



Intelligent Security Solutions



SIFER-U User Programmable Cards

SIFER-U Cards are a user-programmable 13.56Mhz MIFARE DESfire EV2 access card. Using a SIFER Card Programmer, an installer can specify their own encryption key and customise the site code and card number of a SIFER-U access card.

The SIFER Card Programmer is also used to create SIFER-U configuration cards. These are used to encrypt SIFER readers, enabling them to work with the programmed SIFER-U access cards.

Inner Range also offers a SIFER-U 'Gold Card' service that provides a guaranteed unique encryption key for an installer to use.

What is required?

To use SIFER-U a site will need SIFER Readers ([IR-994720](#)), SIFER-U cards ([IR-994612](#)) and a SIFER Programming Station ([IR-994750AU](#))

The Installer will also need the SIFER Card Programmer software, which can be downloaded from the Inner Range website.

SIFER-U Cards

All SIFER-U cards are supplied from Inner Range with the default Inner Range SIFER Global Encryption Key, default site code of 1001 and a unique card number pre-programmed.

The unique card number is laser etched onto the card, and for this reason and to maintain uniqueness, it is not recommended that the Installer change the card number.

What can be programmed?

The SIFER Programmer allows the Installer to encode the following card details:

- **Site Code**
Any number is between 1 – 16.7 million (16,777,215), except for site codes 1000-1099 (inclusive), which are reserved by Inner Range.
- **Encryption Key (32 HEX Digits)**
A custom encryption key, generated from a 32-digit hexadecimal string. This string can be randomly generated by the Card Programmer Software or manually entered by the Installer.
- **Card Number**
It is not recommended that the Installer change the card number because the card number is already unique when leaving the Inner Range factory and the card number is also laser etched onto the card. However, any card number between 1 – 4.3 billion (4,294,967,295) can be programmed.

The SIFER programmer mandates that a custom site code and custom encryption key must be applied for any card programmed. It is not possible to retain the default site code of 1001 or the default Inner Range SIFER Global Key on customised cards.

How is it deployed?

Step 1. Configure the SIFER Card Programmer software

In the SIFER Card Programmer software, the Installer configures the required Site Code and Encryption Keys.

Step.2 Create SIFER-U configuration cards.

The Card Programmer Software and SIFER Programming Station are used to create a SIFER-U Configuration card.

Step.3 Encrypt SIFER Readers.

The newly programmed SIFER-U Configuration card is used to encrypt the SIFER readers for the site.

Step 4. Program SIFER-U access cards.

The SIFER Card Programmer Software and SIFER Programming Station are used to create all SIFER-U access cards for users of the site.

Optional Gold Card Service

As an alternative to the Installer specifying a custom encryption key, Inner Range offers a 'Gold Card' service (**IR-994612G**), which guarantees a unique custom encryption key.

The Gold Card is a physical card with a unique custom encryption key preloaded. This encryption key is allocated from a reserved ranged of encryption keys, ensuring its uniqueness. Being a reserved key, the key can never be manually entered using a SIFER programmer.

To use the Gold Card, it is presented at the SIFER Programming Station and the unique encryption key is read into the SIFER Card Programmer Software.

SIFER-U configuration cards and access cards can then be created using the unique encryption key.