: Supported by custom profile HID Signo, iCLASS SE and multiCLASS SE readers.

Ensure each required option has been checked with the appropriate choice to fulfill a completed order form.

Card without SIO encoding

Base Model **800 Composite** (40% Polyester/PVC)

MIFARE DESFire EV3 Memory Size

F - 8K Bytes

DESFire Programming (Select one option)

- N** - Unprogrammed DESFire EV3 for use with iCLASS SE Encoder (EV1 custom encoding only) or third-party EV1, EV2 or EV3 applications
- S** - Custom MIFARE DESfire EV1, EV2 or EV3 programming, requires custom part number¹

Front Packaging (Select one option)

- G** - Plain White with Gloss Finish²
- C** - Custom Artwork with Gloss Finish - Specify Custom Artwork Number³

Back Packaging (Select one option)

- G** - Plain White with Gloss Finish²
- 1** - Plain White with Gloss Finish with Magnetic Stripe²
- C** - Custom Artwork with Gloss Finish - Specify Custom Artwork Number^{2,3}
- 3** - Custom Artwork with Gloss Finish with Magnetic Stripe - Specify Custom Artwork Number^{2,3}

Card Numbering⁴ (Select one option)

- N** - No Printed Card Numbering, sales number marking only
- A** - Sequential Matching Encoded/Printed (Laser Engraved)
- B** - Sequential Encoded/Sequential Non-Matching Printed (Laser Engraved)
- C** - Random Encoded/Non-Matching Sequential Printed (Laser Engraved)
- Z** - Reversed UID (CSN) Decimal card numbering only (Laser Engraved)

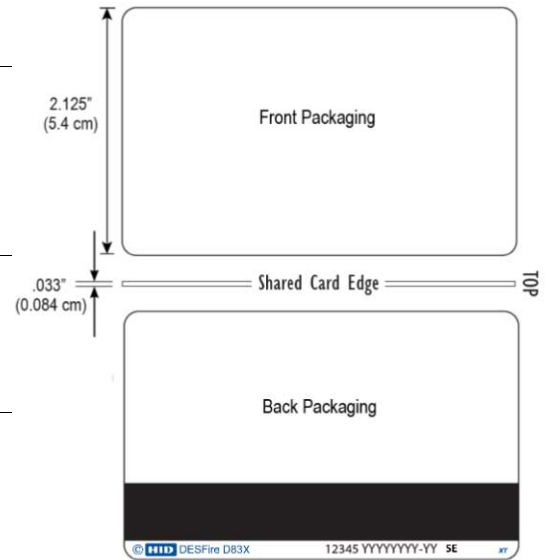
Slot Punch

N - No Slot Punch.

IMPORTANT - 800 credentials do not allow a slot punch due to the antenna design, use a badge holder to attach this card to a lanyard or badge clip.

Option - Custom Artwork³

_____ (Specify Artwork Number - Refer to the Custom Artwork Forms for new Artwork)



12345 = Card ID Number
YYYYYYYY-YY = Sales Order Number

Enter your final card options from check boxes above. Example: 800FNGGNN

Final Part Number	800	F					N	-	(Options #)
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DESFire EV3 Card Programming Information

Format Number	Field Name(s) e.g. Facility Code	Value	QTY	Encoded Start Number	Encoded Stop Number
				Printed Start Number	Printed Stop Number

¹ Contact your local sales or pre-sales representative, HID requires a full written specification, additional lead time applies for setup, test and evaluation of custom profiles.

² Cards ordered with plain white front and back packaging, with no HID artwork or with custom artwork, will still have a small “HID logo” “**HID**” and reference number printed in the lower left-hand corner on the back of the card. A custom part number is required to omit all marking.

³ For new artwork files, contact Customer Service for custom artwork number, lead-times, and cost.

⁴ The Printed card number is placed in the bottom right-hand corner on the back of the card.

MIFARE DESFire EV3 + Prox: Custom Profile - 810

Migration solution from Proximity to either fully customized bespoke DESfire specifications, or unprogrammed for full in-field personalization with EV1, EV2 or EV3 compliant solutions.

Compatibility: Supported by custom profile HID Signo, iCLASS SE and multiCLASS SE readers.

Ensure each required option has been checked with the appropriate choice to fulfill a completed order form.

Card without SIO encoding + Prox **810 Composite** (40% Polyester/PVC)

MIFARE DESFire EV3 Memory Size

F - 8K Bytes DESFire EV3 DESFire Programming

(Select one option)

N - Unprogrammed for use with iCLASS SE Encoder

(EV1 custom encoding only) or third-party EV1, EV2 or EV3 applications.

S - Custom EV1, EV2 or EV3 programming

(custom part number required)¹

Prox Programming (Select one option)

P - Programmed with HID Prox or Indala format.

N - Unprogrammed HID Prox for iCLASS SE encoder (CP1000)

Front Packaging (Select one option)

G - Plain White with Gloss Finish

C - Custom Artwork with Gloss Finish -

Specify Custom Artwork Number³

Back Packaging (Select one option)

G - Plain White with Gloss Finish²

1 - Plain White with Gloss Finish with Magnetic Stripe²

C - Custom Artwork with Gloss Finish -

Specify Custom Artwork Number^{2,3}

3 - Custom Artwork with Gloss Finish with Magnetic Stripe -

Specify Custom Artwork Number^{2,3}

13.56 MHz DESFire Card Numbering⁴ (Select one option)

N - No Printed Card Numbering

A - Sequential Matching Encoded/Printed (Laser Engraved)⁴

B - Sequential Encoded/Sequential Non-Matching Printed

(Laser Engraved)

C - Random Encoded/Non-Matching Sequential Printed

(Laser Engraved)

Slot Punch

N - No Slot Punch.

IMPORTANT - 810 credentials do not allow a slot punch due to antenna design. Use a badge holder to attach this card to a lanyard or badge clip.

125 kHz Card Numbering⁴

N - No Printed Card Numbering

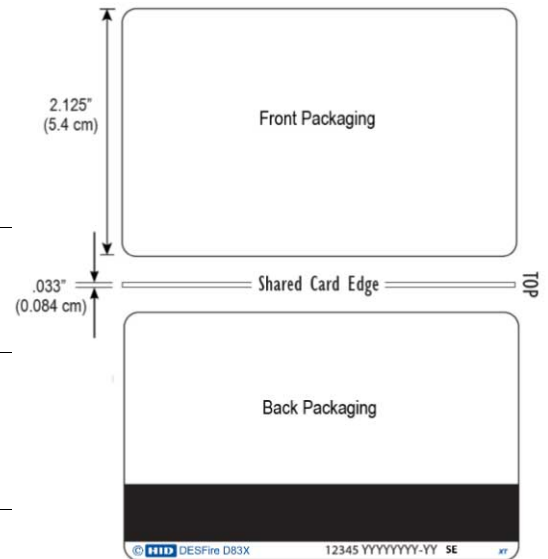
A - Sequential Matching Encoded/Printed (Laser Engraved)

B - Sequential Encoded/Sequential Non-Matching Printed

(Laser Engraved)

C - Random Encoded/Non-Matching Sequential Printed

(Laser Engraved)



12345 = Card ID Number
YYYYYYYY-YY = Sales Order Number

Option - Custom Artwork³

_____ (Specify Artwork Number - Refer to the Custom Artwork Forms for new Artwork)

Enter your final card options from check boxes above. Example: 810FNPGGNNAN

Final Part Number	810	F						N		-	(Options #)
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DESFire EV3 Card Programming Information

Format Number	Field Name(s) e.g. Facility Code	Value	QTY	Encoded Start Number	Encoded Stop Number
HID Elite ICE				Printed Start Number	Printed Stop Number

125 kHz Card Programming Information

Format Number	Field Name(s) e.g. Facility Code	Value	QTY	Encoded Start Number	Encoded Stop Number
				Printed Start Number	Printed Stop Number

¹ Contact your local sales or pre-sales representative, HID requires a full written specification, additional lead time applies for setup, test and evaluation of custom profiles.

² Cards ordered with plain white front and back packaging, with no HID artwork or with custom artwork, will still have a small "HID logo" "HID" and reference number printed in the lower left-hand corner on the back of the card. A custom part number is required to omit all marking.

³ For new artwork files, contact Customer Service for custom artwork number, lead-times, and cost.

⁴ The Printed card number is placed in the bottom right-hand corner on the back of the card. The permanent unique MIFARE DESFire 56 Bit serial # cannot be printed on cards.

Revision history

Date	Description	Revision
May 2021	Minor text changes.	A.1
April 2021	Initial release.	A.0



Powering Trusted Identities

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