HID® Crescendo® Devices

Identity and Access Management Solutions
How to Order Guide

PLT-04939, B.2
November 2021

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Contacts

For technical support, please visit: **https://support.hidglobal.com**.

What's new

Date	Description	Revision
November 2021	Updates for HID Crescendo C1100 EOL	B.2

A complete list of revisions is available in **Revision history**.

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Section 01

HID Crescendo Portfolio

HID® Crescendo® authenticators are the most secure credentials from HID Global that can be used to protect access to computers, networks and data and, optionally, also be used for secure access to physical spaces and facilities using state of the art access control technologies.

The latest version of these credentials includes the HID Crescendo Key, HID Crescendo C2300 models and are recommended for all new deployments.

The previous generation of credentials is available to ensure continued operations for customers with existing installations or who require specific capabilities that are not yet available in the latest models.

For latest information, visit https://www.hidglobal.com/crescendo

	Crescendo Key	C2300	ActivKey SIM	Crescendo FIPS[1]	C1100[2]
Communications					
USB	●		●		
NFC	●	●		●	●
ISO7816		●		●	●
Protocol Support					
PIV	●	●	○ [3]	○	○
FIDO	●	●			
OATH	●				
Physical Access					
Seos		●		●	●
MIFARE		●		●	●
iCLASS		○ [4]		●	●
Prox		●		●	●
Security Evaluation					
FIPS 140-2		●	●	●	
Common Criteria	●	●	●	●	●

1. There are also HID Crescendo PIV dual interface configuration using the same platform suitable for FIPS 201 PIV deployments. See HID Crescendo 144K FIPS for details.
2. The HID Crescendo C1100 is in End-of-Life status and replaced by HID Crescendo C2300.
3. When used with ActivID® CMS these devices can be configured with a PIV card edge for PKI operations.
4. The HID Crescendo C2300 with iCLASS physical access is a contactless only card.

1.1 HID Crescendo Key

The HID Crescendo Key is a device available in USB Type A and USB Type C form factors, that delivers FIDO, PIV PKI, and OATH capabilities.

All models are ready-to-use FIDO USB and NFC Security Keys.

HID Crescendo Keys are available with the following configurations or profiles:

- Standalone Profile supporting a wide combination of capabilities:
  - FIDO, with any FIDO2-compliant browsers and applications
  - PIV/PKI initialized using a stand-alone installation of ActivID ActivClient® middleware or using the HID Credential Management solutions
  - OATH, managed by a stand-alone HID tool such as the HID Crescendo Management Tool, HID Crescendo Authenticator Tool or by leveraging the HID Crescendo API
- Secure Managed Profile requiring ActivID Credential Management solutions (HID WorkForceID™ Management) for management of PIV and OATH capabilities in a more secure way.
  It is suitable for larger deployments where a complete lifecycle management solution is required to synchronize data between a user directory, one or more certification authorities and the HID Crescendo devices assigned to users.

For more information, go to the HID Global website at https://www.hidglobal.com/products/cards-and-credentials/crescendo

1.2 HID Crescendo C2300

HID Crescendo C2300 are the latest generation of multi-application smart cards that combine logical and physical access in the same device.

They exist in hardware configurations compatible with different physical access control systems.

When placing an order for HID Crescendo C2300 smart card, a format must be specified for each of the included technologies.

For information about formats used in physical access technology, contact your HID PACS representative or your PACS reseller. You can also read Understanding Card Data Formats on the HID Global website.

1.3 HID Crescendo FIPS

For customers that have a strict requirement to show a current validation certificate, HID Crescendo FIPS are hybrid cards with a contact FIPS 140-2 certified module used for PKI operations and optional contactless technologies for physical access.

The HID Crescendo FIPS family also includes a dual interface card compliant with FIPS 201 for issuance of US Government Personal Identity Verification PIV smart cards.

1.4 HID Global ActivKey SIM

The HID Global ActivKey SIM is a USB key form factor with a FIPS 140-2 cryptographic module.

Note: The ActivKey SIM that embeds C1100 and C1150 are transitioning to End-of-Life status during 2020 and customers are encouraged to migrate to the **HID Crescendo Key** and use this new platform for all new deployments.

Section 02

Ordering Details

The sections below specify the part numbers and, if available, the programming and marking options that need to be specified when placing an order.

In addition to standard part numbers that are typically in stock, it is possible to define and order custom part numbers that are built-to-order and that can include custom graphics or initialization profiles.

2.1 Overview

2.1.1 Ordering Smart Card Form Factors

When you send your order for devices to HID Global, you must specify the part number and required programming information for the different technologies as specified in *Programming* column of the tables that follow for each product family.

Part Number of the smart card: 40xxxxxx	Programming information for Logical Access: CRExxxx	Programming information for Physical Access: Hxxxx

Guidelines:

- If there are graphical customization options, add them from **Customization Options**, with the same quantity as the number of credentials.
- The quantity corresponds to SKU count, in the case of smart card one unit is one card, and the minimum order quantity is 100.
- If the order includes a Corporate 1000 format, remember to add part number MC-1000 Corp 1000 Management Fee with the same quantity as the number of credentials.
- If you request an Elite Key, add the MC-0036 Elite Key Management Fee.

2.1.2 Ordering USB Key Form Factors

When you send your order for devices to HID Global, the part number includes already all the details related to the graphical and programming information.

Part Number of the USB Key: BKAxx or BKNxxx or BKSxx

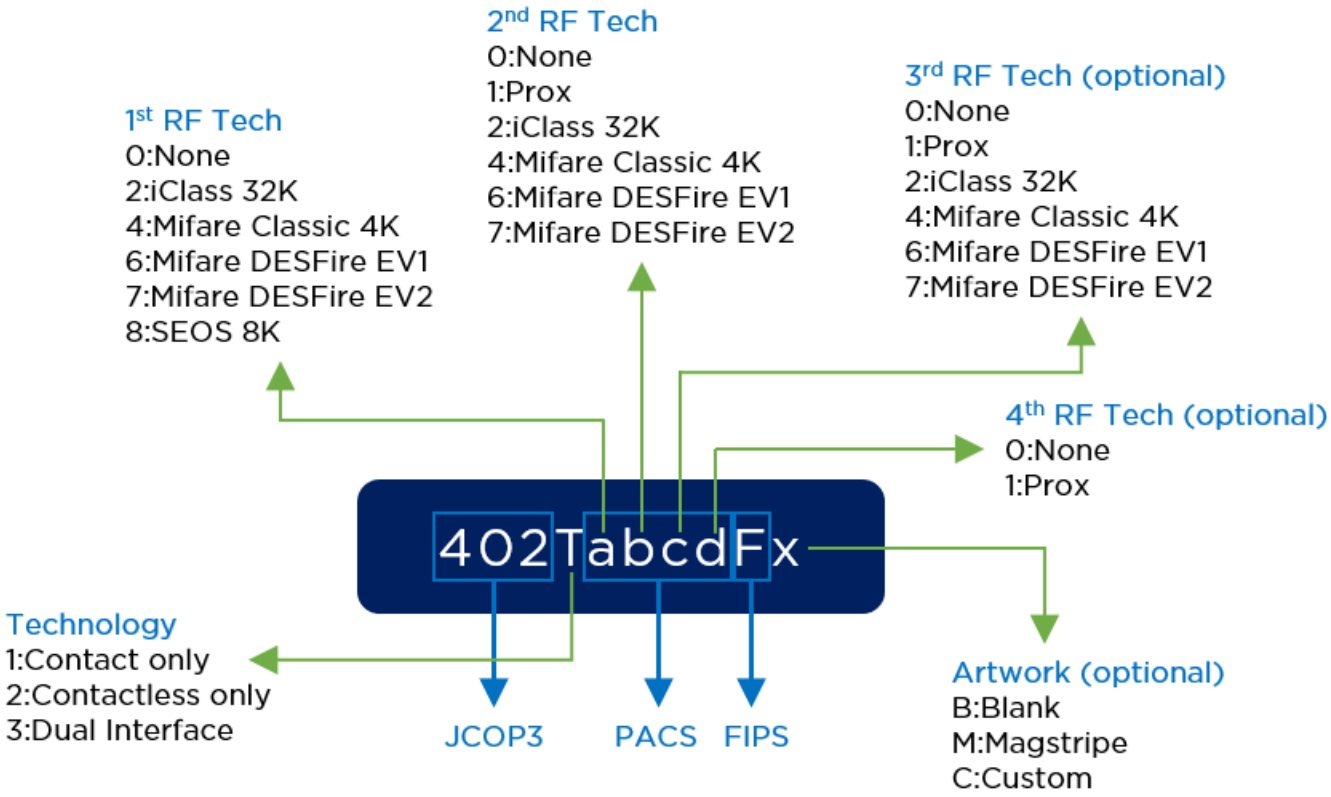
Note: The quantity corresponds to SKU count, in the case of HID Crescendo Key or ActivKey SIM, you order boxes of 100 units, so one unit is one box.

2.2 HID Crescendo Key Series

2.2.1 Part Numbers

SKU	Description
BKA106P100	Crescendo Key Type A - Standalone profile - 100 units
BKA100P100	Crescendo Key Type A - Secure Managed Profile - 100 units
BKN106P100	Crescendo Key Type C - Standalone profile - 100 units
BKN100P100	Crescendo Key Type C - Secure Managed Profile - 100 units

2.3 HID Crescendo C2300



2.3.1 Codification and Part Numbers

SKU	Technology	Description	Required Programming Information
402300x	Dual Interface	Crescendo C2300	Contact: format
402301x	Dual Interface	Crescendo C2300, Prox	Contact: format Proximity: format, CN, FC
402360x	Dual Interface	Crescendo C2300, DESFire EV1 8K	Contact: format DESFire: format, CN, FC – or INIT
402361x	Dual Interface	Crescendo C2300, DESFire EV1 8K, Prox	Contact: format DESFire: format, CN, FC – or INIT Proximity: format, CN, FC
402380x	Dual Interface	Crescendo C2300, Seos 8K	Contact: format Seos: format, CN, FC
402381x	Dual Interface	Crescendo C2300, Seos 8K, Prox	Contact: format Seos: format, CN, FC Proximity: format, CN, FC

SKU	Technology	Description	Required Programming Information
402300Fx	Dual Interface	Crescendo C2300 FIPS	Contact: format
402301Fx	Dual Interface	Crescendo C2300 FIPS, Prox	Contact: format Proximity: format, CN, FC
402220x	Contactless	Crescendo C2300 CL iCLASS SR	Crescendo: format iCLASS: format, CN, FC
402221x	Contactless	Crescendo C2300 CL iCLASS SR, Prox	Crescendo: format iCLASS: format, CN, FC Proximity: format, CN, FC
4022821x	Contactless	Crescendo C2300 CL iCLASS SR, SEOS, Prox	Crescendo: format iCLASS: format, CN, FC Seos: format, CN, FC Proximity: format, CN, FC

Where:

- x can be B(Blank) or (M)Magstripe or (C)Custom
- INIT = PACS technology not initialized

2.3.2 Programming Information

Field	Description	Example values
Contact (for dual interface cards)		
Format	Determines enabled features and options. The most common values are CRE10006868, the standard stand-alone format for cards managed with ActivClient or the HID Credential Management Service, and CRE00000000, the format used for cards managed by ActivID CMS (on-premise).	CRE00000000 – Secure Managed Profile CRE10006868 – Standalone Profile
Elite key	Optional end customer specific reference used to protect the card manager	

Field	Description	Example values
Crescendo (for cards with iCLASS)		
Format	Determines enabled features and options. The most common values are CRE10006868, the standard stand-alone format for cards managed with ActivClient or the HID Credential Management Service, and CRE00000000, the format used for cards managed by ActivID CMS (on-premise).	CRE00000000 – Secure Managed Profile CRE10204868 – Standalone profile with PKI and FIDO features CRE40204868 – Standalone full PKI profile (no FIDO)
Elite key	Optional end customer specific reference used to protect the card manager	
Seos		
Format	Determines the structure of PAC bits	H10302 – HID 37 Bits
Card number (CN)	Initial card number in the order	
Facility code (FC)	Optional additional field, in some formats can be a site or company code	
Elite key	Optional end customer specific reference used to protect Seos vault access	
DESFire		
Format	Determines the structure of PAC bits, in MIFARE technologies it can be an HID format or be left as INIT for blank unprogrammed cards	H10302 – HID 37 Bits
Card number (CN)	Initial card number in the order	
Facility code (FC)	Optional additional field, in some formats can be a site or company code	
Elite key	Optional end customer specific reference used to protect Seos vault access	
Prox		
Format	Determines the structure of PAC bits	H10302 – HID 37 Bits
Card number (CN)	Initial card number in the order	
Facility code (FC)	Optional additional field, in some formats can be a site or company code	
iCLASS		
Format	Determines the structure of PAC bits	H10302 – HID 37 Bits
Card number (CN)	Initial card number in the order	
Facility code (FC)	Optional additional field, in some formats can be a site or company code	
Elite key	Optional end customer specific reference used to restrict iCLASS memory access	

2.4 HID Crescendo 144K FIPS

2.4.1 Part Numbers

SKU	Description	Required Programming Information
40000B-D14	Crescendo 144K FIPS	Contact: format
40020B-D14	Crescendo 144K FIPS iCLASS 32K	Contact: format iCLASS: format, CN, FC
40040B-D14	Crescendo 144K FIPS MIFARE Classic 4K	Contact: format MIFARE: format, CN, FC
40060B-D14	Crescendo 144K FIPS MIFARE DESFire EV1 8K	Contact: format MIFARE: format, CN, FC
40080B-D14	Crescendo 144K FIPS Seos 8K	Contact: format Seos: format, CN, FC
40021B-D14	Crescendo 144K FIPS iCLASS 32K Prox	Contact: format iCLASS: format, CN, FC Proximity: format, CN, FC
40041B-D14	Crescendo 144K FIPS MIFARE Classic 4K Prox	Contact: format MIFARE: format, CN, FC Proximity: format, CN, FC
40061B-D14	Crescendo 144K FIPS MIFARE DESFire EV1 8K Prox	Contact: format MIFARE: format, CN, FC Proximity: format, CN, FC
40081B-D14	Crescendo 144K FIPS Seos 8K Prox	Contact: format Seos: format, CN, FC Proximity: format, CN, FC
400821B-D14	Crescendo 144K FIPS Seos 8K iCLASS 32K Prox	Contact: format Seos: format, CN, FC iCLASS: format, CN, FC Proximity: format, CN, FC
40030M-D14	Crescendo PIV Mag Stripe	N/A
40030M-D14-TAC	Crescendo TAC Mag Stripe	N/A

2.4.2 Programming Information

Field	Description	Example values
Contact		
Format	Determines enabled features and options with only two possible values: • STAND-ALONE for cards managed with ActivClient • NO-PROFILE for cards managed by ActivID CMS on-premise	STAND-ALONE - STANDARD NO-PROFILE - CMS
Elite key	Optional end customer-specific reference used to protect the card manager	
Seos		
Format	Determines the structure of PAC bits	H10302 – HID 37 Bits
Card number (CN)	Initial card number in the order	
Facility Code (FC)	Optional additional field, in some formats can be a site or company code	
Elite key	Optional end customer-specific reference used to protect Seos SIO	
iCLASS		
Format	Determines the structure of PAC bits	H10302 – HID 37 Bits
Card number (CN)	Initial card number in the order	
Facility Code (FC)	Optional additional field, in some formats can be a site or company code	
Elite key	Optional end customer-specific reference used to restrict iCLASS memory access	
MIFARE		
Format	Determines the structure of PAC bits, can be NONE if MIFARE is not to be programmed	H10302 – HID 37 Bits
Card number (CN)	Initial card number in the order, when a format is specified	
Facility Code (FC)	Optional additional field, in some formats can be a site or company code	
Prox		
Format	Determines the structure of PAC bits	H10302 – HID 37 Bits
Card number (CN)	Initial card number in the order	
Facility Code (FC)	Optional additional field, in some formats can be a site or company code	

2.5 ActivID ActivKey SIM

2.5.1 Part Numbers

SKU	Description
BKS900P100	ActivKey SIM 144K FIPS - Secure Managed Profile - 100 units
BKS906P100	ActivKey SIM 144 FIPS - Standalone Profile - 100 units

2.6 Sample Ordering Form

The table below can be used as a template for placing an order.

SKU	Description				Quantity
Programming Details					
	Contact/Crescendo[1]	**Seos**	**iCLASS**	**Prox**	**MIFARE**
Format					
Marking	LASER UID HEX	MATCHING	MATCHING	MATCHING	MATCHING
Card Number (CN)	N/A				
Facility Code (FC)	N/A				
Elite Key					

1. The technology that enables FIDO, PKI and OATH is called Crescendo in contactless cards (4022xx) and Contact in dual interface card (4023xx).

Section 03

Customization Options

3.1 Options for Smart Card Form Factors

HID Global offers a wealth of options to make secure and personalized credentials. You can learn more from your HID Global Account Manager and from the Identity on Demand Success Guide on the HID Global website.

3.1.1 Artwork

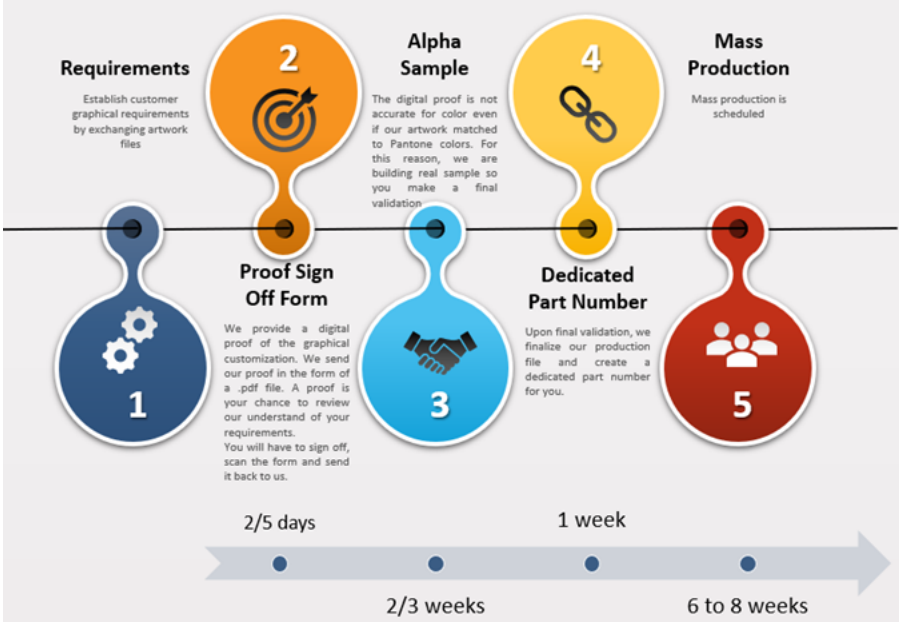
A custom artwork can be printed directly during the lamination process of the card and can include security features like holograms that cannot be reproduced.

3.1.2 Part Numbers

SKU	Description
LITHO-CMYK	Single side underlaminate offset 4 color
LITHO-CMYK-4-4	Dual side underlaminate offset 4 color
LITHO-SPOT	Spot color (Pantone)
LITHO-BLACK	Black offset printing
LC-0001	Artwork Proof
ANTI-UV	Ultraviolet static printing
HOLO-SURFACE	Surface HID Standard Hologram
HOLO-EMBEDDED	Embedded HID Standard Hologram

3.2 Options for USB Key Form Factors

3.2.1 Customization Process Flow



3.2.2 Graphic Requirements - HID Global recommendations?

- No fancy effect (shadow, fading, 50% black...); only plain pantone colors for casing and overlay
- No metallic color
- The logo should have a minimum height of 3mm
- Characters should have a minimum height of 1.5mm

3.2.3 What is the basic information required before starting any proof validation?

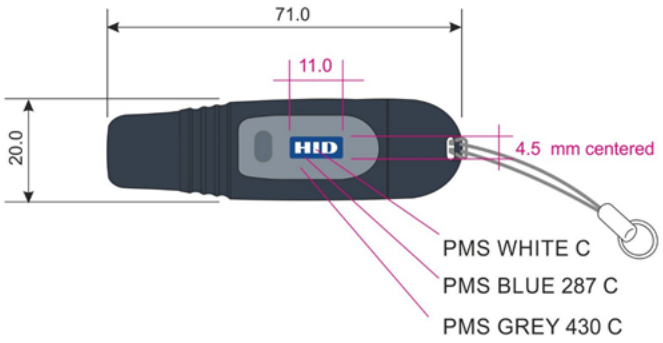
- Pantone colors (drawing, text, ...)
- Font (Arial, ...)
- Font size
- Position of the logo on the windows glass (correctly adjusted, centered...)

3.2.4 Artwork file - Document format?

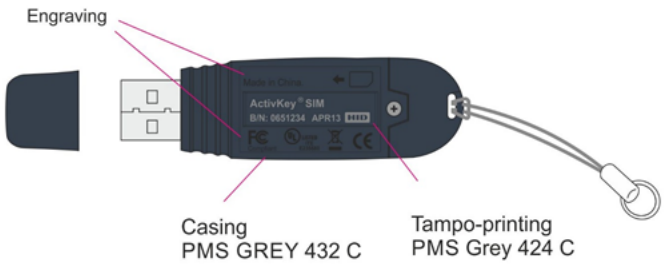
- All files sent to HID Global should be in Adobe® Illustrator® version CS6 or earlier

3.2.5 HID Global ActivID ActivKey SIM

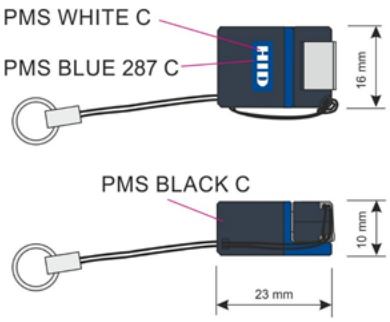
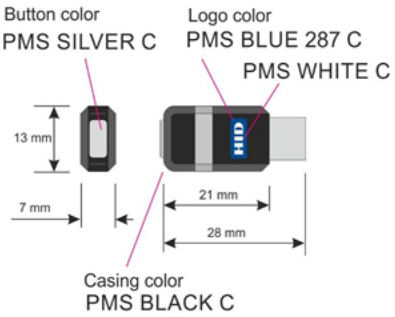
Front



Back



3.2.6 HID Crescendo Key

USB Type-A	USB Type-C
	

Revision history

Date	Description	Revision
November 2021	Updates for HID Crescendo C1100 EOL	B.2
September 2021	Updates for HID Crescendo C2300 FIPS and iCLASS	B.1
December 2020	Updates for HID Crescendo C2300 DESFire	B.0
July 2020	Updates for HID Crescendo C2300 and Key	A.0

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PLT-04939, Rev. B.2

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