

## MIFARE<sup>®</sup> DESFire<sup>®</sup> EV1 ISO Card

### Key Applications

- Advanced public transportation
- Access management
- E-Government
- Closed loop micro-payment
- Loyalty programs
- NFC Type 4 compliant



NXP MIFARE<sup>®</sup> DESFire<sup>®</sup> EV1 is based on open global standards for both RF interface and cryptographic methods. The highly secure microcontroller-based IC is certified with Common Criteria EAL4+ on both hardware and software implementation. It features an on-chip backup management system and mutual three pass authentication, allowing it to hold up to 28 different applications and 32 files per application. The NXP MIFARE DESFire EV1 card operates at 13.56 MHz wireless frequency, according to the ISO 14443A standard with the transport protocol complying to the ISO 14443-4 standard.

MIFARE DESFire EV1 features either 2Kbyte, 4Kbyte or 8Kbyte nonvolatile memory, a high-speed triple-DES data encryption co-processor, a flexible memory organization structure, a mutual 3-pass authentication technique together with a true random number generator and an anti-tear mechanism to guarantee data integrity during contactless transactions.

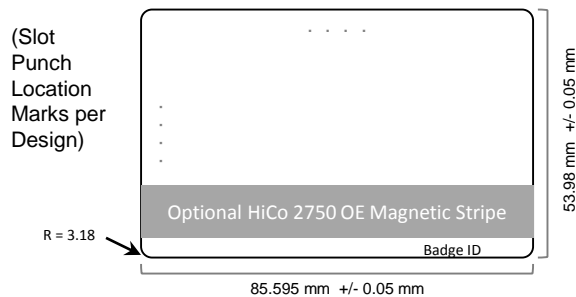
Wave Source LLC offers the MIFARE DESFire EV1 in a high-quality, gloss surface ISO card. A wide selection of card customization options are available to meet your application specific requirements.

	NXP MIFARE® DESFire® EV1 2Kbyte Card	NXP MIFARE® DESFire® EV1 4Kbyte Card	NXP MIFARE® DESFire® EV1 8Kbyte Card
Base Part No.	WSC-2022K0 – PVC WSC-2522K0 – Composite PET/PVC (60/40)	WSC-2024K0 – PVC WSC-2524K0 – Composite PET/PVC (60/40)	WSC-2028K0 – PVC WSC-2528K0 – Composite PET/PVC (60/40)
Operating Frequency	13.56 MHz		
RF Interface	ISO 14443 A, Parts 1-4 (DESFire EV1)		
Typical Read Range	Up to 4" (100 mm) * Dependent upon reader technology		
Memory	EEPROM size [byte] 4096 Write Endurance [cycles] 500,000 Data Retention [yrs] 10	EEPROM size [byte] 8192 Write Endurance [cycles] 500,000 Data Retention [yrs] 10	
Operating Specs	Temperature: PVC Cards: -40 to 122°F (-40 to 50°C); Composite PET/PVC Cards: -40 to 158°F (-40 to 70°C) Humidity: 5% - 95% Non-Condensing		
Options	<ul style="list-style-type: none"> <li>• Custom Artwork</li> <li>• Programming / Encoding</li> <li>• External Numbering / Serializing</li> <li>• Horizontal and/or Vertical Slot Punch Locations</li> <li>• Magnetic Stripe - HiCo, LoCo, Debitek</li> <li>• Signature Panel</li> <li>• Embossing</li> </ul>		
Warranty	3 Years – See Terms and Conditions for complete details		

**Card Front**



**Card Back**



**Card Thickness**

