

# iCLASS<sup>®</sup> OEM75 Reader Module

Contactless Smart Card Reader Module with Read/Write Capability • 3141

- ▶ **Increase Serviceable Market** – Increase application potential by combining ultra-low power consumption and smart card compatibility
- ▶ **Increase Card Compatibility** – The only embeddable reader that offers iCLASS<sup>®</sup> or MIFARE<sup>®</sup> capability in the same module
- ▶ **Versatile Form Factors** – Compact module and antenna design is ideal for embedding contactless smart card technology into virtually any size-constrained application
- ▶ **Backward Compatibility** – Power and communication connections remain backward compatible to previous modules



## ACCESS flexibility.

Providing a link between smart cards and applications, the OEM75 reader module is designed for embedding into products manufactured by third-parties. Used to read or read/write data on smart cards, the OEM75 provides compatibility with all memory locations of the most popular smart cards available, including HID Global's 13.56 MHz iCLASS<sup>®</sup>, MIFARE<sup>®</sup> (sector) and DESFire<sup>®</sup> credentials.

### Card Compatibility

With the OEM75 reader module, designing applications for a multitude of smart card compatibilities has never been easier. By maximizing the configuration of the OEM75, application developers are able to integrate the hardware and then download the desired feature bundle into the module for either iCLASS (application) or MIFARE (sector) compatibility. Developers can also take advantage of the field configuration capability to modify the featured bundle during application installation using a smart card or serial interface to meet the any site requirements.

### Ultra-Low Power

Featuring ultra-low power consumption, the OEM75 reader module operates with a nominal polling current of 12uA, making it the ideal solution for embedding contactless smart card compatibility into any battery-powered environment or application.

### Other Features:

- ▶ Hardware Interfaces include Wiegand, Clock-and-Data, UART, SPI or I2C
- ▶ Module reads secure data from iCLASS and MIFARE smart cards, as well as ISO 15693 CSN, ISO 14443 A CSN, ISO 14443 B CSN, Sony FeliCa<sup>®</sup> iDM and CEPAS CAN/CSN
- ▶ Host-driven commands enable read/write to secure areas of cards
- ▶ Flexible configuration fits a variety of applications

# Features

# Specifications

**Feature Bundles** Downloadable feature bundles provide the ability to modify card/application compatibilities in the factory or field. Modification of card/application compatibilities enables the dynamic configuration to fit card population. Available bundles include:

- ▶ iCLASS®
- ▶ MIFARE®
- ▶ iCLASS & PIV
- ▶ MIFARE & PIV

**Feature Bundle Field Configuration** Using SmartMX™ feature bundle card (provided by HID). Using serial communication (files provided by HID).

**Card Compatibilities** All Bundles  
 iCLASS 15693/14443B CSN  
 ISO14443A (MIFARE) CSN  
 ISO14443A-4 (DESFire) read/write  
 ISO14443B CSN  
 ISO15693 CSN

**Additional card compatibilities (bundle specific)**  
**iCLASS Bundle**  
 iCLASS 15693/14443B read/write 2k, 16k and 32k bit credentials

**MIFARE Bundle**  
 ISO14443A MIFARE (sector) read/write 1K and 4K byte credentials

**iCLASS & PIV or MIFARE & PIV**  
 US Government PIV (in addition to above iCLASS or MIFARE bundles)<sup>4</sup>

**Transit Bundle**  
 Felica® iDM & CEPAS CAN/CSN

**Remote Driven Interface**  
 OEM75 Serial Protocol to Read/Write iCLASS or MIFARE credentials.

<sup>1</sup> FIPS 201 compatibility requires both no metal exposure in immediate vicinity and usage of a larger antenna (size approximately equal to or greater than antennas 3142A or 3148A)

<sup>2</sup> For more information on module operation modes, see the application note 'iCLASS Reader and Module Operational Modes'.

<sup>3</sup> For more information on module operation modes, see the application note 'iCLASS Reader and Module Operational Modes'.

<sup>4</sup> US Government PIV compatibility is highly effected by environment and antenna size. Compatibility requires no metal interference and antennas comparable in size to, or larger than, 3142A or 3148A antennas.

<b>Base Part Numbers</b>	<b>Module:</b> 3141A <b>Antenna:</b> 3142A, 3144A, 3146A, 3148A, 3153A <b>Antenna Cable:</b> 3141-200 <b>Communication/Power Cable:</b> 228-0074 <b>Cable Connector (Host):</b> 45-0039
<b>Transmit Frequency</b>	13.56 MHz
<b>Read Range</b>	2.7" (7.0 cm) using 3142AA antenna in free-air Read range varies depending upon environmental (e.g. metal interference) and antenna size
<b>Dimensions</b>	1.1" x 1.2" (2.8 cm x 3.0 cm) – identical in size and mounting to OEM50 1.3" x 1.7" (3.3 cm x 4.3 cm) – identical in size and mounting to eProx Lock
<b>Power Requirements</b>	4-10 VDC, Reverse Voltage Protected Transient surge protection not provided
<b>Current Requirements</b>	40 mA AVG / 80 mA PEAK (Standard Power Mode) 12 uA AVG / 80 mA PEAK (Ultra-Low Power Mode)
<b>Operating Temperature</b>	-13° F to 149° F (-25° C to 65° C)
<b>Storage Temperature</b>	-67° F to 185° F (-55° C to 85° C)
<b>Operating Humidity</b>	5% to 95% relative humidity non-condensing
<b>Weight</b>	0.25 oz. (7 g)
<b>Hardware Interface</b>	Wiegand, Clock-and-Data, UART, SPI, or I2C
<b>Options</b>	Connectors (Larger size board only); MIFARE (sector) Hardware
<b>Certifications</b>	UL Recognition (Recognized Component) to UL294 for the USA and CSA C22.2 No. 205 for Canada.

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**ACCESS experience.**

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