

Multi-Technology Reader

HID's new RP40 multiCLASS is the most versatile access control reader on the market, offering a complete card management upgrade solution that combines the features of both Prox and iCLASS reader technologies with the security and simplicity that customers expect from HID.

Some Background

The primary consideration in designing the RP40 was to develop an access control reader that would support a reader-based access control technology upgrade from HID Prox to HID iCLASS.

In the past, smaller facilities did a complete change-out of cards and readers, while the larger facilities selected multi-technology cards for their upgrade solution. While both solutions work well, some facilities seek a reader-only solution. Typically, large installations with multiple or multi-national facilities with mixed technology cards are excellent candidates for a multi-technology reader.

The Technology Platform

Starting with our new iCLASS platform that incorporates low-current consumption, 5-16VDC operation, auto-tuning and modular expansion capabilities, we designed a proximity reader interface module. This is the same expansion interface that enables iCLASS development partners to custom tailor iCLASS reader technology for their systems. When this proximity expansion module is combined with our iCLASS reader, it provides a seamless blending of two (high and low frequency) readers becoming the RP40 multiCLASS reader.

Design Challenges

While it may appear easy combining two readers in a single housing, the product development team faced many challenges. For example, when two different frequency antennas are combined, a mutual interference results and read range is impeded. This problem was overcome by balancing both antennas for a harmonious coexistence. Finally, the development team had to confirm that the new RP40 multiCLASS reader could be mixed with other iCLASS readers, providing the same features, security and human interaction. The objective was ensuring that the reader could upgrade a facility to iCLASS cards, in a method that works best for each installation, thereby providing a custom tailored, seamless solution for each customer.

Another major challenge was the ability to read multi-technology cards. Other security industry manufacturers have struggled with reading these types of cards and we needed to ensure that various card types interfacing with the RP40 was perfectly seamless. To accomplish this need for flexibility, the RP40 features a unique reader configuration capability. Each facility can now determine how they prefer to process multi-technology cards and eliminate multiple data transfers that can cause "reader confusion" and/or controller errors.

What This Means to Customers

From a user perspective, it means the RP40 simplifies one of the major challenges in any technology upgrade project, the ability to use existing cards, deploy multi-technology cards, and transition to new contactless smart card technology without having to change the access control system card holder database. This is because all Prox data formats, including HID's Corporate 1000 can be replicated on iCLASS cards and combination cards.

For customers who deploy multi-technology cards with both Prox and iCLASS technologies, the RP40 can be set to "prefer" which technology will be read first. Once the upgrade is completed, the RP40 can then be configured to ignore Prox cards, thereby matching the security level of the other iCLASS readers.

What About Security?

With RP40, the reader does not just read CSN numbers; it protects the data from being comprised. With HID's format, you need to authenticate with a card to access the data, as the data is protected behind a firewall. In addition, with the RP40, the customer can choose a sequential range of data, whereas with other multi-technology readers, they can only read a CSN which is a random number. This means the RP40 delivers true security through mutual authentication, while data encryption delivers secure transactions that is not possible with a CSN reader.

Putting It All Together

- A single reader for multiple card technologies, including combination cards:
 - HID Prox all formats
 - iCLASS
 - DESFire™ and FIPS 201
 - ISO 15693 CSN (MyD, I Code, Tag It)
 - ISO 14443A CSN (MIFARE®)
 - FeliCa™ CSN
- Flexible options for reading multi-technology cards
- Simple migration from HID Prox to iCLASS
- RP40 has same wiring connections and same card formats as Prox
- Ultra-low current consumption (70 mA)
- Larger voltage span (5-16 VDC)
- Corporate 1000 formats can be easily migrated from Prox to iCLASS
- Auto tuning to ensure consistent read ranges across mounting surfaces.

Question and Answers

How does the RP40 differ from the competition?

Selection of Prox only or iCLASS only read functions provides the ability to manage which card type is read, where, and when, to ensure security is maintained during and after upgrading access control technology.

Fact: SWH and GE do not have this functionality with two readers in a single housing vs. one blended reader.

If a multi-technology card is presented to a reader, which data do you want to read?

The RP40 lets you select which technology data you want to read. Whether it is Prox or iCLASS, only one number is sent. This simplifies card data processing by eliminating multiple data transfers from the reader that can cause controller errors.

While having two technologies can be advantageous for upgrading a card population, after you are done ...why leave Prox on?

By turning Prox off, you provide the customer a higher level of security.

Fact: SWH and GE cannot do this!

Why Choose the RP40 over the Others?

- Ideal Upgrade Solution
- Higher Card to Reader Security
- Simple Upgrade Installation
- Eliminates Card Format Transition Problems
- Card Technology Interoperability
- Easy to Customize to Ensure Security
- No Reader "Confusion" When Reading Combination Cards
- Widest Variety of Readers Available
- Custom Site Keys with HID Elite Program
- Unbeatable Warranty
- Unique RP40 Competitive Advantages

Only the RP40 provides true iCLASS security, the ease of Prox, the power of smart cards and the confidence of choosing HID, the worldwide leader in access control.