



**MULTI-FUNCTION CREDENTIAL FOR PHYSICAL ACCESS CONTROL**

**Base Part Number: 5906**

- **Innovative** – Supports Seos® 8K and MIFARE DESFire EV1 implementation on a single RFID chip solution.
- **Versatile** – Supports Seos advanced credential technology and MIFARE® DESFire® EV1 implementation, allowing interoperability to a higher standard of security and functionality.
- **Convenient** – Save time and resources by managing a single card instead of two.
- **Secure** – Seos uses the latest open standards for encryption and authentication.
- **Certified** – Based on Common Criteria (CC) EAL 5+ hardware

HID Global’s innovative Seos® card with MIFARE® DESFire® implementation is a single RFID chip solution that supports ISO14443A-4 Seos and MIFARE DESFire Implementation.

This card allows users to realize the benefits of Seos functionality with HID iCLASS SE® Reader infrastructure\* while remaining interoperable with MIFARE DESFire implementation environments.

Furthermore, organizations can support ongoing interoperability or conveniently upgrade to HID iCLASS SE Readers\* gradually as time and budget allow.

Features enabled through Seos technology also include the ability to use mobile devices for secure access and efficiently managing multiple applications.

**Seos Programming Options**

- Secure Identity Object (SIO) – compatible with HID programming formats
- Field encoder ready – encode using CP1000D SE Encoder

**MIFARE DESFire EV1 Programming Options**

- Non-programmed or custom

**Additional Options**

- HiCo Magstripe (4000 Oe)
- Custom Graphics

**Ordering Information**

\*See application note PLT-04003 for full specification, iCLASS SE reader product compatibility and ordering details.

## SPECIFICATIONS

	Seos®		MIFARE® DESFire® EV1 Implementation	
<b>Operating Frequency</b>	13.56 MHz		13.56 MHz	
<b>Communication Protocol Compliance</b>	ISO14443A-4		ISO14443A-4	
<b>SAK</b>	0x38			
<b>ATQA</b>	0x0200			
<b>Communication Speed</b>	Up to 848kbps		Up to 848 kbps	
<b>Memory Type</b>	EEPROM		EEPROM	
<b>Memory size</b>	8 Kbytes		8 Kbytes	
<b>Multiple Applications Support</b>	Yes (using Open Data Profile)		Yes	
<b>SIO Data Object Support</b>	Yes, default		No	
<b>HID Data Format Support</b>	Yes (wrapped in SIO)		No	
<b>Write Endurance / Data Retention</b>	Min 100,000 cycles / 10 years		Min 100,000 cycles / 10 years	
<b>Typical Transaction Time</b>	Data size dependent		Data size dependent	
<b>Extended Privacy Support</b>	No		No	
<b>Security</b>	Mutual authentication & diversified keys based on AES128.		Application Setting Dependent	
<b>Security Certification</b>	Common Criteria (CC) EAL 5+ HW certified platform			
<b>UID</b>	Global 7 byte static UID			
	TYPICAL READ RANGE <sup>2</sup>			
<b>Reader Environment</b>	Standard <sup>1</sup>	On-Metal <sup>2</sup>	Standard <sup>1</sup>	On-Metal-see note <sup>2</sup>
<b>iCLASS SE® R10/R15 (including BLE)</b>	1.1-1.6" (3-4cm)	0.8-1.1" (2-3cm)	1.1-1.6" (3-4cm)	0.8-1.1" (2-3cm)
<b>iCLASS SE R40/RK40 (including BLE)</b>	0.8-2" (2-5cm)	Use a 1" Spacer <sup>5</sup> 0.8-1.6" (2-4cm)	0.8-2" (2-5cm)	Use a 1" Spacer <sup>5</sup> 0.8-1.6" (2-4cm)
<b>iCLASS SE RP10/RP15 (including BLE)</b>	0.8-1.1" (2-3cm)	Use a 0.5" Spacer <sup>6</sup> 0.8-1.1" (2-3cm)	0.8-1.1" (2-3cm)	Use a 0.5" Spacer <sup>6</sup> 0.8-1.1" (2-3cm)
<b>iCLASS SE RP40/RPK40 (including BLE)</b>	1.1-1.6" (3-4cm)	Use a 1" Spacer <sup>5</sup> 1.1-1.6" (3-4cm)	1.1-1.6" (3-4cm)	Use a 1" Spacer <sup>5</sup> 1.1-1.6" (3-4cm)
<b>iCLASS SE Bio</b>	Template R/W	Template R/W	N/A	N/A
<b>HID Global Product Compatibility</b>	Not All HID Seos or DESFire® EV1 products are compatible. See PLT-04003 for compatible products			
<b>Dimensions</b>	ID-1: 2.12" x 3.35" x 0.315" (54 mm x 85mm x 0.8mm)			
<b>Card Construction</b>	Composite with 60% PVC / 40% PET, laminated card			
<b>Weight</b>	About 5.5 g			
<b>Operating Temperature</b>	-40°F to + 158 °F (- 40 °C to + 70 °C)			
<b>Storage Temperature</b>	-31°F to + 122°F (- 35 °C to + 50 °C) for 1000h			
<b>Thermal Shock</b>	-31°F to + 176°F (- 35 °C to + 80 °C), 50 cycles of 5 minutes, 30s transition time			
<b>Chemical Resistance</b>	The card can withstand exposure salt water (5%) salt mist, acetic acid water (5%), carbonated sodium water (5%), sugared water (10%), fuel B and ethylene glycol (50%) for at least 24 hours			
<b>Card Marking</b>	©HID Seos® JMD8 J2P XT			
<b>Printable</b>	Yes (glossy white front /glossy white back) for best results use an HDP printer Direct-to-card printing is not recommended Contact your HID sales representative or find more information about FARGO® printers on the HID Global website.			
<b>Slot Punch</b>	Not available - Do Not Slot Punch			
<b>Other Options</b>	Custom graphics and magstripe			
<b>Standards Compliance</b>	ISO/IEC7810, ISO14443-4 (Seos + DESFire EV1), ISO10373, ISO60529, ISO7816 RoHS			
<b>Warranty</b>	Lifetime Warranty			

1 Based on dry wall mount with no ferrous material within close proximity

2 Based on metal surface or metal back-box mount



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