

Crescendo® Card 4000 Series

One Corporate Badge to Access Business Applications and Doors

Maximize workforce productivity with Crescendo Cards – one corporate badge for passwordless access to business applications and physical spaces. Simplify deployment and management with one converged credential using passkeys and/or certificate-based authentication with the advantage of either a shared PIN or isolated PINs for FIDO, PKI and OATH.

The Crescendo 4000 Cards are certified with the latest FIDO2 specification, compliant with NIST SP 800-73 for logical access and support the widest range of physical access technologies in one card: Seos, iCLASS (coming Q1 2025), MIFARE Classic, MIFARE DESFire EV3 and PROX.

Additionally, the updated version of the Crescendo Framework minimizes complexity and reliance on HID to specify card configuration. This gives partners and customers the flexibility to customize the card to address their specific needs, including personalizing logical access technology configurations. It is also fully compatible with both HID's Credential Management System (CMS) and third party's credential management systems.

Strengthen your security posture with open standards for phishing-resistant multi-factor authentication (MFA) such as FIDO and PKI.

The Crescendo product line includes additional smart cards and security keys – refer to the HID Crescendo page to know more.

DIVERSE ECOSYSTEM SUPPORT

- **Crescendo Minidriver:** Seamlessly enables Crescendo 4000 Cards to work within the Microsoft ecosystem
- **Microsoft Minidriver:** Fully supported by the built-in Microsoft Minidriver
- **Crescendo SDK and Command Line Interface (CLI):** Enables customers, partners and other third parties to easily and simply integrate support for the Crescendo family into their products and ecosystem
- **PKCS#11:** version 2.40 support on various platforms
- **ActivClient:** Fully supported by the ActivClient Middleware
- **Crescendo Manager:** Empowers technical staff and users to locally configure, manage and test Crescendo devices (smart cards and security keys)
- **Credential Management Systems:** Enables HID's and third party's credential management systems to centrally manage the lifecycle of Crescendo devices, PINs and digital certificates for employee authentication, data encryption and signing



KEY BENEFITS:

- **Converged credentials** — Enjoy the benefits the Crescendo portfolio already offers today - maximize workforce productivity with the broadest range of multi-technology credentials for logical and physical access
- **Updated Crescendo Framework** — Cut complexity and reliance on HID to specify card configuration with one out-of-the-box profile for logical access and the flexibility to customize the card to address your needs
- **More capacity for PKI certificates and FIDO resident keys** – Maximize your investment with one smart card that provides passwordless authentication for multiple applications
- **Improved speed and memory** – Faster card issuance, quicker key generation and greater computational power to support stronger security encryption algorithms

ADDITIONAL PRODUCT FEATURES:

- Based on a Global Platform 2.3 Java Card platform that is Common Criteria EAL 6+ certified and undergoing NIST FIPS 140-3 validation

CRESCENDO CONFIGURATIONS:

- One standard profile, ready to use with customizable configurations available depending on specific customer needs
- Support for OATH, FIDO2 and PIV
- Support for shared or isolated PINs for FIDO, PKI and OATH
- Supports a range of low- and high-frequency physical access technologies
- Offers contact and contactless interfaces for FIDO and PKI

Base Model Number	Crescendo 4000	
Base Part	404	
HID Applet v4.0 Logical Access (LACS) Security Services	PKI/PIV	PIV card edge according to NIST SP 800-73 Up to 40 PKI Key slots split into up to: • 24 PIV key slots • 16 PKI key slots
	FIDO U2F	Unlimited non-resident keys
	FIDO2 CTAP2.1	Up to 30 FIDO Resident Keys (unlimited non-resident keys)
	OATH	up to 16 slots (TOTP or HOTP or OCRA)
	PIN	Configurable Shared Pin (among PKI, FIDO and OATH) Configurable User PIN length min/max Configurable User PIN retry max Configurable Unlock retry max Configurable Numeric PIN only enforcement
	Secure Key Injection	SKI mechanism compliant with API Microsoft MiniDriver SKI transport Key: RSA -3072-bit SKI Session: AES 128-bit
	Certifications	FIDO2 CTAP 2.1 L1
Physical Access Format (PACS)	High Frequency: 13.56MHz	Seos 8K
		MIFARE Classic 1K
		MIFARE DESFire EV3 8K (backward compatible with EV2/EV1)
	Low Frequency: 125KHz	Prox
Smart Card Characteristics	Contact Chip	Yes (Dual Interface for contact and contactless communication)
	Dimensions	ISO 7810: 2.127" x 3.375" x 0.033" max (54 x 85.7 x 0.84 mm)
	Weight	0.20 oz (5.5g)
	Construction	Long-Life composite (40% PVC, 60% PET)
	Operating Temperature	-31°F to +122°F (-35°C to +50°C)
	Printable	Yes
	Magnetic Strip	Optional
Secure Element	Regulatories	RoHS, REACH
	Processor	NXP JCOP 4.5 P71D600
	Memory	Flash: up to 450 kB without applet loaded; Data retention time: 25 years
	Operating System	JavaCard Standard 3.0.5 Classic
	Certification	Common Criteria EAL 6+; FIPS 140-3 overall level 3 (Certificate Number 4679)
	Cryptographic Algorithms	3DES: 3 keys (CBC and ECB) (legacy only) AES: (128-, 192-, 256-bit) (CBC and ECB) RSA: (2048-, 3072-, 4096-bit) ECC: (P-256, P-384 bits) HMAC-SHA1, HMAC-SHA2 (256-, 512-bit)
Interface	Communication Protocols	ISO 7816-3 (T=0 and T=1) contact interface; ISO 14443 contactless interface compatible with NFC (T=CL); supported extended length APDU for FIDO
	Communication Speed	Up to 688,172 bit/s over the contact interface Up to 848Kbps over the contactless interface
Middleware & Tooling	Middleware	Microsoft Inbox Smart Card Mini Driver
		PKCS#11 library (Windows, Mac, Linux)
		Apple CryptoTokenKit
		Compatible with third party OS PIV Implementations
		HID MiniDriver to allow CNG applications (https://www.catalog.update.microsoft.com/Search.aspx?q=crescendo)
Tools		Crescendo SDK
		Crescendo Manager
Warranty	Duration	2 years



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