

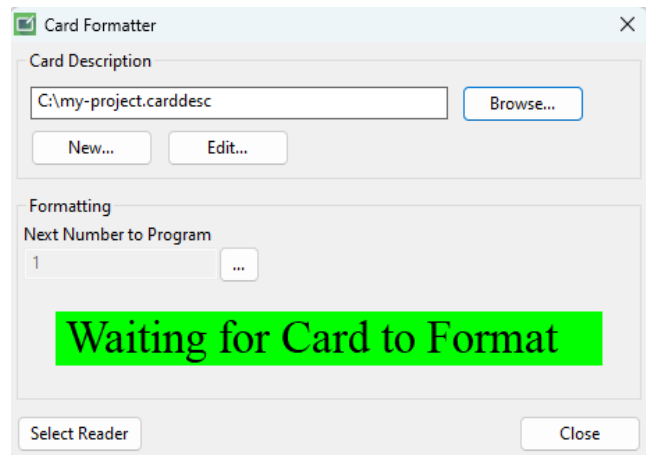
BALTECH Card Formatter

Format project cards safely on site

For sensitive applications, e.g. access control or payment, SmartCards like MIFARE DESFire offer extensive security features. These include encryption of and restricted access to the data on the card.

To make use of these features, you need to format the cards for your project: The card structure, keys, and access conditions are applied, and a Programmed card number (PCN) is stored in a file, sector, or segment, serving as a unique identifier for all applications using the card.

With BALTECH Card Formatter, you don't need any technical know-how for all of this. Instead, you format your cards conveniently via an intuitive user interface. Thanks to its security features tailored to non-secured environments, you can also use it safely on site.



Requirements

Card Formatter requires Windows 10. It's available free of charge, but only works with the following equipment:

Job file

A job file contains the project-specific data to program onto the card. You can order ready-to-use job files from us at a service fee of **€500** per project or change request. Please note that we don't provide documentation or support for job file creation or modification.

Compatible reader

Card Formatter works with BALTECH ID-engine ZM or ZB readers. Both 10115 and 10117 product lines are compatible. To format Hitag cards, ensure your reader version supports 125 kHz cards.

Security Features

As needed, we enable the following features for you when creating the job file.

Advanced key security

- Store DESFire card keys in a Secure Access Module (SAM) or the reader configuration instead of the job file.
- Encrypt the USB interface between reader and Card Formatter.
- Require a password to access the job file in Card Formatter.

For details, please visit docs.baltech.de/card-formatter-key-security.

Control over programmed card numbers (PCNs) issued

- Log file in CSV format to keep track of each formatted card (enabled by default)
- Entries include date & time (system clock), UID, PCN, and content of custom data fields.
- Predefined PCN range per job file
- Enforce consecutive assignment of PCNs: Users can't skip PCNs.
- Prevent multiple assignment of PCNs: Users can assign each PCN only once.

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Supported card and transponder types

MIFARE DESFire

- All EV1 features supported plus EV2 programming of Delegated Application Management (DAM) keys
- AES key diversification (optional)
- Format new blank cards with entire card structure including multiple applications, files, key sets, etc.
- Add new applications to pre-formatted cards (existing applications are preserved).
- Add new files to existing applications.
- Erase and re-format cards (existing applications are deleted).
- Copy files from one application to another.

MIFARE Classic

- All features supported
- Format new blank cards with entire card structure.
- Add new application data to existing cards including keys.
- Exchange keys of existing applications.
- Program static MIFARE Application Directory (MAD).
- Copy files from one application to another.

MIFARE Plus

- Level 1: all MIFARE Classic features
- Level 2 and Level 3: full feature support on request
- Copy files from one application to another.

Hitag

- Program plain data structure without encryption.
- Copy files from one application to another.

Support for further ISO 14443-4 cards is available on request. Billing according to expenditure.

Data structure

- Fix data and incremental PCN in any encoding, e.g. BCD, ASCII, or hexa-decimal
- Optional:
 - Custom entry fields for variable data, e.g. card holder name, to be entered manually via the GUI
 - Time stamp of card formatting

Download, order & documentation

- [Download Card Formatter](#) for free from our website.
- To order a job file, please contact us at sales@baltech.de or +49 0811-99881-0.
- For how-tos and more information, please visit docs.baltech.de/card-formatter.

