iCLASS® High Frequency Migration Readers

Supports migration from MIFARE Classic to MIFARE DESFire EV1 or HID iCLASS®

▶ **MIFARE® DESFire® EV1 Support** – Supports latest NXP DESFire technology including AES Encryption

▶ **Proven Architecture** – Built on HID Global's world leading and flexible iCLASS® reader architecture

▶ **SAM-enabled** – Secure Access Module stores key information and processes encryption and key diversification algorithms

▶ **Multi-technology Support** – Simultaneous support of HID iCLASS, MIFARE DESFire EV1, MIFARE Classic, ISO CSN and HID Prox for convenient credential migration strategies

HID

ACCESS flexibility.

Built on iCLASS® reader architecture, HID Global's iCLASS High Frequency Migration Readers are designed to support the ever-expanding universe of credential technologies. MIFARE® DESFire® EV1, the latest secure credential technology to hit the market, provides advanced cryptographic features and joins iCLASS among secure contactless smart card technologies. Fully interoperable and supporting a wide range of mounting methods, HID's iCLASS HF Migration Readers feature simultaneous support of standard iCLASS, MIFARE DESFire EV1 Application/File, MIFARE Classic Sector, ISO14443 and ISO15693 CSN and HID Prox.

MIFARE® DESFire® EV1 and SAM Support

Supporting MIFARE DESFire EV1 technology with the Advanced Encryption Standard (AES), the reader uses an embedded SAM (Secure Access Module) for cryptographic operations, equipped with hardware security measures that allow the safe and secure storage of secret keys. In a typical application, the SAM is used to authenticate the MIFARE DESFire EV1 card and decrypt data read from the card using the AES cryptographic standard with 128-bit keys. The embedded SAM is environmentally secure from weather and can be upgraded through application or configuration cards.

Migration

Terminal strip connections and flush mounting accessories, combined with MIFARE Classic compatibility, provide easy migration from existing smart card reader technologies to HID iCLASS and MIFARE DESFire EV1. The readers simultaneously read iCLASS, MIFARE DESFire EV1 and legacy MIFARE Classic credentials, including compatibility with MIFARE DESFire EV1 and MIFARE Classic customer-defined keys and CSN usage for access control. A powerful data processing engine provides the flexibility to comply with common pre-existing MIFARE Classic credential field configurations, including those using custom keys, MAD and TLV formatting.

Customized Configuration Services and Tools

To ease migration, HID Global can assist organizations in generating secure configurations or securely transferring sensitive information to HID Global for use in reader production, governed by HID Global's Key Management Security Policy. Optionally, the iCLASS Reader Configuration Tool provides the flexibility to define MIFARE DESFire EV1 and MIFARE Classic data structures and custom keys using a quick-turn custom application configuration.

Whether you have a large project requiring the reader configuration tool for on-site security, or multiple installations requiring the management of multiple key sets from your reader production site, the iCLASS Reader Configuration Tool delivers the flexibility of reader configuration to your facility. A package including a desktop reader, configuration smart cards, the secure access module (SAM) and a software application provides secure data storage mechanisms and enables the secure configuration of readers through configuration smart cards or a direct serial connection to the reader for PC USB port.

iCLASS HF Migration Readers provide advanced smart card security, the flexibility to adapt to existing card populations in the field, the power of smart cards and the confidence of choosing Genuine HID.

Features

Security

AES encryption protects DESFire® EV1 credentials and data transfer between the credential and reader. The reader has an embedded SAM (Secure Access Module) that performs all cryptographic operations and is equipped with hardware security measures that allow the safe and secure storage of secret keys. In a typical application the SAM is used to authenticate the MIFARE® DESFire EV1 card and decrypt all data read from the credential using the AES cryptographic standard with 128-bit keys.

Credential Compatibility

MIFARE® DESFire EV1 Application/File, MIFARE Classic Sector, iCLASS® Standard and Elite and HID Prox (RSP only) simultaneously operate, allowing for easy migration from legacy credential technologies deployed in the field to new DESFire EV1 technology. Fully customizable and factory configurations provide flexible compatibility with future EV1 and legacy Classic credential data. Customization options include custom key definition, Application/File (EV1), MAD (MIFARE) or offset/length configuration for versatile reader capabilities.

Audiovisual Indication

Audio sounder 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.

Easily Installed and Interfaced

Terminal strips are available on most models, providing simple re-wiring from existing terminal strip MIFARE Classic readers. Additionally a spacer accessory is available for any model. This allows for flush mounting where necessary. The reader's Wiegand output easily interfaces with most existing Wiegand protocol access control panels.

Indoor/Outdoor Design

Rugged, weatherized polycarbonate enclosure, designed to withstand harsh environments, provides reliable performance and resistance to vandalism.

Options

Colors - Black
Programmable LED/Beeper operation
Accessory - Security Tool; 04-0001-03

	RS10	RS40	RSK40	RSP15	RSP40	RSPK40
* Model Numbers	7100C	7120C	7130C	7145C	7125C	7136C
** Read Range	MIFARE DESFire® EV1 / MIFARE® Classic Card: Up to 2" (5.1 cm) iCLASS Card : Up to 3.25" (9.0 cm) iCLASS Key/Tag : Up to 1.5" (3.8 cm)	MIFARE DESFire EV1 / MIFARE Classic Card: Up to 2.5" (6.4 cm) iCLASS Card : Up to 4.25" (11.0 cm) iCLASS Key/Tag : Up to 2.0" (5.0 cm)	MIFARE DESFire EV1 / MIFARE Classic Card: Up to 2" (5.1 cm) iCLASS Card: Up to 4.0″ (10.2 cm) iCLASS Key/Tag: Up to 1.25″ (3.2 cm)	MIFARE DESFire EV1 / MIFARE Classic Card: Up to 2" (5.1 cm) HID Prox ISO Card: Up to 3" (7.5 cm) HID Prox Clamshell Card: Up to 3.5" (9.0 cm) iCLASS Card: Up to 3.5" (9.0 cm) iCLASS Key/Tag: Up to 1.5" (3.8 cm)	MIFARE DESFire EV1 / MIFARE Classic Card: Up to 2.5" (6.4 cm) HID Prox ISO Card: Up to 3.25" (9.0 cm) HID Prox Clamshell Card: Up to 4" (10.0 cm) iCLASS Card: Up to 4.25" (11.0 cm) iCLASS Key/Tag: Up to 2.0" (5.0 cm)	MIFARE DESFire EV1 / MIFARE Classic Card: Up to 2" (5.1 cm) HID Prox ISO Card: Up to 3" (8.0 cm) HID Prox Clamshell Card: Up to 3.5" (9.0 cm) iCLASS Card: Up to 4.25" (11.0 cm) iCLASS Key/Tag: Up to 1.5" (3.8 cm)
Mounting	The RS10 is physically our smallest reader and is ideally suited for mullion mounted door installations	The RS40, RSK40 are designed to mount and cover square and circular junction boxes. Mounting plate comes slotted with both European square and US single gang mounting holes.		Ideally suited for mullion mounted door installations	Designed to mount and cover square and circular junction boxes. Mounting plate comes slotted with both European square and US single gang mounting holes.	
Keypad	No		Yes	No		Yes
Dimensions	4.8 cm x 10.3 cm x 2.3 cm	8.4 cm x 12.2 cm x 2.4 cm	8.5 cm x 12.2 cm x 2.8 cm	15.6 cm x 4.8 cm x 2.3 cm	8.4 cm x 12.2 cm x 2.4 cm	8.5 cm x 12.2 cm x 2.8 cm
Termination	Terminal Strip			Pigtail		
Power Supply	5-16 VDC, Linear supply recommended					
*** Current Requirements	55mA AVG, 116mA PEAK	55mA AVG, 121mA PEAK	85mA AVG, 116mA PEAK	55 mA AVG, 114 mA PEAK	55 mA AVG, 141 mA PEAK @ 12 VDC	85 mA AVG, 169 mA PEAK
Operating Temperature	-25° to 65° C					
Operating Humidity	5% to 95% relative humidity non-condensing					
Transmit Frequency	13.56 MHz			125 kHz and 13.56 MHz		
Cable Distance	Wiegand 500ft (150m) 22 AWG • OSDP - RS485 4000ft (1219m)					
Card Compatibility	14443A - read only; MIFARE DESFire EV1 Application/File, MIFARE Classic Sector, CSN • ISO 15693 - read only; 2k bit (256 Byte), 16k bit (2k Byte) and **32k bit (4k Byte) iCLASS Credentials, serial number** • ISO 14443B CSN			**125 kHz Proximity** • HID proximity cards, keyfobs, and tags **13.56 MHz contactless smart cards** • 14443A - read only; MIFARE DESFire EV1 Application/File, MIFARE Classic Sector, CSN • ISO 15693 - read only; 2k bit (256 Byte), 16k bit (2k Byte) and **32k bit (4k Byte) iCLASS Credentials, serial number** • ISO 14443B CSN		
Environmental	IP55					
Certifications	FCC Certification (US), IC (Canada), CE (EU), C-tick (Australia, New Zealand), SRRC (China), MIC (Korea), NCC (Taiwan), MIC (Japan), iDA (Singapore), RoHS					
Housing Material	UL94 Polycarbonate					
Warranty	Warranted against defects in materials and workmanship for life. (See complete warranty policy for details.)					

* Consult How to Order Guide for specific ordering instructions.
** Dependent upon installation conditions.
*** Add 10mA current draw for current measured @ 12 VDC

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ACCESS experience.

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