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?

Prox and iCLASS® Comparisons

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**

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**

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**

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

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**

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**

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)

(Black)

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)**

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

** FeliCa requires iCLASS Transit Reader.*

*** Dependent upon installation conditions and credential type*

iCLASS® Readers/Writers

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)*

(Black, Gray)

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 RWKLB575 is connected to your PC via a USB port. The software will guide the user to place their finger on the sensor. The fingerprint template is collected at the unit and immediately transferred to the card. During this 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 instructions 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
- 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

iCLASS® Reader Specifications

R10/RW100

R15/RW150

R30/RW300

Base Model Number	**R10:** 6100B/6108B/6109B **RW100:** 6101B	**R15:** 6140A/6142A/6148A/6149A **RW150:** 6141B	**R30:** 6110B/6112B/6118B/6119B **RW300:** 6111B
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: 6120B/6122B/6128B/6129B **RW400:** 6121B	**RK40:** 6130B/6132B/6138B/6139B **RWK400:** 6131B	6150A	**RKL55:** 6170B/6172B/6178B **RWKL550:** 6171B	**RKLB57:** 6180B/6188B **RWKLB575:** 6181B
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

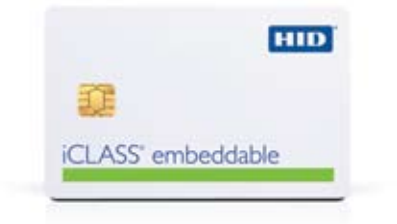
- Ability to add a magnetic stripe, barcode, anti-counterfeiting feature, custom artwork, or photo ID
- Meets ISO standards for thickness for use with direct image and thermal transfer printers
- Magnetic Stripe optional

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

(Black, Gray)

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

iCLASS® Credential Specifications

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
Photo ID
Mobile Verification
Parking Control
Multi-Authentication
Store Biometric Templates on Your Card!
Medical Records
Time & Attendance
Access Control
e-Purse Applications
REFRESHMENT
SMART CARD READER

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.*