

# Crescendo™

## Multi-technology Smart Card

- ▶ **Convenient and Cost Effective** – Combine logical and physical access control in a single card
- ▶ **Out-of-the-box, Standards-Compliant** – Supports hundreds of logical access applications provided by Microsoft® and others
- ▶ **Pre-initialized with the Required On-card Software** – Includes all required drivers and middleware
- ▶ **Simplified Deployment and Card Lifecycle Management** – naviGO™ software's self service functions reduce costs and simplify deployment and card lifecycle management



**ACCESS** secure.

Crescendo™ is a series of highly secure, off-the-shelf smart cards designed to provide out-of-the-box, standards-compliant support for hundreds of logical access applications. A multi-technology smart card, Crescendo is a credit card-sized card that enables logical and physical access control, also serving as an employee ID badge. By incorporating HID's industry standard proximity technology (i.e., HID, Indala®), iCLASS® and other 13.56 MHz technologies, Crescendo is a single card that can be easily deployed for both logical and physical access control applications.

Delivered in a highly durable composite card construction, Crescendo supports all standards-based card readers on the market and is designed to work with the wide range of OMNIKEY® reader form factors (for more information on OMNIKEY products, please visit [www.hidglobal.com/OMNIKEY](http://www.hidglobal.com/OMNIKEY)).

As part of the HID on the Desktop™ solution, Crescendo contact smart cards represent the highest level of network security, working with highly developed PKI (Public Key Infrastructure) infrastructures. Crescendo on the Desktop™ extends the features of the standard Crescendo product by using naviGO™ Server software to provide a simple management solution for card PIN and PUK as well as emergency access functionality.

A wide variety of security applications from other vendors are also supported including: Single sign-on, Pre-boot authentication, Disk encryption, Digital signatures. Choose the Crescendo smart card that is compatible with your existing physical access control system.

Crescendo is Windows® compatible. Crescendo series smart cards are compatible with the Microsoft® Windows® Smart Card Framework (WSF)\* and support applications such as Windows Domain logon, VPN, Microsoft Office Outlook, secure Web access, and wireless LAN authentication. Crescendo supports the Microsoft® Identity Lifecycle Manager 2007 (ILM 2007), dramatically simplifying the deployment, management and auditing of smart cards used for logical access control applications.

An embedded contact smart chip is used for logical access control. To meet the needs of current physical access control customers, Crescendo can be customized with the "physical access control" technologies you choose including: Proximity (HID, Indala® and others), iCLASS®, MIFARE®, DESFire®, Multi-technology combinations, Magnetic stripe.

- ▶ Requires no per-seat middleware licenses, reducing overall costs.
- ▶ Uses a powerful contact smart chip with cryptographic co-processor coupled with HID's industry standard proximity or iCLASS® technology.
- ▶ Is available off-the-shelf, reducing lead times and cost.

\* Only valid for C200

# Features

	C200 <sup>2</sup>	C700
<b>OS Support</b>		
Windows Vista™	Yes	Yes
Windows®XP	Yes	Yes
Windows® 2000 / Windows® Server 2003	Yes	Yes
Windows® CE / Mobile	No	Yes <sup>1</sup>
Mac® OS X, Linux®, Solaris, Unix	No	Yes <sup>1</sup>

	C200 <sup>2</sup>	C700
<b>Standards Support</b>		
ISO 7816 1-4	Yes	Yes
PCSC / CCID	Yes	Yes
CryptoAPI / MSCAPI	Yes	Yes
PKCS11	No	Yes
Base CSP	Yes	No
X.509 v3, PKCS 12, PFX, DER	Yes	Yes

	C200 <sup>2</sup>	C700
<b>Contact Smart Chip</b>		
Java® Card OS v2.2.1	Yes	Yes
Global Platform Specification 2.1.1	Yes	Yes
Crypto Co-Processor	Yes	Yes
Number of 1024 Bit Digital Certificates <sup>2</sup>	16	21
Number of 2048 Bit Digital Certificates <sup>2</sup>	12	15
EEPROM Storage	72K	72K
EEPROM Data Retention	20 Years	20 Years

<sup>1</sup> May require an additional software license.

<sup>2</sup> Maximum number of certificates.

<sup>3</sup> All contactless technology cards include a contact smart chip with specifications per those shown under the "Contact Smart Chip" heading in this chart. The three cards shown are available off-the-shelf.

<sup>4</sup> The iCLASS® portion of the card is a 16K bit (2K Bytes) contactless smart chip with either 2 or 16 application areas.

<sup>5</sup> The magnetic stripe is ABA standard 3 track, high coercivity (4000 Oe), ISO 7811-6 compliant. Custom magnetic stripes are available; consult factory.

<sup>6</sup> Consult factory for other contactless card types and multi-technology card types that are available by custom order.

<sup>7</sup> Requires Windows Vista™ or Windows®XP.

<sup>8</sup> Including ActivIdentity® SecureLogin SSO, Bioscrypt VeriSoft Access Manager,™ CA eTrust® SSO, Evidian Enterprise SSO®, IBM Tivoli® Access Manager, IMPRIVATA® ONESIGN™, M-Tech IDM Suite®, Open Domain Sphinx, Oracle® Enterprise Single Sign-On, Passlogix v-GO®, RSA® Sign-On Manager and Softex OmniPass.

<sup>9</sup> Authentication only; no data storage on card.

<sup>10</sup> Including McAfee Endpoint Encryption (formerly SafeBoot), WinMagic SecurDoc,™ and Utimaco®

<sup>11</sup> Including Microsoft® NCP, Cisco Systems® Check Point® and SafeNet, Inc.

<sup>12</sup> The Crescendo C200 credential solution has completed the Microsoft® certification program for smart card minidrivers.

	C200 <sup>2</sup>	C700
<b>Contactless Technologies<sup>3</sup></b>		
iCLASS® Prox <sup>4</sup>	Yes	Yes
iCLASS® Prox <sup>4</sup> with Magnetic Stripe <sup>5</sup>	Yes	Yes
MIFARE®	Yes	Yes
Other Contactless and Multi-Technology Card Options Available on Request <sup>6</sup>	Yes	Yes

	C200 <sup>2</sup>	C700
<b>Microsoft® Applications</b>		
Windows® Domain Log-On	Yes	Yes
Remote Desktop / RDP	Yes <sup>7</sup>	Yes <sup>7</sup>
Microsoft® Identity Lifecycle Manager 2007	Yes	Yes
Outlook	Yes	Yes
Encrypted File System	Yes	Yes
Internet Explorer	Yes	Yes
Windows® Certificate Authority	Yes	Yes

	C200 <sup>2</sup>	C700
<b>Other Applications</b>		
Single Sign-On <sup>8</sup>	Yes <sup>9</sup>	Yes
Pre-Boot Authentication <sup>10</sup>	No	Yes
Firefox®, Netscape®	No	Yes
VPN (SSL / IPSEC) <sup>11</sup>	Yes	Yes
Match-on-Card Fingerprint	No	Yes <sup>1</sup>
Citrix™	Yes	Yes
Smart Card Management Utility	No	Yes



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## ACCESS experience.

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