



Multi-Technology Cards
with MIFARE Classic /
MIFARE DESFire



**HIGH/HIGH FREQUENCY MIFARE CLASSIC™ SOLUTION/
MIFARE DESFire™ EV1 SOLUTION**

- **Ideal Migration Solution** – Multi-application card that supports two 13.56 MHz read/write contactless chips that are fully compatible with MIFARE Classic and MIFARE DESFire physical access reader from HID and other suppliers.
- **High Performance** – MIFARE DESFire EV1 provides fast and secure data transmission (data encryption and integrity check).
- **Common Criteria** – MIFARE DESFire EV1 EAL 4+ accredited for maximum security.
- **Supports Secure Identity Object™ (SIO)** – Multi-layered security beyond the card technology, providing added protection to identity data.

HID Global's MIFARE Classic and MIFARE DESFire EV1 smart cards are ideal for customers looking to support multiple technologies with a single card or migrate from existing card technology to a more secure solution. The cards deliver the perfect balance of performance and cost efficiency for any MIFARE DESFire EV1 deployment, while preserving backward compatibility with MIFARE Classic.

MIFARE Classic and MIFARE DESFire EV1 technologies offer fast and convenient transactions and are used worldwide for access control, cashless vending, transit and other applications.

MIFARE DESFire EV1 is based on open standards for contactless cards. It is

compliant with all four levels of ISO/IEC 14443A specifications and uses ISO/IEC 7816-4 command sets.

This contactless smart card is available as a PVC or composite card for a more durable solution. The credentials are also made available as an HID Global embeddable card for converged physical and logical access deployments. HID Global can also embed a wide range of commercially available contact modules on these cards.

As with all Genuine HID™ card solutions, these dual high frequency credentials are part of the broadest product line of trusted, fully interoperable secure identity solutions in the market and come with guaranteed compatibility with HID Global reader lines and a lifetime warranty.

MIFARE CLASSIC

- Widely used technology with contactless smart card and proximity card applications.
- Unique Identifier (UID) with 56 bits/7 bytes or Non Global Unique with 32 bits/4 bytes (default configuration).
- Mutual authentication and data encryption with 2*48 bits cryptographic keys per sector.
- MIFARE Application Directory (MAD) allows flexible programming of additional applications to the card.

MIFARE DESFIRE EV1

- Fully compliant with ISO/IEC 14443A part 1-4 with communication speed up to 848 Kb/s.
- Support for ISO/IEC 7816-3 and -4 command set.
- Flexible file system of dynamic secure memory arranged in application folders and data files.
- Transaction times are less than 100 milliseconds for a typical secure transaction
- 56 bit serial number with ISO/IEC 14443 cascade level 2.
- High security with Common Criteria EAL4+ accreditation.
- Configurable access conditions for file.
- Cryptographic functions available for authentication and data encryption (AES or Triple DES) for each application.



SPECIFICATIONS

	MIFARE Classic 4K/ MIFARE DESFire EV1 8K	MIFARE Classic 4K/ MIFARE DESFire EV1 8K - Embeddable
Base Part Number	272 PVC / 282 Composite	283 Composite
Operating frequency (contactless)	13.56 MHz	
Typical Maximum Read Range	MIFARE Classic 4KB: 1 - 3" MIFARE DESFire EV1 8KB: 1 - 2"	
Dimensions	2.127" x 3.375" x 0.033" max (5.40 x 8.57 x 0.084 cm)	
Construction	100% PVC (272) 60% Composite: PET/40% PVC (282)	Composite 60% PET/40% PVC (283)
Operating Temperature	-31° to 122° F (-35° to 50° C) for PVC -40° to 158° F (-40° to 70° C) for Composite	
Weight	0.28 oz (7.9g)	
Memory Size/ Application Areas	MIFARE Classic: 4 KB (32Kb) arranged in 40 sectors MIFARE DESFire EV1: 8 KB arranged in up to 28 applications, with up to 32 files per application	
Write Endurance	Min 100,000 cycles	
Data Retention	Min 10 years	
HID Proximity	Not available	
Contact Smart Chip Embeddable	No	Yes
Printable	Yes (white/white card) Usable with direct imaging and thermal transfer printers (from HID Global but also from other suppliers) Some exclusion areas for printing are defined	
HID Managed Services	Customized cards (including custom artwork) are available through HID Secure Identity Services™	
Slot Punch	Not available (Dual HF cards do not allow a slot punch)	
Visual Options	Optional	
Additional Options	Corporate 1000® card data formatting	
Warranty	Lifetime (Card body only)	

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North America: +1 949 732 2000

Toll Free: 1 800 237 7769

Europe, Middle East, Africa: +44 1440 714 850

Asia Pacific: +852 3160 9800

Latin America: +52 55 5081 1650