

# iCLASS® RW100, RW300, RW400 Readers

## 13.56 MHz Contactless Smart Card Read/Write Readers

- ▶ **Multiple Applications** - Read/write capabilities support applications such as biometric authentication, time and attendance, PC log-on security and cashless vending
- ▶ **Versatile Development Tool Kit** - Uses same software development kit as all iCLASS products
- ▶ **Convenient Enrollment** - Develop enrollment software for your applications



### ACCESS flexibility.

#### Key Features

- ▶ **Expansion Modularity** - Every RW (read/write) reader comes with an expansion socket that accepts RS232, RS485 or USB communication modules. The readers can read or write to any application area on the iCLASS® credential, with all reader functions controlled by an external host processor via the selected serial interface using the iCLASS serial protocol.
- ▶ **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 international 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.

**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 the ever-evolving industry requirements.

Providing read/write capability, iCLASS is the platform of choice for custom applications. With HID iCLASS credential data storage capacities of 2k bit (256 Byte), 16k bit (2k Byte) or 32k bit (4k Byte), this reader line allows for secure bi-directional data exchange between card and reader by reading and writing user data to iCLASS cards. iCLASS-enabled read/write applications include biometric template storage, cashless vending, time and attendance, alarm system control, HVAC control, process control, and point of sale terminals.

The RW series enables development using versatile tool kits. Use the iCLASS Software Development Kit (SDK) for Windows GUI development, or iCLASS Serial Protocol Document for low-level command structure. Both kits include sample applications and source code. Commands can be sent via the RS232, RS485 or USB hardware protocol.

# Features

## 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. Key management is made easy! All cards are shipped with unique diversified keys, and readers are shipped with compatible keys. All keys are derived from the HID Standard transport key. While cards and readers with Standard keys are interchangeable, the keys are highly secure. Cards can be made unique by ordering with iCLASS<sup>®</sup> Elite formatting.

## 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 Corp. 1000 can offer companies a scalable solution that can be implemented in facilities worldwide.

## Easily Interfaced

The reader's Wiegand output easily interfaces with most existing Wiegand protocol access control panels. The same data is also replicated on the RS232 output lines. The reader reads standard proximity format data from HID iCLASS cards and will output data as encoded. When reading ISO 14443A cards (MIFARE<sup>®</sup>/DESFire<sup>®</sup>), 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 Custom  
Selectable Output Type (for MIFARE cards)  
Termination Options: 18" Pigtail or Terminal Strip  
Programmable LED/Beeper operation  
Accessory - Security Tool; 04-0001-03

	RW100 Mullion Style Reader/Writer	RW300 EU/Asian Back Box Style Reader/Writer	RW400 US Wall Switch Style Reader/Writer
<b>Model Numbers</b>	6101	6111	6121
<b>Communication Modules</b>	RS232, RS485, USB or UART to UART	RS232, RS485, USB or UART to UART	RS232, RS485, USB or UART to UART
<b>* Read Range</b>	iCLASS Card : Up to 3.25" iCLASS Key/Tag : Up to 1.5" MIFARE / DESFire Card (CSN) : Up to 2.0"	iCLASS Card : Up to 4.0" iCLASS Key/Tag : Up to 2.0" MIFARE / DESFire Card (CSN) : Up to 2.5"	iCLASS Card : Up to 4.25" iCLASS Key/Tag : Up to 2" MIFARE / DESFire Card (CSN) : Up to 2.5"
<b>Mounting</b>	The RW100 is physically our smallest reader and is ideally suited for mullion-mounted door installations, U.S. single-gang J-box or any flat surface (Reader will not cover junction box).	The RW300 is 83.8 mm (3.15") square reader is designed to mount to and cover standard European and Asian back boxes.	The RW400 is designed to mount and cover single gang switch boxes primarily used in the United States and includes a slotted mounting plate for European and Asian back box spacing.
<b>Dimensions</b>	1.90" x 4.04" x .80" 4.83 cm x 10.26 cm x 2.03 cm	3.30" x 3.30" x .75" 8.38 cm x 8.38 cm x 1.91 cm	3.30" x 4.80" x .85" 8.38 cm x 12.19 cm x 2.16 cm
<b>Power Supply</b>	Power Supply 5-16VDC, Linear supply recommended		
<b>Current Requirements</b>	50/75 mA @ 12VDC		
<b>Operating Temperature</b>	-40° to 150° F (-40° to 65° C)		
<b>Operating Humidity</b>	5% to 95% relative humidity non-condensing		
<b>Transmit Frequency</b>	13.56 MHz		
<b>Cable Distance</b>	Wiegand Interface 500ft (150m) 22.AWG		
<b>Card Compatibility</b>	<ul style="list-style-type: none"> <li>• 15693 - read/write; 2k bit (256 Byte), 16k bit (2k Byte), 32k bit (4k Byte) iCLASS credentials,</li> <li>• 14443A - MIFARE (read only) and DESFire (read/write),</li> <li>• 14443B - read/write; 2k bit (256 Byte), 16k bit (2k Byte), 32k bit (4k Byte) iCLASS credentials</li> </ul>		
<b>Baud Rates</b>	Configurable to 9.6, 19.2, 38.4, 57.6, 115.2 Kbaud		
<b>Certifications</b>	UL 294/cUL, FCC Certification, Canada Certification CE Mark (Europe), New Zealand, Australia c-Tick Pending Certifications: Taiwan, Singapore, Germany VdS		
<b>Housing Material</b>	UL94 Polycarbonate		
<b>Warranty</b>	Warranted against defects in materials and workmanship for life. (See complete warranty policy for details.)		

\*Dependent upon installation conditions.

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MKT-RW100\_RW300\_RW400-DS-EN



## ACCESS experience.

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