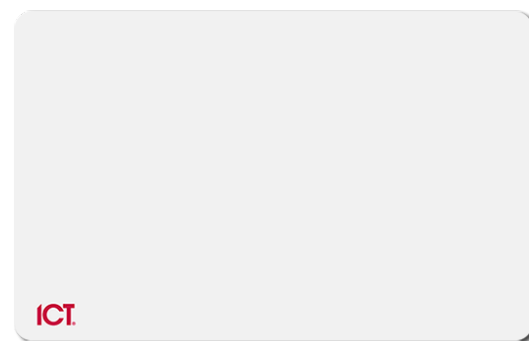




## ICT ISO Graphic Printable Card



The ISO Graphic Printable Card provides a complete multi-technology smart card RFID solution. Available with either 125kHz or 13.56MHz technology, or as a multi-technology card that combines both capabilities, delivering maximum compatibility while providing a path forward to the latest technology. Generic Wiegand output provides flexibility and seamless integration with any access control solution.

### Feature Highlights

- > Utilizes highly secure 13.56MHz MIFARE DESFire EV1 or EV2 smart card technology
- > Mutual authentication, AES 128, DES and triple-DES data encryption with unique 56-bit serial number
- > Improve security of existing 125kHz applications with dual technology transition cards
- > Open solution with read / write functionality
- > ISO standard card thickness enabling use with all direct image and thermal transfer printers
- > Range of options including magnetic stripe, external card numbering, custom artwork, and contact smart chip module
- > Laser engraved card identification

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## ICT Secured MIFARE

ICT Secured MIFARE is ICT's implementation of the MIFARE standard. Credential data is protected with a diversified authentication key and encrypted with an AES 256 algorithm, effectively plugging the known security flaw in the MIFARE standard.

*Other MIFARE formats are also available.*

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## MIFARE DESFire EV2

Designed for a diverse range of applications that demand the highest levels of security, MIFARE DESFire EV2 is based on open global standards for both RF interface and cryptographic methods.

The highly secure micro controller-based solution is certified with Common Criteria EAL5+. It features an on-chip backup management system and mutual three pass authentication, allowing it to hold up to 28 applications and 32 files per application.

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## MIFARE DESFire EV1

MIFARE DESFire EV1 256B addresses the needs of environments requiring only a limited set of applications but high security needs, offering the same fast and highly secure data transmission based on open global standards for both air interface and implemented cryptographic methods.

The size of each file is defined at the moment of its creation and provides an automatic anti-tear mechanism for all file types, guaranteeing transaction-oriented data integrity.

The highly secure micro controller-based solution is certified with Common Criteria EAL4+. It features an on-chip backup management system and mutual three pass authentication.

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## 125kHz Technology

125kHz technology offers a lower level of security but a good read range and short read time due to the lower power requirement and the small amount of data being transmitted. This allows users to simply present, swipe or wave their card in the general direction of the reader to achieve a successful read.

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## Convenient

The thin design allows the card to be carried with credit cards in a wallet or purse. Use with a badge holder and strap clip or lanyard for an attractive photo ID badge.

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## Ideal Migration Solution

Migration from legacy and less secure low frequency 125kHz technology can be easily achieved using dual technology DESFire cards that incorporate both high and low frequency card inlays. This allows organizations to transition to smart readers at their own pace.

*Support for a number of low frequency products is available.*

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## Photo ID Compatible

Print photo ID directly to the card with a direct image or thermal transfer printer.

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## Graphic Printable

The PVC card surface is optimized for dye sublimation printing, allowing you to customize cards with your own text or graphics artwork.

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## Flexible Options

A range of ordering options for true flexibility, including:

- > Custom artwork (text or graphics)
  - > External card numbering (laser engraving)
  - > Magnetic stripe
  - > Contact smart chip module
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## Long Life and Durability

ISO cards are strong, flexible and resistant to damage. A passive, no battery design ensures a long life with an infinite number of reads.

## Technical Specifications

MIFARE DESFire Cards	MIFARE DESFire EV2	MIFARE DESFire EV2/125kHz	MIFARE DESFire EV1	MIFARE DESFire/125kHz
Ordering Code	PRX-ISO-DF-2K PRX-ISO-DF-4K PRX-ISO-DF-8K	PRX-ISO-DF-EV2-LF	PRX-ISO-DF-EV1-LT	PRX-ISO-DF-LF
<b>Technology</b>				
MIFARE DESFire	✓	✓	✓	✓
MIFARE	✗	✗	✗	✗
125kHz	✗	✓	✗	✓
<b>Operating Frequency</b>				
13.56MHz	✓	✓	✓	✓
125kHz	✗	✓	✗	✓
<b>EEPROM Memory</b>				
Memory	2KB / 4KB / 8KB	2KB	256B	2KB
Number of Applications*	Unlimited	Unlimited	28	28
Files per Application*	32	32	32	32
Number of Sectors	N/A	N/A	N/A	N/A
Write Endurance	500,000	500,000	500,000	500,000
<i>* The number of applications and files within the applications is dependent on the device memory available.</i>				
<b>Communications</b>				
RF Interface	ISO/IEC 14443A-4	ISO/IEC 14443A-4	ISO/IEC 14443A-4	ISO/IEC 14443A-4
Baud Rate	848 kbit/s	848 kbit/s	848 kbit/s	848 kbit/s
Typical Maximum Read Range**	15mm (0.6")	15mm (0.6")	15mm (0.6")	40mm (1.57")
<i>** Read range is dependent upon reader technology and installation conditions and may vary accordingly.</i>				
<b>Common Criteria Certification</b>				
Compliance	EAL5+	EAL5+	EAL4+	EAL4+
<b>Features</b>				
Card Construction	Thin, flexible white high gloss polyvinyl chloride (PVC) laminate			
Card Marking	Laser engraving (optional)			
Programming	Factory or field			
<b>Dimensions</b>				
Dimensions	85.7 x 54.0 x 0.76 mm (3.375 x 2.125 x 0.3")			
Net Weight	5.5g (0.2oz)			
Gross Weight	1200g (42.3oz)		Qty: 200	
<b>Operating Conditions</b>				
Operating Temperature	-40° to 50°C (-40° to 122°F)			
Operating Humidity	5%-95% Non-condensing			

MIFARE and 125kHz Cards	MIFARE	MIFARE/125kHz HID	125kHz
Ordering Code	PRX-ISO-MF PRX-ISO-MF4K	PRX-ISO-MF-HID PRX-ISO-MF4K-HID	PRX-ISO-LF
<b>Technology</b>			
MIFARE DESFire	✘	✘	✘
MIFARE	✔	✔	✘
125kHz	✘	✔	✔
<b>Operating Frequency</b>			
13.56MHz	✔	✔	✘
125kHz	✘	✔	✔
<b>EEPROM Memory</b>			
Memory	1KB / 4KB	1KB / 4KB	363 Bits
Number of Applications*	N/A	N/A	N/A
Files per Application*	N/A	N/A	N/A
Number of Sectors	16 (1KB) / 40 (4KB)	16 (1KB) / 40 (4KB)	N/A
Write Endurance	200,000	200,000	100,000
<i>* The number of applications and files within the applications is dependent on the device memory available.</i>			
<b>Communications</b>			
RF Interface	ISO/IEC 14443A-3	ISO/IEC 14443A-3	ISO/IEC 11784/11785
Baud Rate	106 kbit/s	106 kbit/s	106 kbit/s
Typical Maximum Read Range**	60mm (2.36")	60mm (2.36")	40mm (1.57")
<i>** Read range is dependent upon reader technology and installation conditions and may vary accordingly.</i>			
<b>Common Criteria Certification</b>			
Compliance	✘	✘	✘
<b>Features</b>			
Card Construction	Thin, flexible white high gloss polyvinyl chloride (PVC) laminate		
Card Marking	Laser engraving (optional)		
Programming	Factory or field		
<b>Dimensions</b>			
Dimensions	85.7 x 54.0 x 0.76 mm (3.375 x 2.125 x 0.3")		
Net Weight	5.5g (0.2oz)		
Gross Weight	1200g (42.3oz)	Qty: 200	
<b>Operating Conditions</b>			
Operating Temperature	-40° to 50°C (-40° to 122°F)		
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Designers & manufacturers of integrated electronic access control, security and automation products.  
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