



NoC | Opendor

# Offline components

A BRAND OF



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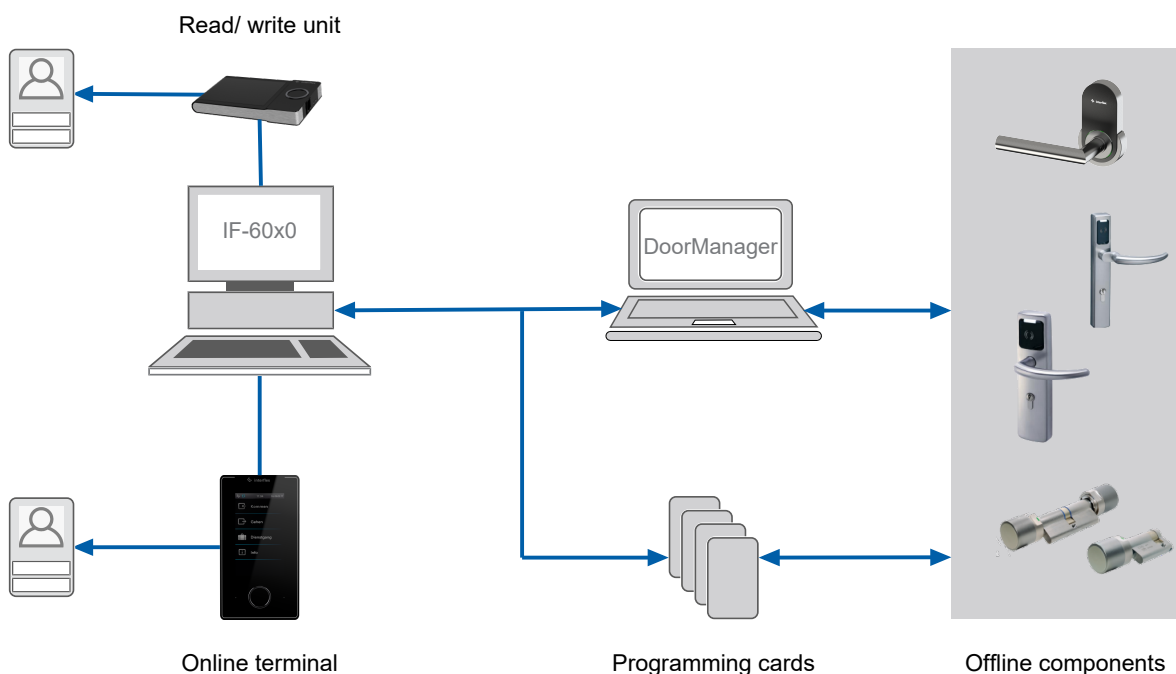
# 1 Overview

The product series *NetworkOnCard (NoC)* and *Opendor<sup>card</sup>* from Interflex provide components that are designed for offline operation. Offline components are operated in conjunction with an access control system, but are not online connected to it.

Access control systems provide the following options for example:

- Manage offline components and structures derived therefrom such as door groups and door profiles
- Manage people and the credentials assigned to them
- Assign access permissions for offline components
- Configure time models to limit the access permissions of certain persons

Interflex distinguishes between battery-powered offline components (*Opendor<sup>card</sup>*) and externally powered offline components (*NoC* firmware). As the technology for managing and programming the components is independent of this, the term *NoC* is used as a general term in this document.



- Personal permissions are defined in the access control system. These permissions are transferred to the *credentials* via read/write units or online terminals and evaluated by the components during the booking procedure.
- In the course of initialization and startup, the data required for the evaluation of the bookings is transferred from the access control system to the *offline components*. Two procedures are available for the data transfer:
  - *DoorManager* software
  - Programming cards




The *DoorManager* software replaces the *PegaSys Mobile* software.

## 1.1 DoorManager

The NFC USB Adapter and the DoorManager software serve as the connecting link between the access control system and the components of the series NoC and Opendor <sup>card</sup>, thus offering a solution to easily operate and maintain these components.

The software assists you during the following tasks:

- Initialize components
- Perform tasks created in the access control system automatically
- Retrieve device information such as reading technologies, processor and firmware versions
- Update firmware
- Retrieve and display diagnostic data such as the last bookings and internal counters


 Further information about DoorManager can be found in the technical manual on our website:

[www.interflex.de/en/downloads](http://www.interflex.de/en/downloads)



## 1.2 Programming cards

You can also use programming cards with the corresponding data from IF-60x0 for the data transfer between access control system and offline components


 Detailed information on the programming of offline components can be found in the documentation of the access control system.

Information for NetworkOnCard readers is transferred using special credentials.

### Cards for the assignment between objects and credentials

Facility card	The card supplier creates a separate facility card for each object. This card is read in once in the access control system so that buildings, credentials and components are associated uniquely. Thereafter, this card is only needed after the reinstallation of the software or after a cold boot of the component.
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Backup card	The backup card is required for the manufacturer to create a new facility card if the original facility card gets lost.
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 The facility card includes all access codes of an object. Keep this card in a safe place.

## Door initialization cards

Each offline component is initialized with device-specific cards. The transferred data will not be lost even after a power failure. Exception: date and time

Door initialization card	Examples: door number, door groups, door opening times, door functions, date and time set during card production, and NoC time profiles
Time profile card	Date and time set during card production, and NoC time profiles
Time initialization card	Date and time set during card production

## Cards for service tasks

Upload card	Read booking data from offline components for the transfer to the access control system
Diagnostics card	Read diagnosis data from offline components, e.g. last bookings, counters and facility data
Battery exchange card	Only for IF-151: unlock the safety pins of the housing cap
Disassembly card	Only for IF-151: uncouple the electronic knob from the middle section
Blacklist card	List of blocked credentials generated in the access control system for the transfer to the offline components



The memory of the offline component contains 2000 bookings. 190 bookings (140 with MIFARE) max. can be stored on an upload card. This is why multiple upload cards are required to store all bookings saved in the component. The bookings recorded last are transferred first. The transferred bookings are deleted from the booking memory of the component. When reading the card at the access control system, the bookings are deleted from the card.

## Card for initialization and deinitialization of LEGIC components


SAM 63 cards are object-specific initialization cards that can be used to prepare LEGIC read/write units for the data structure of the credentials. Once these components have been initialized, they can write data to credentials. The SAM 63 card is also required in connection with the *DoorManager* software, if the connection to LEGIC components fails.

SAM 64 cards are used to reset (deinitialize) offline components. In this case, the SAM 63 license is erased so that the LEGIC components can no longer write data to credentials.

# 2 Credentials and booking types

RFID credentials are used to open doors that are secured with offline devices. Depending on the type, these credentials are provided with different functionalities:

- Credentials with default function
- Credentials with the *permanently open* function
- Credentials with standard function and *permanently open* function.

 Detailed information on the *credentials* subject can be found in the documentation of the access control system.




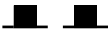


## 3 Signaling

Offline components use color LEDs and signal tones to indicate different states.

### 3.1 States

#### Opening



- ◆ Hold the credential to the reader unit briefly

Visual signal		Audible signal	Description
	Blue		Error reading the credential
	Green	Configurable with door initialization card ( <i>sound during motor flag</i> )	Authorized credential
	Red		Reading error
	Red		Credential unauthorized, the reason can be retrieved from DoorManager under <b>Diagnostics</b>

#### Permanently open mode

##### Activating the permanently open mode

- ◆ Hold the credential to the reader unit for more than three seconds  
The component indicates the *Permanently open On* log file entry:

	3 x green	Standard + Permanently open
	Green	Permanently open

##### Deactivating the permanently open mode

- ◆ Hold the credential to the reader unit for more than three seconds  
The component indicates the *Not permanently open* log file entry:





	Green/green/red	Standard + Permanently open
	Red	Permanently open

In case of credentials that **only** have the *Permanently open* function, the activation / deactivation takes place immediately after the reader unit has read the credential.

## Battery level

### Low battery warning levels

Offline components indicate the low battery level during booking in three stages:

Description	Visual signal	Audible signal
Stage 1		Red
Stage 2		Red 
Stage 3		Red



We recommend changing the battery at stage 2. If the batteries are empty, LED signaling and bookings are no longer possible.





After the replacement of the battery or at the initial startup, the "positive" battery status is loaded and written to five different credentials.



When the batteries become weaker, the battery charge level is written to five credentials at every warning stage. If the offline components are connected to an access control system (and the NoC function has been activated), this system can react to these feedback messages .

If LEGIC components are used, the SAM 63 card must be held up for approx. 20 seconds at the end of the initialization, otherwise the battery warning messages will not be written.

## 3.2 System cards

System cards include: *door initialization cards, time initialization cards, blocking list cards, and upload cards.*

Visual signal	Description	Remedy
	Blue Data transfer between offline component and system card activated	
	Green System card successfully read or written	
	Red Failed to read data from or write data to a system card	Hold the system card in front of offline component a second time
	4 × red Invalid time	Create time initialization card and hold it in front of the offline component

Visual signal	Description	Remedy
	5 × red Offline component not initialized	Create door initialization card and hold it in front of the offline component
	6 × red Facility card not yet held in front of the offline component	Hold the facility in front of the offline component

## 4 Data formats and required storage capacity

Offline components support MIFARE® Classic/DESFire and LEGIC® advant/prime technologies to read RFID credentials. The appropriate credentials must be ordered according to the requirements.

### Format 2.0

Door groups	Single doors	Required bytes	Required sectors (MIFARE)	Segment size (LEGIC)
256	2	48	1	70
256	4	52	2	74
256	8	60	2	82
256	16	76	2	98
512	2	80	2	102
512	4	84	2	106
512	8	92	2	114
512	16	108	3	130
768	2	112	3	134
768	4	116	3	138
768	8	124	3	146
768	16	140	3	162
1024	2	144	3	166
1024	4	148	4	170
1024	8	156	4	178
1024	16	172	4	194



**Format 2.1 or 3.1**

Door groups	Single doors	Required bytes	Required sectors (MIFARE)	Segment size (LEGIC)
216 ("256")	2	48	1	70
256	4	57	2	79
256	8	65	2	87
256	16	81	2	103
512	2	85	2	102
512	4	89	2	111
512	8	97	3	119
512	16	113	3	135
768	2	117	3	139
768	4	121	3	143
768	8	129	3	151
768	16	145	3	167
1024	2	149	3	171
1024	4	153	4	175
1024	8	161	4	183
1024	16	177	4	199



If more than 48 bytes storage capacity is required, use contiguous sectors.

The information contained in this manual is to the best of our knowledge accurate and reliable. However, errors or mistakes cannot be completely ruled out. The information herein is therefore subject to change without prior notice. The original manual is in German. Other languages are translations of the original manual.

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