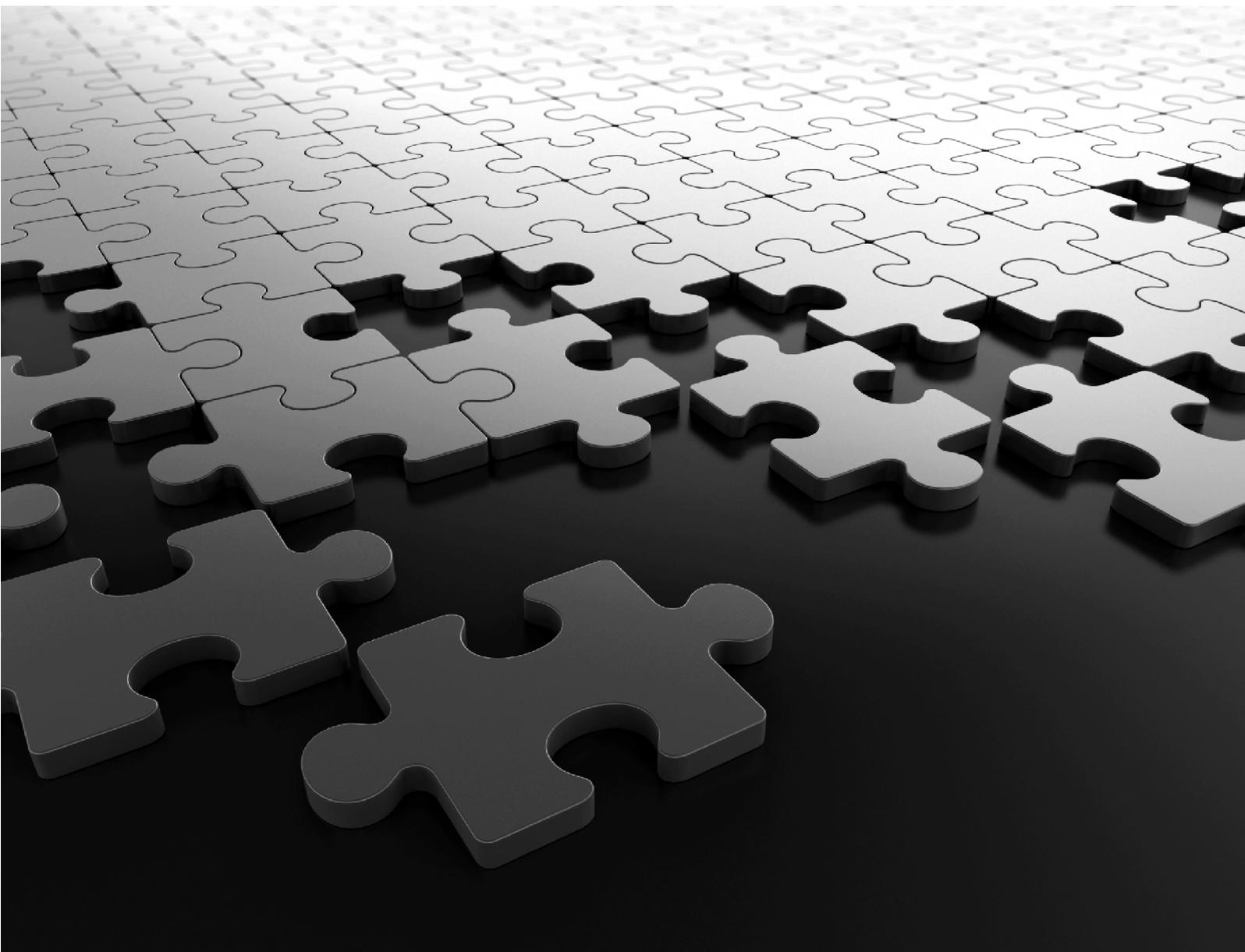


**COSEC Devices API  
User Guide**



## COSEC Devices API

### User Guide



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# About the Document

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Welcome to the *COSEC Devices API User Guide*. This document will provide you a comprehensive overview and complete user-guidance for all *COSEC Devices APIs*. You can learn more about COSEC APIs, browse through detailed descriptions of individual APIs and test them using sample scenarios.

## Document Conventions

This API User Guide will follow a set of document conventions to make it consistent and easier for you to read. These are as follows:

1. Text within angle brackets (e.g. “<request-type>”) denotes content in URL syntax and should be replaced with either a value or a string. The angle brackets should be omitted in all instances except those used to denote “tags” within XML responses (e.g. “<name></name>”).

2. Cross-references and other links appear as follows: [Document Conventions](#)

For e.g. To learn more about APIs, please refer to section [Who Can Use This Document](#)

3. The term *device* used in this document, will refer only to direct doors.
4. Any expression resembling <x~y>, indicates that the field should be repeated for index values *x* to index values *y*. This is to avoid duplicating the same parameter for multiple index numbers.
5. Additional information about any section appears in the form of notices. The following symbols have been used for notices to draw your attention to important items.



**Important:** to indicate something that requires your special attention or to remind you of something you might need to do when you are using the system.



**Caution:** to indicate an action or condition that is likely to result in malfunction or damage to the system or your property.



**Warning:** to indicate a hazard or an action that will cause damage to the system and or cause bodily harm to the user.



**Tip:** to indicate a helpful hint giving you an alternative way to operate the system or carry out a procedure, or use a feature more efficiently.

# Document Organization

This document has been organized into the following topics:

1. About the Document
2. API Overview
3. Supported APIs
4. Details of APIs
5. Error Responses
6. API Response Codes
7. Appendix

Topics 1 and 2 will provide a general understanding of COSEC Devices APIs and the basic interface communication. Topic 3 provides a list of all supported APIs. Topics 4 provide an overview of API categories with detailed explanation of individual APIs. The following information has been provided on each request type:

- Description of the functionality.
- Action requested.
- Generic query syntax.
- Mandatory and optional parameters (argument-value table).
- Examples (*Sample Request* and *Sample Response*).

Topic 5 provides illustrations of error messages. Topic 6 provides a list of API Response Codes and their meaning. The *Appendix* will provide additional material for the user's reference.



*For a list of all tables provided in the document, refer to [List of Tables](#). Click on the links to view the respective tables for the required data.*

## Who Can Use This Document

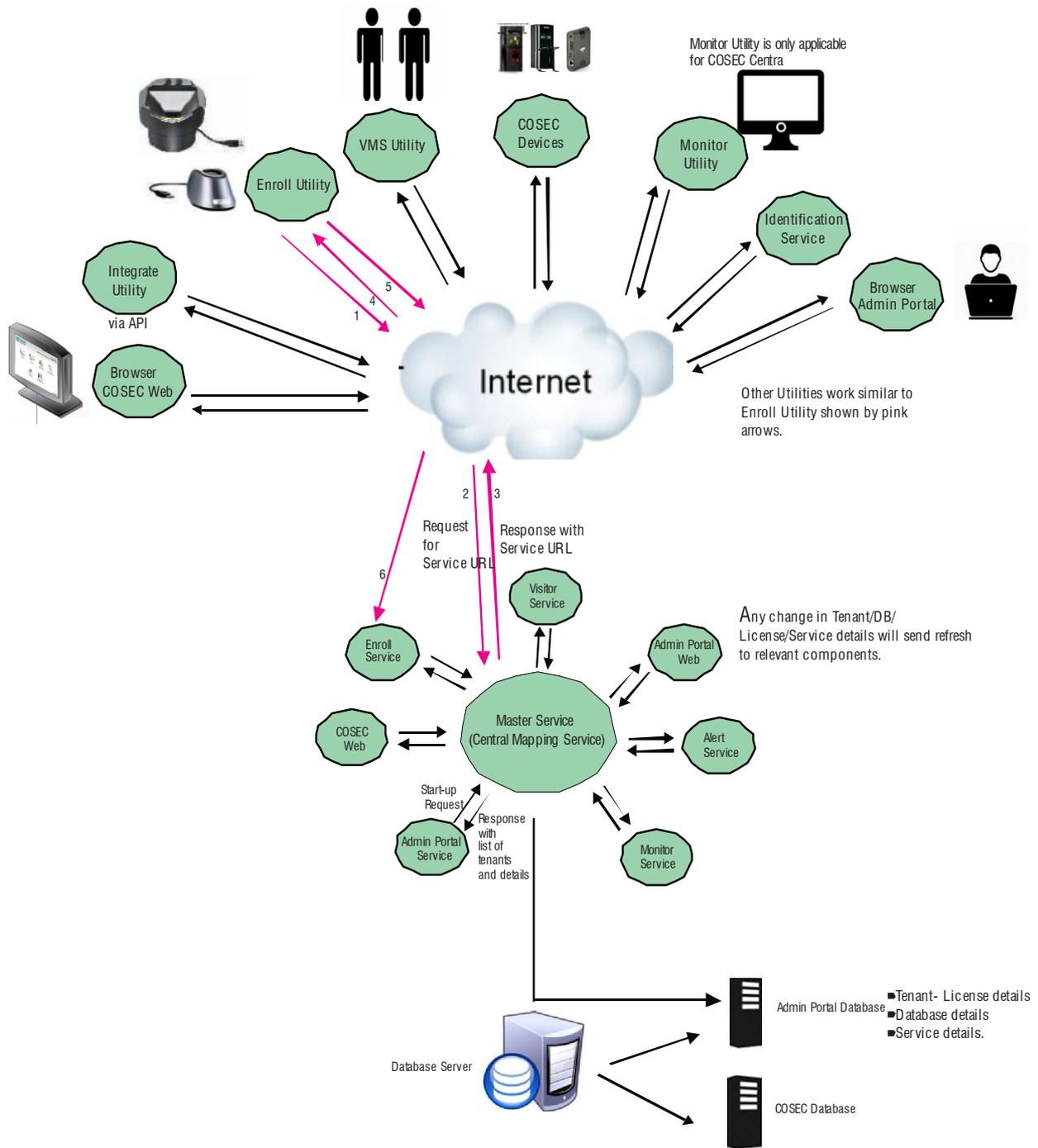
The COSEC Devices API User Guide is meant for *third-party software developers* who wish to operate COSEC Devices via another remote application. This guide will provide information to users on how to request and receive services from COSEC Devices using a COSEC API.

# API Overview

COSEC Devices APIs provide an interface for communication with COSEC Devices via HTTP methods. These APIs will enable specific functions to be performed on your remote devices such as setting basic and advanced device configurations, configuring users on device, performing enrollment of credentials, monitoring events and sending commands to device. For a complete list of COSEC Device APIs, refer to [Supported APIs](#).

## How It Works

Following is an illustration of how the COSEC system typically communicates in a client-server based architecture.



However, here the communication with COSEC devices occurs via the COSEC Web server. On the other hand, Devices APIs enable a client application to access and monitor a remotely installed COSEC device directly, without installing the COSEC server/Monitor.

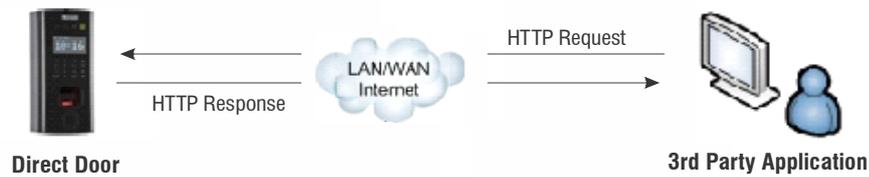


Fig. Communication through COSEC API

Using APIs, the third party can send a simple HTTP request to configure, control or command a device. The device then processes and executes this request to return an appropriate response.

## Supported Devices

COSEC Devices APIs are dependant on the device type. Currently, Device APIs are supported on the following COSEC Door Controllers and their variants:

- COSEC Direct Door V2
- COSEC Direct Door V3
- COSEC Direct Door V4
- COSEC Path Controller
- COSEC Wireless Door
- COSEC NGT Door
- COSEC PVR Door
- COSEC Vega Controller
- COSEC Argo Controller
- COSEC ARC Controller
- COSEC Door FMX
- COSEC ARGO FACE Door

## General Features

All COSEC APIs -

- Are Web-based *HTTP* APIs.
- Use basic *HTTP Request-Response* for interface communication.
- Generate response in either *text* or *XML* (Extensible Markup Language) format.
- Use simple *HTTP commands* such as *GET*, *SET*, *DELETE* etc.
- Use a generic syntax for all queries.
- Support some predefined parameters and their corresponding values for each action. Each parameter will either be mandatory or bear a system-defined default value (when no value is specified).

- Use a mandatory parameter **action** universally, which takes action values (such as **get**, **set**, **delete** etc.) and specifies the action to be requested.

## What the User Should Know

It is assumed that developers using this document have prior knowledge of:

- Basic functioning of the COSEC system
- Basic HTTP request-response communication
- XML

## Prerequisite

In order to use a COSEC API, the user will require:

- A COSEC Device (pre-installed)
- A network enabled for accessing the COSEC Device.
- The credentials for API Authentication



*For information on installing a COSEC device and assigning an IP address to it, please refer to the respective device documentation.*

## Authentication

The device shall request basic authentication for granting access. Default username and password for HTTP session authentication are:

Username: admin

Password: password set on device

## HTTP Request-Response

Basic HTTP communication is based on a request-response paradigm. The message structure for both request and response has a generic format.

|   |  |
|---|--|
| HTTP-message = Request   Response ; HTTP/1.1 messages |  |
| Generic-message = start-line                          | <i>The start line</i>                          |
| *(message-header CRLF)                                | <i>Zero or more header fields or 'headers'</i> |
| CRLF  | <i>An empty line</i>                           |
| [Message-body]  | <i>A message-body (chunk or payload)</i>       |

Start-line = Request-Line | Status-Line

## Communication Flow

The communication takes place in the following manner:

1. The client checks availability of the device.
2. If available, the client issues a request for the device.

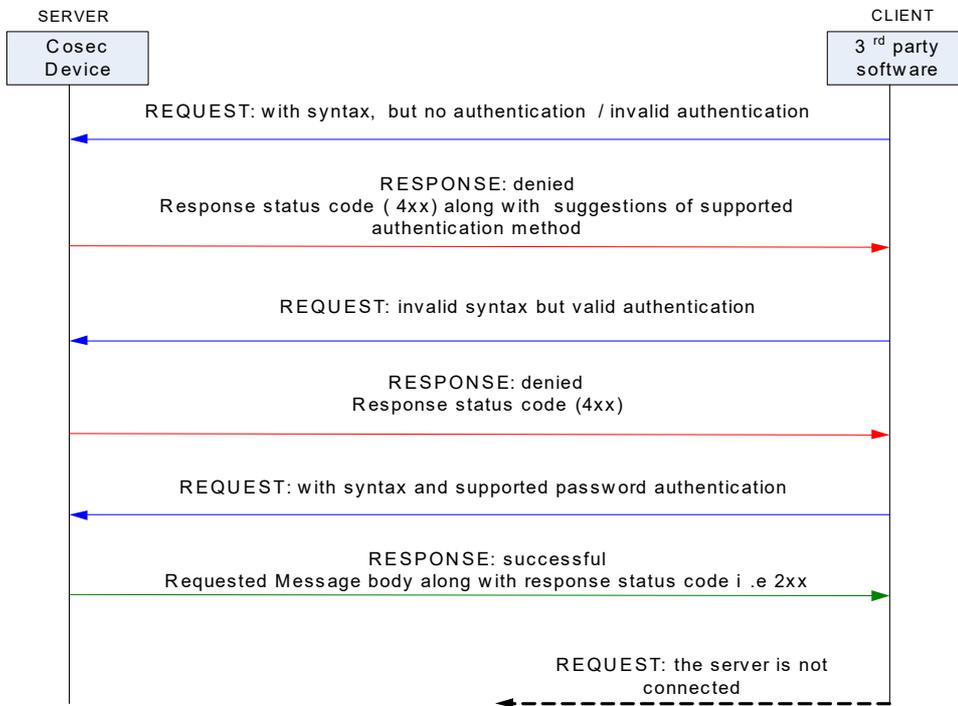


Fig: communication flow

3. The device parses the request for the action to be taken.
4. In case of an error (*invalid syntax, invalid authentication etc.*), the request is denied and an error response is returned. Else, the requested data is returned with the appropriate response code.

## Request Format

All HTTP Requests follow a generic message format. It consists of the following components:

|    |              |   |
|----|--------------|---|
| 1. | Request Line | <p>This line is constituted by the following three elements which must be separated by a space:</p> <ul style="list-style-type: none"> <li>• The method type (GET, HEAD, POST, PUT etc.)</li> <li>• The requested URL</li> <li>• The HTTP version to use</li> </ul> <p>For e.g.:</p> <pre>GET http://192.168.1.2/device.cgi/command?action=geteventcount HTTP/1.0</pre> |
|----|--------------|---|

|    |               |   |
|----|---------------|---|
| 2. | Header Fields | <p>Add information about the request using these header fields:</p> <ul style="list-style-type: none"> <li>• A General Header (&lt;Header-name&gt;:&lt;value&gt;).</li> <li>• A Request Header (&lt;Header-name&gt;:&lt;value&gt;).</li> <li>• An Entity Header (&lt;Header-name&gt;:&lt;value&gt;).</li> </ul> |
| 3  | Empty Line    | This is an empty line separating headers from the message body.   |
| 4  | Message Body  | This is the chunk or payload.   |

**Example:**

```
GET http://matrix.com/ HTTP/1.0
Accept: text/html
If-Modified-Since: Saturday, 15-January-2000 14:37:11 GMT
User-Agent: Mozilla/4.0 (compatible; MSIE 5.0; Windows 95)
```

**Response Format**

An HTTP response is a collection of lines sent by the server to the client. A generic HTTP response format will resemble the following:

```
VERSION-HTTP CODE EXPLANATION<cr1f>
HEADER: Value<cr1f>
.
.
.
HEADER: Value<cr1f>
Empty line<cr1f>
BODY OF THE RESPONSE
```

It consists of the following components:

|    |                            |  |
|----|----------------------------|--|
| 1. | A status line              | <p>This line is constituted by the following three elements which must be separated by a space:</p> <ul style="list-style-type: none"> <li>• The version of the protocol used (e.g. <i>HTTP/1.0</i>).</li> <li>• The status code (indicates the status of the request being processed).</li> <li>• The explanation of the code.</li> </ul> |
| 2. | The response header fields | These optional lines allow additional information to be added to the response header. This information appears in the form of a name indicating the header type followed by a value for the header type. The name and value are separated by a colon (:).  |
| 3. | The body of the response   | Contains the requested data.   |

## Example

When the server gets a request, it will respond with a standard HTTP status code as illustrated in the following sample response:

```
HTTP/1.0 200 OK
Date: Sat, 15 Jan 2000 14:37:12 GMT
Server: Microsoft-IIS/2.0
Content-Type: text/HTML
Content-Length: 1245
Last-Modified: Fri, 14 Jan 2000 08:25:13
GMT
```



**HTTP Status Codes:** Status codes are 3-digit numeric codes returned in HTTP responses that enable recipients to understand the successful or failed status of the request issued. In general, codes in the 1xx range indicate an informational message only, 2xx codes indicate a successful request, 3xx codes indicate an incomplete request that requires further action, 4xx codes point at client-side errors while 5xx codes point at server-side errors.

## URL Syntax

All COSEC APIs follow a common HTTP query syntax for the third party to generate a request. The generic URL is stated below.

### Syntax

```
http://<deviceIP:deviceport>/device.cgi/<request-type>?<argument>=<value>&<argument>=<value>.....
```

Take a close look at the URL and its basic elements:

| URL element                        | Description  |
|------------------------------------|--|
| <i>http://</i>                     | This is the protocol used to communicate with the client.<br><b>Note:</b> All HTTP commands are in plain text, and almost all HTTP requests are sent using TCP port 80, though any port can be used. |
| <i>&lt;deviceIP:deviceport&gt;</i> | This identifies the device with which communication is to be performed. It consists of two components:<br>deviceIP: Device IP address<br>deviceport: Device Port Number (Default- 80)                |
| <i>device.cgi</i>                  | This is a mandatory entity required to specify the CGI directory for all the device-related commands.  |
| <i>&lt;request-type&gt;</i>        | This specifies the type of API request. For the mandatory request types, please refer to the individual API descriptions.  |

| URL element | Description  |
|-------------|--|
| <argument>  | This defines a specific action or command depending on the function to be performed.<br><b>A mandatory argument for all COSEC API functions is <i>action</i>. This argument always takes an action as its value (For eg. <i>action=get</i>).</b><br>For more information on the common HTTP actions used in COSEC APIs, please refer to section <a href="#">Common Actions</a> . |
| <value>     | These are argument values that determine the output.   |

### Example

Let us assume that the target device has the IP address 192.168.x.y and the device port number is 80. The user wants to fetch basic configured parameters for the device. In this case, a sample request would resemble the following:

```
http://192.168.x.y:80/device.cgi/device-basic-config?action=get&format=xml
```

In this case, the query uses an ***action=get*** parameter which is commonly used to retrieve information from the device-side. The URL takes another argument called ***format*** which specifies that the response returned should be in the XML format.



- Special characters ( &, ', ", <, >, #, % and ;) will not be allowed in arguments or their values. Special character "&" will be allowed as a separator between consecutive arguments and "?" will be allowed as a separator between the request-type and an argument.
- The request line and headers must all end with <CR><LF> that is carriage return character followed by a line feed character.
- The status line and header must all end with <CR><LF>.
- The empty line must consist of only <CR><LF> and no other white space.

## Common Actions

The following actions are commonly used in COSEC APIs as values for the '***action***' argument:

| Action            | Use  |
|-------------------|--|
| <i>GET</i>        | To fetch required data from device.  |
| <i>SET</i>        | To set required parameters for a given function.   |
| <i>GETDEFAULT</i> | This is used to get default the parameters of all/ specified argument. If any argument is specified then default value of that particular argument is returned else default value of complete group is returned. |
| <i>SETDEFAULT</i> | This is used to default the parameters. If any argument is specified then default that particular value else default complete group  |

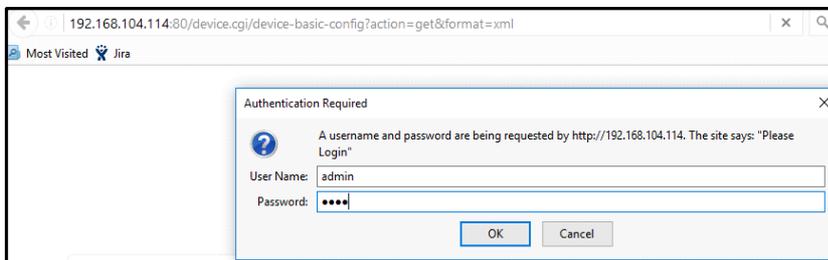
| Action | Use                              |
|--------|----------------------------------|
| DELETE | To delete data from device.      |
| ENROLL | To enroll an entity to a device. |

## Additional Information

- Generally, all the commands will be supported in the GET Method and hence the arguments and valid values will be expected in the URL. Wherever applicable POST method will be specified explicitly. For the POST method, the parameters must be included in the body of the HTTP request.
- To set blank values in a particular field, a blank can follow the “=”. E.g. “argument=”
- If the format is not specified then by default, the values should be returned in text format.
- For all arguments other than ‘action’, the position in the URL may be changed.



COSEC APIs use basic authentication and can be tested on any standard Web browser. Enter the request URL in the address field of your browser and press the ‘Enter’ key to send query to the device. Enter the authentication credentials when prompted. The response will be displayed on your browser in the specified format.



```

<COSEC_API>
<app>1</app>
<name>Door V3-Device-18</name>
<asc-code>0</asc-code>
<generate-invalid-user-events>0</generate-invalid-user-events>
<generate-exit-switch-events>0</generate-exit-switch-events>
<manual-door-mode-selection>0</manual-door-mode-selection>
<mifare-custom-key-enable>0</mifare-custom-key-enable>
<hid-iclass-custom-key-enable>0</hid-iclass-custom-key-enable>
<max-fingers>1</max-fingers>
<finger-format>0</finger-format>
</COSEC_API>

```

# Supported APIs

---

COSEC Devices support the following groups of APIs categorized on the basis of functions to be performed:

- *Device Configuration*
- *User Configuration*
- *Enrollment*
- *Events*
- *Sending Commands to Device*
- *Access Request on QR Scanning*
- *Cafeteria Reset and Recharge*
- *Get Random Key*
- *Verify Biometric and Open Door*

# Device Configuration

---

This group of APIs enables users to perform the following types of device configuration:

- *Basic Device Configuration*
- *Function Key Configuration*
- *Reader Configuration*
- *Finger Reader Parameter Configuration*
- *Palm Sensor Parameter Configuration*
- *Enrollment Configuration*
- *Access Settings Configuration*
- *Alarm Configuration*
- *Date and Time Configuration*
- *Door Features Configuration*
- *System Timers Configuration*
- *Special Function Configuration*
- *Internal/External Reader Configuration*
- *Device Display Configuration*
- *Device-LED & Buzzer Cadence Configuration*
- *Multi-Language Support*
- *To Download/Upload Multi-Language File*
- *To Select the Mode of Wiegand Interface*
- *Temperature Logging Configuration*
- *Face Mask Compulsion*
- *Smart Card Format*
- *Smart Card Key Change*
- *FR Settings*

## Basic Device Configuration

**Description:** To set or retrieve basic configuration parameters for a device such as application type, name, Additional Security Code and maximum number of finger templates on device.

**Actions:** get, set, getdefault, setdefault

**Syntax:** http://<deviceIP:deviceport>/device.cgi/device-basic-config?action=<value>&<argument>=<value>...

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Device Configuration Parameters**

| Argument    | Valid Values   | Mandatory | Description   |
|-------------|--|-----------|---|
| app         | 1, 2<br><br>1 = Advanced Access Control<br>2 = Basic Access Control  | No        | To define the application.  |
| name        | Alphanumeric,<br>Max. 30 characters  | No        | To identify/configure the device name.  |
| asc-code    | Numeric, 16 bits,<br>1-65535 range   | No        | To configure an Additional Security Code (ASC). Should be non-zero. Not applicable for ARGO FACE200T. |
| max-fingers | Single Template/Finger: 0-9<br><br>where,<br>0 - 1 Finger<br>1 - 2 Fingers<br>2 - 3 Fingers<br>3 - 4 Fingers<br>4 - 5 Fingers<br>5 - 6 Fingers<br>6 - 7 Fingers<br>7 - 8 Fingers<br>8 - 9 Fingers<br>9 - 10 Fingers<br><br>Dual Template/Finger: 0-4<br><br>where,<br>0 - 1 Finger<br>1 - 2 Fingers<br>2 - 3 Fingers<br>3 - 4 Fingers<br>4 - 5 Fingers | No        | Maximum no. of finger templates that can be stored per user on this device.                           |

**Table: Device Configuration Parameters**

| <b>Argument</b>              | <b>Valid Values</b>   | <b>Mandatory</b> | <b>Description</b>  |
|------------------------------|---|------------------|---|
| max-palms                    | 0 - 1 Palm<br>1 - 2 Palms<br>2 - 3 Palms<br>3 - 4 Palms<br>4 - 5 Palms<br>5 - 6 Palms<br>6 - 7 Palms<br>7 - 8 Palms<br>8 - 9 Palms<br>9 - 10 Palms  | No               | Maximum no. of palm templates that can be stored per user on this device. |
| max-faces                    | 0 - 1 Face<br>1 - 2 Face<br>2 - 3 Face<br>3 - 4 Face<br>4 - 5 Face<br>5 - 6 Face<br>6 - 7 Face<br>7 - 8 Face<br>8 - 9 Face<br>9 - 10 Face<br>10 - 11 Face<br>11 - 12 Face<br>12 - 13 Face<br>13 - 14 Face<br>14 - 15 Face<br>15 - 16 Face<br>16 - 17 Face<br>17 - 18 Face<br>18 - 19 Face<br>19 - 20 Face<br>20 - 21 Face<br>21 - 22 Face<br>22 - 23 Face<br>23 - 24 Face<br>24 - 25 Face<br>25 - 26 Face<br>26 - 27 Face<br>27 - 28 Face<br>28 - 29 Face<br>29 - 30 Face | No               | Maximum no. of templates that can be stored per user on this device.      |
| generate-invalid-user-events | 0 - No<br>1 - Yes   | No               | To generate invalid user events when invalid user is punched in.          |
| generate-exit-switch-events  | 0 - No<br>1 - Yes   | No               | To generate exit switch events. Not applicable for ARGO FACE200T.         |

**Table: Device Configuration Parameters**

| Argument                     | Valid Values                       | Mandatory | Description  |
|------------------------------|------------------------------------|-----------|--|
| mifare-custom-key-enable     | 0 - Disable<br>1 - Enable          | No        | To enable the custom key for mifare card variants. Not applicable for ARGO FACE200T.     |
| mifare-custom-key            | Numeric<br>6 Bytes (12 Hex Digits) | No        | To define custom keys for Mifare card variants. Not applicable for ARGO FACE200T.        |
| hid-iclass-custom-key-enable | 0 - Disable<br>1 - Enable          | No        | To enable the custom key for hid-iclass variants. Not applicable for ARGO FACE200T.      |
| hid-iclass-custom-key        | 8 Bytes (16 Hex Digits)            | No        | To define custom keys for HID i-class card variants. Not applicable for ARGO FACE200T.   |
| card-custom-key-auto-update  | 0 - Disable<br>1 - Enable          | No        | To enable the auto update of custom key. Not applicable for ARGO FACE200T.               |
| finger-format                | 0 - Proprietary<br>1 - ISO         | No        | To set the mode of the finger template. By default, proprietary format will be selected. |
| manual-door-mode-selection   | 0 - Disable<br>1 - Enable          | No        | To enable/disable the Door Mode Selection feature  |
| format                       | text, xml                          | No        | specifies the format in which the response is expected.                                  |



For parameters "mifare-custom-key" and "hid-iclass-custom-key"; "Get & get default action are not applicable.



The **Additional Security Code** is a code that can be written on a smart card for adding an additional layer of security check during door access.



To get the default values for any parameter, use the **action= getdefault** method. To restore configuration parameters on device to default values, use the **action= setdefault** method.



For ARC IO800, Valid Parameters: action, name, format.

## Example

Following are some test cases for your reference:

### 1. To get all parameters.

#### Sample Request

```
http://<deviceIP:deviceport>/device.cgi/device-basic-config?action=get
```

### Sample Response

HTTP Code: 200 OK  
Content-Type: <code>  
Content-Length: <type>  
Body:  
app=1 name=NGT Direct Door-Device-11 asc-code=0 generate-invalid-user-events=0 generate-exit-switch-  
events=0 max-fingers=1 finger-format=0

#### 2. To get device name, when expected value is blank and the response format is in text.

### Sample Request

http://<deviceIP:deviceport>/device.cgi/device-basic-config?action=get&name&app

### Sample Response

HTTP Code: 200 OK  
Content-Type: <code>  
Content-Length: <type>  
Body:  
app=1 name=NGT Direct Door-Device-11

#### 3. To get device name, when the expected value is blank and the response format is XML.

### Sample Request

http://<deviceIP:deviceport>/device.cgi/device-basic-config?action=get&name&app&format=xml

### Sample Response

HTTP Code: 200 OK  
Content-Type: <code>  
Content-Length: <type>  
Body:  
<COSEC\_API>  
<app>1</app>  
<name>NGT Direct Door-Device-11</name>  
</COSEC\_API>

#### 4. To set device name as blank – Valid argument.

### Sample Request

http://<deviceIP:deviceport>/device.cgi/device-basic-config?action=set&name=

### Sample Response

HTTP Code: 200 OK  
Content-Type: <code>  
Content-Length: <type>  
Body: Response-Code=0

# Function Key Configuration

**Description:** To set or retrieve configuration of Function Keys on the Device keypad. COSEC enables its users to map up to 4 special functions to the arrow keys on a Direct Door keypad. These functions can then be performed at the door by using the keypad shortcuts. Use this API to specify which special functions are to be assigned shortcuts on COSEC devices.

**Actions:** get, set, getdefault, setdefault

**Syntax:** `http://<deviceIP:deviceport>/device.cgi/function-key?action=<value>&<argument>=<value>...`

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Function Key Configuration Parameters**

| Argument          | Valid Values        | Mandatory | Description  |
|-------------------|---------------------|-----------|--|
| F1                | 0 = None            | No        | Assigning special functions to respective function keys. |
| F2                | 1 = Official IN     |           |  |
| F3                | 2 = Official OUT    |           |  |
| F4                | 3 = Short Leave IN  |           |  |
|                   | 4 = Short Leave OUT |           |  |
|                   | 5 = Regular IN      |           |  |
|                   | 6 = Regular OUT     |           |  |
|                   | 7 = Post Break IN   |           |  |
|                   | 8 = Pre - Break OUT |           |  |
|                   | 9 = Overtime IN     |           |  |
| 10 = Overtime OUT |                     |           |  |
| format            | text, XML           | No        | Specifies the format in which the response is expected.  |

## Example

1. To configure function key F1 as official work – IN.

### Sample Request

`http://<deviceIP:deviceport>/device.cgi/function-key?action=set&f1=1`

### Sample Response

HTTP Code: 200 OK  
Content-Type: <type>  
Content-Length: <length>  
Body: Response-Code=0

## Reader Configuration

**Description:** To set or retrieve configuration parameters for internal and external readers such as reader type, access mode, entry-exit mode and the tag re-detection delay time.

**Actions:** get, set, getdefault, setdefault

**Syntax:** http://<deviceIP:deviceport>/device.cgi/reader-config?action=<value>&<argument>=<value>...

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Reader Configuration Parameters (All doors except COSEC ARC Controller)**

| Argument | Valid Values  | Mandatory | Description  |
|----------|---|-----------|--|
| reader1  | 0 = None<br>1 = EM Prox Reader<br>2 = HID Prox Reader<br>3 = MiFare Reader<br>4 = HID iCLASS-U Reader<br>5 = HID iCLASS-W Reader  | No        | To define the internal card reader. Not applicable for ARGO FACE200T.      |
| reader2  | 0 = None<br>1 = Finger Reader<br>2 = Palm Vein Reader   | No        | To define the internal biometric reader. Not applicable for ARGO FACE200T. |
| reader3  | 0 = None<br>1 = EM Prox Reader<br>2 = HID Prox Reader<br>3 = MiFare U Reader<br>4 = HID iCLASS-U Reader<br>5 = Finger Reader<br>6 = HID iCLASS-W Reader<br>8 = UHF Reader<br>9 = Combo Exit Reader<br>10 = MiFare-W Reader<br>11= PIN-W-Reader<br>12=Card+Pin-W-Reader<br>13=CB-U-Reader<br>14=CB-W-Reader<br>15=ATOM-1<br>16=ATOM-2<br>17=ATOM-3 | No        | To define the external reader. Not applicable for ARGO FACE200T.           |

**Table: Reader Configuration Parameters (All doors except COSEC ARC Controller)**

| Argument               | Valid Values   | Mandatory | Description   |
|------------------------|--|-----------|---|
| door-access-mode       | 0 = Card<br>1 = Finger<br>2 = Card + PIN<br>3 = PIN + Finger<br>4 = Card + Finger<br>5 = Card + PIN + Finger<br>6 = Any<br>7 = Palm<br>8 = Palm + PIN<br>9 = Card + Palm<br>10 = Card + PIN + Palm<br>11 = Palm + Group (Optional)<br>12 = Finger then Card<br>13 = Palm then Card<br>14= None<br>15= Face<br>16= Card & Face<br>17= PIN & Face<br>18= finger & Face<br>20= Card then Biometrics | No        | To define the access mode applicable for door access.   |
| door-entry-exit-mode   | 0 = Entry<br>1 = Exit  | No        | To define the whether the internal reader is to be set on an entry or exit mode.  |
| reader-access-mode     | 0 = Card<br>1 = Biometric<br>2 = Card + PIN<br>3 = Biometric + PIN<br>4 = Biometric + Card<br>5 = Biometric + Card + PIN<br>6 = Any One<br>12 = Biometric then Card<br>19 = BLE<br>20 = Card then Biometrics   | No        | To define the access mode applicable for the external reader. Not applicable for ARGO FACE200T.<br><br>reader-access-mode= 2, 3 and 5 are only applicable for Vega, Argo, Argo Face and PathV2. |
| reader-entry-exit-mode | 0 = Entry<br>1 = Exit  | No        | To define the whether the external reader is to be set on an entry or exit mode. Not applicable for ARGO FACE200T.  |
| tag-re-detect-delay    | 00 - 3600 seconds  | No        | To define the tag re-detection delay time. Not applicable for ARGO FACE200T.  |
| format                 | text, XML  | No        | Specifies the format in which the response is expected.   |

**Table: Reader Configuration Parameters (COSEC ARC Controllers only)**

| Argument                   | Valid Values   | Mandatory | Description  |
|----------------------------|--|-----------|--|
| rs-485-readergrp1          | 0 = None<br>1 = EM Prox Reader<br>2 = HID Prox Reader<br>3 = MiFare Reader<br>4 = HID iCLASS-U Reader<br>5 = Combo Reader<br>13= CB-U Reader<br>15= ATOM-1<br>16= ATOM-2<br>17= ATOM-3 | No        | To define the RS-485 reader in reader1 group.  |
| wiegand-readergrp1         | 0 = None<br>1 = Short-Range Reader<br>2 = Long-Range Reader<br>11= PIN- W-Reader<br>12= Card +PIN-W Reader<br>14= CB -W Reader   | No        | To define the Wiegand reader in reader1 group. PIN-W-Reader and Card+ PIN-W Reader, Cb-W Reader is applicable for ARC DC 200 only. |
| readergrp1-entry-exit-mode | 0 = Entry<br>1 = Exit  | No        | To define the mode (entry/exit) for reader1 group  |
| readergrp1-access-mode     | 0 = Card<br>1 = Finger<br>4 = Card + Finger<br>6 = Any<br>12 = Finger then Card<br>20= Card then Biometrics  | No        | To define the access mode applicable for reader1 group.  |
| rs-485-readergrp2          | 0 = None<br>1 = EM Prox Reader<br>2 = HID Prox Reader<br>3 = MiFare Reader<br>4 = HID iCLASS-U Reader<br>5 = Combo Reader<br>13= CB-U Reader<br>15= ATOM-1<br>16= ATOM-2<br>17= ATOM-3 | No        | To define the RS-485 reader in reader2 group.  |
| wiegand-readergrp2         | 0 = None<br>1 = Short-Range Reader<br>2 = Long-Range Reader<br>11= PIN- W-Reader<br>12= Card +PIN-W Reader<br>14= CB -W Reader   | No        | To define the Wiegand reader in reader2 group. PIN-W-Reader and Card+ PIN-W Reader, Cb-W Reader is applicable for ARC DC 200 only. |
| readergrp2-entry-exit-mode | 0 = Entry<br>1 = Exit  | No        | To define the mode (entry/exit) for reader2 group  |
| readergrp2-access-mode     | 0 = Card<br>1 = Finger<br>4 = Card + Finger<br>6 = Any<br>12 = Finger then Card<br>20= Card then Biometrics  | No        | To define the access mode applicable for reader2 group.  |

**Table: Reader Configuration Parameters (COSEC ARC Controllers only)**

| Argument            | Valid Values      | Mandatory | Description                                |
|---------------------|-------------------|-----------|--|
| tag-re-detect-delay | 00 - 3600 seconds | No        | To define the tag re-detection delay time. |

## Example

1. To configure internal card reader as an HID Prox reader and internal reader mode as entry.

### Sample Request

```
http://<deviceIP:deviceport>/device.cgi/reader-config?action=set&reader1=2&door-access-mode=0
```

### Sample Response

```
HTTP Code: 200 OK  
Content-Type: <type>  
Content-Length: <length>  
Body: Response-Code=0
```

## Finger Reader Parameter Configuration

**Description:** To set the finger reader calibration for fingerprint enrollment.

**Actions:** get, set, getdefault, setdefault

**Syntax:** http://<deviceIP:deviceport>/device.cgi /finger-parameter?<argument>=<value>&<argument>=<value>...

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Finger Reader Parameter Configuration - Parameters**

| Argument           | Valid Values   | Mandatory | Description   |
|--------------------|--|-----------|---|
| security           | 0 = Level 1 (Low)<br>1 = Level 2<br>2 = Level 3<br>3 = Level 4<br>4 = Level 5 (High)<br><br>Default = 0 (For Suprema device)<br>Default = 2 (For Lumidigm device)  | Yes       | To define the security type while enrollment.<br><b>Note:</b><br>0-4 is only applicable for FMX.<br>0-2 is applicable for suprema based devices.      |
| lighting-condition | 0 = Out door<br>1 = In door<br><br>Default = 1   | No        | To define the lighting condition.   |
| sensitivity        | 0 = Level 1 (Low)<br>1 = Level 2<br>2 = Level 3<br>3 = Level 4<br>4 = Level 5<br>5 = Level 6<br>6 = Level 7<br>7 = Level 8 (High)<br><br>Default = 7 (For Suprema device)<br>Default = 1 (For Lumidigm device) | No        | To define the sensitivity levels from low to high.<br><b>Note:</b><br>0-2 is only applicable for FMX.<br>0-7 is applicable for suprema based devices. |
| fast-mode          | 0 = Mode 1 (Normal)<br>1 = Mode 2<br>2 = Mode 3<br>3 = Mode 4<br>4 = Mode 5<br>5 = Mode 6 (Fastest)<br>6 = Auto<br><br>Default = 6   | No        | To define the mode to be used during enrollment.  |

**Table: Finger Reader Parameter Configuration - Parameters**

| <b>Argument</b> | <b>Valid Values</b>  | <b>Mandatory</b> | <b>Description</b>                                     |
|-----------------|--|------------------|--|
| image-quality   | 0 = Weak<br>1 = Moderate<br>2 = Strong<br>3 = Strongest<br><br>Default = 1 | No               | To define the acceptable image quality for enrollment. |
| format          | text,xml   | No               | Specifies the format in which the response is expected |

## Palm Sensor Parameter Configuration

**Description:** To set the palm sensor calibration for palm enrollment.

**Actions:** get, set, getdefault, setdefault

**Syntax:** http://<deviceIP:deviceport>/device.cgi /palm-parameter?<argument>=<value>&<argument>=<value>...

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Finger Reader Parameter Configuration - Parameters**

| Argument                   | Valid Values  | Mandatory | Description   |
|----------------------------|---|-----------|---|
| security                   | 0 = Normal<br>1 = Highest<br>2 = High<br>3 = Low<br>4 = Lowest<br><br>Default = 2 | Yes       | To define the security type while enrollment.                         |
| palm-matching-timeout      | 0 to 9999 sec<br><br>Default = 15 sec   | No        | To define the palm matching timeout.                                  |
| palm-temp-quality          | 0 = Good<br>1 = Moderate<br>2 = Poor<br><br>Default = 1                           | No        | To define the acceptable image quality for enrollment.                |
| format                     | text, XML   | No        | Specifies the format in which the response is expected.               |
| custom-palm-app-key-enable | 0 = Inactive<br>1 = Active<br><br>Default = 0                                     | No        | To enable the custom key.   |
| custom-palm-app-key        | Alphanumeric:<br>16 characters  | No        | It specifies the custom key used for identification and verification. |

# Enrollment Configuration

**Description:** To set or retrieve configuration parameters for enrollment of credentials on a device such as number of credentials allowed, number of templates allowed per finger, enrollment mode etc.

**Actions:** get, set, getdefault, setdefault

**Syntax:** http://<deviceIP:deviceport>/device.cgi/enroll-options?action=<value>&<argument>=<value>...

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Enrollment Configuration Parameters**

| Argument            | Valid Values   | Mandatory | Description  |
|---------------------|--|-----------|--|
| enroll-on-device    | 0 = Inactive<br>1 = Active   | No        | To enable/disable the feature to enroll through special function   |
| enroll-using        | 0 = User ID<br>1 = Reference No.   | No        | To define the option to enroll the credential using the user's Reference No. or User ID, for enrollment through special function.<br><br>Note: This parameter will not be valid for NGT Direct Door and Vega Controller where enrollment must be performed by User ID. |
| temp-per-finger     | 0 = Single Template/<br>Finger<br>1 = Dual Template/Finger   | No        | To define the number of templates to be saved per finger.  |
| enroll-finger-count | Single Template/Finger: 0-9<br><br>where,<br>0 = 1 Finger<br>1 = 2 Fingers<br>2 = 3 Fingers<br>3 = 4 Fingers<br>4 = 5 Fingers<br>5 = 6 Fingers<br>6 = 7 Fingers<br>7 = 8 Fingers<br>8 = 9 Fingers<br>9 = 10 Fingers<br><br>Dual Template/Finger: 0-4<br><br>where,<br>0 = 1 Finger<br>1 = 2 Fingers<br>2 = 3 Fingers<br>3 = 4 Fingers<br>4 = 5 Fingers | No        | No. of fingers allowed to be enrolled in one enrollment cycle.<br><br>Note: For the <b>action=set</b> method, this value should not be greater than the <b>max-finger</b> value set in Basic Device Configuration API.   |

**Table: Enrollment Configuration Parameters**

| Argument                    | Valid Values   | Mandatory | Description   |
|-----------------------------|--|-----------|---|
| enroll-palm-count           | 0 = 1 Palm<br>1 = 2 Palms<br>2 = 3 Palms<br>3 = 4 Palms<br>4 = 5 Palms<br>5 = 6 Palms<br>6 = 7 Palms<br>7 = 8 Palms<br>8 = 9 Palms<br>9 = 10 Palms | No        | No. of palms allowed to be enrolled in one enrollment cycle.  |
| enroll-card-count           | 0 = 1 Card<br>1 = 2 Cards<br>2 = 3 Cards<br>3 = 4 Cards  | No        | No. of special function cards allowed to be enrolled in one enrollment cycle. Not applicable for ARGO FACE200T.   |
| enroll-mode                 | 0 = Read Only Card<br>1 = Smart Card<br>2 = Biometric<br>3 = Biometric then Card<br>7 = Face<br>8 =Duress Finger                                   | No        | To define the enrollment mode for enrollment through device. enroll-mode=0 and 1, that is, Read Only Card and Smart Card is not applicable for ARGO FACE200T. |
| palm-operation-mode         | 0 = Non-guide mode<br>1 = Guide mode   | No        | To specify whether the enrollment is in Guide mode or Non-guide mode for the COSEC PVR Door.  |
| palm mode adaptive          | 0=Basic Template<br>1=Compressed Template  | No        | To define whether PVR is running in Adaptive mode or not  |
| self-enrollment-enable      | 0 = Disable<br>1 = Enable  | No        | To enable/disable self-enrollment on device.  |
| self-enrollment-retry-count | 0 - 255  | No        | To specify the self-enrollment retry count for users.   |
| format                      | text, XML  | No        | Specifies the format in which the response is expected.   |



- If the **temp-per-finger** mode is changed, then the templates have to be restored to the device explicitly by the third party software, else mismatch will occur in the module.
- If **Single Template/Finger** mode is selected on the device and some users are already enrolled according to it and if abruptly the mode is changed to **Dual Template/Finger** then:
  - i. If the maximum finger count was greater than 5 fingers in Single Template/Finger mode, then after changing the mode to the Dual Template/Finger, the finger count will set to 5.
  - ii. If the maximum finger count was less than 5 fingers in Single Template/Finger mode, then after changing the mode to the Dual Template/Finger, the finger count will remain same.
- If the mode is changed back to Single Template/Finger, then finger count should not be changed. If users want to increase the finger count they should mention it explicitly.
- The palm adaptive mode is by default disabled, if enabled, device will generate one additional compressed palm template and store it as 11<sup>th</sup> palm template

# Access Settings Configuration

**Description:** To set or retrieve configuration parameters for enabling basic access control on a device for users.

**Actions:** get, set, getdefault, setdefault

**Syntax:** http://<deviceIP:deviceport>/device.cgi/access-setting?action=<value>&<argument>=<value>...

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Access Settings Configuration Parameters**

| Argument      | Valid Values                                     | Mandatory | Description   |
|---------------|--|-----------|---|
| week-day<0~6> | sun (0) to sat (6)<br>0 = Inactive<br>1 = Active | No        | To define the active working days. This parameter is repeated for each day of the week. |
| work-start-hh | 00-23  | No        | Define the work start time  |
| work-start-mm | 00-59  | No        | Define the work start time  |
| work-end-hh   | 00-23  | No        | Define the work stop time   |
| work-end-mm   | 00-59  | No        | Define the work stop time   |
| format        | text, xml  | No        | Specifies the format in which the response is expected                                  |

## Example

1. To get data for all parameters in the text format.

### Sample Request

```
http://<deviceIP:deviceport>/device.cgi/access-setting?action=get&format=xml
```

### Sample Response

```
HTTP Code: 200 OK  
Content-Type: <code>  
Content-Length: <type>  
Body:  
week-day0=1 week-day1=1 week-day2=1 week-day3=1 week-day4=1 week-day5=1 week-day6=1 work-start-hh=0  
work-start-mm=0 work-end-hh=23 work-end-mm=59
```

# Alarm Configuration

**Description:** To set or retrieve configuration parameters for enabling/disabling alarms and related functions on a COSEC device such as Auto Alarm Acknowledgment.

**Actions:** get, set, getdefault, setdefault

**Syntax:** http://<deviceIP:deviceport>/device.cgi/alarm?action=<value>&<argument>=<value>...

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Alarm Configuration Parameters**

| Argument             | Valid Values               | Mandatory | Description  |
|----------------------|----------------------------|-----------|--|
| alarm                | 0 = Inactive<br>1 = Active | No        | To enable/disable alarm.   |
| tamper-alarm         | 0 = Inactive<br>1 = Active | No        | To enable or disable the feature. Not applicable for ARGO FACE200T.                            |
| tamper-readergrp1    | 0 = NO<br>1 = NC           | No        | For ARC Controllers reader group 1. To specify normal state as NO/NC to generate tamper alarm. |
| tamper-readergrp2    | 0 = NO<br>1 = NC           | No        | For ARC Controllers reader group 2. To specify normal state as NO/NC to generate tamper alarm. |
| auto-alarm-ack       | 0 = Inactive<br>1 = Active | No        | To enable or disable the Auto Alarm Acknowledgement feature.                                   |
| format               | text, XML                  | No        | Specifies the format in which the response is expected.  |
| thresh-temp-exceeded | 0 = Inactive<br>1 = Active | No        | To enable/ disable the “User Denied – Threshold Temperature Exceeded” alarm                    |
| mask-not-detected    | 0 = Inactive<br>1 = Active | No        | To enable/ disable the “User Denied – Face Mask Not detected” alarm                            |

## Date and Time Configuration

**Description:** To set or retrieve date and time configurations on a COSEC device. The user can configure the date and time to be displayed on the device, the display format, the time update mode, the NTP server settings as well as the Daylight Savings Time (DST) settings on the selected device.

**Actions:** get, set, getdefault, setdefault

**Syntax:** http://<deviceIP:deviceport>/device.cgi/date-time?action=<value>&<argument>=<value>...

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Date and Time Configuration Parameters**

| Argument         | Valid Values   | Mandatory | Description   |
|------------------|--|-----------|---|
| year             | 2009 to 2037   | No        | To set year value   |
| month            | 01 to 12   | No        | To set month value  |
| date             | 01 to 31   | No        | To set date   |
| hour             | 00 to 23   | No        | To set hour   |
| minute           | 00 to 59   | No        | To set minutes  |
| second           | 00 to 59   | No        | To set seconds  |
| time-format      | 0 = 24 hours<br>1 = 12 hours   | No        | Defines the time format to be displayed on the device display.<br><br>Note: This is applicable only for the time shown on the device display and not for general date-time which will always be in 24 hours format. |
| update-mode      | 0 = Auto<br>1 = Manual   | No        | Defines whether the update mode is manual or through NTP Server.  |
| ntp-server-type  | 0 = Predefined<br>1 = User Defined   | No        | Defines whether the NTP server is a predefined server or user-defined server address.   |
| time-zone        | 00-74 (Tool supported by Windows), default: GMT (+05:30) Chennai, Kolkata, Mumbai, New Delhi.<br><br>Refer to <a href="#">"Table: Universal Time Zone Reference" on page 112</a> | No        | To define the universal time zone.  |
| ntp-server       | 0 = ntp1.cs.wisc.edu<br>1 = time.windows.com<br>2 = time.nist.gov  | No        | To define the NTP Address.  |
| user-defined-ntp | Alphanumeric, Max. 40 characters.  | No        | To define the user-defined NTP.   |
| dst-enable       | 0 = Disable<br>1 = Enable  | No        | To enable/disable DST.  |

**Table: Date and Time Configuration Parameters**

| Argument    | Valid Values   | Mandatory | Description                 |
|-------------|--|-----------|-----------------------------|
| fwd-month   | 0 = January<br>1 = February<br>2 = March<br>3 = April<br>4 = May<br>5 = June<br>6 = July<br>7 = August<br>8 = September<br>9 = October<br>10 = November<br>11 = December | No        | Forward clock day           |
| fwd-week    | 0 = 1st<br>1 = 2nd<br>2 = 3rd<br>3 = 4th<br>4 = Last   |           |                             |
| fwd-day     | 0 = Sunday<br>1 = Monday<br>2 = Tuesday<br>3 = Wednesday<br>4 = Thursday<br>5 = Friday<br>6 = Saturday   |           |                             |
| fwd-time-hh | 00 - 23 (24 hours format only)   | No        | Forward clock time instance |
| fwd-time-mm | 00 - 59  |           |                             |
| rev-month   | 0 = January<br>1 = February<br>2 = March<br>3 = April<br>4 = May<br>5 = June<br>6 = July<br>7 = August<br>8 = September<br>9 = October<br>10 = November<br>11 = December | No        | Reverse clock day           |
| rev-week    | 0 = 1st<br>1 = 2nd<br>2 = 3rd<br>3 = 4th<br>4 = Last   | No        |                             |

**Table: Date and Time Configuration Parameters**

| Argument    | Valid Values   | Mandatory | Description   |
|-------------|--|-----------|---|
| rev-day     | 0 = Sunday<br>1 = Monday<br>2 = Tuesday<br>3 = Wednesday<br>4 = Thursday<br>5 = Friday<br>6 = Saturday | No        | Reverse clock day                                       |
| rev-time-hh | 00 - 23 (24 hours format only)   | No        | Reverse clock time instance                             |
| rev-time-mm | 00 - 59  |           |   |
| duration-hh | 00 - 23 (24 hours format only)   | No        | Time by which clock should be forwarded or reversed.    |
| duration-mm | 00 - 59  |           |   |
| format      | text,xml   | No        | Specifies the format in which the response is expected. |



*When user sets the time locally it should be GMT time. And in GET command also the time value to be returned will be GMT time irrespective of the time displaying on the device.*



*While configuring Daylight Saving Parameters, users are responsible to define the forward and reverse time properly.*



*For IO800: Valid Parameters are: action, year, month, date, hour, minute, second, time-format, time-zone, update-mode, ntp-server-type, ntp-server, user-defined-ntp, format.*

## Door Features Configuration

**Description:** To enable, disable, define or retrieve configuration parameters related to various door features such as auto-relock, ASC, door sense, exit switch, greeting message display, voice guidance etc.

**Actions:** get, set, getdefault, setdefault

**Syntax:** `http://<deviceIP:deviceport>/device.cgi/door-feature?action=<value>&<argument>=<value>...`

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Door Features Configuration Parameters**

| Argument               | Valid Values                       | Mandatory | Description  |
|------------------------|------------------------------------|-----------|--|
| allow-exit-when-locked | 0 = Inactive<br>1 = Active         | No        | To allow exit when door is locked. Not applicable for ARGO FACE200T.   |
| auto-relock            | 0 = Inactive<br>1 = Active         | No        | To enable/disable the Auto-relock feature. Not applicable for ARGO FACE200T.   |
| asc-active             | 0 = Inactive<br>1 = Active         | No        | To enable/disable the Additional Security Code (ASC). Not applicable for ARGO FACE200T.  |
| buzzer-mute            | 0 = Unmute<br>1 = Mute             | No        | To mute/un-mute the buzzer.  |
| door-sense-active      | 0 = Inactive<br>1 = Active         | No        | To enable/disable sensing of door states. Not applicable for ARGO FACE200T.  |
| door-sense             | 0 = NO<br>1 = NC                   | No        | To define the normal door state as as normally open (NO) or normally closed (NC). Not applicable for ARGO FACE200T.                |
| supervised             | 0 = Unsupervised<br>1 = Supervised | No        | To enable/disable supervised sensing of door states (four-state monitoring of door controllers). Not applicable for ARGO FACE200T. |
| exit-switch            | 0 = Inactive<br>1 = Active         | No        | To enable/disable the exit switch. Not applicable for ARGO FACE200T.   |
| aux-output-enable      | 0 = Inactive<br>1 = Active         | No        | To enable/disable aux output. Not applicable for ARGO FACE/ ARGO FACE200T.   |
| aux-output-enable-2    | 0 = Inactive<br>1 = Active         | No        | To enable/disable aux output. Not applicable for ARGO FACE/ ARGO FACE200T.   |
| aux-output-enable-3    | 0 = Inactive<br>1 = Active         | No        | To enable/disable aux output. Not applicable for ARGO FACE/ ARGO FACE200T.   |

**Table: Door Features Configuration Parameters**

| Argument                       | Valid Values                           | Mandatory | Description  |
|--------------------------------|--|-----------|--|
| aux-output-enable-4            | 0 = Inactive<br>1 = Active             | No        | To enable/disable aux output. Not applicable for ARGO FACE/ ARGO FACE200T.                               |
| aux-output-enable-5            | 0 = Inactive<br>1 = Active             | No        | To enable/disable aux output. Not applicable for ARGO FACE/ ARGO FACE200T.                               |
| aux-output-enable-6            | 0 = Inactive<br>1 = Active             | No        | To enable/disable aux output. Not applicable for ARGO FACE/ ARGO FACE200T.                               |
| aux-output-enable-7            | 0 = Inactive<br>1 = Active             | No        | To enable/disable aux output. Not applicable for ARGO FACE/ ARGO FACE200T.                               |
| aux-output-enable-8            | 0 = Inactive<br>1 = Active             | No        | To enable/disable aux output. Not applicable for ARGO FACE/ ARGO FACE200T.                               |
| greeting-msg-enable            | 0 = Inactive<br>1 = Active             | No        | To enable/disable the display greeting message.  |
| greeting-msg<1~4>              | Alphanumeric, Max. 21 ASCII characters | No        | To define upto 4 display greeting messages, the start time and the end time for displaying each message. |
| greeting-start-time-hh<1~4>    | 00-23                                  | No        |  |
| greeting-start-time-mm<1~4>    | 00-59                                  | No        |  |
| greeting-end-time-hh<1~4>      | 00-23                                  | No        |  |
| greeting-end-time-mm<1~4>      | 00-59                                  | No        |  |
| voice-guidance                 | 0 = Inactive<br>1 = Active             | No        | To enable/disable Voice Guidance (Only for NGT doors).   |
| duplicate-access-time-interval | 0-9999                                 | No        | To define subsequent punch restriction time. Applicable for ARGO, VEGA and ARGO FACE only.               |
| format                         | text,xml                               | No        | Specifies the format in which the response is expected.  |



- *When greeting messages are defined in an order then first message will always have precedence over second and second over third and so on. Hence, if two messages defined with overlapped timing range, the first defined message between two will have the priority.*
- *Third party should always take care of setting the time range for different messages.*



*For IO800; Valid Parameters are: action, aux-output-enable-2,3,4,5,6,7,8, format.*

## System Timers Configuration

**Description:** To set or retrieve configurations for the following system timers:

|  |   |
|--|---|
| <b>Auto Alarm Acknowledgment Timer</b> | Specifies the time period in seconds after which an unacknowledged alarm will acknowledge itself automatically.   |
| <b>Inter Digit Wait Timer</b>          | Specifies time period in seconds between two key inputs on the device keypad. On the expiry of this timer, the system considers the user input to be complete and is ready for the next input.                                  |
| <b>Multi Access Wait Timer</b>         | Defines the time in seconds for which the system needs to wait for the second credential input from a user when more than one credential is required to grant access.   |
| <b>Palm Enrollment Time Out Timer</b>  | Defines the time period in seconds within which a palm must be enrolled after generating the enrollment command.  |
| <b>Door Open Pulse Timer</b>           | Defines the time in seconds required for a door to be energized for a valid credential. If the opened door does not return to its closed state before the expiry of this timer, the door will generate a "Door Abnormal Alarm". |
| <b>Special Function Timer</b>          | Defines the time in minutes for which the Late-IN and Early-OUT special functions will remain active after being enabled at the door controller.  |

**Actions:** get, set, getdefault, setdefault

**Syntax:** <http://<deviceIP:deviceport>/device.cgi/system-timer?action=<value>&<argument>=<value>...>

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: System Timers Configuration Parameters**

| Argument                | Valid Values   | Mandatory | Description  |
|-------------------------|--|-----------|--|
| alarm-ack-timer         | 10-65535 (sec)   | No        | To define the timer for Auto Alarm Acknowledgment.                 |
| idwt                    | 1-99 (sec)   | No        | To define the Inter Digit Wait Timer.                              |
| multi-access-wait-timer | 3-99 (sec)   | No        | To define the Multi Access Wait Timer.                             |
| palm-enroll-time-out    | 3-99 (sec)   | No        | To define the Palm Enrollment Time out Timer.                      |
| pulse-time              | 1-65535 (sec)<br>0.1-65535.0 (sec) for<br>ARGO, VEGA, ARGO<br>FACE, Path V2 and ARC<br>DC200 | No        | To define the Door Pulse time. Not applicable for ARGO FACE200T.   |
| sp-function-timer       | 1-99 (mins)  | No        | To define the Special Function Timer.                              |
| auto-relock-timer       | 1-65535 (sec)  | No        | To define the auto relock timer. Not applicable for ARGO FACE200T. |
| format                  | text,xml   | No        | Specifies the format in which the response is expected.            |

## Special Function Configuration

**Description:** COSEC enables its users to perform certain pre-defined operations directly from the COSEC device. These are known as special functions. An RFID card can be encoded for a special function and the card-holder can perform this function at the device just by showing this special card.

Use this API to enable, disable, define or retrieve Special Functions configuration on a device.

**Actions:** get, set, getdefault, setdefault

**Syntax:** `http://<deviceIP:deviceport>/device.cgi/special-function?action=<value>&<argument>=<value>...`

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Special Function Configuration Parameters**

| Argument    | Valid Values  | Mandatory | Description   |
|-------------|---|-----------|---|
| Sp-fn-Index | 1 = Official Work - IN<br>2 = Official Work - OUT<br>3 = Short Leave - IN<br>4 = Short Leave - OUT<br>5 = Regular - IN<br>6 = Regular - OUT<br>7 = Post Break - IN<br>8 = Pre Break - OUT<br>9 = Over Time - IN<br>10 = Over Time - OUT<br>11 = Enroll User<br>12 = Enroll Special Card<br>13 = Delete Credentials<br>14 = Late IN - Start<br>15 = Late IN - Stop<br>16 = Early OUT - Start<br>17 = Early OUT - Stop<br>18 = Door Lock<br>19 = Door Unlock<br>20 = Door Normal<br>21 = Clear Alarm<br>22 = Sold Out<br>23 = Available | Yes       | The index number of a special function.<br><br>Sp-fn-Index=12,18,19 and 20 is not applicable for ARGO FACE200T. |
| enable      | 0 = Disable<br>1 = Enable   | No        | To enable/disable special functions on the device.  |
| card1       | 64 Bits (20 Numeric Digits approx.)   | No        | To define the special function card 1.  |
| card2       | 64 Bits (20 Numeric Digits approx.)   | No        | To define the special function card 2.  |
| card3       | 64 Bits (20 Numeric Digits approx.)   | No        | To define the special function card 3.  |
| card4       | 64 Bits (20 Numeric Digits approx.)   | No        | To define the special function card 4.  |

**Table: Special Function Configuration Parameters**

| <b>Argument</b> | <b>Valid Values</b> | <b>Mandatory</b> | <b>Description</b>                                      |
|-----------------|---------------------|------------------|---|
| format          | text, XML           | No               | Specifies the format in which the response is expected. |

# Internal/External Reader Configuration



*Internal/External Reader Configuration is not applicable for ARGO FACE200T.*

**Description:** To define custom card format for internal/external reader.

- FC = Facility Code
- O = Odd Parity
- CSN = Card Serial No.
- E = Even Parity

**Actions:** get, set, getdefault, setdefault

**Syntax:**

**Internal Reader Card format:**

http://<deviceIP:deviceport>/device.cgi/internal-card-format?action=<value>&<argument>=<value>...

**External Reader Card format:**

http://<deviceIP:deviceport>/device.cgi/external-card-format?action=<value>&<argument>=<value>...

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Internal/External Reader Configuration Parameters**

| Argument        | Valid Values  | Mandatory | Description   |
|-----------------|---|-----------|---|
| Format-id       | 1- 5  | No        | To specify which format index is to be used   |
| max-no-of-bits  | 1 - 128 bits  | No        | To specify no. of bits to be read by card reader.   |
| card-structure  | 1 - max value<br><br>0 = Blank<br>1 = Facility Code<br>2 = Odd Parity<br>3 = Card Serial No.<br>4 = Even Parity | No        | To specify structure of the card format by the selection of even parity, odd parity, card serial no., facility code etc.<br><br>e.g. 26 bits card format<br><br>411111111333333333333332<br>where,<br>1 = FC<br>3 = Card ID<br>4 = Even Parity<br>2 = Odd Parity<br><br>Blank is not a part of configuring card structure. It is to store the default card structure. |
| card-read-order | 0 = Forward<br>1 = Reverse bitwise<br>2 = Reverse bitwise   | No        | To specify the order in which the card is to be read by the reader. By default, card is read in forward order.  |

**Table: Internal/External Reader Configuration Parameters**

| <b>Argument</b>       | <b>Valid Values</b>       | <b>Mandatory</b> | <b>Description</b>  |
|-----------------------|---------------------------|------------------|---|
| Include-facility-code | 0 = Disable<br>1 = Enable | No               | To specify whether facility code is a part of card ID or not. By default it is enabled.                             |
| Seq-of-operation      | 0,1                       | No               | To specify which seq to use<br>0 = Reading order then bit configuration<br>1 = Bit Configuration then reading order |

## Device Display Configuration

**Description:** To customize the device display on COSEC PVR Doors. The COSEC PVR carries a DOT Matrix LCD display. This API can be used to configure the various display elements at the time of accessing the device or when the device is in the Idle mode.

**Actions:** get, set, getdefault, setdefault

**Syntax:** http://<deviceIP:deviceport>/device.cgi/device-display?action=<value>&<argument>=<value>...

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Device Display Settings Parameters**

| Argument       | Valid Values  | Mandatory | Description   |
|----------------|---|-----------|---|
| message-id     | Numeric, 1 to 100   | Yes       | To give message ID.<br><br>Note: Two message IDs having same value of user field & user-id for same date & day will not be allowed.<br><br>e.g. if some message is configured for 1st nov to 1st dec for 3 days Monday, Tuesday, Wednesday for all users, then another message cannot be configured for same date range for say, Thursday, Friday and Saturday. |
| mode           | 0 = Idle<br>1 = Access Allowed/<br>Denied                                   | Yes       | To specify the display mode.  |
| enable         | 0 = Disable<br>1 = Enable   | No        | To enable/disable the message.  |
| user           | 0 = All<br>1 = User ID  | No        | This field shall be used to select whether message is to be shown to all users or random users. NA to idle.   |
| user-id        | Alphanumeric, 15 characters.  | No        | This will be used only if a random user is selected in "user" field.  |
| week-day<0~6>  | Sunday(0) to Saturday(6)<br><br>0 = Inactive<br>1 = Active                  | No        | To define the active working days. This parameter is repeated for each day of the week.   |
| from-date-dd   | Date:1-31;<br>Month: 1-12;<br>Year:2009-2037<br><br>Default Value: 1/1/2009 | No        | This field shall be used to store date from which this message is to be displayed.  |
| from-date-mm   |   |           |   |
| from-date-yyyy |   |           |   |
| to-date-dd     | Date:1-31;<br>Month: 1-12;<br>Year:2009-2037<br><br>Default Value: 1/1/2009 | No        | This field shall be used to store date up to which this message is to be displayed.   |
| to-date-mm     |   |           |   |
| to-date-yyyy   |   |           |   |

**Table: Device Display Settings Parameters**

| Argument     | Valid Values  | Mandatory | Description   |
|--------------|---|-----------|---|
| duration     | Alphanumeric,<br>Sec:00-59<br>Default Value: 3                      | No        | This field shall be used to store the duration for which message is to be displayed at the time of access allowed/denied. NA to idle  |
| message<0~5> | 126 chars(21*6)<br>ASCII Set:<br>A-Z<br>a-z<br>0-9<br>-_.():@!\$*+^ | No        | This field shall be used to configure the message that is to be displayed. One for each line.<br><br>message0=line 2<br>message1=line 3<br>message2=line4<br>message3=line5<br>message4=line6<br>message5=line7<br><br>Default value: Blank |

**Example**

1. To set message that is to be shown in the Idle mode.

**Sample Request**

```
http://<deviceIP:deviceport>/device.cgi/device-display?action=set&mode=0&message-id=1&enable=1&week-day6=1&from-date-dd=22&from-date-mm=7&from-date-yyyy=2014&to-date-dd=22&to-date-mm=7&to-date-yyyy=2014&message0=Merry Christmas
```

**Sample Response**

Response-code=0

**Output on Screen:**

|        |            |   |   |   |   |  |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |
|--------|------------|---|---|---|---|--|---|---|---|---|---|---|---|---|---|--|--|--|--|--|--|
| line 1 | <Reserved> |   |   |   |   |  |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |
| line 2 | M          | e | r | r | y |  | C | h | r | i | s | t | m | a | s |  |  |  |  |  |  |
| line 3 |            |   |   |   |   |  |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |
| line 4 |            |   |   |   |   |  |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |
| line 5 |            |   |   |   |   |  |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |
| line 6 |            |   |   |   |   |  |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |
| line 7 |            |   |   |   |   |  |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |
| line 8 | <Reserved> |   |   |   |   |  |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |

**2. To set message that is to be shown in the Idle mode.**

**Sample Request**

http://<deviceIP:deviceport>/device.cgi/device-display?action=set&mode=0&message-id=1&enable=1&week-day6=1&from-date-dd=22&from-date-mm=7&from-date-yyyy=2014&to-date-dd=25&to-date-mm=7&to-date-yyyy=2014&message0=\_\_\_\_\_Merry Christmas

**Sample Response**

Response-code=0

**Output on Screen:**

|        |            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |  |
|--------|------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|---|--|
| line 1 | <Reserved> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |  |
| line 2 |            |  |  |  |  |  |  |  |  |  |  |  |  |  |  | M | e | r | r | y |  |
| line 3 |            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |  |
| line 4 |            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |  |
| line 5 |            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |  |
| line 6 |            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |  |
| line 7 |            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |  |
| line 8 | <Reserved> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |  |

**3. To delete a specific message.**

**Sample Request**

http://<deviceIP:deviceport>/device.cgi/device-display?action=setdefault&message-id=1

**Sample Response**

Response-code=0

The message on the message-ID =1 will be defaulted that is equivalent to delete, as message is blank by default.

**4. To delete all messages.**

**Sample Request**

http://<deviceIP:deviceport>/device.cgi/device-display?action=setdefault

**Sample Response**

Response-code=0

All the messages will be defaulted to blank.

## Device-LED & Buzzer Cadence Configuration

**Description:** To configure LED and Buzzer cadence for COSEC PVR Doors.

**Actions:** get, set, getdefault, setdefault

**Syntax:** http://<deviceIP:deviceport>/device.cgi/device-led-buzzer?action=<value>&<argument>=<value>...

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: LED & Buzzer Cadence Configuration Parameters**

| Argument | Valid Values   | Mandatory | Description  |
|----------|--|-----------|--|
| state    | 0 = Idle online<br>1 = Idle offline<br>2 = Degraded mode<br>3 = Wait<br>4 = Success<br>5 = Deny<br>6 = Time out<br>7 = Alarm minor<br>8 = Alarm major<br>9 = Alarm critical  | Yes       | This specifies the state for which LED and buzzer cadence is to be shown.  |
| led      | 0 = Off<br>1 = On  | No        | This is to specify "on-off" status for LED. By default it is set to "on".  |
| buzzer   | 0 = Disable<br>1 = Enable  | No        | This is to enable or disable the door buzzer. By default, it is set to "enable". (This is not applicable for states: idle online, idle offline and degraded mode, because only LED cadence is shown for these states ) For other states, buzzer should be active till LED cadence is shown.  |
| on-off   | Numeric.<br><br>200-3000 ms (only in multiple of 200 and both together should be in summation equal to 3000 ms)<br><br><b>Note:</b> Mention the value of "on-off" as "x-y" where x= on time in milliseconds and y= off time in milliseconds. | No        | This is to specify the on-off duration for each state. If not configured, default values should be considered for that state.<br><br>Default values for states:<br><br><b>Idle online</b> - 200 ON/2200 OFF<br><b>Idle offline</b> - 200 ON/2200 OFF<br><b>Degraded</b> - 200 ON/2200 OFF<br><b>Wait</b> - 200 ON/1000 OFF<br><b>Success</b> - 1200 ON/0000 OFF<br><b>Deny</b> - 200 ON/200 OFF (3 cycles)<br><b>Time out</b> - 200 ON/200 OFF<br><b>Alarm minor</b> - 200 ON/1000 OFF<br><b>Alarm major</b> - 400 ON/800 OFF<br><b>Alarm critical</b> - ON till Reset |

**Table: LED & Buzzer Cadence Configuration Parameters**

| Argument | Valid Values | Mandatory | Description  |
|----------|--------------|-----------|--|
| cycles   | 0 - 254      | No        | <p>This specifies the no. of cycles for which cadence is to be shown for each state.'0' indicates the infinite cycle.</p> <p>Default values for states:</p> <p><b>Success</b> - 1<br/> <b>Deny</b> - 3<br/> <b>Time out</b> - 3<br/> <b>Others</b> - 0</p> |



*In case of online state for device, if cycle is changed from infinite to limited no. of cycle, the response will be effective as soon as values are saved but vice-versa is not possible, if user changes the cycle from limited no. of cycle to infinite, it will be effective only after event for the same state will be generated.*

**1. To show buzzer cadence only for a state.**

**Sample Request**

```
http://<deviceIP:deviceport>/device.cgi/device-led-buzzer?action=set&state=4&led=0&buzzer=1&on-off=400-400&cycles=3
```

**Sample Response**

Response-code=0

**Output**

The buzzer cadence will be played on the device for 400 ms on and 400 ms off for 3 cycles for wait state and Led cadence will not be shown.

**2. To show led and buzzer cadence for a state.**

**Sample Request**

```
http://<deviceIP:deviceport>/device.cgi/device-led-buzzer?action=set&state=4&led=1&buzzer=1&on-off=200-1000&cycle=0
```

**Sample Response**

Response-code=0

**Output**

The Led and buzzer cadence will be played on the device for 200 ms on and 1000 ms off for infinite cycle till user allowed state.

## Multi-Language Support

**Description:** To enable/disable multiple language support for custom message display on supported COSEC devices (*Door V3, NGT Controller, PVR Door, Vega Controller*).

Languages supported are: English, Spanish, Albanian, Thai, Vietnamese

**Actions:** get, set, getdefault, setdefault

**Syntax:** http://<deviceIP:deviceport>/device.cgi/multi-language?action=<value>&<argument>=<value>...

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Multi-Language Support Parameters**

| Argument                  | Valid Values               | Mandatory | Description                                 |
|---------------------------|----------------------------|-----------|---|
| multi-language-support    | 0 - Inactive<br>1 - Active | No        | To enable/disable multi-language support.   |
| multi-language-input-data | 0 - Inactive<br>1 - Active | No        | To enable the multi-language for data input |

## To Download/Upload Multi-Language File

**Description:** To download/upload multi-language file for custom message display on supported COSEC devices for which multi-language support has been enabled.

File uploaded can be in XLS or CSV format only.

**Actions:** get, set, getdefault

**Syntax:** http://<deviceIP:deviceport>/device.cgi/multi-language-file?action=<value>&<argument>=<value>...

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Download/Upload Multi-Language File - Parameters**

| Argument | Valid Values | Mandatory | Description                                 |
|----------|--------------|-----------|---|
| action   | get          | Yes       | To download the multi-language file.        |
| action   | getdefault   | Yes       | To download the sample multi-language file. |
| action   | set          | Yes       | To upload a custom message file.            |

### Example

#### 1. To download file.

##### Sample Request

```
http://<deviceIP:deviceport>/device.cgi/multi-language-file?action=get
```

##### Sample Response

Body:  
Response-Code=0

*Custom Message File*



*The method used in this case should be POST method as it consists of raw/hex data in the data portion of the request and the response.*

#### 2. To get sample file.

##### Sample Request

```
http://<deviceIP:deviceport>/device.cgi/multi-language-file?action=getdefault
```

##### Sample Response

Body:  
Response-Code=0

*Custom Message File*

### 3. To upload a file.

#### Sample Request

`http://<deviceIP:deviceport>/device.cgi/multi-language-file?action=set`

#### Sample Response

Body: Response-Code=0

## To Select the Mode of Wiegand Interface



*Wiegand Interface Mode is not applicable for ARGO FACE200T.*

**Description:** To set the Wiegand interface mode for supported COSEC doors (*PVR Door, PATH Controller*) for reader input or output to third party panel.

**Actions:** get, set, getdefault, setdefault

**Syntax:** `http://<deviceIP:deviceport>/device.cgi/wiegand-interface?action=<value>&<argument>=<value>...`

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Wiegand Interface Mode Parameters**

| Argument           | Valid Values                                      | Mandatory | Description   |
|--------------------|---|-----------|---|
| enable             | 0 = Reader Input<br>1 = Output to 3rd party panel | No        | This specifies whether Wiegand interface is configured as a reader input or as an output to 3rd party panel. By default, it is in reader input mode.            |
| enable-signal-wait | 0 = Inactive<br>1 = Active                        | No        | This specifies whether the door should wait for response from the 3rd party panel before unlocking the door after user verification. By default it is disabled. |
| signal-wait-timer  | 0 - 255 sec                                       | No        | This specifies the time duration for which the door should wait for the 3rd party panel signal  |
| output-format      | 0 = 26 Bit<br>1 = Actual<br>2 = 37 Bit            | No        | This specifies the format in which the output is to be sent to 3rd party panel.   |
| send-from          | 0 = MSB Bit<br>1 = LSB Bit                        | No        | Send MSB or LSB first   |

# Temperature Logging Configuration

**Description:** To set the temperature parameters like temperature unit, temperature sensors, threshold temperature value etc in devices.

**Actions:** get, set, getdefault, setdefault

**Syntax:** http://<deviceIP:deviceport>/device.cgi/temp-log?<argument>=<value>[&<argument>=<value>....]

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Temperature Logging Configuration Parameters**

| Argument         | Valid Values                                     | Mandatory | Description  |
|------------------|--|-----------|--|
| enable           | 0= Inactive<br>1= Active                         | No        | To enable or disable Temperature Logging feature. By default it is disabled  |
| temp-unit        | 0= Fahrenheit<br>1=Celsius                       | No        | To set the temperature unit in which the user temperature will be measured. By default it is Fahrenheit  |
| sensor-type      | 0=AST<br>1= Web-based<br>2=Reserved<br>3=FEVOBOT | No        | To allow user to select the thermal sensor type. By default it is FEVOBOT.   |
| interface        | 0= RS-232<br>1=USB<br>2=HTTP/S                   | No        | To allow user to select the interface. HTTP/S is applicable only when sensor type is Web-Based. By default it is "USB". For non USB devices default value is "RS – 232". For sensor type FEVOBOT only USB is applicable. |
| restriction      | 0=Soft<br>1=Hard                                 | No        | To allow user to switch the restriction between Soft and Hard. By default it is Soft   |
| bypass           | 0=Disable<br>1=Enable                            | No        | To give provision of bypass if sensor is disconnected. By default it is disable  |
| thresh-temp      | 97.0 – 110.0 °F<br>36.0 – 43.0 °C                | No        | To allow user to enter the Threshold temperature value. By default it is 99.5°F or 37.5°C  |
| calibration-para | -5.0 to 5.0                                      | No        | To calibrate the temperature with increment of 1. By default it is 0. Not applicable for FEVOBOT   |
| emissivity       | 0.95-0.98  | No        | To set the emissivity parameter for AST sensor. Default is 0.95. Not Applicable for FEVOBOT  |
| format           | text, XML  | No        | Specifies the format in which the response is expected   |



- *temp-unit and thresh-temp are interrelated fields.  
For setdefault/getdefault: temp-unit is Fahrenheit so the thresh-temp will be 99.5.*  
  
*For set:  
If both the fields are passed and the thresh-temp value is not as per temp-unit then API will fail.*  
  
*If temp-unit is only passed then if the temp-thresh value in device is not according to temp-unit passed then temp-thresh value will get defaulted as per temp-unit.*  
  
*If thresh-temp is only passed, temp-unit value already set in device will be checked and if mismatch is found then API will fail.*
- *Sensor-type and interface are interrelated fields:*  
  
*For setdefault/getdefault: sensor-type is 0 and the interface is 1 for devices that support USB and the interface is 0 for devices that don't support USB.*
- *For set:  
If both the fields are passed and sensor-type is web-based then the interface value should be HTTP/S. If any other interface value is sent then API will fail.*  
  
*If both the fields are passed and sensor-type is FEVOBOT then the interface value will be USB. If any other interface value is sent then API will fail*  
  
*If both the fields are passed and sensor-type is not web-based then the interface value should not be HTTP/S. If HTTP/S interface value is sent then API will fail.*  
  
*For devices which don't support USB if interface value is passed as USB, the API will fail  
If only sensor-type is passed then the interface value will be checked.*
- *Sensor-type is passed as Web-based and interface value is not HTTP/S in device then the interface value will be set as HTTP/S.*
- *If sensor-type is passed as AST and interface value is HTTP/S in device then the interface value will be set as USB if device supports USB else it will be set as RS-232.*
- *If sensor-type is passed as FEVOBOT and interface value is other than USB in device then the interface value will be set as USB.*
- *If only interface is passed, then sensor-type value will be checked.*
- *Interface is passed as HTTP/S and sensor-type value in device is not Web-based then API will fail.*
- *Interface is passed as USB and device doesn't support USB then API will fail.*
- *Interface is passed as USB and sensor-type is Web-based in device then API will fail.*
- *Interface is passed as RS-232 and sensor-type is Web-Based in device then API will fail.*
- *Interface is passed as RS-232 and sensor-type is Web-Based/FEVOBOT in device then API will fail*

## Face Mask Compulsion

**Description:** Face Mask Compulsion feature is used to enforce users to wear masks while they are within the premises

**Actions:** get, set, getdefault, setdefault

**Syntax:** http://<deviceIP:deviceport>/device.cgi/face-mask?<argument>=<value>[&<argument>=<value>....]

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Smart Card Format Parameters**

| Argument                           | Valid Values             | Mandatory | Description  |
|------------------------------------|--------------------------|-----------|--|
| enable                             | 0= Inactive<br>1= Active | No        | To enable or disable Face Mask Compulsion Feature. By default it is disabled   |
| approach-cam-timer                 | 0.0 to 15.0s             | No        | To set the approach to camera wait-timer. By default it is 3.0s  |
| detection-timeout                  | 1 to 99 s                | No        | To set time-out for face mask detection. By default it is 4s   |
| restriction                        | 0=Soft<br>1=Hard         | No        | To allow user to switch the restriction between Soft and Hard. By default it is Soft   |
| detection-threshold-identification | 1.00 to 99.99            | No        | To specify the threshold value below which the mask status will be returned as 0 ie. Not detected for identification. By default the value is set as 98.00 |
| detection-threshold-enrollment     | 1.00 to 99.00            | No        | To specify the threshold value below which the mask status will be returned as 0 ie. Not detected for enrollment. By default the value is set as 10.00     |
| format                             | text, XML                | No        | Specifies the format in which the response is expected   |

## Smart Card Format



*Smart Card Format is not applicable for ARGO FACE200T.*

**Description:** To personalize the smart card format by configuring user-defined fields and defining their location on the available card memory as per card type selected. This API will not be applicable for Path Controllers and Arc Controllers due to memory constraints.

**Actions:** get, set, setdefault

**Syntax:** `http://<deviceIP:deviceport>/device.cgi/smart-card-format?action=<value>&<argument>=<value>...`

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Smart Card Format Parameters**

| Argument  | Valid Values   | Mandatory | Description   |
|-----------|--|-----------|---|
| card-type | Indexed.<br>1 = iClass 2K2<br>2 = iClass 16K2<br>3 = iClass 16K16<br>4 = Mifare 1K<br>5 =Mifare 4K | Yes       | To specify the card type.   |
| mode      | Boolean.<br>0 = Default<br>1 = Custom  | No        | To specify the mode of reading/writing a card.  |
| card-no   | Numeric<br>0 = CSN<br>1 = UID<br>2 = Custom  |           |   |
| read-csn  | Boolean.<br>0 = Inactive<br>1 = Active   | No        | To decide whether to read CSN when card id gets failed to read. Only applicable when card id is custom. |

**Table: Smart Card Format Parameters**

| Argument        | Valid Values  | Mandatory | Description  |
|-----------------|---|-----------|--|
| index           | Refer the respective card type tables for values as provided below. | Yes       | To specify the index number of the field to be configured. This field is not mandatory if we want to just change the mode of a particular card type. |
| field-type      |   | No        | To specify the field type of the field to be configured.   |
| date-format     |   | No        | To specify the date format.  |
| separator       |   | No        | To specify the separator   |
| date-field-type |   | No        | To specify the date field format i.e. BCD/ASCII/Hex  |
| start-sector    |   | No        | To specify the start sector for mifare 1K and 4K.  |
| start-block     |   | No        | To specify the start block in iclass 2K2, 16K2, 16K16 and mifare 1K , 4K   |
| start-page      |   | No        | To specify the start page for iclass 16K16.  |
| start-byte      |   | No        | To specify the start byte for iclass 2K2, 16K2, 16K16 and mifare 1K , 4K   |
| start-bit       |   | No        | To specify the start bit for iclass 2K2, 16K2, 16K16 and mifare 1K , 4K  |
| read-from       |   | No        | To specify the order in which the field has to be read   |
| length          |   | No        | To specify the Length of the field.  |
| format          | Text, XML   | No        | Specifies the format in which the response is expected   |

**Table: Smart Card Configuration Parameters - iClass 2K2**

| Argument   | Valid Values                                   | Mandatory | Description   |
|------------|--|-----------|---|
| card-type  | 1 = iClass 2K2                                 | Yes       | To specify the card type.   |
| index      | Numeric.<br>1-99                               | Yes       | To specify the index number of the field to be configured. This field is not mandatory if just the mode of a particular card type is to be changed. |
| field-type | 0 = Text<br>1 = Numeric<br>2 = Date<br>3 = Raw | No        | To specify the field type of the field to be configured.  |

**Table: Smart Card Configuration Parameters - iClass 2K2**

| Argument        | Valid Values   | Mandatory | Description   |
|-----------------|--|-----------|---|
| date-format     | 0 = ddmmyy<br>1 = ddmmyyyy<br>2 = ddmmmyy<br>3 = ddmmmyyyy<br>4 = mmddy<br>5 = mmddyyyy<br>6 = yymmdd<br>7 = yyyyymmdd | No        | To specify the date format.                         |
| separator       | 0 = none<br>1 = -<br>2 = /   | No        | To specify the separator                            |
| date-field-type | 0 = Hex<br>1 = BCD<br>2 = ASCII  | No        | To specify the date field format i.e. BCD/ASCII/Hex |
| start-sector    | 0  | No        | -   |
| start-block     | 19 - 31  | No        | To specify the start block in iClass 2K2.           |
| start-page      | 0  | No        | -   |
| start-byte      | 0 - 7  | No        | To specify the start byte for iclass 2K2.           |
| start-bit       | 0 - 7  | No        | -   |
| length          | 0 - 104  | No        | To specify the Length of the field.                 |

**Table: Smart Card Configuration Parameters - iClass 16K2**

| Argument    | Valid Values   | Mandatory | Description   |
|-------------|--|-----------|---|
| card-type   | 2 = iClass 16K2  | Yes       | To specify the card type.   |
| index       | Numeric.<br>1-99   | Yes       | To specify the index number of the field to be configured. This field is not mandatory if just the mode of a particular card type is to be changed. |
| field-type  | 0 = Text<br>1 = Numeric<br>2 = Date<br>3 = Raw   | No        | To specify the field type of the field to be configured.  |
| date-format | 0 = ddmmyy<br>1 = ddmmyyyy<br>2 = ddmmmyy<br>3 = ddmmmyyyy<br>4 = mmddy<br>5 = mmddyyyy<br>6 = yymmdd<br>7 = yyyyymmdd | No        | To specify the date format.   |
| separator   | 0 = none<br>1 = -<br>2 = /   | No        | To specify the separator  |

**Table: Smart Card Configuration Parameters - iClass 16K2**

| Argument        | Valid Values                    | Mandatory | Description   |
|-----------------|---------------------------------|-----------|---|
| date-field-type | 0 = Hex<br>1 = BCD<br>2 = ASCII | No        | To specify the date field format i.e. BCD/ASCII/Hex |
| start-sector    | 0                               | No        | -   |
| start-block     | 19 - 255                        | No        | To specify the start block in iClass 16K2.          |
| start-page      | 0                               | No        | -   |
| start-byte      | 0 - 7                           | No        | To specify the start byte for iClass 16K2.          |
| start-bit       | 0 - 7                           | No        | -   |
| length          | 0 - 1896                        | No        | To specify the Length of the field.                 |

**Table: Smart Card Configuration Parameters - iClass 16K16**

| Argument        | Valid Values   | Mandatory | Description   |
|-----------------|--|-----------|---|
| card-type       | 3 = iClass 16K16   | Yes       | To specify the card type.   |
| index           | Numeric.<br>1-99   | Yes       | To specify the index number of the field to be configured. This field is not mandatory if just the mode of a particular card type is to be changed. |
| field-type      | 0 = Text<br>1 = Numeric<br>2 = Date<br>3 = Raw   | No        | To specify the field type of the field to be configured.  |
| date-format     | 0 = ddmmyy<br>1 = ddmmyyyy<br>2 = ddmmmyy<br>3 = ddmmmyyyy<br>4 = mmddy<br>5 = mmddyyyy<br>6 = yymmdd<br>7 = yyymmdd | No        | To specify the date format.   |
| separator       | 0 = none<br>1 = -<br>2 = /   | No        | To specify the separator  |
| date-field-type | 0 = Hex<br>1 = BCD<br>2 = ASCII  | No        | To specify the date field format i.e. BCD/ASCII/Hex   |
| start-sector    | 0  | No        | -   |
| start-block     | For Page 0,<br>applicable blocks = 19-31<br><br>For Pages 1-6,<br>applicable blocks = 6-31                           | No        | To specify the start block in iclass 16K16.   |

**Table: Smart Card Configuration Parameters - iClass 16K16**

| Argument   | Valid Values     | Mandatory | Description                                 |
|------------|------------------|-----------|---|
| start-page | 0-6              | No        | To specify the start page for iClass 16K16. |
| start-byte | 0 - 7            | No        | To specify the start byte for iClass 16K16. |
| start-bit  | 0 - 7            | No        | -   |
| length     | 0 - 1352 (bytes) | No        | To specify the Length of the field.         |

**Table: Smart Card Configuration Parameters - Mifare 4K**

| Argument        | Valid Values   | Mandatory | Description  |
|-----------------|--|-----------|--|
| card-type       | 5 = Mifare 4K  | Yes       | To specify the card type.  |
| index           | Numeric.<br>1-99   | Yes       | To specify the index number of the field to be configured. This field is not mandatory if we want to just change the mode of a particular card type. |
| field-type      | 0 = Text<br>1 = Numeric<br>2 = Date<br>3 = Raw   | No        | To specify the field type of the field to be configured.   |
| date-format     | 0 = ddmmyy<br>1 = ddmmyyyy<br>2 = ddmmmyy<br>3 = ddmmmyyyy<br>4 = mmddy<br>5 = mmddyyy<br>6 = yymmdd<br>7 = yyyyymmdd                            | No        | To specify the date format.  |
| separator       | 0 = none<br>1 = -<br>2 = /   | No        | To specify the separator   |
| date-field-type | 0 = Hex<br>1 = BCD<br>2 = ASCII  | No        | To specify the date field format i.e. BCD/ASCII/Hex  |
| start-sector    | 0-39   | No        | To specify the start sector for Mifare 4K.   |
| start-block     | For sector 0,<br>applicable blocks = 1,2<br><br>For sector 1-31,<br>applicable blocks = 0-2<br><br>For sector 32-39,<br>applicable blocks = 0-14 | No        | To specify the start block in Mifare 4K.   |
| start-page      | 0  | No        | -  |
| start-byte      | 0 - 15   | No        | To specify the start byte for Mifare 4K.   |

**Table: Smart Card Configuration Parameters - Mifare 4K**

| Argument  | Valid Values | Mandatory | Description                         |
|-----------|--------------|-----------|-------------------------------------|
| start-bit | 0 - 7        | No        | -                                   |
| length    | 0 - 3440     | No        | To specify the Length of the field. |

**Table: Smart Card Configuration Parameters - Mifare 1K**

| Argument        | Valid Values   | Mandatory | Description   |
|-----------------|--|-----------|---|
| card-type       | 4 = Mifare 4K  | Yes       | To specify the card type.   |
| index           | Numeric.<br>1-99   | Yes       | To specify the index number of the field to be configured. This field is not mandatory if just mode of a particular card type is to be changed. |
| field-type      | 0 = Text<br>1 = Numeric<br>2 = Date<br>3 = Raw   | No        | To specify the field type of the field to be configured.  |
| date-format     | 0 = ddmmyy<br>1 = ddmmyyyy<br>2 = ddmmmyy<br>3 = ddmmmyyyy<br>4 = mmddy<br>5 = mmddyyyy<br>6 = yymmdd<br>7 = yyyyymmdd | No        | To specify the date format.   |
| separator       | 0 = none<br>1 = -<br>2 = /   | No        | To specify the separator  |
| date-field-type | 0 = Hex<br>1 = BCD<br>2 = ASCII  | No        | To specify the date field format i.e. BCD/ASCII/Hex   |
| start-sector    | 0-15   | No        | To specify the start sector for Mifare 1K.  |
| start-block     | For sector 0,<br>applicable blocks = 1,2<br><br>For sector 1-15,<br>applicable blocks = 0-2                            | No        | To specify the start block in iclass 2K2, 16K2, 16K16 and mifare 1K , 4K  |
| start-page      | 0  | No        | -   |
| start-byte      | 0 - 15   | No        | To specify the start byte for Mifare 1K.  |
| start-bit       | 0 - 7  | No        | -   |
| length          | 0 - 752 bytes  | No        | To specify the Length of the field.   |



- For mode set as “default”, no other parameters are not be configured other than “card-type”.
- For action= setdefault, card-type & index are only the required parameters. If “card-type” parameter is given in setdefault API then all the parameters of a particular card-type will be defaulted. If “index” is also provided with “card-type” as parameter, then all the properties of that specific index field will be set to default.
- For action=get, if the mode of the device is default mode, then the parameters shown in the response will contain parameters applicable according to the default mode. i.e. all the Matrix predefined fields and their corresponding parameters.
- For action = set, all the parameters will be configurable.

## Example

### 1. To set the fields for Mifare 1K in custom mode.

#### Sample Request

```
http://<deviceIP:deviceport>/device.cgi/smart-card-format1?action=set&card-type=3&mode=1&index=22&field-type=1&start-sector=8&start-block=1&start-byte=1&length=4
```

#### Sample Response

```
HTTP Code: 200 OK  
Content-Type: <type>  
Content-Length: <length>  
Body: <response code>
```

### 2. To set the mode for Mifare 1K.

#### Sample Request

```
http://<deviceIP:deviceport>/device.cgi/smart-card-format1?action=set&card-type=3&mode=1
```

#### Sample Response

```
HTTP Code: 200 OK  
Content-Type: <type>  
Content-Length: <length>  
Body: <response code>
```

In the above example, this API will set the mode of the Mifare 1K card type as custom globally, irrespective of the field type. Setting the mode of a card is only dependent upon the card type and not the index.

### 3. To default Mifare 1K.

#### Sample Request

```
http://<deviceIP:deviceport>/device.cgi/smart-card-format1?action=setdefault&card-type=3
```

## Sample Response

HTTP Code: 200 OK  
Content-Type: <type>  
Content-Length: <length>  
Body: <response code>

## Smart Card Key Change



*Smart Card Key Change is not applicable for ARGO FACE200T.*

**Description:** This API will enable to change the key of the Smart card. The key-type parameter will decide which key i.e. matrix predefined key or the custom key is to be written on the shown smart card.

**Actions:** set

**Syntax:** `http://<deviceIP:deviceport>/device-cgi/key-change?action=set[&<argument>=<value>...]`

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Smart Card Key Change Parameters**

| Argument     | Valid Values  | Mandatory | Description   |
|--------------|---|-----------|---|
| new-key-type | 0 = matrix key<br>1 = custom key stored in the device | Yes       | To specify the type of key to be written on the card shown.     |
| old-key-type | 0 = matrix key<br>1 = custom key stored in the device | Yes       | To specify the type of key currently written on the card shown. |
| card-type    | 0 = Mifare Classic<br>1 = Mifare DESFire              | Yes       | Applicable only if Internal Reader= Mifare.                     |
| old-key      | 8 Bytes (16 Hex digits)                               | Yes       | This key will be verified with the old key written in the card. |
| format       | Text, XML   | No        | Specifies the format in which the response is expected          |



- *This API will only change the key for a single card shown.*
- *Using this API only key can be changed. Key verification is not supported by this API.*
- *Server shall send the old key type written in the card along with key value. The old key value should be sent as blank if the old key type is matrix key.*

**Table: Smart Card Key Change Response**

| Field         | Valid Values  | Response |
|---------------|---|----------|
| Response-code | 0 = success<br>16 = Device Busy<br>24 = Feature not configured<br>28 = Read/Write Failed<br>29 = Wrong Card Type<br>30 = Key mismatch | -        |

**Table: Smart Card Key Change Response**

| Field     | Valid Values   | Response   |
|-----------|--|--|
| card-no   | 0-18446744073709551615; 8 bytes  | <p>1.In CP if card no= CSN; device will read the csn of the card and send the same as response in this parameter.</p> <p>2.In cp if card no= custom; device will write the value received in the card-no parameter in the field22 and send the same as response in this parameter</p> <p>3.This value will be sent has zero if card no is failed to be read.</p> <p>*Note: card no will represent CSN / field22 as per card no parameter defined in CP</p> |
| Card-type | <p>1 = iclass2K2</p> <p>2 = iclass16K2</p> <p>3 = iclass16K16</p> <p>4 = Mifare 1K</p> <p>5 = Mifare 4K</p> <p>6 = Mifare DESFire 2K</p> <p>7 = Mifare DESFire 4K</p> <p>8 = Mifare DESFire 8K</p> <p>9 = Read Only Card</p> | <p>Read only card will be send if the read card is a HID prox card or EM prox card</p>   |

## FR Settings

**Actions:** set, get, setdefault, getdefault

**Syntax:** http://<deviceIP:deviceport>/device.cgi/fr-settings?<argument>=<value>[&<argument>=<value>....]

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: FR Settings**

| Argument                | Valid Values                                     | Mandatory | Description  |
|-------------------------|--|-----------|--|
| enable                  | 0 = Disable<br>1 = Enable<br><br>Default = 0     | No        | To enable or disable Face Recognition.   |
| mode                    | 0 = Local  | No        | Only Local mode is applicable for FR Settings.<br><br>For Server Assisted Mode, the API will be handled by the Server. |
| capturing-mode          | 0 = Tap & Go<br>1 = Free Scan<br><br>Default = 0 | No        | To allow user to switch the mode between tap & go and free scan mode.  |
| enable-freescan-timeout | 0 = Disable<br>1 = Enable<br><br>Default = 0     | No        | This will allow user can set the free scan timeout   |
| freescan-timeout        | 5 to 999 seconds<br><br>Default: 30 seconds      | No        | If free scan timeout is enabled, this will set the timer value.  |
| identification-timeout  | 1-99 s<br><br>Default: 4seconds                  | No        | This is the timeout value for tap and go mode.   |
| group-fr                | 0 = Disable<br>1 = Enable<br><br>Default = 0     | No        | To enable or disable Group Face Recognition.   |
| unidentified-face       | 0 = Disable<br>1 = Enable<br><br>Default = 0     | No        | To enable or disable Capture Face of Unidentified User.  |
| format                  | Text,xml   | No        | Specifies the format in which the response is expected   |
| conflict-check          | 0 = Disable<br>1 = Enable<br><br>Default = 1     | No        | To enable or disable Conflict Checking with other users during Face Enrollment   |

**Table: FR Settings**

| <b>Argument</b>                         | <b>Valid Values</b>  | <b>Mandatory</b> | <b>Description</b>   |
|---|--|------------------|--|
| conflict-matching-threshold             | 1.0 - 99.99  | No               | This is the Matching Threshold used to check conflict with other users during Face Enrollment.                               |
| face-anti-spoofing                      | 0 = Disable<br>1 = Enable<br><br>Default = 0   | No               | This flag defines whether Face Anti-Spoofing feature is enabled or not.  |
| face-anti-spoofing-threshold            | 1.00 - 99.99<br><br>Default: 62.00 for ARGO and VEGA<br>Default: 90.00 for ARGO FACE | No               | This parameter defines the minimum required value of identified user's face liveness for considering him/her as real person. |
| adaptive-face-enrollment                | 0 = Disable<br>1 = Enable<br><br>Default = 0   | No               | To enable or disable Adaptive Face Enrollment  |
| threshold-deviation                     | 0.0 - 10.0<br><br>Default: 2.0   | No               | This parameter defines the threshold value from which the value can be deviated.   |
| multi-user-matching-score-deviation     | 0.0 - 10.0<br><br>Default: 2.0   | No               | This parameter defines the deviation expected in Matching Score from Multi - User.   |
| confirm-before-adaptive-face-enrollment | 0 = Disable<br>1 = Enable<br><br>Default = 0   | No               | To enable or disable Asking for user confirmation before Adaptive Face Enrollment.   |
| face-matching-score                     | 0.0 - 100.0<br><br>Default = 94.0  | No               | This parameter defines the Matching of Face.   |
| threshold-face-detection                | 0 - 100<br><br>Default = 50  | No               | This parameter defines the threshold that should be maintained for face detection.   |
| adaptive-face-templates-per-user        | 1-10<br><br>Default = 60   | No               | This parameters defines the number of adaptive face templates that can be stored against a user.                             |
| Unidentified-face-feedback              | 0 = Disable<br>1 = Enable<br><br>Default = 0   | No               | To enable or disable Show Feedback for Unidentified Face.  |
| Unidentified-face-event                 | 0 = Disable<br>1 = Enable<br><br>Default = 0   | No               | To enable or disable Generate Unidentified Face Event.   |

**Table: FR Settings**

| <b>Argument</b> | <b>Valid Values</b>                          | <b>Mandatory</b> | <b>Description</b>                        |
|-----------------|--|------------------|---|
| Access-via-qr   | 0 = Disable<br>1 = Enable<br><br>Default = 0 | No               | To enable or disable Allow Access via QR. |

# User Configuration

---

The various COSEC devices have capacity to support the following number of users

| S. No. | COSEC Device    | No. of Users Supported |
|--------|-----------------|------------------------|
| 1      | Direct Door V1  | 500                    |
| 2      | Direct Door V2  | 2000                   |
| 3      | Direct Door V3  | 50,000                 |
| 4      | Direct Door V4  | 50,000                 |
| 5      | NGT Direct Door | 10,000                 |
| 6      | Wireless Door   | 50,000                 |
| 7      | PVR Door        | 10,000                 |
| 8      | PATH Door       | 10,000                 |
| 9      | ARC Door        | 10,000                 |
| 10     | ARC IO 800      | NA                     |
| 11     | Panel           | 10,000                 |
| 12     | Panel-Lite      | 25,000                 |
| 13     | Panel200        | 25,000                 |
| 14     | Vega Controller | 50,000                 |
| 15     | Door FMX        | 50,000                 |
| 16     | MODE Device     | 50,000                 |
| 17     | ARGO            | 50,000                 |
| 18     | ARGO FACE       | 50,000                 |

This group of APIs enables users to add or delete users, set user photographs, add or fetch various configurations related to users on or from a device as well as synchronize credentials with device. The following functions can be called:

- [Setting/Retrieving User Configuration](#)
- [Setting a User Photo](#)
- [Deleting a User](#)
- [Setting User Credentials](#)
- [Retrieving User Credentials](#)
- [Deleting User Credentials](#)

## Setting/Retrieving User Configuration

**Description:** To set basic user configuration parameters on a device using the **action= set** parameter and retrieve configuration details using **action= get**.

**Actions:** get, set

**Syntax:** http://<deviceIP:deviceport>/device.cgi/users?action=<value>&<argument>=<value>...

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: User Configuration Parameters**

| Argument        | Valid Values   | Mandatory                                     | Description  |
|-----------------|--|---|--|
| user-id         | Maximum 15 characters  | Yes   | To set or retrieve the alphanumeric user ID for the selected user.<br><br>Note: If a <b>set</b> request is sent against an existing user ID, then configuration for this user will be updated with the new values. |
| user-index      | Direct Door V2= 1 - 2,000<br>Path Controller = 1 - 2,000<br>Path V2= 1 - 50,000<br>Wireless Door = 1 - 50,000<br>PVR = 1 - 10,000<br>NGT = 1 - 10,000<br>Vega Controller = 1 - 50,000<br>Door FMX = 1 - 50,000<br>Panel Lite V2= 1 - 25,000<br>Panel/ Panel Lite= 1 - 25,000<br>V4 DOOR= 1 - 50,000<br>ARGO= 1 - 50,000<br>ARGO FACE= 1 - 50,000<br>ARC DC 200= 1 - 50,000 | No  | To identify the index number for the selected user ID (only <b>get</b> parameter)  |
| ref-user-id     | Maximum 8 digits   | Yes (Not mandatory for the <b>get</b> action) | To select the numeric user ID on which the specified operation is to be done.  |
| name            | Alphanumeric. Max. 15 characters   | No  | To define the user name  |
| user-active     | 0 = Inactive<br>1 = Active   | No  | to activate or deactivate a user.  |
| vip             | 0 = Inactive<br>1 = Active   | No  | To define a user as VIP.<br><br>Note: A VIP user is a user with the special privilege to access a particular door.   |
| validity-enable | 0 = Inactive<br>1 = Active   | No  | To enable/disable the user validity.   |

**Table: User Configuration Parameters**

| Argument               | Valid Values   | Mandatory | Description  |
|------------------------|--|-----------|--|
| validity-date-dd       | 1-31   | No        | To define the end date for user validity.  |
| validity-date-mm       | 1-12   | No        |  |
| validity-date-yyyy     | 2000-2099  | No        |  |
| user-pin               | 1 to 15 Digits                                       | No        | To set the user PIN or get the event from user PIN.<br><br>Note: The user-pin can be set to a blank value.   |
| by-pass-finger         | 0 = Inactive<br>1 = Active                           | No        | To enable/disable the bypass finger option.  |
| by-pass-palm           | 0 = Inactive<br>1 = Active                           | No        | To enable/disable the bypass palm option.  |
| card1                  | 64 Bits (8 bytes) (max value - 18446744073709551615) | No        | It defines the value of access card 1 and 2.   |
| card2                  | 64 Bits (8 bytes) (max value - 18446744073709551615) | No        |  |
| dob-enable             | 0 = Enable<br>1 = Disable                            | No        | To enable/disable the display of a birthday message.   |
| dob-dd                 | 1-31   | No        | To set or delete the date of birth for a user.   |
| dob-mm                 | 1-12   |           |  |
| dob-yyyy               | 1990-2037  |           |  |
| user-group             | 0-999  | No        | To set the user group number.<br><br><b>Note:</b> A user can be assigned to any user group ranging from 1 to 999. User group number can be set/update via "Set" action. To remove a user from an assigned user group, user group should be set to 0. |
| self-enrollment-enable | 0 = Disable<br>1 = Enable                            | No        | To enable/disable self-enrollment for user.  |
| enable-fr              | 0 = Disable<br>1 = Enable                            | No        | To enable/disable face recognition for a user.   |
| format                 | text, xml  | No        | Specifies the format in which the response is expected.  |



- For **set** requests only one user's complete data should be sent at a time. Attempting to set data for multiple users at a time will return an error response. For more examples of error responses, see [Error Responses](#).
- To create a new user on device, both **user-id** and **ref-user-id** are mandatory parameters to be provided, and these should be unique for each user.
- If a user is already configured in the system and admin wants to update the user with new information/data, only Alphanumeric User ID is sufficient but if the reference user ID is also mentioned then it would be verified whether this belongs to the same user or not.
- Whenever an event is generated related to a user, the required user ID field upon calling the event will always show user's reference user ID. Whereas if "Get" action is sent to call user configuration then it will show alphanumeric user ID.

## Example

### 1. To get user data for user-id = 1

#### Sample Request

```
http://192.168.104.114:80/device.cgi/users?action=get&user-id=1
```

#### Sample Response

```
user-id=1 user-index=2 ref-user-id=1 name=Chirag user-active=1 vip=0 validity-enable=0 validity-date-  
dd=1 validity-date-mm=1 validity-date-yyyy=2009 user-pin= card1=3280168263 card2=0 self-enrollment-  
enable=0 by-pass-finger=0
```

## Setting a User Photo

**Description:** To set, fetch or delete a photograph against a user's profile on the device using a third party application.

**Actions:** get, set, delete

**Syntax:** `http://<deviceIP:deviceport>/device.cgi/userphoto?action=<value>&<argument>=<value>...`

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Setting a User Photo - Parameters**

| Argument     | Valid Values                              | Mandatory                           | Description  |
|--------------|---|-------------------------------------|--|
| user-id      | Maximum 15 characters                     | Yes                                 | To specify the alphanumeric user ID for the user whose photo is to be set.   |
| user-photo   | N/A                                       | Yes                                 | To get, set or delete the user photo. This should be done in the data portion of the request / response.(applicable only for VEGA and NGT doors) |
| photo-format | 0 = jpeg<br>1 = jpg<br>2 = png<br>3 = bmp | Yes (only for <b>set</b> parameter) | To define the format for the photograph.   |
| format       | text,xml                                  | No                                  | Specifies the format in which the response is expected.  |

### Example

Following are some test cases for your reference:

1. To add an image file in .jpeg format for user-id 1.

#### Sample Request

```
http://<deviceIP:deviceport>/device.cgi/userphoto?action=set&user-id=1&photo-format=0  
Data:  
Image data
```

#### Sample Response

```
HTTP Code: 200 OK  
Content-Type: <code>  
Content-Length: <type>  
Body: Response-Code=0
```

2. To fetch the user photo for the same user.

#### Sample Request

```
http://<deviceIP:deviceport>/device.cgi/userphoto?action=get&user-id=1
```

## Sample Response

HTTP Code: 200 OK  
Content-Type: image/jpeg  
Content-Length: 12345  
Body:

<JPEG Image Data>



*This is an example only. The actual response will vary depending on product model and configuration.*

## Deleting a User

**Description:** To delete a user from a device. Deleting a user will result in deletion of the credentials of that user along with all the other configurations set on the device.

**Actions:** delete

**Syntax:** `http://<deviceIP:deviceport>/device.cgi/users?action=delete<argument>=<value>...`

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Delete User - Parameters**

| Argument | Valid Values          | Mandatory | Description   |
|----------|-----------------------|-----------|---|
| user-id  | Maximum 15 characters | Yes       | To specify the alphanumeric user ID for the user to be deleted. |
| format   | text,xml              | No        | Specifies the format in which the response is expected.         |

## Setting User Credentials

**Description:** To set a user's biometric or card credentials on a device.

**Actions:** set

**Syntax:** `http://<deviceIP:deviceport>/device.cgi/credential?action=set<argument>=<value>...`

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Setting User Credentials - Parameters**

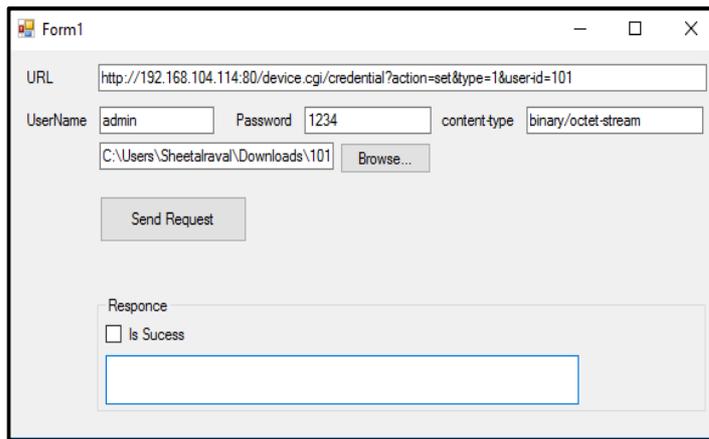
| Argument | Valid Values   | Mandatory | Description   |
|----------|--|-----------|---|
| type     | 1 = Finger<br>2 = Card<br>3 = Palm<br>4 = Palm template with guide mode<br>5 = Face Template<br>6 = Face image | Yes       | To define the user credentials type.<br><br>Type= 5 and 6 are applicable only for ARGON FACE. |
| user-id  | Alphanumeric (Max 15 characters)   | Yes       | To select the user-id for which the credential is to be fetched.                              |
| card1    | 64 Bits (8 bytes) (max value - 18446744073709551615)   | No        | It defines the value of access card 1 and 2.  |
| card2    | 64 Bits (8 bytes) (max value - 18446744073709551615)   | No        |   |

**Table: Setting User Credentials - Parameters**

| Argument | Valid Values | Mandatory | Description   |
|----------|--------------|-----------|---|
| format   | text,xml     | No        | Specifies the format in which the response is expected.   |
| data     | -            | No        | This is the data of respective credential type, which is to be stored at given index number for the respective user id. |

**Example:**

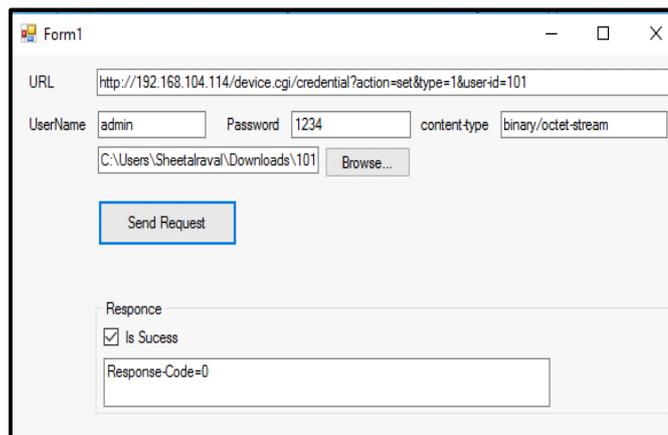
The API for setting user credential on device is mentioned in URL field of 3rd party application as shown below:  
<http://192.168.104.114:80/device.cgi/credential?action=set&type=1&user-id=101>



The **User Name** and **Password** are the device login credentials.

Click **Browse** button to select the credential template file say finger template which is required to set on the device.

Now click **Send Request** to set the finger template on device. The success response of API will be shown as below.



## Retrieving User Credentials

**Description:** To retrieve a user's credential information from a device.

**Actions:** get

**Syntax:** http://<deviceIP:deviceport>/device.cgi/credential?action=get<argument>=<value>...

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Retrieving User Credentials - Parameters**

| Argument     | Valid Values  | Mandatory | Description  |
|--------------|---|-----------|--|
| type         | 1 = Finger<br>2 = Card<br>3 = Palm<br>4 = Palm template with guide mode<br>5 = Face Template<br>6 = Face Image  | Yes       | To define the user credentials type.<br><br>Type= 5 and 6 are applicable only for ARGO FACE.   |
| user-id      | Alphanumeric (Max. 15 characters)   | Yes       | To select the user-id for which the credential is to be fetched.   |
| card1        | 64 Bits (8 bytes) (max value - 18446744073709551615)  |           | It defines the value of access card 1 and 2.   |
| card2        | 64 Bits (8 bytes) (max value - 18446744073709551615)  |           |  |
| finger-index | 1 = 1 Finger<br>2 = 2 Fingers<br>3 = 3 Fingers<br>4 = 4 Fingers<br>5 = 5 Fingers<br>6 = 6 Fingers<br>7 = 7 Fingers<br>8 = 8 Fingers<br>9 = 9 Fingers<br>10 = 10 Fingers | No        | Identifies the number of finger templates/palm/ face templates/ face image to be set or retrieved, on or from the device. The template/image will be set and retrieved from the data portion of the request and response.<br><br>Face-index is applicable for both type= 5 and type=6. |
| palm-index   | 1 = 1 Palm<br>2 = 2 Palms<br>3 = 3 Palms<br>4 = 4 Palms<br>5 = 5 Palms<br>6 = 6 Palms<br>7 = 7 Palms<br>8 = 8 Palms<br>9 = 9 Palms<br>10 = 10 Palms<br>11 = 11 Palms    | No        |  |

**Table: Retrieving User Credentials - Parameters**

| Argument   | Valid Values   | Mandatory | Description   |
|------------|--|-----------|---|
| face-index | 1 - 1 Face<br>2 - 2 Face<br>3 - 3 Face<br>4 - 4 Face<br>5 - 5 Face<br>6 - 6 Face<br>7 - 7 Face<br>8 - 8 Face<br>9 - 9 Face<br>10 - 10 Face<br>11 - 11 Face<br>12 - 12 Face<br>13 - 13 Face<br>14 - 14 Face<br>15 - 15 Face<br>16 - 16 Face<br>17 - 17 Face<br>18 - 18 Face<br>19 - 19 Face<br>20 - 20 Face<br>21 - 21 Face<br>22 - 22 Face<br>23 - 23 Face<br>24 - 24 Face<br>25 - 25 Face<br>26 - 26 Face<br>27 - 27 Face<br>28 - 28 Face<br>29 - 29 Face<br>30 - 30 Face<br>31 - 31 Face<br>32 - 32 Face<br>33 - 33 Face<br>34 - 34 Face<br>35 - 35 Face<br>36 - 36 Face<br>37 - 37 Face<br>38 - 38 Face<br>39 - 39 Face<br>40 - 40 Face | No        | Identifies the number of finger templates/palm/ face templates to be set or retrieved, on or from the device. The template will be set and retrieved from the data portion of the request and response. |
| format     | text,xml   | No        | Specifies the format in which the response is expected.<br><br>Applicable only for type=2   |
| data       | -  | No        | This is the data of respective credential type, which is to be stored at given index number for the respective user id.   |



- *Credential parameters to be applied will depend on the credential type selected.*
- *At a time only finger print or palm can be get/set. Both cannot be set at the same time.*
- *The set command is basically similar to adding and duplication of finger template will not be verified by the device. It is expected to be handled by the 3rd party software. See example in Setting User Credential.*
- *The method used in this case should be POST method as it consists of raw/ hex data in the data portion of the request and the response.*
- *Finger/palm index fields are not mentioned as mandatory fields because if user selects credential type card then there is no need to specify the finger or palm index, similarly if credential type is finger then palm index is not a mandatory field and vice versa.*
- *Compressed palm template will be given with index 11.*
- *If the user passes the argument: Face-index and type=5/6 in the Credentials API with action=GET, then device should return the face template/ face image present at that specific face-index in response.*
- *At a time only one face image can be obtained via action=GET and passing the face-index.*
- *In data field, if data of 832 bytes is received then only the data will be treated as compressed palm template and stored.*
- *At a time only one face image can be set. Multiple face images cannot be set a time.*
- *For type=6, maximum size allowed= 200Kb and supported file format= jpg only.*

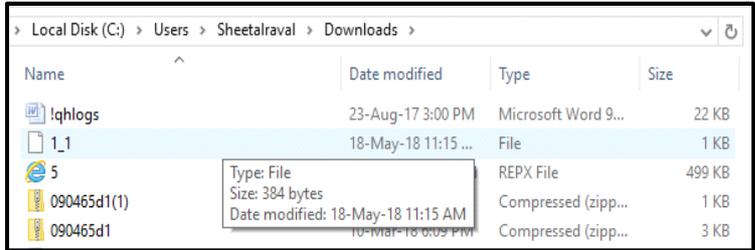
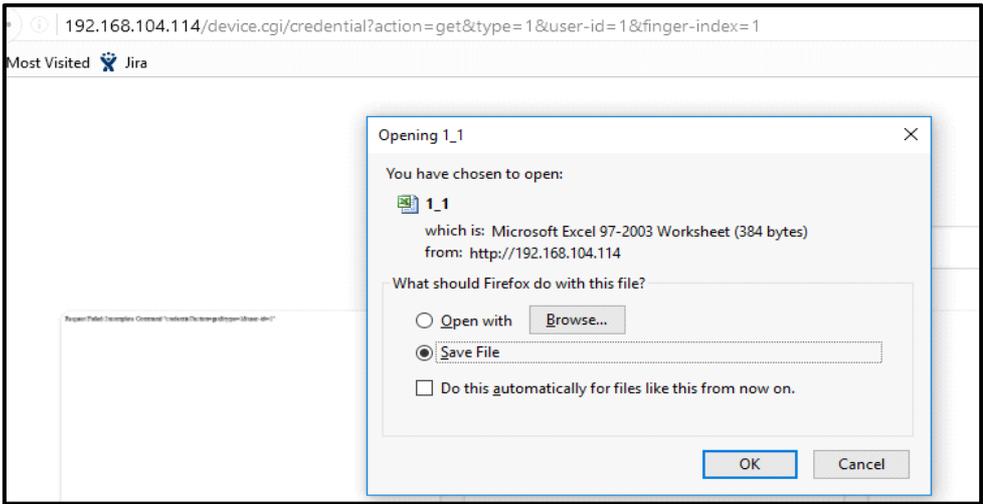
### Example1

#### 1. To get finger credential of user-id = 1

#### Sample Request

`http://192.168.104.114:80/device.cgi/credential?action=get&type=1&user-id=1&finger-index=1`

#### Sample Response



# Deleting User Credentials

**Description:** To delete selected credentials of a user from a device.

**Actions:** delete

**Syntax:** http://<deviceIP:deviceport>/device.cgi/credential?action=delete<argument>=<value>...

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Deleting User Credentials - Parameters**

| Argument | Valid Values  | Mandatory | Description  |
|----------|---|-----------|--|
| user-id  | Alphanumeric (Max. 15 characters)   | Yes       | To delete the credential of a particular user.   |
| type     | 0 = All<br>1 = Finger<br>2 = Card<br>3 = Palm<br>4 = Palm template with guide mode<br>5 = Face Template<br>6 = Face Image | Yes       | Defines the credential type to be deleted.<br>Note: For the selected type, all credentials will be deleted.<br><br>Type= 5 and 6 are applicable only for ARGO FACE.<br><br>NOTE- For delete if type is all then all card, biometric and face credentials should be deleted.<br><br>For type= 5/6, both face images and face templates will be deleted. |
| format   | text,xml  | No        | Specifies the format in which the response is expected.  |

## Example

1. To delete finger templates of user id 1.

### Sample Request

http://deviceIP:deviceport/device.cgi/credential?action=delete&user-id=1&type=1

### Sample Response

HTTP Code: 200 OK  
Content-Type: <type>  
Content-Length: <length>  
Body: Response-Code=0

# Enrollment

---

The Enrollment APIs can be used to generate an enrollment request for a device. Once the enrollment request is successfully sent on the device, the device will initiate the enrollment process and request credentials to be provided physically, as per the credential type and sequence specified.

Perform the enrollment function on a remote door controller using these enrollment APIs:

- [\*Enrolling a User\*](#)
- [\*Enrolling Special Cards\*](#)
- [\*Read/Write Card\*](#)
- [\*Test Enrollment\*](#)

## Enrolling a User

**Description:** To command a device to initiate enrollment for a user based on parameters specified.

**Actions:** enroll

**Syntax:** `http://<deviceIP:deviceport>/device.cgi/enrolluser?action=enroll<argument>=<value>...`

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Enrolling User - Parameters**

| Argument     | Valid Values   | Mandatory | Description   |
|--------------|--|-----------|---|
| type         | 0 = Read Only Card<br>1 = Smart Card<br>2 = Biometric<br>3 = Biometric Then Card<br>4 = Mobile Device<br>7 = Face<br>8 = Duress Finger   | Yes       | Defines the credential to be enrolled.<br>type=0 and 1, that is, Read Only Card and Smart Card is not applicable for ARGO FACE200T. |
| user-id      | Maximum 15 characters  | Yes       | Defines the alphanumeric User ID of the user whose credential is to be enrolled.  |
| enroll-using | 0 = Reader Group 1<br>1 = Reader Group 2<br>2 = Device   | No        | To specify on which reader the enrollment is to be done. <i>Only applicable for ARC DC 100 and ARC DC 200.</i>                      |
| finger-count | Single Template/Finger: 0-9<br><br>where,<br>0 = 1 Finger<br>1 = 2 Fingers<br>2 = 3 Fingers<br>3 = 4 Fingers<br>4 = 5 Fingers<br>5 = 6 Fingers<br>6 = 7 Fingers<br>7 = 8 Fingers<br>8 = 9 Fingers<br>9 = 10 Fingers<br><br>Dual Template/Finger: 0-4<br><br>where,<br>0 = 1 Finger<br>1 = 2 Fingers<br>2 = 3 Fingers<br>3 = 4 Fingers<br>4 = 5 Fingers | No        | To specify the number of fingers to be enrolled.  |
| card-count   | 0 = 1 Card<br>1 = 2 Cards<br>2 = 3 Cards<br>3 = 4 Cards  | No        | To specify the number of cards to be enrolled.  |

**Table: Enrolling User - Parameters**

| <b>Argument</b> | <b>Valid Values</b>   | <b>Mandatory</b> | <b>Description</b>  |
|-----------------|---|------------------|---|
| palm-count      | 0 = 1 Palm<br>1 = 2 Palms<br>2 = 3 Palms<br>3 = 4 Palms<br>4 = 5 Palms<br>5 = 6 Palms<br>6 = 7 Palms<br>7 = 8 Palms<br>8 = 9 Palms<br>9 = 10 Palms  | No               | To specify the number of palms to be enrolled.  |
| face-count      | 0 - 1 Face<br>1 - 2 Face<br>2 - 3 Face<br>3 - 4 Face<br>4 - 5 Face<br>5 - 6 Face<br>6 - 7 Face<br>7 - 8 Face<br>8 - 9 Face<br>9 - 10 Face<br>10 - 11 Face<br>11 - 12 Face<br>12 - 13 Face<br>13 - 14 Face<br>14 - 15 Face<br>15 - 16 Face<br>16 - 17 Face<br>17 - 18 Face<br>18 - 19 Face<br>19 - 20 Face<br>20 - 21 Face<br>21 - 22 Face<br>22 - 23 Face<br>23 - 24 Face<br>24 - 25 Face<br>25 - 26 Face<br>26 - 27 Face<br>27 - 28 Face<br>28 - 29 Face<br>29 - 30 Face | No               | To specify the number of faces to be enrolled.  |
| w-asc           | 0 = Inactive<br>1 = Active  | No               | To enable/disable the Additional Security Code (ASC) to be written on the Smart Card. |
| w-fc            | 0 = Inactive<br>1 = Active  | No               | To enable/disable the Facility Code (FC) to be written on the Smart Card.             |
| w-ref-user-id   | 0 = Inactive<br>1 = Active  | No               | To enable/disable the User ID to be written on the Smart Card.                        |

**Table: Enrolling User - Parameters**

| <b>Argument</b>   | <b>Valid Values</b>   | <b>Mandatory</b> | <b>Description</b>   |
|-------------------|---|------------------|--|
| w-name            | 0 = Inactive<br>1 = Active  | No               | To enable/disable the User Name to be written on the Smart Card.                 |
| w-designation     | 0 = Inactive<br>1 = Active  | No               | To enable/disable the designation to be written on the Smart Card.               |
| w-branch          | 0 = Inactive<br>1 = Active  | No               | To enable/disable the branch name to be written on the Smart Card.               |
| w-department      | 0 = Inactive<br>1 = Active  | No               | To enable/disable the department name to be written on the Smart Card.           |
| w-bg              | 0 = Inactive<br>1 = Active  | No               | To enable/disable the blood group to be written on the Smart Card.               |
| w-contact         | 0 = Inactive<br>1 = Active  | No               | To enable/disable Emergency Contact information to be written on the Smart Card. |
| w-medical-history | 0 = Inactive<br>1 = Active  | No               | To enable/disable the medical history to be written on the Smart Card.           |
| w-fp-template     | 0 = No Templates<br>1 = 1 Finger Template<br>2 = 2 Finger Templates | No               | To enable/disable the finger templates to be written on the Smart Card.          |
| w-palm-template   | 0= No<br>1=Yes  | No               | To enable/disable the finger templates to be written on the Smart Card.          |
| name              | Alphanumeric, 15 Chars, ASCII Code                                  | No               | Defines the values for the respective fields to be written on the Smart Card.    |
| designation       |   |                  |  |
| branch            |   |                  |  |
| department        |   |                  |  |

**Table: Enrolling User - Parameters**

| Argument        | Valid Values   | Mandatory | Description   |
|-----------------|--|-----------|---|
| bg              | Maximum 4 characters. Valid Values:<br>A+<br>A-<br>B+<br>B-<br>AB+<br>AB-<br>O+<br>O-<br>A1-<br>A1+<br>A1B-<br>A1B+<br>A2-<br>A2+<br>A2B-<br>A2B+<br>B1+ | No        | Defines the values for the respective fields to be written on the Smart Card.<br><br>Note: 'bg' stands for blood group of the user. |
| contact         | Alphanumeric, 15 Chars, ASCII Code   | No        |   |
| medical-history | Alphanumeric, 15 Chars, ASCII Code   | No        |   |
| format          | text, XML  | No        | Specifies the format in which the response is expected.   |



- *This is only to send enrollment command, if the credential is to be retrieved then it has to be retrieved explicitly using the get and set credential command.*
- *By default, if count is not specified for enroll command then consider it as one and perform the enroll operation.*
- *This enrollment has no links to the parameter configured on the device for "enroll through special function".*

## Example

1. To start enrollment of two fingers for user id 45.

### Sample Request

http://deviceIP:deviceport/device.cgi/enrolluser?action=enroll&user-id=45&type=2&finger-count=1

### Sample Response

HTTP Code: 200 OK  
Content-Type: <type>  
Content-Length: <length>  
Body: Response-Code=0

## Enrolling Special Cards



*Enrolling Special Cards is not applicable for ARGO FACE200T.*

**Description:** A Special Card is an RFID card which can be encoded for a special function. This API enables the user to perform enrollment of special cards on the selected device based on specified parameters such as special function ID and number of cards to be enrolled as special cards.

**Actions:** enroll

**Syntax:** `http://<deviceIP:deviceport>/device.cgi/enrollspcard?action=enroll<argument>=<value>...`

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Enroll Special Cards - Parameters**

| Argument   | Valid Values  | Mandatory | Description   |
|------------|---|-----------|---|
| sp-fn-id   | All configured Special Functions (special function ID)  | Yes       | Defines the special function identification number.     |
| card-count | 0 = 1 Card<br>1 = 2 Cards<br>2 = 3 Cards<br>3 = 4 Cards | No        | To specify the number of cards to be enrolled.          |
| format     | text, XML   | No        | Specifies the format in which the response is expected. |

## Read/Write Card



*Read/Write Card is not applicable for ARGO FACE200T.*

**Description:** This API will be used to read and write a card. The API will only read/write values from the card/on the card. No values will be permanently stored on the device.

**Actions:** read, write

**Syntax:** `http://<deviceIP:deviceport>/device.cgi/card-read-write?<argument>=<value> [&<argument>=<value>...]`

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Read/Write Card Parameters**

| Argument        | Valid Values  | Mandatory | Description                                   |
|-----------------|---|-----------|---|
| ref-user-id     | 0-9; 8 digits   | No        | To specify the numeric User-ID.               |
| user-id         | 15 char, Alphanumeric   | No        | To specify the alpha-numeric User-ID.         |
| name            | 15 char, Alphanumeric   | No        | To specify the user name.                     |
| asc             | 1-65535   | No        | To specify the additional security code.      |
| fc              | 1-65535   | No        | To specify the facility code.                 |
| designation     | 15 char, ASCII Code   | No        | To specify the designation of the user.       |
| branch          |   | No        | To specify the branch of the user.            |
| department      |   | No        | To specify the department of the user.        |
| bg              | 0- NA<br>1- A+<br>2- A-<br>3- B+<br>4- B-<br>5- AB+<br>6- AB-<br>7- O+<br>8- O-<br>9- A1-<br>10- A1+<br>11- A1B-<br>12- A1B+<br>13- A2-<br>14- A2+<br>15- A2B-<br>16- A2B+<br>17- B1+ | No        | To specify the blood-group of the user.       |
| contact         | 15 char, ASCII Code   | No        | To specify the emergency contact of the user. |
| medical-history | 15 char, ASCII Code   | No        | To specify the medical-history of the user.   |

**Table: Read/Write Card Parameters**

| Argument                | Valid Values                       | Mandatory | Description  |
|-------------------------|------------------------------------|-----------|--|
| pin                     | 0-9; 6 digits                      | No        | To specify the user pin.   |
| VIP                     | 0- Inactive<br>1- Active           | No        | To specify the user as VIP or not.   |
| bypass-palm             | 0=Inactive<br>1= Active            | No        | To specify the user has authority to bypass palm verification                                  |
| bypass-fp               | 0- Inactive<br>1- Active           | No        | To specify the user has authority to bypass finger print verification or not                   |
| validity-date-dd        | 1-31                               | No        | To specify the validity date   |
| validity-date-mm        | 1-12                               | No        | To specify the validity month  |
| validity-date-yyyy      | 2000-2037                          | No        | To specify the validity year   |
| access-level            | 1-15                               | No        | To specify the access level of user for smart identification                                   |
| card-no                 | 0-18446744073709551615;<br>8 bytes | No        | To specify CSN/Card ID of the card   |
| fp1                     | 0=not present<br>1=present         | No        | To specify if FP template1 is to be written on card or not.                                    |
| fp2                     | 0=not present<br>1=present         | No        | To specify if FP template2 is to be written on card or not.                                    |
| palm                    | 0=not present                      | No        | To define whether the palm compressed template is to be written on the card [field-25] or not. |
| format                  | Text, XML                          | No        | To specify the format in which response is needed  |
| fp-index                | 1 or 2                             | Yes       | To identify whether the template received is 1st template or second template                   |
| Smart-access-route-id   | 1-99                               | No        | When Smart Access Route is enabled for SI user   |
| Smart-access-user-level | 1-75                               | No        | When Smart Access Route is enabled for SI user   |

**Action= Write**

- For this action device will write the values received in the API into the respective fields in the card.
- Note that all the values that are to be written in the card should be received in the API.
- Device is not expected fetch the values from the device configuration and write them into the card.
- **Card no:**  
If valid card no parameter is received and card no in CP configuration = default: device will ignore this parameter, write the card and return the CSN in the card no parameter of the API response.

- Server shall send the old key type written in the card along with key value. The old key value should be sent as blank if the old key type is matrix key.

**Table: Write Card Response**

| Field         | Valid Values  | Response  |
|---------------|---|---|
| Response-code | 0 = success<br>16 = Device Busy<br>26 = Parameters not applicable as per card type defined.<br>27 = Time-Out<br>28 = Read/Write Failed<br>29 = Wrong Card Type<br>30 = Key mismatch   | -   |
| card-no       | 0-18446744073709551615; 8 bytes   | 4.In CP if card no= CSN; device will read the csn of the card and send the same as response in this parameter.<br>5.In cp if card no= custom; device will write the value received in the card-no parameter in the field22 and send the same as response in this parameter<br>6.This value will be sent has zero if card no is failed to be read.<br>*Note: card no will represent CSN / field22 as per card no parameter defined in CP |
| Card-type     | 1 = iclass2K2<br>2 = iclass16K2<br>3 = iclass16K16<br>4 = Mifare 1K<br>5 = Mifare 4K<br>6 = Mifare DESFire 2K<br>7 = Mifare DESFire 4K<br>8 = Mifare DESFire 8K<br>9 = Read Only Card | Read only card will be send if the read card is a HID prox card or EM prox card   |

Action= Read

- If any parameters received in the API are not configured in the CP configuration then API will be failed with reason 26.
- After reading the values, device will send the read values in the API response and No further action will be taken at the device.
- Device will not store the read values in its memory.Test Enrollment

**Table: Read Card Response**

| Field         | Valid Values  | Response |
|---------------|---|----------|
| Response-code | 0 = success<br>16 = Device Busy<br>27 = Time-Out<br>28 = Read/Write Failed<br>29 = Wrong Card Type<br>30 = Key mismatch | -        |

**Table: Read Card Response**

| Field     | Valid Values   | Response   |
|-----------|--|--|
| card-no   | 0-18446744073709551615; 8 bytes  | <p>1.In CP if card no= CSN; device will read the csn of the card and send the same as response in this parameter.</p> <p>2.In cp if card no= custom; device will write the value received in the card-no parameter in the field22 and send the same as response in this parameter</p> <p>7.This value will be sent has zero if card no is failed to be read.</p> <p>*Note: card no will represent CSN / field22 as per card no parameter defined in CP</p> |
| Card-type | <p>1 = iclass2K2</p> <p>2 = iclass16K2</p> <p>3 = iclass16K16</p> <p>4 = Mifare 1K</p> <p>5 = Mifare 4K</p> <p>6 = Mifare DESFire 2K</p> <p>7 = Mifare DESFire 4K</p> <p>8 = Mifare DESFire 8K</p> <p>9 = Read Only Card</p> | <p>Read only card will be send if the read card is a HID prox card or EM prox card</p>   |

**Table: Read Card Response**

| Field              | Valid Values                                       | Response   |
|--------------------|--|--|
| ref-user-id        | Value read from the respective field from the card | If the corresponding fields are not configured in the CP [for CP card format = custom] or if the debug field of respective field = 0 [for CP card format = default] then that respective field should not be a part of the response. |
| user-id            | Value read from the respective field from the card |  |
| name               | Value read from the respective field from the card |  |
| asc                | Value read from the respective field from the card |  |
| fc                 | Value read from the respective field from the card |  |
| designation        | Value read from the respective field from the card |  |
| branch             | Value read from the respective field from the card |  |
| department         | Value read from the respective field from the card |  |
| bg                 | Value read from the respective field from the card |  |
| contact            | Value read from the respective field from the card |  |
| medical-history    | Value read from the respective field from the card |  |
| pin                | Value read from the respective field from the card |  |
| vip                | Value read from the respective field from the card |  |
| bypass-fp          | Value read from the respective field from the card |  |
| bypass-palm        | Value read from the respective field from the card |  |
| validity-date-dd   | Value read from the respective field from the card |  |
| validity-date-mm   | Value read from the respective field from the card |  |
| validity-date-yyyy | Value read from the respective field from the card |  |
| access-level       | Value read from the respective field from the card |  |

**Table: Read Card Response**

| Field                   | Valid Values                                       | Response  |
|-------------------------|--|---|
| card-no                 | Value read from the respective field from the card | If the corresponding fields are not configured in the CP [for CP card format = custom] or if the debug field of respective field = 0 [for CP card format = default] then that respective field should not be a part of the response.                |
| Smart-access-route-id   | Value read from the respective field from the card |   |
| Smart-access-user-level | Value read from the respective field from the card |   |
| fp-count                | 0,1,2  | <p>1.For card format in cp = default<br/>Return 0 if both FP debug fields = 0<br/>Return 1 if any FP debug field = 1<br/>Return 2 if both FP debug field = 1</p> <p>2.For card format in cp = custom<br/>Always return [device side limitation]</p> |
| palm-count              | 0,1  | <p>For card format in cp = default<br/>Return 0 if palm debug fields = 0<br/>Return 1 if palm debug field = 1<br/>For card format in cp = custom<br/>Always return [<b>device side limitation</b>]</p>  |

## Test Enrollment

**Description:** This API will be used to know whether the device is applicable to be used as a enrollment device or not. There is a requirement from the COSEC ENROLL that it should check whether the device is online or not. To confirm the same the following API must be fired from the COSEC Enroll.

**Actions:** get

**Syntax:** `http://<deviceIP:deviceport>/device.cgi /check-enrollment?<argument>=<value>[&<argument>=<value>...]`

# Events

---

Any action that occurs or is performed using a live COSEC device is referred on the COSEC system as an Event. A client application can directly request event logs to be fetched from a specific device or be fed with live events data via the device listening port. The functions available in this API group are as follows:

- [Retrieving Events](#)
- [Retrieving Events in the TCP Socket](#)

# Retrieving Events

**Description:** To request all or specified events from a device.

**Actions:** getevent

**Syntax:** http://<deviceIP:deviceport>/device.cgi/events?action=getevent<&argument>=<value>...

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Retrieving Events - Parameters**

| Argument        | Valid Values   | Mandatory | Description  |
|-----------------|--|-----------|--|
| roll-over-count | 0 to 65535   | Yes       | This identifies the first event that is to be sent to the 3rd party from a set of events sent in this response. If the "no-of-events" field value is 1, then this will be the only event sent to the server. |
| seq-number      | Refer to "Table: Value Range for Event Sequence Numbers" for the valid values on different devices.  | Yes       |  |
| no-of-events    | 1 to 5 (for Direct Door V2, Path Controller, IO Controller)<br>1 to 100 (for all other Direct Doors) | No        | Specifies the number of events to be fetched.  |
| format          | text, XML  | No        | Specifies the format in which the response is expected.  |

**Table: Value Range for Event Sequence Numbers**

| Door            | Event Sequence Number |
|-----------------|-----------------------|
| V2              | 1 to 50,000           |
| CDC             | 1 to 50,000           |
| Wireless        | 1 to 5,00,000         |
| NGT             | 1 to 1,00,000         |
| PVR             | 1 to 1,00,000         |
| Vega Controller | 1 to 5,00,000         |
| ARC Controller  | 1 to 1,00,000         |
| IO Controller   | 1 to 1,00,000         |
| Door FMX        | 1 to 5,00,000         |
| ARGO FACE       | 1 to 5,00,000         |
| ARGO            | 1 to 5,00,000         |



- For different kind of events, different fields are required, to understand the functionality of an event, which are denoted as **Detail** fields.
- The **Detail** field in the response depends on the type of device. For further information, refer to relevant tables in the [Event Configuration Reference](#) (Appendix).

## Example

1. To request specific events with roll over count = 0 and sequence number = 1. No. of events requested is 3, for an NGT door.

### Sample Request

```
http://deviceIP:deviceport/device.cgi/events?action=getevent&roll-over-count=0&seq-number=1&no-of-events=3
```

### Sample Response

```
HTTP Code: 200 OK
Content-Type: xml
Content-Length: 12345
Body:
<COSEC_API>
<Events>
<roll-over-count>0</roll-over-count>
<seq-No>1</seq-No>
<date>16/4/2014</date>
<time>14:56:20</time>
<event-id>457</event-id>
<detail-1>0</detail-1>
<detail-2>0</detail-2>
<detail-3>6</detail-3>
<detail-4>0</detail-4>
<detail-5>0</detail-5>
</Events>
<Events>
<roll-over-count>0</roll-over-count>
<seq-No>2</seq-No>
<date>16/4/2014</date>
<time>14:56:20</time>
<event-id>453</event-id>
<detail-1>0</detail-1>
<detail-2>0</detail-2>
<detail-3>0</detail-3>
<detail-4>0</detail-4>
<detail-5>0</detail-5>
</Events>
<Events>
<roll-over-count>0</roll-over-count>
<seq-No>3</seq-No>
<date>16/4/2014</date>
<time>14:57:28</time>
<event-id>453</event-id>
<detail-1>0</detail-1>
<detail-2>0</detail-2>
<detail-3>0</detail-3>
<detail-4>0</detail-4>
<detail-5>0</detail-5>
</Events>
</COSEC_API>
```

For example if an enrollment event is called in which three fingers have been enrolled with the dual template per finger then the detail fields will be as follows:

#### For first finger:

- Event-ID: 405 (code for enrollment event)
- Detail-1: user-id
- Detail-2: 9 (code for finger credential)
- Detail-3: **12**
- Detail-4: 0
- Detail-5: 0

#### For second finger:

- Event-ID: 405 (code for enrollment event)
- Detail-1: user-id
- Detail-2: 9 (code for finger credential)
- Detail-3: **24**
- Detail-4: 0

- Detail-5: 0

**For third finger:**

- Event-ID: 405 (code for enrollment event)
- Detail-1: user-id
- Detail-2: 9 (code for finger credential)
- Detail-3: **36**
- Detail-4: 0
- Detail-5: 0

If the template per finger mode was selected as single template per finger then the respective values for detail 3 will be 11, 22 and 33, where LSB denotes the template index.

## Retrieving Events in the TCP Socket

**Description:** To receive all or specific events through the TCP listening port of the device.

**Actions:** getevent

**Syntax:** http://<deviceIP:deviceport>/device.cgi/tcp-events?action=getevent<argument>=<value>...

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Retrieving Events in the TCP Socket - Parameters**

| Argument         | Valid Values  | Mandatory                        | Description  |
|------------------|---|----------------------------------|--|
| trigger          | 1: Start<br>0: Stop   | No                               | It is used to start and stop the process   |
| keep-live-events | 0: inactive<br>1: active  | No                               | It is used to send the events continuously or till the maximum limit.  |
| ipaddress        | IP address and port number validations are same as for network configuration settings.              | Yes                              | Defines the IP Address and the listening port on which the events are to be sent.  |
| port             |   |                                  |  |
| roll-over-count  | 0 to 65535  | Yes<br>No; if keep-live-events=1 | It is used to specify the exact sequence number of an event stored at any port.  |
| seq-number       | Refer to "Table: Value Range for Event Sequence Numbers" for the valid values on different devices. | Yes<br>No; if keep-live-events=1 | It is used to specify the sequence number of any event. The maximum value for this can be from 1 to the event log capacity of that device. |
| response-time    | 3 - 15 seconds  | No                               | To specify the response time to wait for a confirmation of established network.  |
| interface        | 0 = Ethernet<br>1 = WiFi<br>2 = Mobile Broadband  | No                               | Specifies the interface.<br><br>Note: If no interface is defined, <b>Ethernet</b> will be tried by default.                                |
| format           | text, XML   | No                               | Specifies the format in which the response is expected.  |



*Due to memory constraints, this API is not supported on Direct Door V2.*

## Example

1. To request to send the events continuously on the TCP port from event seq 1 and roll over count 0 on IP address 192.168.102.42 and tcp listening port 80.

### Sample Request

```
http://deviceIP:deviceport/device.cgi/tcp-events?action=getevent&ipaddress=192.168.102.42&port=80&roll-over-count=0&seq-number=1
```

### Sample Response

```
HTTP Code: 200 OK  
Content-Type: <type>  
Content-Length: <length>  
Body: Response-Code=0
```



- *The default TCP protocol acknowledgment should be used to send the next event. If in case any event is missed in between, then it is the responsibility of the 3rd party to re-request for that event. This shouldn't be done via TCP port but missed events can be re-requested through HTTP API.*
- *If during the event transferring if reboot occurs then the prior command (to send events) will no longer be valid and client must re-request events. In such a case, the events which have already been sent, will be overwritten by the same.*
- *The user ID against which an event is stored must be the Reference ID for a user. This being numeric (max. 8 digits), will enable efficient utilization of storage space on devices, especially those having high event logging capacity (up to 5,00,000 events).*

# Sending Commands to Device

It is possible to send CGI commands to a device in order to perform certain functions.

The generic URL for these commands:

http://<deviceIP:deviceport>/device.cgi/command?action=<value>&<argument>=<value>...

**Table: List of Commands to Device**

| S.No. | Command to Device                             | Action             | Description  |
|-------|---|--------------------|--|
| 1     | Clear Alarm                                   | clearalarm         | To command the device to clear an alarm.   |
| 2     | Get Credential Count for Enrolled Credentials | getcount           | To get the count of already enrolled templates and credentials for a user on the selected device.<br><br>For parameters, refer <a href="#">Table: Get Credential Count Command - Parameters</a> below.   |
| 3     | Acknowledge Alarm                             | acknowledgealarm   | To command the device to acknowledge an alarm without clearing it.   |
| 4     | Lock Door                                     | lockdoor           | To command the door to return to a locked state. Not applicable for ARGO FACE200T.   |
| 5     | Unlock Door                                   | unlockdoor         | To command the door to return to an unlocked state. Not applicable for ARGO FACE200T.  |
| 6     | Normalize Door                                | normalizedoor      | To command the door to return to a normal state. Not applicable for ARGO FACE200T.   |
| 7     | Open Door                                     | opendoor           | To open the door. The door should be opened only for the defined pulse time. Not applicable for ARGO FACE200T.<br><br>For parameters, refer <a href="#">Table: Open Door Command - Parameters</a> below. |
| 8     | Get User Count on Device                      | getusercount       | To obtain the total number of users added on a device.   |
| 9     | Get Current Event Sequence Number             | geteventcount      | To get the current event sequence number and roll over count in a device.  |
| 10    | Default the System Configuration              | systemdefault      | To set all the configurations on the device to default status.   |
| 11    | Delete Credentials for All Users              | deletecredential   | To delete all biometric credentials of users from device.<br><br>For parameters, refer <a href="#">Table: Deleting Credentials for All Users - Parameters</a> below.                                     |
| 12    | Activate the Aux Relay                        | activateauxrelay   | To activate the Aux Relay.   |
| 13    | De-activate the Aux Relay                     | deactivateauxrelay | To de-activate the Aux Relay.  |
| 14    | Deny User                                     | denyuser           | To deny a user.<br><br>For parameters, refer <a href="#">Table: Deny User Command- Parameters</a> below.   |

**Table: List of Commands to Device**

| S.No. | Command to Device | Action     | Description   |
|-------|-------------------|------------|---|
| 15    | Door Panic        | door panic | To create door panic situation when some number is entered by user from his extension.<br><br>For parameters, refer <a href="#">Table: Door Panic Command - Parameters</a> below. |

**For action= getcount**

For valid values of this action, refer to the following argument-value table.

**Table: Get Credential Count Command - Parameters**

| Argument     | Valid Values   | Mandatory | Description   |
|--------------|--|-----------|---|
| user-id      | 1 to max. User ID in the door<br>(2 bytes)   | Yes       | Defines the numeric ID of the user whose data is to be fetched. |
| card-count   | 0 = 1 Card<br>1 = 2 Cards<br>2 = 3 Cards<br>3 = 4 Cards  | No        | To get the number of cards enrolled.                            |
| finger-count | Single Template/Finger: 0-9<br><br>0 = 1 Finger<br>1 = 2 Fingers<br>2 = 3 Fingers<br>3 = 4 Fingers<br>4 = 5 Fingers<br>5 = 6 Fingers<br>6 = 7 Fingers<br>7 = 8 Fingers<br>8 = 9 Fingers<br>9 = 10 Fingers<br><br>Dual Template/Finger: 0-4<br><br>0 = 1 Finger<br>1 = 2 Fingers<br>2 = 3 Fingers<br>3 = 4 Fingers<br>4 = 5 Fingers | No        | To get the number of fingers enrolled.                          |
| palm-count   | 0 = 1 Palm<br>1 = 2 Palms<br>2 = 3 Palms<br>3 = 4 Palms<br>4 = 5 Palms<br>5 = 6 Palms<br>6 = 7 Palms<br>7 = 8 Palms<br>8 = 9 Palms<br>9 = 10 Palms   | No        | To get the number of palms enrolled.                            |

**Table: Get Credential Count Command - Parameters**

| Argument   | Valid Values  | Mandatory | Description   |
|------------|---|-----------|---|
| face-count | 0 - 1 Face<br>1 - 2 Face<br>2 - 3 Face<br>3 - 4 Face<br>4 - 5 Face<br>5 - 6 Face<br>6 - 7 Face<br>7 - 8 Face<br>8 - 9 Face<br>9 - 10 Face<br>10 - 11 Face<br>11 - 12 Face<br>12 - 13 Face<br>13 - 14 Face<br>14 - 15 Face<br>15 - 16 Face<br>16 - 17 Face<br>17 - 18 Face<br>18 - 19 Face<br>19 - 20 Face<br>20 - 21 Face<br>21 - 22 Face<br>22 - 23 Face<br>23 - 24 Face<br>24 - 25 Face<br>25 - 26 Face<br>26 - 27 Face<br>27 - 28 Face<br>28 - 29 Face<br>29 - 30 Face | No        | To get the number of faces enrolled.<br><br>Currently applicable for ARGO FACE only |
| format     | text,xml  | No        | Specifies the format in which the response is expected.                             |



- *If no parameter is requested then all the count values will be returned by default (of supported credential types e.g. for PVR door, only card and palm template count will be returned).*
- *Palm template count and finger template counts depend on the device type i.e. Palm template count is only applicable for PVR doors and FP template counts are applicable for other devices. The specified credential should be applicable for the device on which the command is sent.*

## Example

Following are some sample cases for your reference:

1. **To get the current rollover count and sequence number of events in the device.**

### Sample Request

```
http://<deviceIP:deviceport>/device.cgi/command?action=geteventcount&format=xml
```

## Sample Response

```
HTTP Code: 200 OK
Content-Type: <xml>
Body:
<COSEC_API>
<Roll-over-count>1</roll-over-count>
<seq-number>1</seq-number>
</COSEC_API >
```

### For action=opendoor

For valid values of this action, refer to the following argument-value table.

**Table: Open Door Command - Parameters**

| Argument          | Valid Values  | Mandatory | Description   |
|-------------------|---|-----------|---|
| extra-info1       | 4 ASCII bytes   | Yes       | This field is kept mandatory to identify the source of the command. |
| extra-info2       | 2 ASCII bytes   | No        | -   |
| extra-info3       | 0 to 65535  | No        | -   |
| show-a/v-response | 0 = Do not display audio/video (default value)<br>1 = Display audio/video | No        | To enable/disable display of audio/video.                           |



The valid values in the “extra-info” fields are numeric values which can be replaced for valid enumerated codes and can be included in the event by the third party requesting the command.

### For action=deletecredential

For valid values of this action, refer to the following argument-value table.

**Table: Deleting Credentials for All Users - Parameters**

| Argument | Valid Values  | Mandatory | Description                                      |
|----------|---|-----------|--|
| type     | 0 = All<br>1 = Finger<br>2 = Palm<br>3 = Face (Currently applicable for ARGO FACE only) | Yes       | To specify the type of credential to be deleted. |

### For action=activateauxrelay

For valid values of this action, refer to the following argument-value table.

**Table: Activate Aux Relay command - Parameters**

| Argument | Valid Values | Mandatory | Description  |
|----------|--------------|-----------|--|
| port-no  | 1 to 8       | No        | To select the Aux port. This parameter is applicable only for IO controller. |

**For action=deactivateauxrelay**

For valid values of this action, refer to the following argument-value table.

**Table: Deactivate Aux Relay command - Parameters**

| Argument | Valid Values | Mandatory | Description  |
|----------|--------------|-----------|--|
| port-no  | 1 to 8       | No        | To select the Aux port. This parameter is applicable only for IO controller. |

**For action=denyuser**

For valid values of this action, refer to the following argument-value table.

**Table: Deny User Command- Parameters**

| Argument          | Valid Values  | Mandatory | Description   |
|-------------------|---|-----------|---|
| extra-info1       | 4 ASCII bytes   | Yes       | This field is kept mandatory to identify the source of the command. |
| extra-info2       | 2 ASCII bytes   | No        | -   |
| extra-info3       | 0 to 65535  | No        | -   |
| show-a/v-response | 0 = Do not display audio/video (default value)<br><br>1 = Display audio/video | No        | To enable/disable display of audio/video.                           |

**For action=doorpanic**

For valid values of this action, refer to the following argument-value table.

**Table: Door Panic Command - Parameters**

| Argument    | Valid Values  | Mandatory | Description   |
|-------------|---------------|-----------|---|
| extra-info1 | 4 ASCII bytes | Yes       | This field is kept mandatory to identify the source of the command. |
| extra-info2 | 2 ASCII bytes | No        | -   |
| extra-info3 | 0 to 65535    | No        | -   |

# Cafeteria Reset and Recharge



*Cafeteria Reset and Recharge is not applicable for ARGO FACE200T.*

**Description:** This API will be used to recharge/reset the cafeteria balance on card.

**Actions:** read, write

**Syntax:** `http://<deviceIP:deviceport>/device.cgi/cafeteria-reset-recharge?<argument>=<value>[&<argument>=<value>...]`

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Cafeteria Reset-Recharge - Parameters**

| Argument | Valid Values                    | Mandatory | Description   |
|----------|---------------------------------|-----------|---|
| card-no1 | 0-18446744073709551615; 8 bytes | Yes       | To define the CSN/Card ID of the user.                  |
| card-no2 | 0-18446744073709551615; 8 bytes | Yes       | To define the CSN/Card ID of the user.                  |
| balance  | 4 bytes                         | No        | To specify the available cafeteria balance of the user. |
| format   | text,xml                        | No        | Specifies the format in which the response is expected. |

**Table: Smart Card Key Change Response**

| Field         | Valid Values  | Response  |
|---------------|---|---|
| Response-code | 0 = success<br>16 = Device Busy<br>26 = Parameters not applicable as per card type defined.<br>28 = Read/Write Failed<br>29 = Wrong Card Type<br>30 = Key mismatch<br>31 = Invalid card | -   |
| card-no       | 0-18446744073709551615; 8 bytes   | 1.In CP if card no= CSN; device will read the csn of the card and send the same as response in this parameter.<br>2.In cp if card no= custom; device will write the value received in the card-no parameter in the field22 and send the same as response in this parameter<br>3.This value will be sent has zero if card no is failed to be read.<br>*Note: card no will represent CSN / field22 as per card no parameter defined in CP |

**Table: Smart Card Key Change Response**

| Field     | Valid Values  | Response  |
|-----------|---|---|
| Card-type | 1 = iclass2K2<br>2 = iclass16K2<br>3 = iclass16K16<br>4 = Mifare 1K<br>5 = Mifare 4K<br>6 = Mifare DESFire 2K<br>7 = Mifare DESFire 4K<br>8 = Mifare DESFire 8K<br>9 = Read Only Card | Read only card will be send if the read card is a HID prox card or EM prox card |

# Verify Biometric and Open Door

---

**Description:** When this API is fired; device will prompt for User finger and it will be compared with the finger templates received from APIs.

**Actions:** set

**Syntax:** `http://<deviceIP:deviceport>/device.cgi/verify-open-door?<argument>=<value>[&<argument>=<value>....]`

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Verify biometric and Open door- Parameters**

| Argument  | Valid Values                          | Mandatory | Description   |
|-----------|---------------------------------------|-----------|---|
| user-id   | 15 Alphanumeric characters            | Yes       | The user ID on which the specified operation is to be done. |
| name      | 15 Alphanumeric characters with space | Yes       | The name of the user  |
| operation | 0-2                                   | Yes       | 0-Verify and open<br>1-Only Verify<br>2-Only open           |
| Format    | Text, XML                             | No        | Specifies the format in which the response is expected.     |



Finger data must be sent in JSON format only.  
JSON object names must be fp1, fp2, ..., fp10 only.

If operation = 0; device will verify scanned finger with received fingers in the API and if verified then device will open the door.

If operation =1 then device will verify the scanned finger with received fingers in the API and if verified device will send success response but door will not be opened.

If operation = 2 then device will directly open the door.

# Temperature Reading

---

**Description:** This API will be used by 3<sup>rd</sup> Party Thermal Sensors to send temperature readings to the device.

**Actions:** set

**Syntax:** http://<deviceIP:deviceport>/device.cgi/temp-reading?<argument>=<value>[&<argument>=<value>....]

**Parameters:** All arguments for this query and their corresponding valid values are listed below:

**Table: Arguments and Valid Values**

| Argument   | Valid Values                           | Mandatory | Description   |
|------------|--|-----------|---|
| temp-value | 6 characters (0-9 and dot (.) only)    | Yes       | The temperature value recorded by sensor                      |
| temp-unit  | 0=Fahrenheit<br>1= Celsius<br>2=Kelvin | Yes       | The unit in which the temperature value is recorded by sensor |
| Format     | Text, XML                              | No        | Specifies the format in which the response is expected.       |

# Error Responses

---

These are some possible error response types obtained from incorrect API requests.

- **Argument is mentioned in request but valid value is not assigned.**

| Sample Response  |
|--|
| HTTP code: <code><br>Content-type: <type><br>Body:<br>Request failed: Incomplete command "<argument>=" |

- **Invalid value is assigned to argument in request.**

| Sample Response  |
|--|
| HTTP code: <code><br>Content-type: <type><br>Body:<br>Request failed: Invalid command "<argument>=<invalid value>" |

- **Syntax of request is incorrect or any unexpected arguments are received.**

| Sample Response   |
|---|
| HTTP code: <code><br>Content-type: <type><br>Body:<br>Request failed: Invalid syntax "<entire request>" |

- **Mandatory fields are not mentioned in request.**

| Sample Response   |
|---|
| HTTP code: <code><br>Content-type: <type><br>Body:<br>Request failed: Incomplete command "<entire request>" |

- **Syntax of request is valid but no data found.**

#### Sample Response

HTTP code: <code>  
Content-type: <type>  
Body:  
Request failed: No record found "<argument>=<value>"

# API Response Codes

These numerical codes will be returned with an API response. These response codes shall indicate the result of a particular request made by the client. For e.g. the response code '0' will indicate that the requested action was performed successfully. Refer to the given table for a list of response codes and their meanings.

**Table: API Response Codes**

| Response Code | Description   | Test Condition   |
|---------------|---|--|
| 0             | Successful  | -  |
| 1             | Failed - Invalid Login Credentials  | On every Authentication/Verification while logging In  |
| 2             | Date and time – manual set failed   | If unable to set the RTC for date and time API   |
| 3             | Invalid Date/Time   | In User API, if validity-date or date of birth is set wrong.<br>If the starting time and end time of a shift is configured as same.  |
| 4             | Maximum users are already configured.   | On every set command for user API  |
| 5             | Image – size is too big   | On every set command for user API  |
| 6             | Image – format not supported  | On every set command for user API  |
| 7             | Card 1 and card 2 are identical   | On every set command for user API and set credential API   |
| 8             | Card ID exists  | On every set command for user API and set credential API, Set Special Function API   |
| 9             | Finger print template/ Palm template/ Face template already exists/ Face Image already exists | Set credential API   |
| 10            | No Record Found   | Event sequence number and roll over count not found, user id not found in Set User API   |
| 11            | Template size/ format mismatch  | If the expected template size is not as per the required size, format or any checksum error etc. in Set credential API   |
| 12            | FP Memory full  | In Set credential API, if the max FP template is set in the module.  |
| 13            | User id not found   | In enroll user command if user id is not available in the device and in User Configuration API, to update a user if provided reference user ID doesn't belong to that user verified with alphanumeric user ID. |
| 14            | Credential limit reached  | In enroll user command, if max no. of credentials is already enrolled.   |
| 15            | Reader mismatch/ Reader not configured  | The enroll request is for smart card and the device has proximity reader or if enroll request has palm template but door has finger reader and similar cases.  |
| 16            | Device Busy   | All cases of enrollment when the device is unable to process a request as it is in a different menu state  |
| 17            | Internal process error  | Internal error like configuration, firmware or event or calibration failure occur  |
| 18            | PIN already exists  | Set User API: PIN is already assigned to another user  |
| 19            | Credential not found  | Get FP/Palm/ Face template or Face Image command is sent but template/ image is not present.   |

**Table: API Response Codes**

| Response Code | Description   | Test Condition   |
|---------------|---|--|
| 20            | Memory Card Not Found   | In case memory card is not connected, and a command related to getting an image (user photo) is sent.  |
| 21            | Reference User ID exists  | When an already existing User ID is entered against a user having unique User ID.  |
| 22            | Wrong Selection   | For enrolling user, if writing FP template on smart card is enabled, but no fingerprint is enrolled.<br>When palm/finger/card count exceeds the maximum number of available places.  |
| 23            | Palm template mode mismatch   | In Set Credentials API, when palm template with particular mode does not match with the selected mode.   |
| 24            | Feature not enabled in the configuration  | In configuration, if a particular parameter is not enabled and is required for the process.<br><br>On Set Credential API- for Face Image, if the device's FR is disabled<br>Or On Set Credential API- for Face Image/ Face Template, if the device's FR Mode is server-assisted. |
| 25            | Message already exists for same user for same date                                | In Device Display API, if message is configured for same date and same user that is already configured.  |
| 26            | Invalid smart card format/<br>Parameters not applicable as per card type defined. | If any of the entered values are incorrect as per specified range./ If any parameter received in the API is configured in the CP configuration of the device.  |
| 27            | Time Out  | If the card is not shown on the device.  |
| 28            | Read/Write failed   | If the card has been failed to read/write due to any reason like: key mismatch, wrongly placed card etc  |
| 29            | Wrong Card Type   | If the card shown on the device is not as per the reader set on the device for example, if write operation is to be done & read only card is shown or reader is set as HID i-class & mifare card has been shown etc  |
| 30            | key mismatch  | If the old key written in the card mismatches with the read old key.   |
| 31            | invalid card  | This should be sent whenever the cafeteria card shown is a wrong card for recharge/reset API.  |
| 32            | Scan failed   | When the finger/palm scanning fails dues to reason like improper finger/palm placement or bad quality template in scan template API  |
| 33            | Invalid value   | If the value of the parameters passed in the API is not applicable.<br>Example if template format is passed as 0/1 for FMX door  |
| 34            | Credential does not match   | If finger templates received in the API and scanned templates does not match.  |
| 35            | Failure   | Fail to find any FP template/image for FP Template API<br>Applicable for Face Image Upload via Web API   |
| 36            | Face Not Detected   | On Set Credential API- for Face Image, if the received face image fails face detection   |
| 37            | User Conflict   | On Set Credential API- for Face Image, if the received face image is already enrolled against any other user   |
| 38            | Enroll Conflict   | On Set Credential API- for Face Image, if for the user any previously enrolled images exist and the received face image doesn't match with the previously enrolled face images   |
| 39            | Face Mask Detected  | On Set Credential API- for Face Image, if the received face image has face with mask worn.   |

**Table: API Response Codes**

| <b>Response Code</b> | <b>Description</b>    | <b>Test Condition</b>   |
|----------------------|-----------------------|---|
| 40                   | Full Face Not Visible | On Set Credential API- for Face Image, if the received face image fails Full Face Visible conditions      |
| 41                   | Face Not Straight     | On Set Credential API- for Face Image, if the extracted face from the received face image is not straight |

# Appendix

**Table: Universal Time Zone Reference**

| Index    | Universal Time Zone  |
|----------|--|
| Index=0  | Text="(GMT-12:00) International Date Line West"                      |
| Index=1  | Text="(GMT-11:00) Midway Island, Samoa"                              |
| Index=2  | Text="(GMT-10:00) Hawaii"  |
| Index=3  | Text="(GMT-09:00) Alaska"  |
| Index=4  | Text="(GMT-08:00) Pacific Time (Us & Canada); Tijuana"               |
| Index=5  | Text="(GMT-07:00) Arizona"   |
| Index=6  | Text="(GMT-07:00) Chihuahua, La Paz, Mazatlan"                       |
| Index=7  | Text="(GMT-07:00) Mountain Time (Us & Canada)"                       |
| Index=8  | Text="(GMT-06:00) Central America"                                   |
| Index=9  | Text="(GMT-06:00) Central Time (Us & Canada)"                        |
| Index=10 | Text="(GMT-06:00) Guadalajara, Mexico City, Monterrey"               |
| Index=11 | Text="(GMT-06:00) Saskatchewan"                                      |
| Index=12 | Text="(GMT-05:00) Bogota, Lima, Quito"                               |
| Index=13 | Text="(GMT-05:00) Eastern Time (Us & Canada)"                        |
| Index=14 | Text="(GMT-05:00) Indiana (East)"                                    |
| Index=15 | Text="(GMT-04:00) Atlantic Time (Canada)"                            |
| Index=16 | Text="(GMT-04:00) Caracas, La Paz"                                   |
| Index=17 | Text="(GMT-04:00) Santiago"  |
| Index=18 | Text="(GMT-03:30) Newfoundland"                                      |
| Index=19 | Text="(GMT-03:00) Brasilia"  |
| Index=20 | Text="(GMT-03:00) Buenos-Aires, Georgetown"                          |
| Index=21 | Text="(GMT-03:00) Greenland"   |
| Index=22 | Text="(GMT-02:00) Mid-Atlantic"                                      |
| Index=23 | Text="(GMT-01:00) Azores"  |
| Index=24 | Text="(GMT-01:00) Cape Verde Is"                                     |
| Index=25 | Text="(GMT) CASABLANCA, MONROVIA"                                    |
| Index=26 | Text="(GMT) Dublin, Edinburgh, Lisbon, London"                       |
| Index=27 | Text="(GMT+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna"  |
| Index=28 | Text="(GMT+01:00) Belgrade, Bratislava, Budapest, Ljubljana, Prague" |
| Index=29 | Text="(GMT+01:00) Brussels, Copenhagen, Madrid, Paris"               |
| Index=30 | Text="(GMT+01:00) Sarajevo, Skopje, Warsaw, Zagreb"                  |
| Index=31 | Text="(GMT+01:00) West Central Africa"                               |
| Index=32 | Text="(GMT+02:00) Athens, Beirut, Istanbul, Minsk"                   |
| Index=33 | Text="(GMT+02:00) Bucharest"   |
| Index=34 | Text="(GMT+02:00) Cairo"   |
| Index=35 | Text="(GMT+02:00) Harare, Pretoria"                                  |
| Index=36 | Text="(GMT+02:00) Helsinki, Kyiv, Riga, Sofia, Tallinn, Vilnius"     |
| Index=37 | Text="(GMT+02:00) Jerusalem"   |
| Index=38 | Text="(GMT+03:00) Baghdad"   |
| Index=39 | Text="(GMT+03:00) Kuwait, Riyadh"                                    |
| Index=40 | Text="(GMT+03:00) Moscow, St Petersburg, Volgograd"                  |
| Index=41 | Text="(GMT+03:00) Nairobi"   |
| Index=42 | Text="(GMT+03:30) Tehran"  |
| Index=43 | Text="(GMT+04:00) Abu Dhabi, Muscat"                                 |
| Index=44 | Text="(GMT+04:00) Baku, Tbilisi, Yerevan"                            |
| Index=45 | Text="(GMT+04:30) Kabul"   |
| Index=46 | Text="(GMT+05:00) Ekaterinburg"                                      |
| Index=47 | Text="(GMT+05:00) Islamabad, Karachi, Tashkent"                      |
| Index=48 | Text="(GMT+05:30) Chennai, Kolkata, New Delhi, Mumbai"               |
| Index=49 | Text="(GMT+05:45) Kathmandu"   |
| Index=50 | Text="(GMT+06:00) Almay, Novosibirsk"                                |
| Index=51 | Text="(GMT+06:00) Astana, Dhaka"                                     |
| Index=52 | Text="(GMT+06:00) Sri Jayewardenepura"                               |
| Index=53 | Text="(GMT+06:30) Rangoon"   |
| Index=54 | Text="(GMT+07:00) Bangkok, Hanoi, Jakarta"                           |
| Index=55 | Text="(GMT+07:00) Krasnoyarsk"                                       |
| Index=56 | Text="(GMT+08:00) Beijing, Chongqing, Hong Kong, Urumqi"             |
| Index=57 | Text="(GMT+08:00) Irkutsk, Ulaanbaatar"                              |
| Index=58 | Text="(GMT+08:00) Kuala Lumpur, Singapore"                           |
| Index=59 | Text="(GMT+08:00) Perth"   |
| Index=60 | Text="(GMT+08:00) Taipei"  |

**Table: Universal Time Zone Reference**

| Index    | Universal Time Zone                                   |
|----------|---|
| Index=61 | Text="(GMT+09:00) Osaka, Sapporo, Tokyo"              |
| Index=62 | Text="(GMT+09:00) Seoul"                              |
| Index=63 | Text="(GMT+09:00) Yakutsk"                            |
| Index=64 | Text="(GMT+09:30) Adelaide"                           |
| Index=65 | Text="(GMT+09:30) Darwin"                             |
| Index=66 | Text="(GMT+10:00) Brisbane"                           |
| Index=67 | Text="(GMT+10:00) Canberra, Sydney, Melbourne,"       |
| Index=68 | Text="(GMT+10:00) Guam, Port Moresby"                 |
| Index=69 | Text="(GMT+10:00) Hobart"                             |
| Index=70 | Text="(GMT+10:00) Vladivostok"                        |
| Index=71 | Text="(GMT+11:00) Magadan, Solomon Is, New Caledonia" |
| Index=72 | Text="(GMT+12:00) Auckland, Wellington"               |
| Index=73 | Text="(GMT+12:00) Fiji, Kamchatka, Marshall Is"       |
| Index=74 | Text="(GMT+13:00) Nuku'alofa"                         |

## Event Configuration Reference

**Table: List of Events**

| Event ID | Event Description                                   |
|----------|---|
| 101      | User Allowed  |
| 102      | User Allowed – with Duress                          |
| 103      | User Allowed – Anti-Pass Back-soft                  |
| 104      | User Allowed - Dead-man Zone                        |
| 105      | User Allowed – Door Not open                        |
| 106      | User Allowed – Smart Secure Access                  |
| 107      | User Allowed – Smart card based route access - soft |
| 108      | User Allowed – Panel route access - soft            |
| 109      | User Allowed – two person rule - primary user       |
| 110      | User Allowed – two person rule - secondary user     |
| 111      | Visitor Allowed                                     |
| 112      | User Allowed – Multi-Level Access                   |
| 151      | User Denied – User Invalid                          |
| 152      | User Denied – Occupancy Control                     |
| 153      | User Denied – 2-Person Rule                         |
| 154      | User Denied – Time Out                              |
| 155      | User Denied – Visitor Escort Rule                   |
| 156      | User Denied – Anti-Pass Back                        |
| 157      | User Denied – Disabled User                         |
| 158      | User Denied – Blocked User                          |
| 159      | User Denied – First IN User                         |
| 160      | User Denied – DND Enabled                           |
| 161      | User denied – Control zone                          |

**Table: List of Events**

| <b>Event ID</b> | <b>Event Description</b>              |
|-----------------|---------------------------------------|
| 162             | User Denied – Door Lock               |
| 163             | User Denied – Invalid Access Group    |
| 164             | User Denied – Validity date expired   |
| 165             | User Denied – Invalid Route Access    |
| 166             | User Denied – Invalid Shift Access    |
| 167             | User Denied – Invalid Access Cluster  |
| 171             | Visitor Denied                        |
| 172             | User Denied – FP sensor busy          |
| 201             | Door Status changed                   |
| 202             | Dead-man timer changed                |
| 203             | DND status changed                    |
| 204             | Aux input status changed              |
| 205             | Aux output status changed             |
| 206             | Door sense input status               |
| 207             | Door Controller Communication status  |
| 208             | Door Open/ Close                      |
| 209             | Lock relay status changed             |
| 301             | Dead-man timer expired Alarm– User IN |
| 302             | Duress detection                      |
| 303             | Panic Alarm                           |
| 304             | FP Memory Full – Alarm                |
| 305             | Door Held open too long               |
| 306             | Door Abnormal                         |
| 307             | Door force open                       |
| 308             | Door Controller Offline               |
| 309             | Door Controller -Fault                |
| 310             | Tamper Alarm                          |
| 311             | Master Controller Mains fail Alarm    |
| 312             | Master Controller Battery fail        |
| 313             | Master Alarm – MC Alarm input         |
| 314             | RTC                                   |
| 315             | Event Buffer Full                     |
| 317             | Intercom - panic                      |
| 318             | Occupancy Violated Alarm              |
| 319             | Tail- Gating Alarm                    |
| 320             | Man Trap Timer Violated Alarm         |

**Table: List of Events**

| <b>Event ID</b> | <b>Event Description</b>                 |
|-----------------|--|
| 321             | Access Denied Aalrm                      |
| 322             | Multiple Unauthorized Access Alarm       |
| 323             | Custom Alarm 1                           |
| 324             | Custom Alarm 2                           |
| 325             | Custom Alarm 3                           |
| 326             | User Unidentified                        |
| 327             | Anti-Pass Back Violated Alarm            |
| 328             | Access Route Violated Alarm              |
| 329             | Raise Alarm                              |
| 351             | Alarm acknowledged                       |
| 352             | Alarm cleared                            |
| 353             | Alarm Re-issued                          |
| 401             | User Block/Restore                       |
| 402             | Login to ACS                             |
| 403             | Message transaction confirmation to ACMS |
| 404             | Guard Tour-status                        |
| 405             | Enrolment                                |
| 406             | Master Alarm sense input status          |
| 407             | Master Aux Output status                 |
| 408             | Input Output Group Link status           |
| 409             | Credentials Deleted                      |
| 410             | Time Triggered Function                  |
| 411             | Time Stamping Function                   |
| 412             | Guard tag                                |
| 413             | Camera Event for time stamp              |
| 451             | Configuration Change                     |
| 452             | Roll over of events                      |
| 453             | Master Controller Power ON               |
| 454             | Configuration Defaulted                  |
| 455             | Soft Override                            |
| 456             | Backup and Update                        |
| 457             | Default System                           |
| 458             | Sensor Calibration                       |
| 459             | User Denied – invalid card               |
| 460             | User PIN Change                          |



Some of the events listed are applicable only on Panels/Panel Doors and not on Direct Doors. Refer the respective event tables to see the applicable doors for each event.

**Table: Size of Event Fields**

| Door            | Field 1 | Field 2 | Field 3 | Field 4 | Field 5 | Event Log Capacity |
|-----------------|---------|---------|---------|---------|---------|--------------------|
| Direct Door V2  | 4 bytes | 2 bytes | 2 bytes | N.A.    | N.A.    | 50,000 events      |
| Path Controller | 4 bytes | 2 bytes | 2 bytes | N.A.    | N.A.    | 50,000 events      |
| Wireless Door   | 4 bytes | 2 bytes | 2 bytes | 4 bytes | 4 bytes | 5,00,000 events    |
| NGT Direct Door | 4 bytes | 2 bytes | 2 bytes | 4 bytes | 4 bytes | 1,00,000 events    |
| PVR Door        | 4 bytes | 2 bytes | 2 bytes | 4 bytes | 4 bytes | 1,00,000 events    |
| Vega Controller | 4 bytes | 2 bytes | 2 bytes | 4 bytes | 4 bytes | 5,00,000 events    |
| Panel200        | 4 bytes | 2 bytes | 2 bytes | 4 bytes | 4 bytes | 5,00,000 events    |
| ARC             | 4 bytes | 2 bytes | 2 bytes | N.A.    | N.A.    | 1,00,000 events    |
| IO Controller   | 4 bytes | 2 bytes | 2 bytes | N.A.    | N.A.    | 1,00,000 events    |
| Door FMX        | 4 bytes | 2 bytes | 2 bytes | 4 bytes | 4 bytes | 5,00,000 events    |
| Direct Door V3  | 4 bytes | 2 bytes | 2 bytes | 4 bytes | 4 bytes | 5,00,000 events    |
| Direct Door V4  | 4 bytes | 2 bytes | 2 bytes | 4 bytes | 4 bytes | 5,00,000 events    |
| ARGO            | 4 bytes | 2 bytes | 2 bytes | 4 bytes | 4 bytes | 5,00,000 events    |
| ARGO FACE       | 4 bytes | 2 bytes | 2 bytes | 4 bytes | 4 bytes | 5,00,000 events    |

**Table: User Events**

| Event Details       |                                   |                           |                         | Applicable Devices      |                |                 |                         |          |          |                 |  |     |          |      |                |
|---------------------|-----------------------------------|---------------------------|-------------------------|-------------------------|----------------|-----------------|-------------------------|----------|----------|-----------------|--|-----|----------|------|----------------|
| Event ID            | (Field 1)<br>User ID              | (Field 2)<br>Special Code | (Field 3)<br>Entry/Exit | (Field 4) and (Field 5) | Direct Door V2 | Path Controller | Wireless Door / Door V3 | NGT Door | PVR Door | Vega Controller | Panel/Panel-Lite/ Standalone Panellite | ARC | Door FMX | ARGO | Direct Door V4 |
| User Allowed Events |                                   |                           |                         |                         |                |                 |                         |          |          |                 |  |     |          |      |                |
| 101                 | Xxxx<br>(user ID=0 for REX input) | Special Function code     | Detail                  |                         | ✓              | ✓               | ✓                       | ✓        | ✓        | ✓               | ✓                                      | ✓   | ✓        | ✓    | ✓              |
| 102                 | Xxxx                              | Special Function code     | Detail                  |                         | ✗              | ✗               | ✓                       | ✗        | ✓        | ✗               | ✗                                      | ✗   | ✗        | ✗    | ✓              |
| 103                 | Xxxx                              | Special Function code     | Detail                  |                         | ✓              | ✓               | ✓                       | ✓        | ✓        | ✓               | ✓                                      | ✓   | ✓        | ✓    | ✓              |
| 104                 | Xxxx                              | Special Function code     | Detail                  |                         | ✗              | ✗               | ✗                       | ✗        | ✗        | ✗               | ✓                                      | ✗   | ✗        | ✗    | ✗              |

**Table: User Events**

| Event Details      |                                      |                                    |                         |                         | Applicable Devices |                 |                         |          |          |                 |   |     |          |      |                |
|--------------------|--------------------------------------|------------------------------------|-------------------------|-------------------------|--------------------|-----------------|-------------------------|----------|----------|-----------------|---|-----|----------|------|----------------|
| Event ID           | (Field 1)<br>User ID                 | (Field 2)<br>Special Function Code | (Field 3)<br>Entry/Exit | (Field 4) and (Field 5) | Direct Door V2     | Path Controller | Wireless Door / Door V3 | NGT Door | PVR Door | Vega Controller | Panel/ Panel-Lite/ Standalone Panellite | ARC | Door FMX | ARGO | Direct Door V4 |
| 105                | Xxxx                                 | Special Function code              | Detail                  |                         | X                  | X               | X                       | X        | X        | X               | ✓                                       | X   | X        | X    | X              |
| 106                | Xxxx                                 | Special Function code              | Detail                  |                         | ✓                  | ✓               | ✓                       | ✓        | ✓        | ✓               | ✓                                       | ✓   | ✓        | ✓    | ✓              |
| 107                | Xxxx                                 | Special Function code              | Detail                  |                         | ✓                  | ✓               | ✓                       | ✓        | ✓        | ✓               | ✓                                       | ✓   | ✓        | ✓    | ✓              |
| 108                | Xxxx                                 | Special Function code              | Detail                  |                         | X                  | X               | X                       | X        | X        | X               | ✓                                       | X   | X        | X    | X              |
| 109                | Xxxx                                 | Special Function code              | Detail                  |                         | ✓                  | ✓               | ✓                       | ✓        | ✓        | ✓               | ✓                                       | ✓   | ✓        | ✓    | ✓              |
| 110                | Xxxx                                 | Special Function code              | Detail                  |                         | ✓                  | ✓               | ✓                       | ✓        | ✓        | ✓               | ✓                                       | ✓   | ✓        | ✓    | ✓              |
| 111                | First four bytes of extension number | last two bytes of extension number | Detail                  |                         | ✓                  | ✓               | ✓                       | ✓        | ✓        | ✓               | X                                       | ✓   | ✓        | ✓    | ✓              |
| 112                | Xxxx                                 | 0 = Door unlock<br>1 = Door lock   | Detail                  |                         | X                  | X               | X                       | X        | X        | X               | ✓                                       | X   | X        | X    | X              |
| User Denied Events |                                      |                                    |                         |                         |                    |                 |                         |          |          |                 |   |     |          |      |                |
| 151                | (User ID = 0 if not identified)      | Special Function code              | Detail                  |                         | ✓                  | ✓               | ✓                       | ✓        | ✓        | ✓               | ✓                                       | ✓   | ✓        | ✓    | ✓              |
| 152                | Xxxx                                 |                                    | Detail                  |                         | ✓                  | ✓               | ✓                       | ✓        | ✓        | ✓               | ✓                                       | ✓   | ✓        | ✓    | ✓              |
| 153                | Xxxx                                 |                                    | Detail                  |                         | ✓                  | ✓               | ✓                       | ✓        | ✓        | ✓               | ✓                                       | ✓   | ✓        | ✓    | ✓              |
| 154                | Xxxx                                 |                                    | Detail                  |                         | ✓                  | ✓               | ✓                       | ✓        | ✓        | ✓               | ✓                                       | ✓   | ✓        | ✓    | ✓              |
| 155                | Xxxx                                 |                                    | Detail                  |                         | X                  | X               | X                       | X        | X        | X               | ✓                                       | X   | X        | X    | X              |
| 156                | Xxxx                                 |                                    | Detail                  |                         | ✓                  | ✓               | ✓                       | ✓        | ✓        | ✓               | ✓                                       | ✓   | ✓        | ✓    | ✓              |
| 157                | Xxxx                                 |                                    | Detail                  |                         | ✓                  | ✓               | ✓                       | ✓        | ✓        | ✓               | ✓                                       | ✓   | ✓        | ✓    | ✓              |
| 158                | Xxxx                                 |                                    | Detail                  |                         | ✓                  | ✓               | ✓                       | ✓        | ✓        | ✓               | ✓                                       | ✓   | ✓        | ✓    | ✓              |

**Table: User Events**

| Event Details          |                      |  |                         |                         | Applicable Devices |                 |                         |          |          |                 |   |     |          |      |                |   |   |
|------------------------|----------------------|--|-------------------------|-------------------------|--------------------|-----------------|-------------------------|----------|----------|-----------------|---|-----|----------|------|----------------|---|---|
| Event ID               | (Field 1)<br>User ID | (Field 2)<br>Special Code  | (Field 3)<br>Entry/Exit | (Field 4) and (Field 5) | Direct Door V2     | Path Controller | Wireless Door / Door V3 | NGT Door | PVR Door | Vega Controller | Panel/ Panel-Lite/ Standalone Panellite | ARC | Door FMX | ARGO | Direct Door V4 |   |   |
| 159                    | Xxxx                 |  | Detail                  |                         | ✓                  | ✓               | ✓                       | ✓        | ✓        | ✓               | ✓                                       | ✓   | ✓        | ✓    | ✓              |   |   |
| 160                    | Xxxx                 |  | Detail                  |                         | ✗                  | ✗               | ✗                       | ✗        | ✗        | ✗               | ✓                                       |     |          |      |                |   |   |
| 161                    | Xxxx                 |  | Detail                  |                         | ✓                  | ✓               | ✓                       | ✓        | ✓        | ✓               | ✓                                       | ✓   | ✓        | ✓    | ✓              |   |   |
| 162                    | Xxxx                 |  | Detail                  |                         | ✓                  | ✓               | ✓                       | ✓        | ✓        | ✓               | ✓                                       | ✓   | ✓        | ✓    | ✓              |   |   |
| 163                    | Xxxx                 |  | Detail                  |                         | ✗                  | ✗               | ✗                       | ✗        | ✗        | ✗               | ✓                                       |     |          |      |                |   |   |
| 164                    | Xxxx                 |  | Detail                  |                         | ✓                  | ✓               | ✓                       | ✓        | ✓        | ✓               | ✓                                       | ✓   | ✓        | ✓    | ✓              |   |   |
| 165                    | Xxxx                 | 0=Door Not in Sequence   | Detail                  |                         | ✗                  | ✗               | ✗                       | ✗        | ✗        | ✗               | ✓                                       | ✗   | ✗        | ✗    | ✗              |   |   |
|                        |                      | 1=Door Not in Route  |                         |                         |                    |                 |                         |          |          |                 |   |     |          |      |                |   |   |
|                        |                      | 2=Door Not in Sequence for Smart card based Route                            |                         |                         |                    |                 |                         |          |          |                 |   |     |          |      |                |   |   |
|                        |                      | 3=Door Not in Smart card based Route   |                         |                         | ✓                  | ✓               | ✓                       | ✓        | ✓        | ✓               | ✓                                       | ✓   | ✓        | ✓    | ✓              | ✓ |   |
|                        |                      | 4=Cred ential Invalid for Smart card based Route Access                      |                         |                         |                    |                 |                         |          |          |                 |   |     |          |      |                |   |   |
|                        |                      | 5=Door cannot be accessed now due to time zone inside access route violation |                         |                         | ✗                  | ✗               | ✗                       | ✗        | ✗        | ✗               | ✗                                       | ✗   | ✓        | ✗    | ✗              | ✗ | ✗ |
| 6=Door is not assigned |                      | ✗  | ✗                       | ✗                       | ✗                  | ✗               | ✗                       | ✗        | ✗        | ✓               | ✗                                       | ✗   | ✗        | ✗    |                |   |   |

**Table: User Events**

| Event Details |                                      |                                    |                         |                         | Applicable Devices |                 |                         |          |          |                 |   |     |          |      |                |
|---------------|--------------------------------------|------------------------------------|-------------------------|-------------------------|--------------------|-----------------|-------------------------|----------|----------|-----------------|---|-----|----------|------|----------------|
| Event ID      | (Field 1)<br>User ID                 | (Field 2)<br>Special Code          | (Field 3)<br>Entry/Exit | (Field 4) and (Field 5) | Direct Door V2     | Path Controller | Wireless Door / Door V3 | NGT Door | PVR Door | Vega Controller | Panel/ Panel-Lite/ Standalone Panellite | ARC | Door FMX | ARGO | Direct Door V4 |
| 166           | Xxxx                                 | 0=Outside working hours            | Detail                  |                         | X                  | X               | X                       | X        | X        | X               | ✓                                       | X   | X        | X    | X              |
|               |                                      | 1=Holiday                          |                         |                         | ✓                  | ✓               | ✓                       | ✓        | ✓        | ✓               | ✓                                       | ✓   | ✓        | ✓    |                |
| 167           | Xxxx                                 | 2=Week off                         | Detail                  |                         | X                  | X               | X                       | X        | X        | X               | ✓                                       | X   | X        | X    | X              |
|               |                                      | 3=Field Break                      |                         |                         | ✓                  | ✓               | ✓                       | ✓        | ✓        | ✓               | ✓                                       | ✓   | ✓        | ✓    |                |
| 171           | First four bytes of extension number | last two bytes of extension number | Detail                  |                         | ✓                  | ✓               | ✓                       | ✓        | ✓        | ✓               | X                                       | ✓   | ✓        | ✓    | ✓              |
|               |                                      |                                    |                         |                         | 4=Rest Day         | X               | X                       | X        | X        | X               | X                                       | X   | X        | ✓    | X              |
| 172           | Xxxx                                 |                                    | Detail                  |                         | X                  | X               | X                       | X        | X        | X               | X                                       | X   | ✓        | X    | X              |

**Table: Special Function Codes Reference**

| S.No. | Special Function Name            | Special Function Code | Applicable for Allowed Events | Applicable for Denied Events |
|-------|----------------------------------|-----------------------|-------------------------------|------------------------------|
| 1     | Official Work-IN Marking in T&A  | 1                     | ✓                             | X                            |
| 2     | Official Work-OUT Marking in T&A | 2                     | ✓                             | X                            |
| 3     | Short Leave-IN Marking in T&A    | 3                     | ✓                             | X                            |
| 4     | Short Leave-OUT Marking in T&A   | 4                     | ✓                             | X                            |
| 5     | Clock - IN Marking in T&A        | 5                     | ✓                             | X                            |
| 6     | Clock - OUT Marking in T&A       | 6                     | ✓                             | X                            |
| 7     | Post Lunch-IN Marking in T&A     | 7                     | ✓                             | X                            |
| 8     | Pre Lunch -OUT Marking in T&A    | 8                     | ✓                             | X                            |
| 9     | Over time – IN Marking in T&A    | 9                     | ✓                             | X                            |

**Table: Special Function Codes Reference**

| S.No. | Special Function Name              | Special Function Code | Applicable for Allowed Events | Applicable for Denied Events |
|-------|------------------------------------|-----------------------|-------------------------------|------------------------------|
| 10    | Over time – OUT Marking in T&A     | 10                    | ✓                             | ✗                            |
| 11    | Late –IN Allowed Marking in T&A    | 11                    | ✓                             | ✗                            |
| 12    | Early - OUT Allowed Marking in T&A | 12                    | ✓                             | ✗                            |
| 13    | Access in Degrade Mode Marking     | 99                    | ✓                             | ✓                            |
| 14    | Smart Identification               | 98                    | ✗                             | ✓                            |
| 15    | e-Canteen                          | 97                    | ✗                             | ✓                            |

**Table: Field 3 Detail (User Events) Reference\***

| Bit 15 | Bit 14 | Bit 13 | Bit 12 | Bit 11 | Bit 10 | Bit 9 | Bit 8 | Bit 7 | Bit 6  | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1      | Bit 0      |
|--------|--------|--------|--------|--------|--------|-------|-------|-------|--------|-------|-------|-------|-------|------------|------------|
| RFU    | QR     | Card 2 | Card 1 | BLE    | Face   | API   | Group | Palm  | Finger | Card  | PIN   | RFU   |       | Time Stamp | Entry/Exit |

\* Applicable for Firmware Version of following doors:  
 ARC DC200: V01R40 and later.  
 ARGO: V01R42 and later.  
 ARGO FACE: V01R20 and later.  
 VEGA: V01R71 and later.  
 PATH V2: V01R34 and later.

**Table: Information of Bit 0 and 1\***

| Credential | Bit 1 | Bit 0 | Value |   |
|------------|-------|-------|-------|---|
| Entry      | 0     | 0     | 0     | ✓ |
| Exit       | 0     | 1     | 1     | ✓ |

\* Applicable for Firmware Version of following doors:  
 ARC DC200: V01R40 and later.  
 ARGO: V01R42 and later.  
 ARGO FACE: V01R20 and later.  
 VEGA: V01R71 and later.  
 PATH V2: V01R34 and later.

**Table: Information of Bit 4 to 13\***

| Credential      | Bit 14 | Bit 13 | Bit 12 | Bit 11 | Bit 10 | Bit 9 | Bit 8 | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Value |
|-----------------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| PIN             | 0      | 0      | 0      | 0      | 0      | 0     | 0     | 0     | 0     | 0     | 1     | 1     |
| Card 1          | 0      | 0      | 1      | 0      | 0      | 0     | 0     | 0     | 0     | 1     | 0     | 258   |
| Card 1 + PIN    | 0      | 0      | 1      | 0      | 0      | 0     | 0     | 0     | 0     | 1     | 1     | 259   |
| Finger          | 0      | 0      | 0      | 0      | 0      | 0     | 0     | 0     | 1     | 0     | 0     | 4     |
| Finger + PIN    | 0      | 0      | 0      | 0      | 0      | 0     | 0     | 0     | 1     | 0     | 1     | 5     |
| Finger + Card 1 | 0      | 0      | 1      | 0      | 0      | 0     | 0     | 0     | 1     | 1     | 0     | 262   |

| Credential            | Bit 14 | Bit 13 | Bit 12 | Bit 11 | Bit 10 | Bit 9 | Bit 8 | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Value |
|-----------------------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| Finger + Card 1 + PIN | 0      | 0      | 1      | 0      | 0      | 0     | 0     | 0     | 1     | 1     | 1     | 263   |
| Palm                  | 0      | 0      | 0      | 0      | 0      | 0     | 0     | 1     | 0     | 0     | 0     | 8     |
| PIN + Palm            | 0      | 0      | 0      | 0      | 0      | 0     | 0     | 1     | 0     | 0     | 1     | 9     |
| Card 1 + Palm         | 0      | 0      | 1      | 0      | 0      | 0     | 0     | 1     | 0     | 1     | 0     | 266   |
| PIN + Card 1 + Palm   | 0      | 0      | 1      | 0      | 0      | 0     | 0     | 1     | 0     | 1     | 1     | 267   |
| Group + Palm          | 0      | 0      | 0      | 0      | 0      | 0     | 1     | 1     | 0     | 0     | 0     | 24    |
| API                   | 0      | 0      | 0      | 0      | 0      | 1     | 0     | 0     | 0     | 0     | 0     | 32    |
| API + Finger          | 0      | 0      | 0      | 0      | 0      | 1     | 0     | 0     | 1     | 0     | 0     | 36    |
| API + Palm            | 0      | 0      | 0      | 0      | 0      | 1     | 0     | 1     | 0     | 0     | 0     | 40    |
| API + Face            | 0      | 0      | 0      | 0      | 1      | 1     | 0     | 0     | 0     | 0     | 0     | 96    |
| API + PIN             | 0      | 0      | 0      | 0      | 0      | 1     | 0     | 0     | 0     | 0     | 1     | 33    |
| Group + Finger        | 0      | 0      | 0      | 0      | 0      | 0     | 1     | 0     | 1     | 0     | 0     | 20    |
| API + Card 1          | 0      | 0      | 1      | 0      | 0      | 1     | 0     | 0     | 0     | 1     | 0     | 290   |
| Face                  | 0      | 0      | 0      | 0      | 1      | 0     | 0     | 0     | 0     | 0     | 0     | 64    |
| PIN + Face            | 0      | 0      | 0      | 0      | 1      | 0     | 0     | 0     | 0     | 0     | 1     | 65    |
| Card 1 + Face         | 0      | 0      | 1      | 0      | 1      | 0     | 0     | 0     | 0     | 1     | 0     | 322   |
| Finger + Face         | 0      | 0      | 0      | 0      | 1      | 0     | 0     | 0     | 1     | 0     | 0     | 68    |
| Palm + Face           | 0      | 0      | 0      | 0      | 1      | 0     | 0     | 1     | 0     | 0     | 0     | 72    |
| BLE 1                 | 0      | 0      | 1      | 1      | 0      | 0     | 0     | 0     | 0     | 0     | 0     | 384   |
| BLE 2                 | 0      | 1      | 0      | 1      | 0      | 0     | 0     | 0     | 0     | 0     | 0     | 640   |
| BLE 1 + Card 1        | 0      | 0      | 1      | 1      | 0      | 0     | 0     | 0     | 0     | 1     | 0     | 386   |
| BLE 2 + Card 1        | 0      | 1      | 1      | 1      | 0      | 0     | 0     | 0     | 0     | 1     | 0     | 898   |
| BLE 1 + Finger        | 0      | 0      | 1      | 1      | 0      | 0     | 0     | 0     | 1     | 0     | 0     | 388   |
| BLE 2 + Finger        | 0      | 1      | 0      | 1      | 0      | 0     | 0     | 0     | 1     | 0     | 0     | 644   |
| BLE 1 + Palm          | 0      | 0      | 1      | 1      | 0      | 0     | 0     | 1     | 0     | 0     | 0     | 392   |
| BLE 2 + Palm          | 0      | 1      | 0      | 1      | 0      | 0     | 0     | 1     | 0     | 0     | 0     | 648   |
| BLE 1 + Face          | 0      | 0      | 1      | 1      | 1      | 0     | 0     | 0     | 0     | 0     | 0     | 448   |
| BLE 2 + Face          | 0      | 1      | 0      | 1      | 1      | 0     | 0     | 0     | 0     | 0     | 0     | 704   |
| BLE 1 + PIN           | 0      | 0      | 1      | 1      | 0      | 0     | 0     | 0     | 0     | 0     | 1     | 385   |
| BLE 2 + PIN           | 0      | 1      | 0      | 1      | 0      | 0     | 0     | 0     | 0     | 0     | 1     | 641   |
| Card 2                | 0      | 1      | 0      | 0      | 0      | 0     | 0     | 0     | 0     | 1     | 0     | 514   |
| Card 2 + PIN          | 0      | 1      | 0      | 0      | 0      | 0     | 0     | 0     | 0     | 1     | 1     | 515   |
| Finger + Card 2       | 0      | 1      | 0      | 0      | 0      | 0     | 0     | 0     | 1     | 1     | 0     | 518   |
| Finger + Card 2 + PIN | 0      | 1      | 0      | 0      | 0      | 0     | 0     | 0     | 1     | 1     | 1     | 519   |
| Card 2 + Palm         | 0      | 1      | 0      | 0      | 0      | 0     | 0     | 1     | 0     | 1     | 0     | 522   |

| Credential          | Bit 14 | Bit 13 | Bit 12 | Bit 11 | Bit 10 | Bit 9 | Bit 8 | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Value |
|---------------------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| PIN + Card 2 + Palm | 0      | 1      | 0      | 0      | 0      | 0     | 0     | 1     | 0     | 1     | 1     | 523   |
| API + Card 2        | 0      | 1      | 0      | 0      | 0      | 1     | 0     | 0     | 0     | 1     | 0     | 546   |
| Card 2 + Face       | 0      | 1      | 0      | 0      | 1      | 0     | 0     | 0     | 0     | 1     | 0     | 578   |
| BLE 1 + Card 2      | 0      | 1      | 1      | 1      | 0      | 0     | 0     | 0     | 0     | 1     | 0     | 898   |
| BEL 2 + Card 2      | 0      | 1      | 0      | 1      | 0      | 0     | 0     | 0     | 0     | 1     | 0     | 642   |
| QR 1                | 1      | 0      | 1      | 0      | 0      | 0     | 0     | 0     | 0     | 0     | 0     | 1280  |
| QR 1 + PIN          | 1      | 0      | 1      | 0      | 0      | 0     | 0     | 0     | 0     | 0     | 1     | 1281  |
| API + QR 1          | 1      | 0      | 1      | 0      | 0      | 1     | 0     | 0     | 0     | 0     | 0     | 1312  |
| QR 1 + Face         | 1      | 0      | 1      | 0      | 1      | 0     | 0     | 0     | 0     | 0     | 0     | 1344  |
| BLE 1 + QR 1        | 1      | 0      | 1      | 1      | 0      | 0     | 0     | 0     | 0     | 0     | 0     | 1408  |
| BLE 2 + QR 1        | 1      | 1      | 1      | 1      | 0      | 0     | 0     | 0     | 0     | 0     | 0     | 1920  |
| QR 2                | 1      | 1      | 0      | 0      | 0      | 0     | 0     | 0     | 0     | 0     | 0     | 1536  |
| QR 2 + PIN          | 1      | 1      | 0      | 0      | 0      | 0     | 0     | 0     | 0     | 0     | 1     | 1537  |
| API + QR 2          | 1      | 1      | 0      | 0      | 0      | 1     | 0     | 0     | 0     | 0     | 0     | 1568  |
| QR 2 + Face         | 1      | 1      | 0      | 0      | 1      | 0     | 0     | 0     | 0     | 0     | 0     | 1600  |
| BLE 1 + QR 2        | 1      | 1      | 1      | 1      | 0      | 0     | 0     | 0     | 0     | 0     | 0     | 1920  |
| BLE 2 + QR 2        | 1      | 1      | 0      | 1      | 0      | 0     | 0     | 0     | 0     | 0     | 0     | 1664  |

\* Applicable for Firmware Version of following doors:  
 ARC DC200: V01R40 and later.  
 ARGO: V01R42 and later.  
 ARGO FACE: V01R20 and later.  
 VEGA: V01R71 and later.  
 PATH V2: V01R34 and later.

**Table: Field 3 Detail (User Events) Reference\***

| Bit 15 | Bit 14 | Bit 13 | Bit 12 | Bit 11 | Bit 10 | Bit 9 | Bit 8 | Bit 7 | Bit 6  | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 | Bit 0      |
|--------|--------|--------|--------|--------|--------|-------|-------|-------|--------|-------|-------|-------|-------|-------|------------|
| RFU    |        |        |        | BLE    | Face   | API   | Group | Palm  | Finger | Card  | PIN   | RFU   |       | RFU   | Entry/Exit |

\* Applicable for All Doors.



*Applicable for Firmware Version of following doors:*  
 ARC DC200: Earlier than V01R40.  
 ARGO: Earlier than V01R42.  
 ARGO FACE: Earlier than V01R20.  
 VEGA: Earlier than V01R71.  
 PATH V2: Earlier than V01R34.

**Table: Information of Bit 0 and Bit 1\***

| Credential | Bit 1 | Bit 0 | Value |   |
|------------|-------|-------|-------|---|
| Entry      | 0     | 0     | 0     | ✓ |
| Exit       | 0     | 1     | 1     | ✓ |

\* Applicable for All Doors.



Applicable for Firmware Version of following doors:

ARC DC200: Earlier than V01R40.

ARGO: Earlier than V01R42.

ARGO FACE: Earlier than V01R20.

VEGA: Earlier than V01R71.

PATH V2: Earlier than V01R34.

Table: Information of Bit 4 to 9\*

| Credential          | Bit 11 | Bit 10 | Bit 9 | Bit 8 | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Value |
|---------------------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| PIN                 | 0      | 0      | 0     | 0     | 0     | 0     | 0     | 1     | 1     |
| Card                | 0      | 0      | 0     | 0     | 0     | 0     | 1     | 0     | 2     |
| Card + PIN          | 0      | 0      | 0     | 0     | 0     | 0     | 1     | 1     | 3     |
| Finger              | 0      | 0      | 0     | 0     | 0     | 1     | 0     | 0     | 4     |
| Finger + PIN        | 0      | 0      | 0     | 0     | 0     | 1     | 0     | 1     | 5     |
| Finger + Card       | 0      | 0      | 0     | 0     | 0     | 1     | 1     | 0     | 6     |
| Finger + Card + PIN | 0      | 0      | 0     | 0     | 0     | 1     | 1     | 1     | 7     |
| Palm                | 0      | 0      | 0     | 0     | 1     | 0     | 0     | 0     | 8     |
| PIN + Palm          | 0      | 0      | 0     | 0     | 1     | 0     | 0     | 1     | 9     |
| Card + Palm         | 0      | 0      | 0     | 0     | 1     | 0     | 1     | 0     | 10    |
| PIN + Card + Palm   | 0      | 0      | 0     | 0     | 1     | 0     | 1     | 1     | 11    |
| Group + Palm        | 0      | 0      | 0     | 1     | 1     | 0     | 0     | 0     | 24    |
| API                 | 0      | 0      | 1     | 0     | 0     | 0     | 0     | 0     | 32    |
| API + Finger        | 0      | 0      | 1     | 0     | 0     | 1     | 0     | 0     | 36    |
| API + Palm          | 0      | 0      | 1     | 0     | 1     | 0     | 0     | 0     | 40    |
| API + PIN           | 0      | 0      | 1     | 0     | 0     | 0     | 0     | 1     | 33    |
| Group + Finger      | 0      | 0      | 0     | 1     | 0     | 1     | 0     | 0     | 20    |
| Face                | 0      | 1      | 0     | 0     | 0     | 0     | 0     | 0     | 64    |
| Card + Face         | 0      | 1      | 0     | 0     | 0     | 0     | 1     | 0     | 66    |
| PIN + Face          | 0      | 1      | 0     | 0     | 0     | 0     | 0     | 1     | 65    |
| Finger + Face       | 0      | 1      | 0     | 0     | 0     | 1     | 0     | 0     | 68    |
| Palm + Face         | 0      | 1      | 0     | 0     | 1     | 0     | 0     | 0     | 72    |
| BLE                 | 1      | 0      | 0     | 0     | 0     | 0     | 0     | 0     | 128   |
| BLE + Finger        | 1      | 0      | 0     | 0     | 0     | 1     | 0     | 0     | 132   |
| BLE + Palm          | 1      | 0      | 0     | 0     | 1     | 0     | 0     | 0     | 136   |
| BLE + Face          | 1      | 1      | 0     | 0     | 0     | 0     | 0     | 0     | 192   |
| BLE + PIN           | 1      | 0      | 0     | 0     | 0     | 0     | 0     | 1     | 129   |
| BLE + Card          | 1      | 0      | 0     | 0     | 0     | 0     | 1     | 0     | 130   |

\* Applicable for All Doors.



Applicable for Firmware Version of following doors:

ARC DC200: Earlier than V01R40.

ARGO: Earlier than V01R42.

ARGO FACE: Earlier than V01R20.

VEGA: Earlier than V01R71.

PATH V2: Earlier than V01R34.

**Table: Alarm Events**

| Event Details |                            |                 |                       |                         | Applicable Devices |                 |               |          |          |                 |          |                   |      |                |                |
|---------------|----------------------------|-----------------|-----------------------|-------------------------|--------------------|-----------------|---------------|----------|----------|-----------------|----------|-------------------|------|----------------|----------------|
| Event ID      | (Field 1)                  | (Field 2)       | (Field 3)             | (Field 4) and (Field 5) | Direct Door V2     | Path Controller | Wireless Door | NGT Door | PVR Door | Vega Controller | Door FMX | Panel/ Panel Lite | ARGO | Direct Door V4 | ARC Controller |
| 301           | Reference ID<br>Xxxx       | 1 =<br>Critical | Alarm Sequence Number |                         | ✓                  | ✓               | ✓             | ✓        | ✓        | ✓               | ✗        | ✓                 | ✗    | ✗              | ✗              |
| 302           | Reference ID<br>Xxxx       | 1 =<br>Critical | Same as above         |                         | ✗                  | ✗               | ✗             | ✗        | ✗        | ✗               | ✗        | ✓                 | ✗    | ✗              | ✗              |
| 303           | Reference ID<br>Xxxx       | 1 =<br>Critical | Same as above         |                         | ✗                  | ✗               | ✗             | ✗        | ✗        | ✗               | ✗        | ✓                 | ✗    | ✗              | ✗              |
| 304           | 1= Internal<br>2= External | 3 =<br>Minor    | Same as above         |                         | ✓                  | ✓               | ✓             | ✓        | ✓        | ✓               | ✗        | ✓                 | ✗    | ✗              | ✗              |
| 305           |                            | 3 =<br>Minor    | Same as above         |                         | ✓                  | ✓               | ✓             | ✓        | ✓        | ✓               | ✗        | ✓                 | ✗    | ✗              | ✗              |
| 306           |                            | 2 =<br>Major    | Same as above         |                         | ✓                  | ✓               | ✓             | ✓        | ✓        | ✓               | ✓        | ✓                 | ✓    | ✓              | ✓              |
| 307           |                            | 1 =<br>Critical | Same as above         |                         | ✗                  | ✗               | ✗             | ✗        | ✗        | ✗               | ✓        | ✓                 | ✓    | ✓              | ✓              |
| 308           |                            | 2 =<br>Major    | Same as above         |                         | ✗                  | ✗               | ✗             | ✗        | ✗        | ✗               | ✗        | ✓                 | ✗    | ✗              | ✗              |
| 309           |                            | 2 =<br>Major    | Same as above         |                         | ✓                  | ✓               | ✓             | ✓        | ✓        | ✓               | ✓        | ✓                 | ✓    | ✓              | ✓              |
| 310           |                            | 1 =<br>Critical | Same as above         |                         | ✓                  | ✓               | ✓             | ✓        | ✓        | ✓               | ✓        | ✓                 | ✓    | ✓              | ✓              |
| 311           |                            | 2 =<br>Major    | Same as above         |                         | ✗                  | ✗               | ✗             | ✗        | ✗        | ✗               | ✗        | ✓                 | ✗    | ✗              | ✗              |

**Table: Alarm Events**

| Event Details |   |                                    |               |                         | Applicable Devices |                 |               |          |          |                 |          |                   |      |                |                |
|---------------|---|------------------------------------|---------------|-------------------------|--------------------|-----------------|---------------|----------|----------|-----------------|----------|-------------------|------|----------------|----------------|
| Event ID      | (Field 1)   | (Field 2)                          | (Field 3)     | (Field 4) and (Field 5) | Direct Door V2     | Path Controller | Wireless Door | NGT Door | PVR Door | Vega Controller | Door FMX | Panel/ Panel Lite | ARGO | Direct Door V4 | ARC Controller |
| 312           |   | 1 = Critical                       | Same as above |                         | X                  | X               | X             | X        | X        | X               | X        | ✓                 | X    | X              | X              |
| 313           |   | 1 = Critical                       | Same as above |                         | X                  | X               | X             | X        | X        | X               | X        | ✓                 | X    | X              | X              |
| 314           | 1= Power ON/OFF Detected (time not in sync)<br>2= low battery detected<br>3= RTC Not Detected | 2 = Major<br>1 = Critical          | Same as above |                         | ✓                  | ✓               | ✓             | ✓        | ✓        | ✓               | ✓        | X                 | ✓    | ✓              | ✓              |
| 315           | 0   | 2 = Major<br>1 = Critical          | Same as above |                         | X                  | X               | X             | X        | X        | X               | X        | X                 | X    | X              | X              |
| 317           | First four bytes of Extension number  | Last two bytes of extension number | Same as above |                         | ✓                  | ✓               | ✓             | ✓        | ✓        | ✓               | ✓        | X                 | ✓    | ✓              | ✓              |
| 318           | Reference ID Xxxx   | 2 = Major                          | Same as above |                         | X                  | X               | X             | X        | X        | X               | X        | ✓                 | X    | X              | X              |
| 319           | Reference ID Xxxx   | 2 = Major                          | Same as above |                         | X                  | X               | X             | X        | X        | X               | X        | ✓                 | X    | X              | X              |

**Table: Alarm Events**

| Event Details |                   |  |               |                         | Applicable Devices |                 |               |          |          |                 |          |                   |      |                |                |   |
|---------------|-------------------|--|---------------|-------------------------|--------------------|-----------------|---------------|----------|----------|-----------------|----------|-------------------|------|----------------|----------------|---|
| Event ID      | (Field 1)         | (Field 2)  | (Field 3)     | (Field 4) and (Field 5) | Direct Door V2     | Path Controller | Wireless Door | NGT Door | PVR Door | Vega Controller | Door FMX | Panel/ Panel Lite | ARGO | Direct Door V4 | ARC Controller |   |
| 320           | Reference ID Xxxx | 2 = Major  | Same as above |                         | X                  | X               | X             | X        | X        | X               | X        | ✓                 | X    | X              | X              |   |
| 321           | Reference ID Xxxx | 2 = Major  | Same as above |                         | X                  | X               | X             | X        | X        | X               | X        | ✓                 | X    | X              | X              | X |
| 322           | Reference ID Xxxx | 2 = Major  | Same as above |                         | X                  | X               | X             | X        | X        | X               | X        | ✓                 | X    | X              | X              | X |
| 323           |                   | 2 = Major  | Same as above |                         | X                  | X               | X             | X        | X        | X               | X        | ✓                 | X    | X              | X              | X |
| 324           |                   | 2 = Major  | Same as above |                         | X                  | X               | X             | X        | X        | X               | X        | ✓                 | X    | X              | X              | X |
| 325           |                   | 2 = Major  | Same as above |                         | X                  | X               | X             | X        | X        | X               | X        | ✓                 | X    | X              | X              | X |
| 326           |                   | 2 = Major  | Same as above |                         | X                  | X               | X             | X        | X        | X               | X        | ✓                 | X    | X              | X              | X |
| 327           | Reference ID Xxxx | 2 = Major  | Same as above |                         | X                  | X               | X             | X        | X        | X               | X        | ✓                 | X    | X              | X              | X |
| 328           | Reference ID Xxxx | 2 = Major  | Same as above |                         | X                  | X               | X             | X        | X        | X               | X        | ✓                 | X    | X              | X              | X |
| 329           | Reference ID Xxxx | 2 = Major  | Same as above |                         | X                  | X               | X             | X        | X        | X               | X        | ✓                 | X    | X              | X              | X |
| 351           |                   | 4 = SysInte rlock<br>5 = User_J eeves<br>6 = User_A CMS<br>9 = Auto              | Same as above |                         | ✓                  | ✓               | ✓             | ✓        | ✓        | ✓               | ✓        | ✓                 | ✓    | ✓              | ✓              |   |
| 352           |                   | 4 = SysInte rlock<br>5 = User_J eeves<br>6 = User_A CMS<br>7 = Special Functio n | Same as above |                         | ✓                  | ✓               | ✓             | ✓        | ✓        | ✓               | ✓        | ✓                 | ✓    | ✓              | ✓              | ✓ |
| 353           |                   |  | Same as above |                         | X                  | X               | X             | X        | X        | X               | X        | ✓                 | X    | X              | X              | X |

**Table: System Events**

| Event Details |                                 |   |                           |                         | Applicable Devices |                 |                       |          |          |                 |          |   |               |                |      |                |
|---------------|---------------------------------|---|---------------------------|-------------------------|--------------------|-----------------|-----------------------|----------|----------|-----------------|----------|---|---------------|----------------|------|----------------|
| Event ID      | (Field 1)                       | (Field 2)   | (Field 3)                 | (Field 4) and (Field 5) | Direct Door V2     | Path Controller | Wireless Door/Door V3 | NGT Door | PVR Door | Vega Controller | Door FMX | Panel/Panel Lite/ Standalone Panel lite | IO Controller | ARC Controller | ARGO | Direct Door V4 |
| 401           | User ID: xxxx                   | 0= Unused (Restore User)<br>1= Absentee Rule<br>2= Unauthorized access<br>3= Usage count<br>4= Invalid PIN<br>5= Tail Gating<br>6= Man Trap Timer Violated<br>7= Occupancy Violated<br>8= Anti-Pass Back Violated | 1= Blocked<br>0= Restored |                         | ✓                  | ✓               | ✓                     | ✓        | ✓        | ✓               | ✓        | ✓                                       | ✗             | ✓              | ✓    | ✓              |
| 402           |                                 | 5= SA<br>6= SE<br>7= Operator   | 1= Success<br>0= Fail     |                         | ✗                  | ✗               | ✓                     | ✓        | ✓        | ✓               | ✓        | ✓                                       | ✓             | ✓              | ✓    | ✓              |
| 403           | Transaction ID: Xxxx            |   | 1= Success<br>0= Fail     |                         | ✗                  | ✗               | ✓                     | ✓        | ✓        | ✓               | ✓        | ✓                                       | ✗             | ✓              | ✓    | ✓              |
| 404           | Guard Tour no. Xxxx + cycle no. |   | 1= Success<br>0= Fail     |                         | ✗                  | ✗               | ✗                     | ✗        | ✗        | ✗               | ✗        | ✗                                       | ✗             | ✗              | ✗    | ✗              |

**Table: System Events**

| Event Details |                    |   |   |                         | Applicable Devices |                 |                       |          |          |                 |          |  |               |                |      |                |
|---------------|--------------------|---|---|-------------------------|--------------------|-----------------|-----------------------|----------|----------|-----------------|----------|--|---------------|----------------|------|----------------|
| Event ID      | (Field 1)          | (Field 2)   | (Field 3)   | (Field 4) and (Field 5) | Direct Door V2     | Path Controller | Wireless Door/Door V3 | NGT Door | PVR Door | Vega Controller | Door FMX | Panel/ Panel Lite/ Standalone Panel lite | IO Controller | ARC Controller | ARGO | Direct Door V4 |
| 405           | reference ID: Xxxx | 8= User Card<br>9= User Finger Propriety format e<br>10= Special Cards<br>14= Palm<br>16= palm template with guide mode<br>17=User Finger - Suprema ISO format<br>18=User Finger - Lumidigm ISO format<br>19= User Face<br>20=Mobile Device |   |                         | ✓                  | ✓               | ✓                     | ✓        | ✓        | ✓               | ✓        | ✓  | x             | ✓              | ✓    | ✓              |
| 406           |                    |   | 1=Normal<br>2=Fault (Open)<br>3= Fault(Short)<br>4= Activated |                         | x                  | x               | x                     | x        | x        | x               | x        | ✓  | x             | x              | x    | x              |
| 407           |                    |   | 1=Normal<br>4=Activated                                       |                         | x                  | x               | x                     | x        | x        | x               | x        | ✓  | x             | x              | x    | x              |
| 408           | I/O Link ID        | 11 = Pulse<br>12 = Interlock<br>13 = Latch<br>15 = Toggle (only with activated event)   | 1=Normal<br>4=Activated                                       |                         | ✓                  | ✓               | ✓                     | ✓        | ✓        | ✓               | ✓        | ✓  | ✓             | ✓              | ✓    | ✓              |

**Table: System Events**

| Event Details |                            |   |   |                         | Applicable Devices |                 |                       |          |          |                 |          |   |               |                |      |                |
|---------------|----------------------------|---|---|-------------------------|--------------------|-----------------|-----------------------|----------|----------|-----------------|----------|---|---------------|----------------|------|----------------|
| Event ID      | (Field 1)                  | (Field 2)                                       | (Field 3)                                       | (Field 4) and (Field 5) | Direct Door V2     | Path Controller | Wireless Door/Door V3 | NGT Door | PVR Door | Vega Controller | Door FMX | Panel/Panel Lite/ Standalone Panel lite | IO Controller | ARC Controller | ARGO | Direct Door V4 |
| 409           | ID: Xxxx                   | 8 = User Cards<br>9 = User Fingers<br>14 = Palm | 5= Web Jeeves<br>6= ACMS<br>7= Special Function |                         | ✓                  | ✓               | ✓                     | ✓        | ✓        | ✓               | ✓        | ✓                                       | ✗             | ✓              | ✓    | ✓              |
| 410           | Time Triggered Function Id |   | 1=Normal/ Deactivated<br>4=Activated            |                         | ✓                  | ✓               | ✓                     | ✓        | ✓        | ✓               | ✓        | ✓                                       | ✓             | ✓              | ✓    | ✓              |
| 411           | Time Stamping Function ID  |   | 1=Normal/ Deactivated<br>4=Activated            |                         | ✗                  | ✗               | ✗                     | ✓        | ✗        | ✗               | ✗        | ✗                                       | ✗             | ✗              | ✗    | ✗              |
| 412           | Guard tour no. +cycle no.  | Door Controller sequence no.                    | 1=Success<br>0=Fail                             |                         | ✗                  | ✗               | ✗                     | ✗        | ✗        | ✗               | ✗        | ✗                                       | ✗             | ✗              | ✗    | ✗              |
| 413           | event sequence number      | roll over count                                 | 1=Success<br>0=Fail                             |                         | ✗                  | ✗               | ✗                     | ✓        | ✗        | ✗               | ✓        | ✗                                       | ✗             | ✗              | ✓    | ✗              |
| 451           | Configuration Table ID xxx | Index start                                     | Index end                                       |                         | ✗                  | ✗               | ✓                     | ✓        | ✓        | ✓               | ✓        | ✓                                       | ✓             | ✓              | ✓    | ✓              |
| 452           | Roll over number 00 to 99  |   |   |                         | ✓                  | ✓               | ✓                     | ✓        | ✓        | ✓               | ✓        | ✓                                       | ✓             | ✓              | ✓    | ✓              |
| 453           |                            |   |   |                         | ✓                  | ✓               | ✓                     | ✓        | ✓        | ✓               | ✓        | ✓                                       | ✓             | ✓              | ✓    | ✓              |
| 454           | Configuration Table ID xxx | Index start                                     | Index end                                       |                         | ✗                  | ✗               | ✓                     | ✓        | ✓        | ✓               | ✓        | ✓                                       | ✗             | ✓              | ✓    | ✓              |

**Table: System Events**

| Event Details |   |  |           |   | Applicable Devices |                 |                       |          |          |                 |          |  |               |                |      |                |
|---------------|---|--|-----------|---|--------------------|-----------------|-----------------------|----------|----------|-----------------|----------|--|---------------|----------------|------|----------------|
| Event ID      | (Field 1)   | (Field 2)  | (Field 3) | (Field 4) and (Field 5)                       | Direct Door V2     | Path Controller | Wireless Door/Door V3 | NGT Door | PVR Door | Vega Controller | Door FMX | Panel/ Panel Lite/ Standalone Panel lite | IO Controller | ARC Controller | ARGO | Direct Door V4 |
| 455           | Time Period = xxx (configured value)<br>(this field is used only with Overridden events)<br>Resume events will have blank | 1= 2-person Rule<br>2= Access Policies<br>3= Alarms<br>4= Anti-pass back<br>5= First In User<br>6= Mantrap<br>7= Occupancy control<br>8= Visitor Escort Rule |           | 1= Overridden<br>0= Resumed                   | X                  | X               | X                     | X        | X        | X               | X        | ✓  | X             | X              | X    | X              |
| 456           | 1=Backup<br>2=Update  | 1=Configuration<br>2=Event<br>3=Firmware   |           | 0 = Fail<br>1 = Success<br>2 = CRC Check Fail | X                  | X               | ✓                     | ✓        | ✓        | ✓               | ✓        | ✓  | X             | X              | ✓    | ✓              |
| 457           |   |  |           | 6 = from ACMS<br>8 = from Hardware            | ✓                  | ✓               | ✓                     | ✓        | ✓        | ✓               | ✓        | ✓  | ✓             | ✓              | ✓    | ✓              |
| 458           |   | 0 = Internal Finger Reader<br>1 = External Finger Reader   |           | 0 = Fail<br>1 = Success<br>2 = Not Supported  | ✓                  | ✓               | ✓                     | ✓        | X        | ✓               | ✓        | ✓  | X             | ✓              | ✓    | ✓              |
| 459           | Card ID   | Card ID  | Card ID   |   | ✓                  | ✓               | ✓                     | ✓        | ✓        | ✓               | ✓        | ✓  | X             | ✓              | ✓    | ✓              |
| 460           | Reference ID: xxxx  |  |           |   | X                  | X               | ✓                     | ✓        | ✓        | ✓               | ✓        | ✓  | X             | X              | ✓    | ✓              |
| 461           | Reference ID: xxxx  | 0 = Authorized<br>1 = Rejected   |           | System User Index 1 to 10                     | X                  | X               | X                     | X        | X        | X               | X        | ✓  | X             | X              | X    | X              |

**Table: Cafeteria Events**

| Event Details |                      |   |                          |                    |                    | Applicable Devices |                 |               |          |          |                 |          |                  |                |      |                |
|---------------|----------------------|---|--------------------------|--------------------|--------------------|--------------------|-----------------|---------------|----------|----------|-----------------|----------|------------------|----------------|------|----------------|
| Event ID      | (Field 1)            | (Field 2)   | (Field 3)                | (Field 4)          | (Field 5)          | Direct Door V2     | Path Controller | Wireless Door | NGT Door | PVR Door | Vega Controller | Door FMX | Panel/Panel Lite | ARC Controller | ARGO | Direct Door V4 |
| 501           | Reference ID<br>Xxxx | Item Code + Menu Number + Quantity                  | Menu Number              | Item Cost          |                    | ✓                  | ✗               | ✓             | ✓        | ✓        | ✓               | ✓        | ✗                | ✗              | ✓    | ✓              |
| 502           | Reference ID<br>Xxxx | Item Code + Menu Number + Quantity                  | User Level + Menu Number | Item Cost          | Discount Value     | ✓                  | ✗               | ✓             | ✓        | ✓        | ✓               | ✓        | ✗                | ✗              | ✓    | ✓              |
| 503           | Reference ID<br>Xxxx | Item Code + Menu Number + Quantity                  | Menu Number              | Item Cost          |                    | ✓                  | ✗               | ✓             | ✓        | ✓        | ✓               | ✓        | ✗                | ✗              | ✓    | ✓              |
| 504           | Reference ID<br>Xxxx | Item Code + Menu Number + Quantity                  | User Level + Menu Number | Item Cost          | Discount Value     | ✓                  | ✗               | ✓             | ✓        | ✓        | ✓               | ✓        | ✗                | ✗              | ✓    | ✓              |
| 505           |                      | Item Code + Menu Number                             | Menu Number              | Item Cost          |                    | ✓                  | ✗               | ✓             | ✓        | ✓        | ✓               | ✓        | ✗                | ✗              | ✓    | ✓              |
| 506           |                      | Item Code + Menu Number                             | Menu Number              | Item Cost          |                    | ✓                  | ✗               | ✓             | ✓        | ✓        | ✓               | ✓        | ✗                | ✗              | ✓    | ✓              |
| 507           | Reference ID<br>Xxxx |   |                          | Transaction Amount | Available Balance  | ✓                  | ✗               | ✓             | ✓        | ✓        | ✓               | ✓        | ✗                | ✗              | ✓    | ✓              |
| 508           | Reference ID<br>Xxxx | 0= Failure<br>1=Successful<br>2=verification failed |                          | Previous Balance   | Recharge Amount    | ✓                  | ✗               | ✓             | ✓        | ✓        | ✓               | ✓        | ✗                | ✗              | ✓    | ✓              |
| 509           | Reference ID<br>Xxxx | 0= Failure<br>1=Successful<br>2=verification failed |                          | Previous Balance   | Reset Value        | ✓                  | ✗               | ✓             | ✓        | ✓        | ✓               | ✓        | ✗                | ✗              | ✓    | ✓              |
| 510           | Reference ID<br>Xxxx |   | Menu Number              | Previous Balance   | Transaction Amount | ✓                  | ✗               | ✓             | ✓        | ✓        | ✓               | ✓        | ✗                | ✗              | ✓    | ✓              |
| 511           | Reference ID<br>Xxxx |   | Menu Number              |                    | Transaction Amount | ✓                  | ✗               | ✓             | ✓        | ✓        | ✓               | ✓        | ✗                | ✗              | ✓    | ✓              |

**Table: Cafeteria Events**

| Event Details |                   |   |           |           |           | Applicable Devices |                 |               |          |          |                 |          |                  |                |      |                |
|---------------|-------------------|---|-----------|-----------|-----------|--------------------|-----------------|---------------|----------|----------|-----------------|----------|------------------|----------------|------|----------------|
| Event ID      | (Field 1)         | (Field 2)                                     | (Field 3) | (Field 4) | (Field 5) | Direct Door V2     | Path Controller | Wireless Door | NGT Door | PVR Door | Vega Controller | Door FMX | Panel/Panel Lite | ARC Controller | ARGO | Direct Door V4 |
| 512           | Reference ID Xxxx | 0= Consecutive transaction<br>1= pre-ordering |           |           |           | X                  | X               | ✓             | ✓        | ✓        | ✓               | ✓        | X                | X              | ✓    | ✓              |



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