iCLASS®

13.56 MHz Contactless Cards and Readers

Optimized to make physical access control more powerful, iCLASS® 13.56 MHz read/write contactless smart card technology provides versatile interoperability and supports multiple applications such as biometric authentication, cashless payment and PC log-on security.

iCLASS smart cards and readers make access control more powerful and more versatile, offering enhanced security through encryption and mutual authentication. At the same time, iCLASS is user-friendly, delivering the convenience, affordability and reliability of contactless technology for which HID is known worldwide.

Imagine an affordable, single-card, contactless solution that allows you to not only read data securely and quickly, but also to securely write data to the card for many applications. You have imagined iCLASS by HID.

Did You Know?

◗ There is an iCLASS Clamshell card at the same price as the ProxCard II?

◗ iCLASS Reader installation is identical to Prox?

◗ iCLASS costs no more than Prox, often even less?

Many are familiar with HID's proximity reader and card technology. However, HID's iCLASS contactless smart card technology may not be as well known. In short, iCLASS is the next generation of proximity.

Establishing the similarities between the two technologies provides a basis for outlining the differences. The HID access control application information programmed on an iCLASS chip is the same information that is programmed on a proximity chip. That information includes a facility code and card number in a specific HID format. HID proximity readers read HID formats from HID proximity cards, and iCLASS readers read HID formats from HID iCLASS cards. HID proximity readers and iCLASS readers produce a Wiegand protocol output to the access control panel. An HID proximity card with format H10301 (standard 26-bit format), facility code 20 and card number 1,000 would look the same to an access control panel as an iCLASS card with the same format, facility code, and card number. Therefore, the way the two technologies work from a basic access control standpoint is identical. Both card technologies use HID formats and both reader technologies produce a Wiegand protocol output.

"In short, iCLASS is the next generation of Prox."

The main differences between proximity and iCLASS lie in the additional capabilities provided by iCLASS. These include:

Encrypted Communication

The communication between an iCLASS reader and card is encrypted using a secure algorithm so the transaction between the card and reader cannot be "sniffed" and replayed to a reader. The encryption protocol uses a combination of diversified keys, unique 64-bit card serial numbers and mutual card and reader authentication.

Capability to Add Other Applications

The iCLASS chip not only stores HID access control information, it also has memory space available for other applications. iCLASS cards are currently available with 2k bit, 16k, and 32k bit memory capacities, and depending on the amount of memory available and the number of memory areas, iCLASS cards can serve as multi-application credentials that can be used for many purposes. Since the memory can securely store any kind of information, applications for iCLASS include biometrics, secure computer/network authentication, health record management, time and attendance, digital cash (cafeteria & vending) and many, many more.

For details regarding smart cards, visit this link:
www.hidglobal.com/documents/HIDsmartcardsForAC_wp_en.pdf

For details regarding HID iCLASS application partners, visit this link:
www.hidconnect.com

iCLASS® Readers

iCLASS® R10
Contactless Smart Card Reader
Base Part Number • 6100, 6108, 6109

- Slim design is perfect for metal mullions or any other space-limited installation
- Provides Wiegand or Clock-and-Data output
- Low Voltage and Current Consumption (5-16 VDC @ <100 mA)
- Reads 13.56 MHz: HID iCLASS, ISO 15693 CSN, ISO 14443A (MIFARE) CSN, ISO 14443B CSN, FeliCa IDm*, and FIPS 201
- Choice of Pigtail or Terminal Strip
- Dimensions: 4.0″ x 1.9″ x 0.9″ (10.3 cm x 4.8 cm x 2.3 cm)
- Read Range: up to 3.25″ (8.25 cm)**

(Black, Gray)

FIPS 201 Approved. Call for details **800-872-5359**

FIPS 201 COMPLIANT
GSA ★ CERTIFIED

iCLASS® R15
Contactless Smart Card Reader
Base Part Number • 6140, 6142, 6148, 6149

- Slim design is perfect for metal mullions or any other space-limited installation
- Provides Wiegand or Clock-and-Data output
- Low Voltage and Current Consumption (5-16 VDC @ <100 mA)
- Reads 13.56 MHz: HID iCLASS, ISO 15693 CSN, ISO 14443A (MIFARE) CSN, ISO 14443B CSN, FeliCa IDm*, and FIPS 201
- Choice of Pigtail or Terminal Strip
- Dimensions: 6.0″ x 1.9″ x 0.9″ (15.3 cm x 4.8 cm x 2.3 cm)
- Read Range: up to 3.5″ (8.89 cm)**

(Black, Gray)

FIPS 201 Approved. Call for details **800-872-5359**

FIPS 201 COMPLIANT
GSA ★ CERTIFIED

iCLASS® R30
Contactless Smart Card Reader
Base Part Number • 6110, 6112, 6118, 6119

- EU/Asian Back Box
- Provides Wiegand or Clock-and-Data output
- Choice of Pigtail or Terminal Strip
- Low Voltage and Current Consumption (5-16 VDC @ <100 mA)
- Reads 13.56 MHz: HID iCLASS, ISO 15693 CSN, ISO 14443A (MIFARE) CSN, ISO 14443B CSN, FeliCa IDm*, and FIPS 201
- Dimensions: 3.3″ x 3.3″ x 0.9″ (8.4 cm x 8.4 cm x 2.3 cm)
- Read Range: up to 4.0″ (10.2 cm)**

(Black, Gray)

FIPS 201 Approved. Call for details **800-872-5359**

FIPS 201 COMPLIANT
GSA ★ CERTIFIED

* FeliCa requires iCLASS Transit Reader.
** Dependent upon installation conditions and credential type

FIPS 201 COMPLIANT
GSA ★ CERTIFIED

FIPS 201 Readers are designed for government agencies and contractors. HID's FIPS 201 readers are GSA approved and included in the U.S. General Services Administration (GSA) FIPS 201 Approved Products List. Additionally, these readers read all of HID's family of iCLASS contactless smart cards. Contact HID for Order Guides.

iCLASS® R40
Contactless Smart Card Reader
Base Part Number • 6120, 6122, 6128, 6129

- U.S./EU/Asian Back Box
- Provides Wiegand or Clock-and-Data output
- Low Voltage and Current Consumption (5-16 VDC @ <100 mA)
- Reads 13.56 MHz: HID iCLASS, ISO 15693 CSN, ISO 14443A (MIFARE) CSN CSN, ISO 14443B CSN, FeliCa IDm*, and FIPS 201
- Choice of Pigtail or Terminal Strip
- Dimensions: 4.8″ x 3.3″ x 1.0″ (12.2 cm x 8.4 cm x 2.4 cm)
- Read Range: up to 4.25″ (10.8 cm)**

(Black, Gray)

FIPS 201 Approved. Call for details **800-872-5359**

FIPS 201 COMPLIANT
GSA ★ CERTIFIED

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iCLASS® RK40
Contactless Smart Card Keypad Reader
Base Part Number • 6130, 6132, 6138, 6139

- Dual-factor authentication with keypad
- Provides Wiegand or Clock-and-Data output
- Low Voltage and Current Consumption (5-16 VDC @ <100 mA)
- Reads 13.56 MHz: HID iCLASS, ISO 15693 CSN, ISO 14443A (MIFARE) CSN CSN, ISO 14443B CSN, FeliCa IDm*, and FIPS 201
- Choice of Pigtail or Terminal Strip
- Illuminated keypad
- Dimensions: 4.8″ x 3.3″ x 1.1″ (12.2 cm x 8.5 cm x 2.8 cm)
- Read Range: up to 4.0″ (10.2 cm)**

(Black, Gray)

FIPS 201 Approved. Call for details **800-872-5359**

FIPS 201 COMPLIANT
GSA ★ CERTIFIED

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iCLASS® RKL55
Contactless Smart Card LCD Keypad Reader
Base Part Number • 6170, 6172, 6178

- LCD guides user through reader usage
- Dual factor authentication with keypad
- Provides Wiegand or Clock-and-Data output
- Reads 13.56 MHz: HID iCLASS, ISO 15693 CSN, ISO 14443A (MIFARE) CSN CSN, ISO 14443B CSN, FeliCa IDm*, and FIPS 201
- Terminal strip only
- Dimensions: 6.1″ x 4.2″ x 4.5″ (15.6 cm x 10.6 cm x 3.7 cm)
- Read Range: up to 4.0″ (10.2 cm)**

(Black)

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iCLASS® R90 Long Range Reader
Contactless Smart Card Reader
Base Part Number • 6150

- Long read range distance (up to 18 inches or 45 centimeters)
- Reads all HID iCLASS credentials
- "Parking Hold" feature allows connection to a loop detector to ensure accurate detection of vehicles in parking lanes
- With a multicolor LED and beeper which can be controlled internally or at host
- Two R90 units can operate one meter apart for "HI-LO" truck and car installations
- 12-24 VDC
- Terminal Strip only
- Dimensions: 12.0″ x 12.0″ x 1.25″ (30.48 cm x 30.48 cm x 3.175 cm)
- Read Range: up to 18.0″ (45.7 cm)**

(Black)

FIPS 201 Approved. Call for details **800-872-5359**

FIPS 201 COMPLIANT
GSA ★ CERTIFIED

* FeliCa requires iCLASS Transit Reader.
** Dependent upon installation conditions and credential type

HID Global Product Catalog

iCLASS® Readers/Writers

Did You Know?
iCLASS Readers can read MIFARE and DESFire Card Serial Numbers (CSN).

iCLASS® RW100
Contactless Smart Card Reader/Writer
Base Part Number • 6101
- Store data remotely on iCLASS card for time and attendance, biometric applications and much more
- Mullion mount
- Offers read/write application to iCLASS credentials
- Provides a bi-directional RS232, RS485, USB or UART connection to a PC or microcontroller
- Low Voltage and Current Consumption (5-16 VDC @ <100 mA)
- Dimensions: 4.0″ x 1.9″ x 0.9″ (10.3 cm x 4.8 cm x 2.3 cm)
- Read Range: up to 3.25″ (8.25 cm)*

(Black, Gray)

iCLASS® RW150
Contactless Smart Card Reader/Writer
Base Part Number • 6141
- Store data remotely on iCLASS card for time and attendance, biometric applications and much more
- Mullion mount
- Offers read/write application to iCLASS credentials
- Provides a bi-directional RS232, RS485, USB or UART connection to a PC or microcontroller
- Low Voltage and Current Consumption (5-16 VDC @ <100 mA)
- Dimensions: 6.0″ x 1.9″ x 0.9″ (15.3 cm x 4.8 cm x 2.3 cm)
- Read Range: up to 3.5″ (8.9 cm)*

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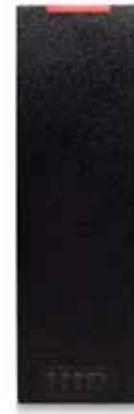
iCLASS® RW300
Contactless Smart Card Reader/Writer
Base Part Number • 6111
- Store data remotely on iCLASS card for time and attendance, biometric applications and much more
- EU/Asian Back Box Size
- Offers read/write application to iCLASS credentials
- Provides a bi-directional RS232, RS485, USB or UART connection to a PC or microcontroller
- Also provides a standard Wiegand output
- Low Voltage and Current Consumption (5-16 VDC @ <100 mA)
- Dimensions: 3.3″ x 3.3″ x 0.9″ (8.38 cm x 8.38 cm x 2.3 cm)
- Read Range: up to 4.0″ (10.2 cm)*

(Black, Gray)

Dependent upon installation conditions and credential type

iCLASS® RW400
Contactless Smart Card Reader/Writer
Base Part Number • 6121
- Store data remotely on iCLASS card for time and attendance, biometric applications and much more
- U.S./EU/Asian Back Box
- Provides a bi-directional RS232, RS485, USB or UART connection to a PC or microcontroller
- Offers Read/Write application to iCLASS credentials
- Ideal for access control, health records time and attendance and digital cash
- Low Voltage and Current Consumption (5-16 VDC @ <100 mA)
- Dimensions: 4.8″ x 3.3″ x 1.0″ (12.2 cm x 8.4 cm x 2.4 cm)
- Read Range: up to 4.25″ (10.8 cm)*

(Black, Gray)

iCLASS® RWK400
Contactless Smart Card Keypad Reader/Writer
Base Part Number • 6131
- Store data remotely on iCLASS card for time and attendance, biometric applications and much more
- U.S./EU/Asian Back Box
- Present a card and use a PIN number for dual verification of identity
- Provides a bi-directional RS232, RS485, USB or UART connection to a PC or microcontroller
- Terminal Strip only
- Dimensions: 4.8″ x 3.3″ x 1.1″ (12.2 cm x 8.5 cm x 2.8 cm)
- Read Range: up to 4.0″ (10.2 cm)*

(Black, Gray)

RWKL550 Smart Card Reader
Contactless Smart Card LCD Keypad Reader/Writer
Base Part Number • 6171
- Store data remotely on iCLASS card for time and attendance, biometric applications and much more
- LCD guides user through reader usage
- Dual-factor authentication with keypad
- Provides a bi-directional RS232, RS485, USB or UART connection to a PC or microcontroller
- Terminal strip only
- Dimensions: 6.1″ x 4.2″ x 4.5″ (15.6 cm x 10.6 cm x 3.7 cm)
- Read Range: up to 4.0″ (10.2 cm)*

(Black)

* Dependent upon installation conditions and credential type

iCLASS® Biometric Readers

bioCLASS™ is HID's iCLASS family of biometric products. Using 13.56 MHz contactless smart card technology, bioCLASS products provide users with new options for supporting multi-authentication of identity. Combine a contactless card presentation with a fingerprint biometric or use a personal identification number (PIN) number along with a contactless card presentation.

The bioCLASS products provide three levels of fingerprint verification. During the enrollment process, the RKLB57 will guide the user to place their finger on the sensor. The fingerprint template is collected at the unit and immediately transferred to the cards. During the enrollment process, the fingerprint template is stored ONLY on the card; it is never transmitted to an external host. During verification at the door, the LCD graphical display will assist the user with instruction about finger placement on the biometric sensor.

bioCLASS™ BIO500
Fingerprint Biometric Verification Module
Base Part Number • 6190
  • Fingerprint biometric module for the RWKLB575
  • Centered finger pad offers ease-of-use for right-or left handed individuals
  • Location of pad is compliant with ADA standards
  • Dimensions: 8.2″ x 4.2″ x 2.3″ (20.8 cm x 10.6 cm x 5.8 cm)

  (Black)

bioCLASS™ RKLB57
Contactless Smart Card Biometric Reader
Base Part Number • 6180, 6188
  • Reads fingerprint template from iCLASS card and verifies against live finger
  • Provides fingerprint enrollment facility
  • LCD guides user through biometric authentication and reader usage
  • Three-factor authentication with fingerprint and keypad
  • Provides a bi-directional RS232, RS485, USB or UART connection to a PC or microcontroller
  • Reads all HID iCLASS and ISO 14443/15693 compatible (CSN) credentials
  • Terminal strip only
  • Dimensions: 8.5″ x 4.2″ x 2.3″ (21.4 cm x 10.6 cm x 5.8 cm)
  • Read Range: up to 4.0″ (10.2 cm)*

  (Black)

bioCLASS™ RWKLB575
Contactless Smart Card Biometric Reader/Writer
Base Part Number • 6181
  • Reads fingerprint template from iCLASS card and verifies against live finger
  • Allows developers to remotely administer enrollment process from enrollment software
  • LCD guides user through biometric authentication and reader usage
  • Three-factor authentication with fingerprint and keypad
  • Provides a bi-directional RS232, RS485, USB or UART connection to a PC or microcontroller
  • Terminal strip only
  • Dimensions: 8.5″ x 4.2″ x 2.3″ (21.4 cm x 10.6 cm x 5.8 cm)
  • Read Range: up to 4.0″ (10.2 cm)

  (Black)

Card Programmers

The iCLASS® CP400 and CP575A Card Programmers are designed for on-site programming of access control data, Personal Identification Number (PIN) codes and user data onto HID iCLASS cards. They allow HID proximity formats, keypad PIN codes and user data fields to be programmed directly into iCLASS contactless smart cards. This enables the system manager to stock configured cards and program cards on demand when new cardholders are added to the system. To ensure security of the format and cards, an iCLASS Card Programmer license is required.

The iCLASS CP400 Card Programmer includes a desktop reader/writer, CD-ROM with programming software and documentation, personalization diskette, universal power supply and serial cable.

The iCLASS CP575A Card Programmer adds fingerprint template programming capability for use with the bioCLASS reader. The iCLASS CP575A includes a desktop reader/writer, CD-ROM with programming software and documentation, personalization diskette, universal power supply and USB cable.

CP400 Card Programmer
Contactless Smart Card Programmer
Base Part Number • 3150
- Stores PIN codes on the card for use with the iCLASS RK40, RWK400, RKL550, RWKL550, RKLB575 and RWKLB575
- Programs four, 16-character user data fields on the card, that can later be read on the programmer
- Reads any iCLASS card when the authentication key is pre-stored in the programmer
- Prints card numbers directly onto the cards using a PVC card printer or on standard Avery labels
- Maintains a secure, encrypted database on a personal computer
- Personalized for individual customers (proprietary formats are restricted to authorized users)

CP575 Card Programmer
Contactless Smart Card Programmer
Base Part Number • 6251
- Stores PIN codes on the card for use with the iCLASS RK40, RWK400, RKL550, RWKL550, RKLB575 and RWKLB575
- Keypad readers configured for local PIN verification
- Programs four, 16-character user data fields on the card, that can later be read on the programmer
- Creates site-specific, high-security authentication keys that are programmed into both readers and cards
- Creates reader configuration cards to program new authentication keys into readers and change other reader operating parameters
- Reads any iCLASS card when the authentication key is pre-stored in the programmer
- Prints card numbers directly onto the cards using a PVC card printer or on standard Avery labels
- Maintains a secure, encrypted database on a personal computer
- Personalized for individual customers (proprietary formats are restricted to authorized users)
- CP575A Card Programmer provides USB user interface capability

HID Global Product Catalog

iCLASS® Reader Specifications

	R10/RW100	**R15/RW150**	**R30/RW300**
Base Model Number	**R10:** 6100/6108/6109 **RW100:** 6101	**R15:** 6140/6142/6148/6149 **RW150:** 6141	**R30:** 6110/6112/6118/6119 **RW300:** 6111
Dimensions	4.04″ x 1.9″ x .9″ (10.5 cm x 5.0 cm x 2.5 cm)	6.1″ x 1.9″ x 0.9″ (15.5 cm x 5.0 cm x 2.5 cm)	3.3″ x 3.3″ x .85″ (8.5 cm x 8.5 cm x 2.0 cm)
Weight	3.2 oz (91 g)	3.2 oz (91 g)	4.0 oz (113 g)
Read Range	Up to 3.25″ (8.5 cm)	Up to 3.5″ (9.0 cm)	Up to 4.0″ (10.0 cm)
Mounting	Mullion	Mullion, Fits footprint of HID MiniProx reader.	Standard EU/Asian back boxes
Power Supply	5-16 VDC, Linear supply recommended		
Current Requirements	55/116 mA	55/112 mA	55/121 mA
Termination	**R10:** Pigtail or Terminal Strip **RW100:** Terminal Strip	**R15:** Pigtail or Terminal Strip **RW150:** Terminal Strip	**R30:** Pigtail or Terminal Strip **RW300:** Terminal Strip
Output Formats	**R10:** Wiegand, Clock-and-Data **RW100:** Wiegand, RS232, RS485, USB, UART	**R15:** Wiegand, Clock-and-Data **RW150:** Wiegand, RS232, RS485, USB, UART	**R30:** Wiegand, Clock-and-Data **RW300:** Wiegand, RS232, RS485, USB, UART
FIPS 201 Certification	Yes		
Tamper	Optical		
Indoor/Outdoor	Both		
Warranty	Lifetime		

R40/RW400	RK40/RWK400	R90	RKL55/RWKL550	RKLB57/RWKLB575
R40: 6120/6122/6128/6129 **RW400:** 6121	**RK40:** 6130/6132/6138/6139 **RWK400:** 6131	6150	**RKL55:** 6170/6172/6178 **RWKL550:** 6171	**RKLB57:** 6180/6188 **RWKLB575:** 6181
4.8″ x .3.3″ x 95″ (12.0 cm x 8.5 cm x 2.0 cm)	4.8″ x 3.3″ x 1.1″ (12.0 cm x 8.5 cm x 2.5 cm)	12.0″ x 12.0″ x 1.25″ (30.5 cm x 30.5 cm x 3.0 cm)	6.14″ x 4.17″ x 1.48″ (15.5 cm x 10.5 cm x 4.0 cm)	8.34″ x 4.17″ x 2.3″ (21.0 cm x 10.5 cm x 4.0 cm)
8.8 oz (250 g)	10.0 oz (283 g)	60.0 oz (1.86 kg)	12.69 oz (360 g)	17.12 oz (485 g)
Up to 4.25″ (11.0 cm)	Up to 4.0″ (10.0 cm)	Up to 18.0″ (45.5 cm)	Up to 4.0″ (10.0 cm)	
U.S./EU/Asian back box		Reader body fits onto base mounting plate. Cover fits over reader body, secured with four screws.	U.S./EU/Asian back box	
5-16 VDC, Linear supply recommended		12-24 VDC reverse voltage protected, Linear supply recommended	9-12 VDC	
R40: 55/121 mA **RW400:** 55/132 mA	**RK40:** 85/116 mA **RWK400:** 85/132 mA	420/1300 mA @ 12 VDC 210/700 mA @ 24 VDC	**RKL55:** 160/250 mA **RWKL550*:** 160/250 mA	**RKLB57:** 270 mA/328 mA **RWKLB575*:** 270 mA/328 mA
R40: Pigtail or Terminal Strip **RW400:** Terminal Strip	**RK40:** Pigtail or Terminal Strip **RWK400:** Terminal Strip	Terminal Strip		
R40: Wiegand, Clock-and-Data **RW400:** Wiegand, RS232, RS485, USB, UART	**RK40:** Wiegand, Clock-and-Data **RWK400:** Wiegand, RS232, RS485, USB, UART	Wiegand, Clock-and-Data	**RKL55:** Wiegand, Clock-and-Data **RWKL550:** Wiegand, RS232, RS485, USB, UART	**RKLB57:** Wiegand, Clock-and-Data **RWKLB575:** Wiegand, RS232, RS485, USB, UART
Yes		No		
Optical		Switch	Optical	
Both			Indoor	
Lifetime			One Year	

* Add 40 mA current draw for USB expansion module. Add 10 mA current draw for RS232, RS485 or UART expansion modules

iCLASS® Credentials

All iCLASS Credentials Feature:

- iCLASS credentials come as cards, tags, and keys.
- 13.56 MHz read/write contactless smart card technology, providing high-speed, reliable communications with superior data integrity.
- The ability to store biometric templates and useful data using read/write capabilities.
- Communications between card and reader that include high security with mutual authentication, encrypted data transfer, and 64-bit diversified keys for read/write.
- Advanced key management systems to reduce the risk of compromised data or duplicated cards.
- Supports all existing HID card formats, including Corporate 1000.
- The ability to factory or field* program any existing HID format into the secure HID access control application area.
- A choice of 2k bits (256 Bytes), 16k bits (2k Bytes) or 32k bits (4k Bytes) memory capacity.
- Lifetime warranty provided for all iCLASS credentials!

Consult factory for availability of the iCLASS Card Programmer, CP400

iCLASS® Card
13.56 MHz Contactless Smart Card
Base Part Number • 200

- Ability to add a magnetic stripe, barcode, anti-counterfeiting feature, custom artwork, or photo ID
- Meets ISO standards for thickness for use with direct image and thermal transfer printers
- Magnetic Stripe optional

iCLASS® Embeddable Card
13.56 MHz Contactless Smart Card
Base Part Number • 201*

- Designed to be embedded with an optional contact smart chip module of your choice
- Enables contact smart chip applications to be added to iCLASS cards in a single ISO standard thickness card
- Offers the ability to add a magnetic stripe, barcode, anti-counterfeiting feature, custom artwork, or photo ID
- Meets ISO standards for thickness for use with direct image and thermal transfer printers
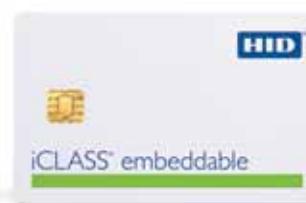
iCLASS® Prox Card
### 13.56 MHz Contactless Smart Card and 125 kHz Proximity Card
Base Part Number • 202

- 13.56 MHz iCLASS read/write technology and 125 kHz proximity technology in a single ISO standard thickness card
- Enables contactless smart card applications to be added to an existing proximity technology access control system
- Offers the ability to add a magnetic stripe, barcode, anti-counterfeiting feature, custom artwork, or photo ID
- Meets ISO standards for thickness for use with direct image and thermal transfer printers

* Base part number does not include contact chip
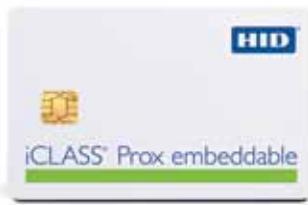
iCLASS® Prox Embeddable Card
13.56 MHz Contactless Smart Card With 125 kHz Proximity
Base Part Number • 203
- Designed to be embedded with an optional contact smart chip module of your choice
- Enables contact smart chip applications to be added to iCLASS cards in a single ISO standard thickness card
- Offers the ability to add a magnetic stripe, barcode, anti-counterfeiting feature, custom artwork, or photo ID
- Meets ISO standards for thickness for use with direct image and thermal transfer printers
- Optional Contact Smart Chip Module

iCLASS® Clamshell Card
Value Price 13.56 MHz Contactless Smart Card
Base Part Number • 208
- Provides contactless smart card technology in a cost-effective card package
- An ABS shell construction that provides durability in harsh environments

iCLASS® Wiegand Card
13.56 MHz Contactless Smart Card and Wiegand Technology
Base Part Number • 204
- Offers a one-card solution combining iCLASS and Wiegand technologies
- Ideal for companies transitioning from Wiegand technology to an HID iCLASS-based system
- Offers the ability to add a magnetic stripe, barcode, anti-counterfeiting feature, custom artwork, or photo ID
- Card thickness is suitable for use with all Wiegand readers, and most direct image printers and magnetic stripe readers (nominal thickness .037″)
- Optional magnetic stripe

iCLASS® Key
Convenient 13.56 MHz Contactless SmartKey
Base Part Number • 205
- Incorporates iCLASS contactless read/write technology into a convenient device approximately the size of an automotive key
- Molded plastic enclosure provides durability in harsh environments
- Provides an external number for easy identification and control
- Can be placed on a key ring or clipped to a lanyard for convenient entry

iCLASS® Tag
13.56 MHz Contactless Smart Tag With Adhesive Back
Base Part Number • 206
- Provides the convenience of HID's iCLASS contactless read/write technology in a small disk-shaped package
- Seamlessly upgrade from Wiegand, magnetic stripe, barium ferrite, or proximity technologies by adhering the Tag to an existing access card*
- Allows users to easily and cost-effectively turn a plastic ID badge or contact smart chip card into a contactless smart card
- Attaches easily to cell phones, PDAs, and other non-metallic objects

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* Consult HID for specific guidelines for actual placement. Not for use with cards used with tractor feed (full insertion) readers.

iCLASS Meets Industry Standards

The development team at the Identification Technology Group of ASSA ABLOY has utilized advanced semiconductor technology based on the 13.56 MHz frequency to meet numerous ISO standards. iCLASS readers can read data from cards compliant with the following standards:

ISO 15693 - read/write; 2k bits (256 Bytes), 16k bits (2k Bytes), and 32k bits (4k Bytes)
ISO 14443, Type A - read only; MIFARE® (serial number)*
ISO 14443, Type B2 - read/write; 2k bits (256 Bytes), 16k bits (2k Bytes), and 32k bits (4k Bytes)

Meeting the standards above is important in smart card technology because they enable many equipment and application developers to work with this technology to create a broader range of uses for the card.

*The R90 is an ISO 15693 reader and will not read MIFARE cards

	iCLASS® Clamshell	iCLASS® Card	iCLASS® Card Embeddable
Base Part Number	2080	200X/210X	201X/211X
Read Range: *			
R10/RW100	Up to 2.5″ (6.5 cm)	Up to 3.25″ (8.0 cm)	
R30/RW300	Up to 3.0″ (7.5 cm)	Up to 4.0″ (10.0 cm)	
R40/RW400	Up to 4.5″ (10.0 cm)	Up to 4.25″ (11.0 cm)	
RK40/RK400	Up to 4.0″ (9.0 cm)	Up to 3.5″ (9.0 cm)	
Memory Size/ Application Areas	2k bits with two areas	2k bits with two application areas; 16k bits with two application areas (16k/2); 16k bits with 16 application areas (16k/16); 32k bits (16k/2+16k/1); 32k bits (16k/16+16k/1)	
HID Proximity 125 kHz	No		
Contact Smart Chip Module Embeddable	No		Yes**
Wiegand Strip	No		
Magnetic Stripe	No	Optional	
Printable ***	Yes		
Standard HID Artwork	Optional		
Slot Punch	Vertical Included	Vertical Optional	
Visual Security Options	N/A	Yes	
Additional Security Options	Corp 1000, iCLASS Elite		
Warranty	Lifetime		

* Dependant upon installation conditions.
** Contact smart chip module not included. Ask about HID's SMARTS Program for off-the-shelf contact smart chip embedded cards.
*** Some types of printing processes can take these credentials out of ISO compliance for thickness. Consult factory for more information.

Did You Know...

...the same card data formats used in HID Prox are all available in iCLASS?

iCLASS® Prox	iCLASS® Prox Embeddable	iCLASS® Wiegand	iCLASS® Key	iCLASS® Tag
202X/212X	203X/213X	204X	205X	206X
Up to 3.25″ (8.0 cm)		Up to 3.0″ (7.5 cm)	1.5″ (4.0 cm)	
Up to 4.0″ (10.0 cm)		Up to 3.0″ (7.5 cm)	2.0″ (5.0 cm)	
Up to 4.25″ (11.0 cm)		Up to 4.5″ (11.5 cm)	2.0″ (5.0 cm)	
Up to 3.5″ (9.0 cm)		Up to 2.5″ (6.5 cm)	2.0″ (5.0 cm)	
2k bits with two application areas; 16k bits with two application areas (16k/2); 16k bits with 16 application areas (16k/16); 32k bits (16k/2+16k/1); 32k bits (16k/16+16k/1)				
Yes		No		
No	Yes**	No		
No		Yes	No	
Optional			No	
Yes			No	
Optional			No	Yes
Vertical Optional		Horizontal or Vertical Optional	Key Ring Hole	No
Yes			N/A	
Corp 1000, iCLASS Elite				
Lifetime				

HID Connect®

HID Connect® is the hardware and software partnership arm of HID Global Corporation. Focused on positioning HID as a platform provider to help expand and support the new "ecosystem" that requires a single credential for many day-to-day applications, HID Connect promotes products, applications and solutions that use HID 13.56 MHz iCLASS®, MIFARE® or DESFire® and 125 kHz proximity technologies.

By combining HID Global's strength in all aspects of secure credentialing with Partner solutions, HID can extend the use of a single-secure credential to cost-effectively and conveniently solve additional business problems throughout an enterprise. The ultimate goal of HID Connect is to help end-users "do more than open the door" with their HID cards.

HID Connect Partners offer a variety of hardware, software and full solutions that incorporate proximity, iCLASS or MIFARE technologies. To find a Partner solution, simply "click" on the solution category above. Or, if you need assistance in location an HID Connect Partner, please send an e-mail to hidconnect@hidglobal.com.

Help HID Global build a cohesive development community around HID's contactless technologies, creating a network for industry collaboration, future development, and partnership opportunities. To become an HID Connect Development Partner, please contact your local HID representative or send an e-mail to hidconnect@hidglobal.com.

IT Secure Authentication

Cashless Vending

e-Purse Applications

Photo ID

Access Control

Mobile Verification

Time & Attendance

Parking Control

Medical Records

Multi-Authentication
Store Biometric Templates on Your Card!

Ask the Expert

Q: Is it hard to use a smart card for access control?

A: It depends on what you mean by "smart card". You see, there are two different types of smart cards. A "contactless" smart card is very easy to use for access control. A "contact" smart card is not typically used for that purpose.

Contact Smart Cards:

These are what most people think of when they hear the term "smart card." They have a microchip and a copper interface leaf imbedded into the surface of the card. These cards must be inserted into a thin reader slot to be used, a process that works well in an office environment, but is not ideal for outdoor or industrial applications. Furthermore, contact smart card readers are a prime target for vandalism. Once vandalized, the reader typically must be replaced.

Advantages:

Contact smart cards do have some very significant advantages compared to contactless smart cards. They are available in much greater memory capacity, up to 2 Mb (2 megabits), and with more powerful microprocessors. Large memory files like high-resolution photographs and complete medical histories can fit on contact smart cards. Certain cryptographic processes used in high-security financial and legal applications can only be accomplished by utilizing contact smart cards. But for access control use, you'll typically want to use contactless smart cards.

Contactless Smart Cards:

A contactless smart card is essentially the same as any regular proximity card. It can be read (and written to) several inches from the reader, and it works really fast. Contactless cards can be programmed with a conventional card data format like 26-bit Wiegand. A compatible reader can read that data and send it on to a controller. The controller can't tell any difference compared to data from a regular proximity (or even Wiegand swipe) card.

Advantages:

For access control purposes, there is little comparison. The many benefits of proximity technology have been widely accepted since 1974. Contactless smart cards used for access purposes share all of the same advantages including great ease of use, high reliability, and long life of both cards and readers. In addition, the contactless smart cards can be used to carry many types of additional binary data including the following:

- Biometric (fingerprint, hand geometry, etc.) templates
- Complex PC and network passwords for logical access security
- Formatted medical data for university, military and industrial applications.
- Money for vending, cafeteria payment, laundry and telephone use, etc.
- Building system and lighting control
- And many more

Different types of contactless cards and different memory sizes control how many and which kinds of applications can be combined on one card. The access control benefits, however, remain the same regardless of what other functions are managed by the card. None of these features can be accomplished by conventional access cards of any kind.

Choosing a contactless smart card solution for an access system gives the end user an almost unlimited range of future applications that can co-exist on the same card. The fact that smart card readers are compatible with virtually all access control panels, just like Wiegand or Prox readers, gives them a universal appeal. For any new or completely renovated access system, contactless smart cards are the way to go.

iCLASS Elite

As an extension of the HID Corporate 1000 Program, HID is pleased to introduce the iCLASS Elite Program, offering end-users the highest level of card-to-reader security available today!

When using iCLASS contactless smart card technology, the iCLASS Elite Program provides security professionals the ability to standardize on a "single credential" solution that can be used for all applications and locations throughout the enterprise worldwide. The mutual authentication and encryption features of the technology enhance the "peace of mind" offered by this solution.

Similar to the Corporate 1000 Program, the iCLASS Elite Program offers end-users their own proprietary key. This key protects the card number within the access control application of the card. Cards and readers are programmed in the HID factory to match. Only matching cards and readers will work together, further prohibiting cards and readers from foreign populations to enter and function within the company's Elite secured population.

Combined with HID's Corporate 1000 Program, the iCLASS Elite program offers customers multiple layers of card to reader security.

Consult factory for availability.

With HID, there's more than one way to be smart.
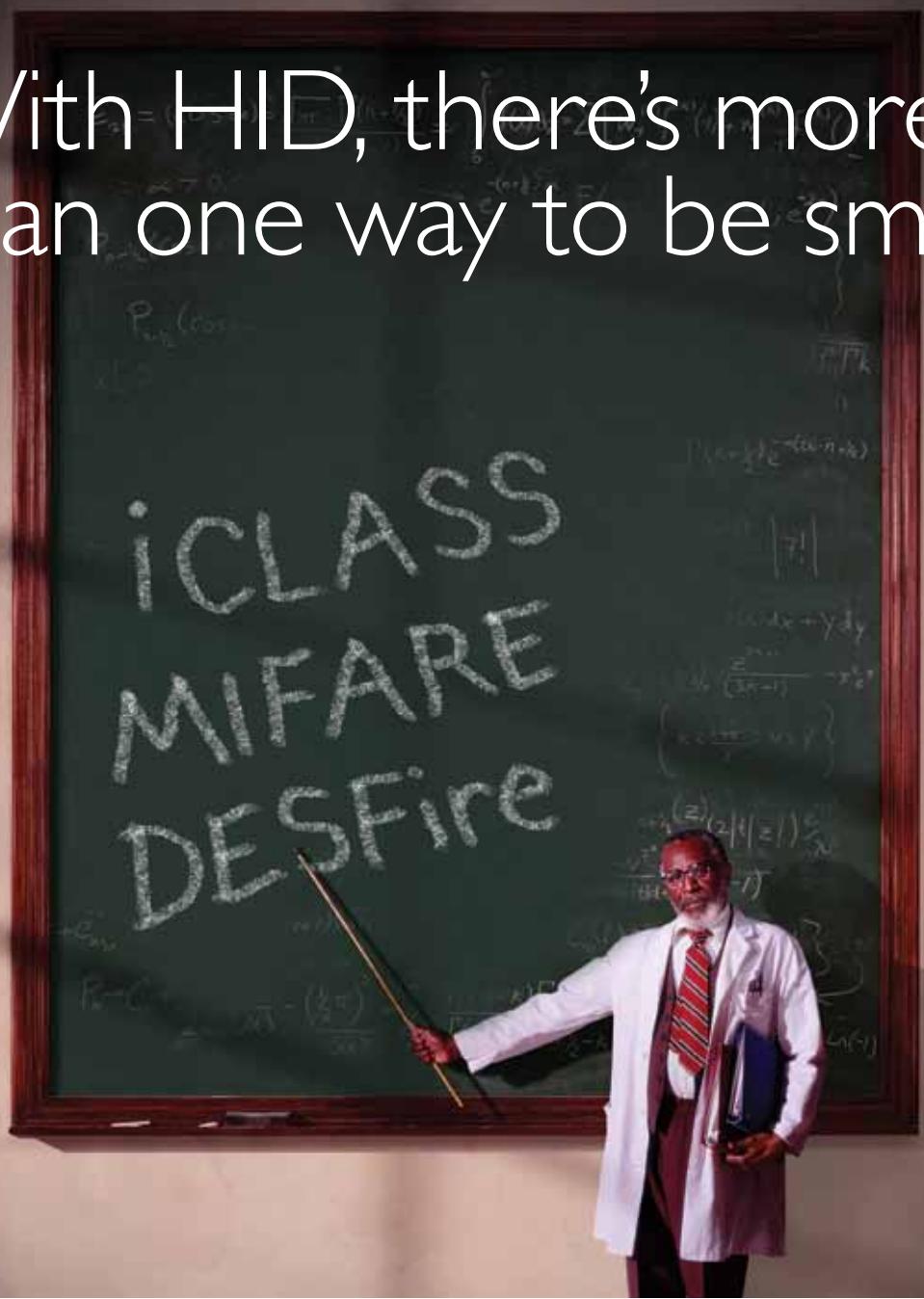
We think 13.56 MHz smart technology is great, but an open approach is even better.

13.56 MHz smart technology offers an unbeatable combination of enhanced security along with the ability to support other applications such as time and attendance, cashless vending and more. That's why we offer product lines featuring all of the leading smart solutions – iCLASS®, MIFARE® and DESFire® – as well as multi-technology cards and readers that can help make any migration smoother and easier. All of the solutions have their strong points, but we like to think the strongest point of all of them is the expertise and support of HID.

hidglobal.com

HID

ACCESS technology.

SmartID™ Readers

13.56 MHz MIFARE® and DESFire® Contactless Cards and Readers

SmartID Contactless Smart Card Readers are completely compatible with the requirements of ISO 14443A (MIFARE/DESFire) and are a perfect choice for access control, data storage solutions and multiple applications. The open architecture and highly customizable platform enables adaptation to an assortment of card population scenarios. Adding to the security and flexibility of tailored ISO 14443 applications, a wide variety of form factors and multi-factor authentication product is available, including keypad and biometric readers. Choose from a full range of HID's 13.56 MHz offerings encompassing the industry's broadest range of open standard contactless smart card products, available from over 40,000 resellers worldwide.

SmartID™ Readers

Did You Know...

The SmartID reader offers the ultimate choice in interoperability and programmability. Designed for a wide variety of applications from entry level access control to secure ID management, the reader family is completely configurable for every access control application challenge.

SmartID Mullion - S10
ISO 14443A Contactless Smart Card Reader
Base Part Number • 8030

- Reads data from any Smart Card including HID MIFARE
- Can be configured for almost any custom card population
- Choose from a variety of reader outputs, including Wiegand, Clock-and-Data, RS232, RS485 and RS422.
- Reader firmware loaded from smart card makes upgrades and maintenance painless
- Dimensions: 5.59″ x 1.81″ x 0.98″ (14.2 x 4.6 x 2.5 cm)
- Read Range: up to 1.18″ (3.0 cm)
- Additional accessory (p/n 8090AS) turns reader into single-gang electrical mount

Silver

FIPS 201 Approved. Call for details **800-872-5359**

FIPS 201 COMPLIANT

SmartID Mullion Keypad - SK10
ISO 14443A Contactless Smart Card Keypad Reader
Base Part Number • 8031

- Reads data from any ISO 14443A (MIFARE/DESFire) Contactless Smart Card
- Can be configured for almost any custom card population
- Choose from a variety of reader outputs, including Wiegand, Clock-and-Data, RS232, RS485 and RS422.
- Keypad offers dual-factor authentication
- Reader firmware loaded from smart card makes upgrades and maintenance painless
- Dimensions: 5.59″ x 1.81″ x 0.98″ (14.2 x 4.6 x 2.5 cm)
- Read Range: up to 1.18″ (3.0 cm)
- Additional accessory (p/n 8090AS) turns reader into single-gang electrical mount

Silver

FIPS 201 Approved. Call for details **800-872-5359**

FIPS 201 COMPLIANT

SmartTOUCH™ Biometric Readers

SmartTOUCH - SB10
ISO 14443A Contactless Smart Card Biometric Reader
Base Part Number • 800-8050*

- Biometric authentication in conjunction with data from any ISO 14443A (MIFARE/DESFire) Contactless Smart Card
- Can be configured for almost any of custom card population
- Choose from a variety of reader outputs, including Wiegand, Clock-and-Data, RS232, RS485 and RS422.
- Field fingerprint enrollment at the reader for simplicity and convenience
- Dimensions: 7.58″ x 1.99″ x 1.69″ (19.25 x 5.05 x 4.3 cm)
- Read Range: up to 1.18″ (3.0 cm) MIFARE
- Additional accessory (p/n 500-8095) turns reader into single-gang electrical mount

Silver

SmartTOUCH Keypad - SBK10
ISO 14443A Contactless Smart Card Biometric Keypad Reader
Base Part Number • 800-8055*

- Biometric authentication in conjunction with data from any ISO 14443A (MIFARE/DESFire) Contactless Smart Card
- Can be configured for almost any custom card population
- Three-factor authentication finger + card + pin
- Field fingerprint enrollment at the reader for simplicity and convenience
- Dimensions: 7.58″ x 1.99″ x 1.69″ (19.25 x 5.05 x 4.3 cm)
- Read Range: up to 1.18″ (3.0 cm) MIFARE
- Additional accessory (p/n 500-8095) turns reader into single-gang electrical mount

Silver

* Multiple base part numbers available depending upon application.

SmartID™ Card Programmers

The SmartTOOLS™ desktop card programmer suite is a flexible, highly secure and stylish Contactless Smart Card programmer, ideal for customers that require access card programming and/or reader customization for new or existing installations. The SmartTOOLS software suite offers two software packages:

ProxBurn CP100, part number 501-7753
ReaderTOOLS CP101, part number 501-7756

ProxBurn is a card programming suite for MIFARE cards that allows the user to program 32-bit Wiegand card numbers and flexible Clock-and-Data card formats up to 10 digits using site specific security keys for MIFARE and DESFire cards. ReaderTOOLS is a SmartID reader configuration tool. ReaderTOOLS allows users to create configuration cards that customize the behavior of any SmartID reader. Using an existing key management process, ReaderTOOLS enables customers to secure readers with site specific keys known only to the site manager. After creation of configuration cards, site managers configure readers by placing the configuration card in front of the reader. After configured, SmartID readers will read, process and output custom programmed MIFARE data.

ProxBurn and ReaderTOOLS are both available for Windows® 2000/XP/2003. Software licenses and/or NDAs are required for use.

ProxBurn - CP100
Card Programmer
Base Part Number • 501-7753
  • Programs 32-bit Wiegand card numbers
    (MIFARE only)
  • Programs up to 10 Clock-and-Data ABA digits
  • Programs access cards with site specific security keys
  • RS232 connection to computer
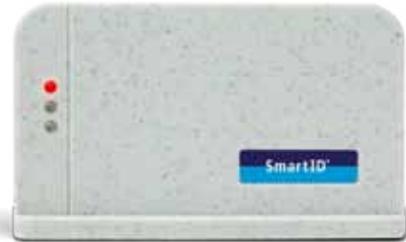
ReaderTOOLS - CP101
Configuration Card Programmer
Base Part Number • 501-7756
  • Programs SmartID Reader Configuration Cards
  • Allows users to setup secure site specific reader keys
  • Enables users to configure a multitude of reader
    settings
  • Configure any SmartID reader
  • USB connection to computer

SmartID™ Reader Specifications

	SmartID™ Mullion S10	SmartID™ Mullion Keypad SK10	SmartTOUCH™ SB10	SmartTOUCH™ Keypad SBK10
Base Model Number*	8030	8031	800-8050	800-8055
Dimensions	5.59″ x 1.81″ x 0.98″ (14.0 cm x 4.6 cm x 2.5 cm)		7.58″ x 1.99″ x 1.69″ (19.5 cm x 5.0 cm x 4.5 cm)	
Weight	4.3 oz (122 g)		5..5 oz (157 g)	
Read Range	Up to 1.18″ (3.0 cm)		Up to 1.18″ (3.0 cm)	
Mounting	Mullion or Single-gang electrical box**			
Power Supply	5-24 VDC		8–24 VDC regulated	
Current Requirements	68 mA / 82 mA (@12 VDC)		208 mA / 417 mA (@12 VDC)	
Termination	Terminal			
Output Formats	Wiegand, Clock-and-Data RS232, RS485, RS422			
Tamper	Option			
Indoor/ Outdoor	Both		No	
Additional Technologies	N/A		Fingerprint Sensor	
Warranty	Lifetime		One Year	

* Multiple base part numbers available depending upon application
** Single-gang mounting requires purchase of additional accessory

FlexSmart® Readers

HID FlexSmart® MIFARE® and DESFire® Contactless Smart Card Readers are completely compatible with the requirements of ISO 14443A and are a perfect choice for access control, data storage solutions and multiple applications.

The open architecture, flexible, highly secure and stylish contactless smart card reader series augments HID's market-leading iCLASS® product line and features three models: FlexSmart MIFARE HID Format Secure Reader (6075), FlexSmart MIFARE Custom Reader (6076), and FlexSmart DESFire Custom Reader (6077). This HID family of contactless smart card products provides options for customers looking for either an out-of-the-box solution or requiring customizable readers. HID's 13.56 MHz offerings encompass the industry's broadest range of open standard contactless smart card products, available from over 40,000 resellers worldwide.

MIFARE® HID Format
Secure Reader 6075
ISO 14443A Contactless Smart Card Series
Base Part Number • 6075

- All keys and formats are preconfigured, making installations easy
- Choose from a variety of HID formats: OEM, Corporate 1000 or 26-Bit
- Complete flexibility to read HID Sector formats and/or CSN
- HID manages all reader and card security for the customer
- Dimensions: 4.3″ x 1.5″ x 0.72″ (10.9 cm x 3.8 cm x 1.8 cm)
- Read Range: up to 2.0″ (5.0 cm)*

Wave (Black, Blue)   Arch (Black, Beige)

....

MIFARE® Custom Reader 6076
ISO 14443A Contactless Smart Card Series
Base Part Number • 6076

- Can be configured to read any third-party formatted cards or to develop a custom format for a new application
- ISO 14443A compatible for card interoperability
- Can read data from any MIFARE sector of the card
- Ideal for customers that require a customizable reader for new or existing installations
- Dimensions: 4.3″ x 1.5″ x 0.72″ (10.9 cm x 3.8 cmx 1.8 cm)
- Read Range: up to 2.0″ (5.0 cm)*

Wave (Blue)   Arch (Black, Beige)

....

DESFire® Custom Reader 6077
ISO 14443A Contactless Smart Card Series
Base Part Number • 6077

- Highly secure data transactions with Triple DES encryption
- ISO 14443A compatible for card interoperability
- Reads data from any DESFire application file on the card
- Ideal for customers that require a customizable reader for new or existing installations
- Dimensions: 4.3″ x 1.5″ x 0.72″ (10.9 cm x 3.8 cm x 1.8 cm)
- Read Range: up to 2.0″ (5.0 cm)*

Wave (Blue)   Arch (Black, Beige)

....

MIFARE® Reader/Writer 6055
13.56 MHz Contactless Smart Card Reader
Base Part Number • 6055

- Configurable as a MIFARE MAD, Sector or CSN Reader
- Wiegand or RS-232 Outputs
- Compatible with all HID formats
- Mounts on a single-gang electrical box for easy installation
- Dimensions: 4.7″ x 3.0″ x 0.68″ (11.9 cm x 7.6 cm x 1.7 cm)
- Read Range: up to 2.0″ (5.0 cm)*

(Black, Gray, Beige, White)

* All Read Ranges are dependent on the type of credential used.

MIFARE® HID Format Secure Keypad Reader 6071
ISO 14443A Contactless Smart Card Series
Base Part Number • 6071
- Keypad enables multi-factor authentication
- Ideal for high traffic areas
- All keys and formats are preconfigured, making installations easy
- Choose from a variety of HID formats: OEM, Corporate 1000 or 26-Bit
- Complete flexibility to read HID Sector formats and/or CSN
- HID manages all reader and card security for you
- Dimensions: 4.7″ x 2.9″ x 1.1″ (11.9 cm x 7.4 cm x 2.8 cm)
- Read Range: Up to 2.0″ (5.0 cm)

MIFARE® Custom Keypad Reader 6072
ISO 14443A Contactless Smart Card Series
Base Part Number • 6072
- Keypad enables multi-factor authentication
- Completely configurable for every access control application challenge
- ISO 14443A compatible for card interoperability
- Can read data from any MIFARE sector of the card
- Dimensions: 4.7″ x 2.9″ x 1.1″ (11.9 cm x 7.4 cm x 2.8 cm)
- Read Range: Up to 2.0″ (5.0 cm)

DESFire® Custom Keypad Reader 6073
ISO 14443A Contactless Smart Card Series
Base Part Number • 6073
- Keypad enables multi-factor authentication
- The reader is completely configurable for every access control application challenge
- ISO 14443A compatible for card interoperability
- Reads data from any DESFire application file on the card
- Secure data transactions with Triple DES encryption
- Dimensions: 4.7″ x 2.9″ x 1.1″ (11.9 cm x 7.4 cm x 2.8 cm)
- Read Range: Up to 2.0″ (5.0 cm)

	MIFARE® HID Format Secure Reader	MIFARE® Custom Reader	DESFire® Custom Reader
Base Model Number	6075	6076	6077
Dimensions	4.3″ x 1.5″ x .72″ (10.9 cm x 3.8 cm x 1.08 cm)		
Weight	4.0 oz (113 g)		
Read Range	Up to 2.0″ (5.0 cm)		
Mounting	Mullion base with interchangeable bezels		
Power Supply	Power Supply 9-16 VDC, Linear supply recommended		
Current Requirements	15-75 mA		
Termination	Pigtail		
Output Formats	Wiegand or Clock-and-Data		
Certifications/ Approvals	FCC Certification, Canada Certification, CE Mark (Europe), New Zealand, Australia c-Tick Pending Certifications: Taiwan, Singapore, Germany VdS, UL 294/cUL,		
Tamper	No		
Indoor/Outdoor	Both		
Warranty	Lifetime		

	MIFARE® HID Format Secure Keypad Reader	MIFARE® Custom Keypad Reader	DESFire® Custom Keypad Reader
Base Model Number	6071	6072	6073
Dimensions	4.7″ x 2.9″ x 1.1″ (11.9 cm x 7.4 cm x 2.8 cm)		
Weight	12.0 oz (340 g)		
Read Range	Up to 2.0″ (5.0 cm)		
Mounting	Single-gang electrical box		
Power Supply	Power Supply 9-16 VDC, Linear supply recommended		
Current Requirements	25 mA /100 mA @ 12 VDC; Linear power supply recommended		
Termination	Pigtail		
Output Formats	Wiegand or Clock-and-Data		
Certifications/ Approvals	FCC Certification, Canada Certification, CE Mark (Europe), New Zealand, Australia c-Tick Pending Certifications: Taiwan, Singapore, Germany VdS, UL 294/cUL,		
Tamper	No		
Indoor/Outdoor	Both		
Warranty	Lifetime		

MIFARE® Card
13.56 MHz Contactless Smart Card
Base Part Number • 1430
- Credit card-thin MIFARE 1K ISO card provides high security with mutual authentication, data encryption and unique 32-bit serial number
- Ideal for diverse applications such as access control, cashless vending, public transportation, corporate and campus applications, event ticketing, customer loyalty and photo ID cards
- Photo ID compatibility allows printing directly to the card with a direct image or thermal transfer printer
- Cards can be produced with visual security and anti-counterfeiting features such as holograms, ultra-violet fluorescent inks, micro-printing or a custom logo
- Also Available in Composite Polyester / PVC, MIFARE 4K and magnetic stripe versions

MIFARE®/Prox Combo Card
13.56 MHz Contactless Smart Card
Base Part Number • 1431
- Combine MIFARE 1K and proximity technologies to add smart card applications, such as cashless vending, corporate and campus applications, event ticketing, customer loyalty and photo ID cards, to access control systems
- Provides high security with mutual authentication, data encryption and unique 32-bit serial number and supports all HID proximity card formats, including Corporate 1000
- Photo ID compatibility allows printing directly to the card with a direct image or thermal transfer printer
- Cards can be produced with visual security and anti-counterfeiting features such as holograms, ultra-violet fluorescent inks, micro-printing or a custom logo
- Also Available in Composite Polyester / PVC and MIFARE 4K versions

DESFire® Card
13.56 MHz Contactless Smart Card
Base Part Number • 1450
- Proven, Reliable Technology – Offers extremely consistent read range. Use is unaffected by body shielding or variable environmental conditions, even when close to keys and coins.
- Fast Processing and Data Communication – Transaction times are less than 100 milliseconds for a typical secure ticketing transaction.

DESFire®/Prox Combo Card
13.56 MHz Contactless Smart Card
Base Part Number • 1451
- Proven, Reliable Technology – Offers extremely consistent read range. Use is unaffected by body shielding or variable environmental conditions, even when close to keys and coins.
- Fast Processing and Data Communication – Transaction times are less than 100 milliseconds for a typical secure ticketing transaction.
- True Credit Card Thickness – Use with all direct image and thermal transfer printers.

MIFARE® Keyfob
13.56 MHz Contactless Smart Card
Base Part Number • 1434
- High Security - MIFARE technology ensures mutual authentication, data encryption and unique 32-bit serial number.
- Proven, Reliable Technology - Offers extremely consistent read range. Use is unaffected by body shielding or variable environmental conditions, even when close to keys and coins.
- Fast Processing and Data Communication - Transaction times are less than 100 milliseconds for a typical secure ticketing transaction.
- Multiple Memory Types - Available in MIFARE 1K and 4K.

DESFire® Keyfob
13.56 MHz Contactless Smart Card
Base Part Number • 1454
- High Security - DESFire technology includes mutual authentication, DES and triple-DES data encryption, and unique 56-bit serial number.
- Proven, Reliable Technology - Offers extremely consistent read range. Use is unaffected by body shielding or variable environmental conditions, even when close to keys and coins.
- Fast Processing and Data Communication - Transaction times are less than 100 milliseconds for a typical secure ticketing transaction.

MIFARE® Adhesive Tag
13.56 MHz Contactless Smart Card
Base Part Number • 1435
- High Security - MIFARE technology ensures mutual authentication, data encryption and unique 32-bit serial number.
- Proven, Reliable Technology - Offers extremely consistent read range. Use is unaffected by body shielding or variable environmental conditions, even when close to keys and coins.
- Fast Processing and Data Communication - Transaction times are less than 100 milliseconds for a typical secure ticketing transaction.
- Multiple Memory Types - Available in MIFARE 1K and 4K.

DESFire® Adhesive Tag
13.56 MHz Contactless Smart Card
Base Part Number • 1455
- High Security - DESFire technology includes mutual authentication, DES and triple-DES data encryption and unique 56-bit serial number.
- Fast Processing and Data Communication - Transaction times are less than 100 milliseconds for a typical secure ticketing transaction.
- Upgrade Tool - Provides the security of DESFire contactless read/write technology in a small, disk-shaped package.

	MIFARE® Card	MIFARE® / HID Prox Combo Card	DESFire® Card	DESFire® / HID Prox Combo Card
Base Part Number	**1430**: PVC 1k Card **1440**: PVC 4k Card **1436**: Composite PET/PVC 1k Card **1446**: Composite PET/PVC 4k Card	**1431**: PVC 1k Card **1441**: PVC 4k Card **1437**: Composite PET/PVC 1k Card **1447**: Composite PET/PVC 4k Card	**1450**: PVC Card **1456**: Composite PET/PVC Card	**1451**: PVC Card **1457**: Composite PET/PVC Card
Read Range: *				
MIFARE	Up to 4.0″ (10.0 cm)		N/A	
DESFIRE	N/A		Up to 4.0″ (10.0 cm)	
HID Prox	N/A	Up to 4.5″ (11.5 cm)	N/A	Up to 4.5″ (11.5 cm)
Indala Prox	N/A		N/A	
Memory Size/ Application Areas	1k Byte (8k bits) or 4k Bytes (32k bits)		4k Bytes (32k bits)	
HID Proximity 125 kHz	No	Yes	No	Yes
Contact Smart Chip Module Embeddable	Yes**			
Wiegand Strip	No			
Magnetic Stripe	Optional			
Printable * **	Yes			
Standard HID Artwork	Optional			
Slot Punch	Vertical optional			
Visual Security Options	Yes			
Additional Security Options	Corp 1000			
Warranty	Lifetime			

* Dependant upon installation conditions.
** Contact smart chip module not included. Ask about HID's SMARTS Program for off-the-shelf contact smart chip embedded cards.
*** Some types of printing processes can take these credentials out of ISO compliance for thickness. Consult factory for more information.

MIFARE® Keyfob	DESFire® Keyfob	Adhesive Tag	DESFire® Adhesive Tag
1434: 1k Keyfob **1444**: 4k Keyfob	**1454**	**1435**: 1k Tag **1445**: 4k Tag	**1455**
Up to 2.0″ (5.0 cm)	N/A	Up to 2.0″ (5.0 cm)	N/A
N/A	Up to 2.0″ (5.0 cm)	N/A	Up to 2.0″ (5.0 cm)
N/A			
N/A			
1k Byte (8k bits) or 4k Bytes (32k bits)	4k Bytes (32k bits)	1k Byte (8k bits) or 4k Bytes (32k bits)	4k Bytes (32k bits)
No			
No			
No			
No			
No			
Yes			
Key Ring Hole		No	
No			
Corp 1000			
Lifetime			

We speak 13.56 MHz.

Fluently.

iCLASS®and SmartID® In 13.56 MHz technology, HID is talking choices. HID believes in the enhanced security and functionality of 13.56 MHz smart technology. Our iCLASS and SmartID product lines cover all the leading smart technologies, whether you're talking iCLASS, MIFARE or DESFire. And our multi-technology cards and readers are there to help you migrate at your own pace. When an access control card provides mutual authentication, and supports applications such as time and attendance, cashless vending and PC log-in security, that is one smart credential. Best of all, HID offers more than one way to get one.

HID

hidglobal.com

ACCESS technology.