PHYSICAL ACCESS SOLUTIONS

SIO Technology-Enabled Cards for MIFARE® DESFire® EV1 / HID Prox





SECURE CONTACTLESS SMART CARD WITH MIFARE DESFIRE EV1 / HID PROX TECHNOLOGIES

- **Supports Secure Identity Object™ (SIO)** – Multi-layered security beyond the card technology, providing added protection to identity data.
- **Trusted Identity Platform® (TIP™) enabled** – Provides trusted identity within a secure ecosystem of interoperable products.
- **Open configuration** – MIFARE® DESFire® EV1 is based on open global standards for security, and is interoperable with existing MIFARE DESFire infrastructure.
- **Multi-layered security** – MIFARE DESFire EV1 built-in mutual authentication, AES 128, DES and triple-DES data encryption and unique 56-bit serial number, and Common Criteria (CC) EAL 4+ certified.
- **Ideal migration solution** – Mutual use of SIO-protected 13.56 Mhz smart card technologies delivered with 125 KHz HID Prox .

HID Global SIOs deliver three key benefits: portability, security and extensibility.

- SIOs are defined using open standards that can support any piece of data, including data for access control, biometrics, PC logon, and many other applications.



HID SIO Technology-Enabled (SE) Cards for MIFARE DESFire EV1 / HID Prox are part of the next-generation access control platform and open ecosystem based on HID's Trusted Identity Platform (TIP) architecture. The SE Card is designed to provide additional key diversification, authentication, encryption and portability for advanced applications, unprecedented mobility, heightened security and enhanced performance.

HID Global's next-generation access control platform goes beyond the traditional smart card model to offer a secure, standards-based, technology-independent and flexible identity data structure based on Secure Identity Object (SIO), a new HID portable credential methodology.

The smart cards are designed for diverse applications that demand the highest levels of security, including access control and biometric identification, cashless vending, public transportation, ticketing and customer loyalty cards. Available in PVC and Composite PET/PVC card construction, the SE Card is exceptionally durable and can accept an embeddable contact chip for logical access and biometric ID systems.

13.56 MHz SE Cards for MIFARE DESFire EV1 read/write technology and HID Prox can be integrated into a single ISO standard thickness card (custom programming with Indala formats is also available).

MULTI-TECHNOLOGY SIO-ENABLED CARDS FOR MIFARE DESFIRE EV1 / HID PROX FEATURES

- 13.56 MHz MIFARE® DESFire® EV1 read/write technology.
- Compliant with ISO 14443A 1-4.
- Transaction times less than 100 milliseconds for a typical secure ticketing transaction.
- 8 KBytes of dynamic memory arranged in easy-to-define application folders and data files.
- Durability – Passive, no-battery design allows for an infinite number of reads. Strong and resistant to damage.
- Ordering Options – Magnetic stripe, external card numbering, custom artwork and contact smart chip module.
- 125 KHz HID Prox with convenient read range and flexible format programming.
- Photo ID Compatible – True credit card thickness for printing directly to the card with a direct image or thermal transfer printer. PVC card surface is optimized for dye sublimation printing.

HIGHER SECURITY

- CC EAL 4+ certified.
- Trusted Identity Platform (TIP) Enabled – Provides trusted identity within a secure ecosystem of interoperable products.
- Multi-Layered Security -- Supports data authenticity and privacy through the multi-layered security of HID's SIO.
- SIO Data Binding – Inhibits data cloning by binding an object to a specific credential.
- Mutual authentication, AES 128, DES and triple-DES data encryption and unique 56-bit serial number.
- Expanded EliteTM Program (SE Elite) – Extends security by providing unique keys for each application area (sector) within an SE Card for MIFARE DESFire EV1.
- Visual security/anti-counterfeiting features (holograms, ultra-violet fluorescent inks, micro-printing or custom logo).





SPECIFICATIONS

Base Part Number	3800	MIFARE DESFire EV1 + HID Prox PVC
	3850	MIFARE DESFire EV1 + HID Prox Composite
***Card Construction**	Thin, flexible polyvinyl chloride (PVC) laminate, or Composite PVC/PET for MIFARE DESFire EV1 + HID Prox	
Dimensions	2.125" x 3.375" x 0.070" max. (5.40 x 8.57 x 0.18 cm)	
Weight	0.24 oz (6.8 g)	
Operating Temperature	PVC Cards: -40 to 122°F (-40 to 50°C) Composite Cards: -40 to 158°F (-40 to 70°C)	
Operating Humidity	5% - 95% Non-Condensing	
Operating Frequency	13.56 MHz for MIFARE, 125 KHz for HID Prox	
RF Interface	ISO 14443 A, Parts 1-4 (DESFire EV1)	
Transaction Time	< 100 ms for MIFARE	
Baud Rate	Activation at 106 kbps; Data transfer up to 848 kbps for MIFARE	
Memory Type	EEPROM 8 EEPROM, read/write Kbytes EEPROM for SIO-Enabled MIFARE	
MIFARE DESFire EV1 Memory Structure	Up to 28 applications, with up to 32 files per application	
Write Endurance	500,000 cycles min.	
Data Retention	10 years min	
Typical Maximum Read Range	Up to 4" (10 cm) Dependent upon installation conditions	
Card Marking	Inkjet standard, Laser Engraving optional	
Custom Graphics	Optional	
Programming	Factory or Field	
Operates With	iCLASS SE readers and any reader that can read DESFire and HID Prox technology.	
Magnetic Stripe	Optional	
Printable	Yes (white/white card)	
Visual Security Options	Optional	
Warranty	Lifetime - see Sales Policy for complete details	

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