



DESFire Decoder

Plug-in User Guide

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Read-a-Card

Overview

Read-a-Card plug-ins give you the ability to extend the application's functionality to meet your own custom needs. By default, Read-a-Card will read the CSN/UID of a contactless card. But if instead you wish to read, for example, data from a specific file on a DESFire card, then Read-a-Card can return that data, formatted according to your requirements, using a software plug-in. You can also optionally store the necessary card access keys securely in a hardware SAM (secure access module).

The DESFire Decoder plug-in supports reading and decoding of IDs stored in a nominated secure file on DESFire EV1 and EV2 cards of any size (2K, 4K or 8K). It can work in conjunction with Dot Origin's Key-ID Encoder software and physical access systems, or with other solutions for encoding and managing DESFire cards in a multi-application environment.

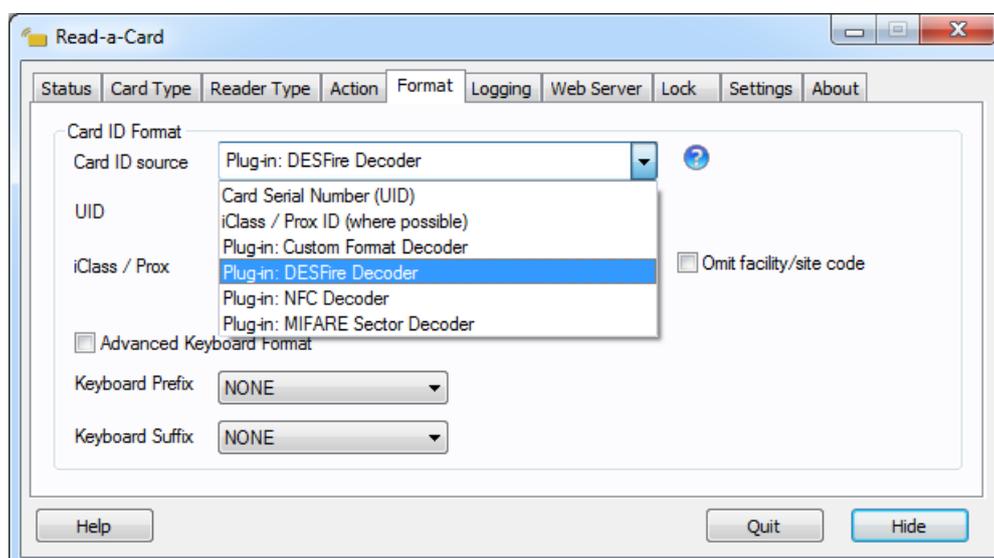
This document will guide you through the configuration and use of the Read-a-Card DESFire Decoder plug-in.

Read-a-Card and plug-ins

Read-a-Card supports plug-in extensions in the form of DLL files. These DLL files must reside in the "Plugins" folder within the Read-a-Card application folder. (e.g. C:\Program Files\Read-a-Card\Plugins).

The DESFire Decoder plug-in is included with recent versions of the Read-a-Card installer. The plug-in (DESFireDecoder.dll) is copied to the Plugins folder when Read-a-Card is installed.

Read-a-Card will display all available plug-ins in the Card ID source drop-down box on the Format tab. All plug-ins will have the "Plug-in:" prefix. Only one plug-in can be in use at any time.





Read-a-Card

Some plug-ins may require that Read-a-Card is licensed for the plug-in to function; others may require specific configuration data. If a plug-in is unable to work for either of these reasons, it will appear in the drop-down list “greyed out”.

Clicking on the help icon (?) next to the format drop-down box will pop-up a information dialog which indicates the current selected plug-in format name, version, format name and other features.

Modes of operation

The DESFire Decoder plug-in can operate in three modes, offering different options for how it obtains the necessary key and configuration information for decoding a card when presented to a reader:

- Using a pre-set hardware template, stored in a Key-ID SAM
- Using a pre-set software template, stored in a Key-ID .tid file
- Using configuration settings stored in the plug-in’s own config file

The first two options are designed to work in conjunction with Dot Origin’s standard DESFire-based door access solutions and Key-ID Encoder software, while the third provides flexibility to configure Read-a-Card to read from cards issued and used by other software.

When used with a Key-ID SAM, further configuration is not usually required. Simply attach the SAM and reader to the PC and select the DESFire Decoder plug-in, and Read-a-Card should automatically detect it and request the SAM USER passphrase when needed.

Plug-in configuration

Read-a-Card format plug-ins may be configured by using a Windows configuration file. In the case of the DESFire Decoder plug-in, this file is named “DESFireDecoder.ini”. This ini file should be located in the same folder as the Read-a-Card ini file, which is normally in C:\ProgramData\Read-a-Card\

In order for this plug-in to work, this file must at least contain the following:

```
[Config]
PluginVersion=x.x
PluginName=DESFire Decoder Plug-in
```

Note that there must only be one [Config] section in the ini file, so if you add extra settings as described below, please don’t repeat the [Config] part.

Plug-in name

The Read-a-Card format name displayed in the Card ID source drop-down box can optionally be configured in the ini file as follows:



Read-a-Card

[Config]

FormatUIName=My name for this plug-in

Hardware template mode

In this mode, no configuration is necessary. Simply attach a suitable Key-ID SAM to the PC, usually by inserting it into a small 'dongle' smartcard reader. If the DESFire Decoder plug-in has been selected as the card ID source, the user will be asked to enter their USER passphrase the first time a DESFire card is presented to the reader, and after that the plug-in will automatically decode and return the stored ID as required.

Software template mode

In this mode, the specific software template file must be configured for use by Read-a-Card, by setting the following entries in the ini file:

[Config]

ReadUsing=Template

TemplateFile=<location of Key-ID software template .tid file>

Complete configuration settings

If a hardware or software template is not being used, you can specify all of the required details in the ini file itself.

Documentation on this option is available on request.