HID®

iCLASS® Card

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CONTACTLESS SMART CARD
PVC CARDS 2000, 2001, 2002, 2003, 2004
COMPOSITE PVC/PET CARDS 2100, 2101, 2102, 2103, 2104

- **Proven, Reliable Technology** – Offers extremely consistent read range. Unaffected by body shielding or variable environmental conditions.

- **Thin** – Can be carried with credit cards in a wallet or purse. Use with a strap and clip as a photo ID badge.

- **Long Life** – Passive, no-battery design allows for an estimated minimum 100,000 reads.

- **Durable** – Strong, flexible, and resistant to cracking and breaking.

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 Card offers iCLASS 13.56 MHz contactless read/write smart card technology along the ability to add a magnetic stripe, barcode, and anti-counterfeiting features including custom artwork or a photo identification directly on the credential. Your iCLASS Card can now be utilized for such diverse applications including access control, network log-on security, automotive vehicle identification, cashless vending, time and attendance, and biometric verification. Multiple securely separated files enable numerous applications and can support future capabilities. The iCLASS Card meets strict ISO thickness standards for use with direct image

and thermal transfer printers.

iCLASS® was specifically designed to make access control more powerful, more versatile, and more secure. All radio frequency data transmission between the card and reader is encrypted using a secure algorithm. By using industry standard encryption techniques, iCLASS reduces the risk of compromised data or duplicated cards. For even higher security, the card 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.

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 Byte), 16k bit (2K Byte) or 32k bit (4K Byte) configurations.
- Meets ISO standards for thickness for use with all direct image and thermal transfer printers
- Add a magnetic stripe, barcode, anti-counterfeiting, or photo ID.

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.
- 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.

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OPTIONS
- Magnetic stripe
- External card numbering (inkjet or laser engraving)
- Vertical slot punch
- Custom artwork (text or graphics)

  (Please see "How To Order Guide" for a description of the options and associated part numbers.)

SPECIFICATIONS

Base Part Number	2000 for 2k bit (256 Byte) card 2001 for 16k bit (2k Byte) card with 2 application areas 2002 for 16k bit (2k Byte) card with 16 application areas 2003 for 32k bit (4k Byte) 16k/2+16k/1. 2004 for 32k bit (4k Byte) 16k/16 + 16k/1.
Description	13.56 MHz contactless smart card.
Card Construction	Thin, flexible polyvinyl chloride (PVC) laminate.
Dimensions	2.127" x 3.375" x 0.033" max. (5.40 x 8.57 x 0.084 cm)
Weight	0.20oz (5.7 g)
Operating Temperature	-40° to 158° F (-40° to 70° C)
Operating Humidity	5-95% non-condensing
Operating Frequency	13.56 MHz
RF Interface	As suggested by ISO/IEC:15693 read/write, 14443B mode - 106 kbps
Transaction Time	<100 ms typical
Baud Rate	14443 B2 mode - 212 kbps 15693 mode - 26 kbps
Memory Type	EEPROM, read/write
Multi-application Memory	2k bit (256 Byte) card – 2 application areas 16k bit (2k Byte) card – 2 or 16 application areas 32k bit (4k Byte) card – 16k bits in 2 or 16 application areas plus 16k bits user configurable.
Write Endurance	Min. 100,000 cycles
Data Retention	10 years
Typical Maximum Read Range	R10 2.0-3.0" (5.0-7.6cm) R30/RW300 2.0-3.5" (5.0-8.9cm) R40/RW400 2.5-4.5" (6.3-11.4cm) RK40/RWK400 3.0-4.0" (7.6-10.1 cm) *Dependent upon installation conditions.
Card Marking	Print directly to the card with a direct image or thermal transfer printer. Slot punch vertically for easy use. *
Custom Graphics	Optional
Operates With	iCLASS® readers
Warranty	Lifetime warranty. See complete warranty policy for details.

* When customizing cards using Re-Transfer Printers that fuse images to the surface of the card by applying heat and pressure (such as the FARGO HDP5000) we recommend the use of composite cards, which are better able to withstand the higher application temperatures.

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