iCLASS® 13.56 MHz contactless smart cards and readers make access control more powerful, more versatile and offer enhanced security through data encryption and mutual authentication between the card and reader.

iCLASS readers are user-friendly, delivering the same convenience and reliability of HID’s world-renowned Prox technology, with state-of-the-art features, driven by evolving industry requirements.

Upgrading from Prox to iCLASS technology has never been so simple. All iCLASS readers provide the same wiring connections, low-current consumption and 5 to 16 volt operation as our Prox readers. Additionally, you can transfer your Prox format and user identification numbers to iCLASS credentials, making the change completely transparent to your access control system.

**Key Features**

- **Format Portability** - Upgrading is completely transparent since the same Prox format and user identification numbers are brought across to your iCLASS credentials, including HID Corporate 1000 formats. Also, Elite custom key program is available for a higher level of security.
- **Secure** - All RF data transmission between the card and reader is encrypted using a secure algorithm. By using industry-standard encryption techniques and advanced key management systems, iCLASS reduces the risk of compromised data or duplicated cards.
- **Interoperability** - iCLASS is based on ISO interoperability standards providing compatibility with many popular card technologies (ISO 15693, ISO 14443A and ISO 14443B).
- **Optimal Read Range Performance** - An auto-tuning feature automatically adjusts the reader for optimal read range performance on any mounting surface.

HID® R10, R15, R30, R40 Readers

13.56 MHz Contactless Smart Card Readers
Plug-n-play with new and existing access control systems

- **Simple Upgrades** - iCLASS readers have the same wiring connections, same low-current consumption and same 5 to 12 volt operation as our Prox readers.
- **Multiple Applications** - HID Connect offers over 70 technology partners which have embedded iCLASS technology into their products providing a single card solution for all your application requirements.
- **GSA approved** - Included in the U.S. General Services Administration (GSA) FIPS 201 Approved Products List.
- **Field Upgradeable** - Utilize firmware upgrade cards to modify reader firmware while installed on site.
## Security
64-bit authentication keys are extremely secure. Readers and cards require matching keys to function. All RF data transmission between the card and reader is encrypted using a secure algorithm. The key management system reduces the risk of compromised data or duplicated cards.

### Elite Custom Keys
Custom keys provide the highest level of security, where cards and readers are uniquely matched to individual sites or customers, and are non-interchangeable. Combining Elite custom keys with our Corporate 1000 can offer companies a scalable solution that can be implemented in facilities worldwide.

### Audiovisual Indication
Audio speaker provides various tone sequences to signify access granted, access denied, power-up and diagnostics. Visually impaired cardholders can easily distinguish between access granted and access denied. A high-intensity light bar provides a clear visual status indication in red, green or amber, even in bright sunlight. Note: Light bar will illuminate amber when a FIPS 201/PIV card is read.

### Easily Interfaced
The reader’s Wiegand output easily interfaces with most existing Wiegand and Clock-and-Data protocol access control panels. The reader reads standard proximity format data from HID iCLASS® cards and will output data as encoded. When reading ISO 14443 cards (MIFARE®/DESFire®), the reader can be configured to output 26-bit, 32-bit (MSB), 32-bit (LSB), 34-bit, 40-bit or 56-bit Wiegand formats based on the CSN (card serial number).

### Indoor/Outdoor Design
Rugged, weatherized polycarbonate enclosure, designed to withstand harsh environments, provides reliable performance and resistance to vandalism.

### Options
- Colors - Black or Gray
- Key Management - Standard or Elite
- Selectable Output Type (for MIFARE cards)

### Termination Options
- 18” Pigtail or Terminal Strip
- Programmable LED/Beep operation
- Accessory - Security Tool: 04-0001-03
- Termination: Enables FeliCa IDm and/or CEPAS CAN/CSN

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### Table: Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>R10</th>
<th>R15</th>
<th>R30</th>
<th>R40</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model Numbers</strong></td>
<td>6108C (Wiegand)</td>
<td>6108C (Wiegand)</td>
<td>6118C (Wiegand)</td>
<td>6128C (Wiegand)</td>
</tr>
<tr>
<td>Read Range</td>
<td>1.25” (3.1 cm)</td>
<td>1.25” (3.1 cm)</td>
<td>1.25” (3.1 cm)</td>
<td>1.25” (3.1 cm)</td>
</tr>
<tr>
<td><strong>Mounting</strong></td>
<td>1.9” x 4.0” x 0.9”</td>
<td>1.9” x 4.0” x 0.9”</td>
<td>3.3” x 3.3” x 0.9”</td>
<td>3.3” x 4.8” x 1.0”</td>
</tr>
<tr>
<td>Dimensions</td>
<td>4.8 cm x 10.3 cm x 2.3 cm</td>
<td>4.8 cm x 10.3 cm x 2.3 cm</td>
<td>8.4 cm x 8.4 cm x 2.3 cm</td>
<td>8.4 cm x 12.2 cm x 2.4 cm</td>
</tr>
<tr>
<td>Power Supply</td>
<td>5-16 VDC, Linear supply recommended</td>
<td>5-16 VDC, Linear supply recommended</td>
<td>5-16 VDC, Linear supply recommended</td>
<td>5-16 VDC, Linear supply recommended</td>
</tr>
<tr>
<td>Current Requirements</td>
<td>55mA AVG, 11mA PEAK</td>
<td>55mA AVG, 12mA PEAK</td>
<td>55mA AVG, 12mA PEAK</td>
<td>55mA AVG, 12mA PEAK</td>
</tr>
<tr>
<td><strong>Environmental</strong></td>
<td></td>
<td><strong>Operating Temperature</strong></td>
<td>-31°C to +65°C (+35°F to 149°F)</td>
<td>-31°C to +65°C (+35°F to 149°F)</td>
</tr>
<tr>
<td><strong>Certifications</strong></td>
<td></td>
<td><strong>Transmit Frequency</strong></td>
<td>13.56 MHz</td>
<td>13.56 MHz</td>
</tr>
<tr>
<td><strong>Transmit Frequency</strong></td>
<td>500 ft (150 m)</td>
<td>22 AWG</td>
<td>500 ft (150 m)</td>
<td>22 AWG</td>
</tr>
<tr>
<td><strong>Card Compatibility</strong></td>
<td></td>
<td><strong>Card Compatibility</strong></td>
<td>1.5693 - read only, 2k bit (256 Bytes), 16k bit (2k Bytes), 32k bit (4k Bytes)</td>
<td>1.5693 - read only, 2k bit (256 Bytes), 16k bit (2k Bytes), 32k bit (4k Bytes)</td>
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<tr>
<td><strong>Card Compatibility</strong></td>
<td></td>
<td><strong>Card Compatibility</strong></td>
<td>1.4443A - read only, 32 bit (256 Bytes), 16k bit (2k Bytes), 32k bit (4k Bytes)</td>
<td>1.4443A - read only, 32 bit (256 Bytes), 16k bit (2k Bytes), 32k bit (4k Bytes)</td>
</tr>
<tr>
<td><strong>Card Compatibility</strong></td>
<td></td>
<td><strong>Card Compatibility</strong></td>
<td>14443A - read only, MIFARE® and DESFire®</td>
<td>14443A - read only, MIFARE® and DESFire®</td>
</tr>
<tr>
<td><strong>Card Compatibility</strong></td>
<td></td>
<td><strong>Card Compatibility</strong></td>
<td>US Government PIV</td>
<td>US Government PIV</td>
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<tr>
<td><strong>Card Compatibility</strong></td>
<td></td>
<td><strong>Card Compatibility</strong></td>
<td>FeliCa IDm and/or FeliCa IDm</td>
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</tr>
<tr>
<td><strong>Card Compatibility</strong></td>
<td></td>
<td><strong>Card Compatibility</strong></td>
<td>CEPAS CAN/CSN (Transit Readers Only)</td>
<td>CEPAS CAN/CSN (Transit Readers Only)</td>
</tr>
<tr>
<td><strong>Card Compatibility</strong></td>
<td></td>
<td><strong>Card Compatibility</strong></td>
<td>UL294/cUL (US), FCC Certification (US), IC (Canada), CE (EU), C-Sick (Australia, New Zealand), SRRC (China), MIC (Korea), FCC (Taiwan), iDA (Singapore), RoHS</td>
<td>UL294/cUL (US), FCC Certification (US), IC (Canada), CE (EU), C-Sick (Australia, New Zealand), SRRC (China), MIC (Korea), FCC (Taiwan), iDA (Singapore), RoHS</td>
</tr>
<tr>
<td><strong>Card Compatibility</strong></td>
<td></td>
<td><strong>Card Compatibility</strong></td>
<td>UL94 Polycarbonate</td>
<td>UL94 Polycarbonate</td>
</tr>
<tr>
<td><strong>Family Model</strong></td>
<td>R-640X.300</td>
<td><strong>Family Model</strong></td>
<td>R-640X.300</td>
<td>R-640X.300</td>
</tr>
<tr>
<td><strong>Warranty</strong></td>
<td>Warranted against defects in materials and workmanship for life. (See complete warranty policy for details.)</td>
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</tr>
</tbody>
</table>

*Consult How to Order Guide for specific ordering instructions.
**Dependent upon installation conditions.

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HID’s iCLASS® 13.56 MHz read/write contactless smart card technology enables numerous applications and supports future growth for an organization’s credential program. A unique form factor, the iCLASS Key II provides the convenience of an iCLASS contactless read/write smart card that is durable for harsh environments.

The size of a typical automotive key, this credential form factor can be placed on a key ring or lanyard and customized for corporate identity and branding purposes. The molded plastic key fob is ideal for diverse applications including access control, network log-on security, parking applications, cashless vending, time and attendance and biometric verification.

Features:
- The iCLASS 13.56 MHz read/write contactless smart key 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 Byte), 16k bit (2k Byte) or 32k bit (4k Byte) configurations.
- Molded plastic enclosure provides durability in harsh environments.

All 2k bit (256 Byte) 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 Byte) and 32k bit (4k Byte) iCLASS credentials have the following features:
- Sufficient read/write memory to store multiple biometric templates.
- 16k available in a two or sixteen application area configuration. 32k available with 16k memory configured in either 2 or 16 application areas, plus an additional 16k user configurable memory.
- Meets ISO 15693 and 14443B for contactless communications.
iCLASS® was specifically designed to make access control more powerful, more versatile, and more secure. All radio frequency data transmission between the key and reader is encrypted using a secure algorithm. By using industry standard encryption techniques, iCLASS reduces the risk of compromised data or duplicated keys. 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.

### 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 key and reader is encrypted using a secure algorithm. By using industry standard encryption techniques, iCLASS reduces the risk of compromised data or duplicated keys. Multiple securely separated application areas are each protected by 64-bit diversified read/write keys which allow complex applications and provide for future expansion.

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### Base Part Number

<table>
<thead>
<tr>
<th>Description</th>
<th>Base Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF-programmable, 13.56 kHz, black with blue insert, customer-specified ID Numbers.</td>
<td>2050, 2051, 2052, 2053, 2054</td>
</tr>
</tbody>
</table>

### *Typical Maximum Read Range*

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Key Fob Construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.555 x 1.25 x 0.235 inches max (3.95 x 3.18 x 0.60 cm)</td>
<td>Ultrasonna skin ABS Shell with TPE insert</td>
</tr>
</tbody>
</table>

### Operating Temperature

-50° to 160° F (-45° to 70° C)

### Weight

0.14 oz (4.0g)

### Memory Size/ Application Areas

2k bit (256 Byte) key – 2 application areas
16k bit (2k Bytes) key – 2 or 16 application areas
32k bit (4k Byte) card – 16k bits in 2 or 16 application areas plus 16k bit user configurable.

### HID Proximity 125 kHz

No

### Contact Smart Chip Module Embeddable

No

### Wiegand Stripe

No

### Magnetic Stripe

No

### Printable

No

### Standard HID Artwork

Yes

### Slot Punch

Key Ring Hole

### Visual Security Options

N/A

### Additional Security Options

Corporate 1000

### Warranty

Lifetime

### Options

Key Ring sold separately (Part Number: 57-0001-02)

External card numbering (inkjet or laser engraving)*Dependent upon installation conditions. Tested using Rev “C” readers.

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