# Wiegand

## Application:

HID's *iCLASS* 13.56 MHz read/write contactless smart card technology can be used for diverse applications such as access control, biometrics, cashless vending, public transportation, airline ticketing and customer loyalty programs.  Multiple, securely separated files enable numerous applications and support future growth.

The *iCLASS* Wiegand Card integrates *iCLASS* 13.56 MHz contactless read/write smart card with Wiegand technology on a single card with the ability to add a magnetic stripe, barcode, and anti-counterfeiting features including custom artwork or a photo identification directly on the credential.  You now have the ability to offer a one-card solution that combines existing Wiegand and newly integrated *iCLASS* technology as you transition from Wiegand to HID *iCLASS* technology readers for such diverse applications including access control, network log-on security, automotive vehicle identification, cashless vending, time and attendance, and biometric verification..  The *iCLASS* Wiegand Card is suitable for use with all Wiegand readers and most direct image printers and magnetic stripe readers that feature a nominal thickness of .037" or 0.94mm.

## Features:

- 13.56 MHz read/write contactless smart card technology provides high-speed, reliable communications with high data integrity.
- *iCLASS* technology ensures high security with mutual authentication, encrypted data transfer, and  64-bit diversified keys for read/write capabilities.
- Any existing HID format can be factory or field programmed into the secure HID access control application area.
- Available in 2K bit (256 Bytes) or 16K bit (2K Bytes) configurations

## All 2K bit (256 Bytes) *iCLASS* credentials have the following features:

- Available in two application area configuration only.
- Provides the HID standard access control application area and one other application area for user customization.
- Meets ISO 15693 standard for contactless communications.
- Provides a cost effective way to improve the security of your access control installation.

## All 16K bit (2K Bytes) *iCLASS* credentials have the following features:

- Sufficient read/write memory to store multiple biometric templates.
- Available in a two or sixteen application area configuration.
- Multiple securely separated files enable numerous applications, including the HID standard access control application, and support future growth.
- Meets ISO 15693 and 14443B for contactless communications.

# iCLASS® by HID

## Smart • Powerful • Trusted

## Features

### Read/write Functionality for Multi-functional Memory Applications

*iCLASS* was specifically designed to make access control more powerful, more versatile, and more secure. All radio frequency data transmission between the tag and reader is encrypted using a secure algorithm. By using industry standard encryption techniques, *iCLASS* reduces the risk of compromised data or duplicated tag. For even higher security, the tag data may also be protected with DES or triple-DES encryption. Multiple securely separated application areas are each protected by 64-bit diversified read/write keys which allow complex applications and provide for future expansion.

Security mechanisms such as mutual authentication and encryption are efficiently combined with fast processing and data communication, resulting in transaction times of less than 100 milliseconds for a typical secure e-purse transaction.

### Proven, Reliable Technology

Offers extremely consistent read range. Unaffected by body shielding or variable environmental conditions.

### Long Life

Passive, no-battery design allows for an estimated minimum 100,000 reads.

### Durability

Strong, flexible, and resistant to cracking and breaking.

### Options

- Wiegand Strip
- Magnetic Striipe
- External Card Numbering (inkjet or laser)
- Vertical or horizontal slot puch
- Custom Artwork (text or graphics)

### Warranty

Lifetime Waranty. See complete warranty policy for details.

### Part Numbers

Base Part Number:
- 2040 for 2K bit (256 bytes) card with 2 application areas
- 2041 for 16K bit (2K Bytes) card with 2 application areas
- 2042 for 16K bit (2K Bytes) card with 16 application areas

### Description

13.56 MHz contactless smart card and Wiegand technology

## Specifications:

### Typical Maximum Read Range

R10 2.0"-3.0" (5.0 cm - 7.6 cm)
R30/RW300 2.0" - 3.00" (5.0 cm - 7.6 cm)
R40/RW400 2.5" - 4.5" (6.3 cm - 11.4 cm)
RK40/RK400 1.5" - 2.5" (3.8 cm - 6.3 cm)

### Dimensions

2.127 x 3.375 x .040" Max (5.40 x 8.57 x .10 cm)

### Weight

0.22 oz (6.3 g)

### Card Construction

PVC laminate

### Operating Temperature

-40° to 158° F (-40° to 70° C)

### Operating Humidity

10-95% non-condensing

### Operating Frequency

13.56 MHz

### Transaction Time

<100 ms typical

### Data Retention

10 years

### Baud Rate

14443B mode - 106 Kbps
15693 read/write - 26 Kbps

### Memory Type

EEPROM, read/write

### Multi-Application Memory

2K bit (256 bytes) card - 2 application areas
16K bit (2K Bytes) card - 16 applicaion areas

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