

GSM GATE  
CONTROLLER ESIM010

# GPRS USER MANUAL



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# 1. Operation description

Since July 2010 software supporting GPRS connection is installed in automatic gate controller ESIM010. The users will be able to quickly perform configurations not only connecting the device to their computer but also remotely – using web browser.

GPRS connection is activated according to the standard GPRS parameters which are stored in device memory or according to one-time GPRS parameters. These parameters are activated by sending the corresponding command via SMS message. One-time GPRS parameters are valid only for one connection session (the system uses standard GPRS parameters with one or several indicated changes). Standard GPRS parameters (Table 1) are changed by SMS messages, using special software or by connecting via web browser.

One of the main GPRS parameters is the mode, i. e. Server or Client, which describes the way ESIM010 configuration web environment is reached i. e. connecting directly to the device or through transitional server. In this case after activating Client mode the administrator will be able to connect to the device through the internet website defined by the provider and the connection will be maintained through the transitional server. After activating Server mode the administrator connects directly to ESIM010 using web browser. However, this mode will operate only in the case GSM operator of the SIM card used in the device provides a static IP address. It is also necessary to mention that GPRS connection is activated only for a particular period (session time) and after this period is over it is ended automatically. In such a case, if the administrator wants to continue configuring ESIM010 it is necessary to reactivate GPRS connection and to connect using the new login data.

## **Before activating GPRS connection, administrator must ensure the following conditions:**

- ESIM010 is with a SIM card placed in it.
- Power supply is connected.
- The default 4-digit password is changed to a new one and your mobile number is uploaded as administrator mobile number.
- The device isn't connected to computer with USB cable.

## **A short description of actions that should be taken in order to successfully use ESIM010 configuration web environment:**

1. If requested, corrections are made in the standard GPRS parameters (refer to chapter 2.1 Configuring standard GPRS Parameters);
2. The administrator sends SMS message with GPRS activation command from the mobile phone number registered in the system (refer to chapter 2.3 GPRS Activation);
3. The system sends SMS message with login data (username and password) necessary for connecting to ESIM010 configuration web environment;
4. The administrator opens a corresponding web page (the address is formed depending on the running mode (refer to chapter 3.1 Login to configuration webpage);
5. Configurations or other actions are made in ESIM010 configuration web environment (refer to chapter 3);
6. If session time is not ended after all the tasks are performed, end the connection by sending a corresponding SMS message (refer to chapter 2.4 Additional Commands via SMS messages -> Ending the Session).

**ATTENTION:** by factory default settings the administrator can connect to ESIM010 device using a connection form provided in [www.eldes.lt/login](http://www.eldes.lt/login), and the connection is maintained through ELDES server (ESIM010 works in Client mode with defined ELDES server parameters).

# 2. GPRS configurations and activation

**ATTENTION:** In the examples of SMS messages in this manual 'XXXX' means your 4 digit password, '\_' (underscore symbol) – space typing.

## 2.1. Configuring standart GPRS parameters

Standart GPRS parameters are entered by SMS messages in the following format:

```
xxxx_setgprs:settings:parameters
```

Here in the place of “settings” and “parameters” enter the corresponding commands from Table 1. For example, sending SMS message „1111 setgprs:type:client” you indicate to ESIM010 to work in Client mode from the next session. All standart GPRS parameters with detailed information is provided in Table 1.



To specify more than one parameter, you have to separate settings and parameters with ';' symbol (for example, sending SMS message „1111 setgprs:type:client;ip:192.168.1.1;port:15000” you indicate to ESIM010 to work in Client mode with indicated server ip address and port number):

```
xxxx_setgprs:settings1:parameters1;settings2:parameters2;...;setting  
sN:parametersN
```



Instead of text “Settings1”, “Parameters1”, “Settings2”, “Parameters2”, “SettingsN” and “ParametersN” use the corresponding commands form table 1.

## 2.2. Standart GPRS parameters

Table 1

Settings	Parameters	Description	Mode*
type	client / server	Choose Server mode if you want to connect directly to the device using web browser (inserted SIM card must have static IP address). Choose Client mode if you want to connect through <a href="http://www.eldes.lt">www.eldes.lt</a> website (by default settings).	-
profile	Code name	The code name of the standart GPRS parameters. Configurable only by software or using web interface.	Both
ip	IP or DNS address	Remote server IP address or domain. It is recommended not to change default paramater.	Client
port	xxxx	Remote server parameter. It is recommended not to change default paramater.	Client
dns1	IP address	Top-level DNS Server IP address. It is recommended not to change default paramater.	Client
dns2	IP address	DNS Server IP address. It is recommended not to change default paramater.	Client
lport	xxxx	Computer TCP port used for communication with the device.	Server
timeout	xx	Time of one session; when this period expires the administrator has to reconnect with new login data.	Both
protocol	TCP / UDP	Data transmission protocol. It is recommended not to change this default parameter.	Both
apn	-	GPRS diversion point provided by the GSM operator of the used SIM card. Entered only in the case if GSM operator requires it.	Both
user	-	GPRS username (provided by the GSM operator). Entered only in the case if GSM operator requires it.	Both
password	-	GPRS user password (provided by the GSM operator). Entered only in the case if GSM operator requires it.	Both

\* – indicates in which working mode selected parameter is required.

## 2.3. GPRS activation

Connection via GPRS can be activated and login data (username and password) can be requested by SMS message which is used in several cases, i. e.:

- To activate connection using standart GPRS parameters (see Table 1):

```
xxxx_connect:profile1
```

Here "profile1" is the code name of the used standart GPRS parameters.

- To activate connection using one-time GPRS parameters. Use one-time GPRS parameters when you want to change only one or several parameters from the standart GPRS parameters and use it only for upcoming session.

```
xxxx_connect:settings:parameters
```

Here "settings" and "parameters" are corresponding entries from Table 1. For example, sending SMS message „1111 connect:type:client" you indicate to ESIM010 to work in Client mode in the upcoming session (other parameters will be the same as standart GPRS parameters). To specify more than one parameter, you have to separate settings and parameters with ' ' symbol (for example, sending SMS message „1111 connect:type:client;timeout:25" you indicate to ESIM010 to work in Client mode for 25 minutes).

**ATTENTION:** the administrator can also receive login data (username and password) by making a call to the mobile phone number of the SIM card. However, this method can be activated only by performing particular configurations using ELDES software or by connecting via Internet browser.



## 2.4 Additional Commands via SMS Messages

### Remaining Session Time Request

Send SMS message with the following text:

```
xxxx_session?
```

You will receive the reply by SMS message with the time remaining until the end of the session. The time is presented in minute-accuracy (when the last minute remaining is left, the time is presented in second-accuracy).



### Stopping the On-going Session

To terminate the on-going session without waiting for it to end send SMS message with the following text:

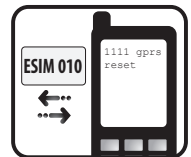
```
xxxx_stop
```



### Restoring GPRS Connection

This command is used only in the case particular GPRS connection interruptions are present (for more information refer to chapter 3). Send SMS message with the following text:

```
xxxx_gprsreset
```



## 3. Configuration Using Internet Browser

### 3.1. Login to configuration webpage

ESIM010 configuration webpage is accessible on the address that is formed referring to what mode is supported at that time:

- **Client mode.** Upload [www.eldes.lt/login](http://www.eldes.lt/login) webpage to login with received username and password (use default GPRS parameters).
- **Server mode.** Upload webpage [http://mobile\\_SIM\\_IP:Local\\_TCP\\_port](http://mobile_SIM_IP:Local_TCP_port), here `mobile_SIM_IP` is a static external IP address provided by GSM operator to the SIM card, `Local_TCP_IP` is a TCP port number used for communication with the device (e. g.: <http://195.22.1.1:5000>).

Having received username and password and opening a particular webpage you can connect to the device. Please note that the device maintains GPRS connection only for a specific period. By manufacturer default settings this period is 20 minutes and when this period expires you have to activate GPRS connection anew.

#### Main Menu

[Basic Configuration](#)

[Data Base View](#)

[Data Base Configuration](#)

[Log Management](#)

**When you connect to web server an initial window opens; this window contains menu items that are used for performing particular operations:**

**Basic Configuration** – this section is used for performing all the necessary configurations so that the device operates under certain conditions. For more information see chapter 3.2.

**Data Base View** – this section is used for reviewing all information connected with ESIM010 user database, i. e., for reviewing how many and what mobile phone numbers are entered and other statistics. For more information refer to chapter 3.3.

**Data Base Configuration** – this chapter is used for adding, removing or searching for a particular mobile phone number in user database. It also provides database statistics. For more information refer to chapter 3.4.

**Log Management** – this section is used for reviewing gate controller ESIM010 operation summary, i. e., this section shows when and what user used this system. For more information refer to chapter 3.5.

**NOTE:** it is necessary to wait until the webpage is fully loaded in your browser. Otherwise corruption and mismatch of parameter representation is possible. If the page does not respond, please refer to chapter 4.

**NOTE:** after performing any configurations it is necessary to click the button **Write to Device**.

### 3.2. ESIM010 Configuration

The section **Basic Configuration** can be used for performing all the necessary device configurations, i. e., for changing administrator data, their informational settings, for changing the main password or device system parameters etc. These configurations can be performed by selecting a respective menu item:

#### Main Configuration

[Back to Main Menu](#)

[Zones Settings](#)

[Users Settings](#)

[Params](#)

[GPRS Params](#)

**Zone Settings** – a section where you can select settings related with device input control. For more information please refer to chapter 3.2.1.

**User Settings** – a section used for entering administrator data, update the main password and change particular control settings. For more information please refer to chapter 3.2.2.

**Params** – a section where you can configure control and informing settings. For more information please refer to chapter 3.2.3.

**GPRS Params** – this section is used for adjusting GPRS connection settings. For more information please refer to chapter 3.2.4.

3.2.1. Input signal control parameters

Zones Settings

Zona1 Enable:

☒

Zone1 Delay:

600

mS

Text Z1:

Zone1

Zona2 Enable:

☒

Zone2 Delay:

600

mS

Text Z2:

Zone2

Zona3 Enable:

☒

Zone3 Delay:

600

mS

Text Z3:

Zone3

Write to Device

**Zone Enable** – enables/disables checking of specific inputs.

**Zone1 Delay** – original manufacturer default parameters that can be changed. This parameter indicates that the system will sense the impulse, transmitted to a particular input, duration if it is longer than the preset value. The specified parameter must be in the range of 100 – 42000000, counted in milliseconds (1 second – 1000 milliseconds).

**Text Z1** – code name of a particular input. It is recommended to create the name that would most accurately describe the connected device. The name cannot be longer than 8 characters (you cannot use commas, full stops, semicolons or spaces).

3.2.2. Administrator Settings

Users Settings

User1:

#

User2:

#

User3:

#

User4:

#

User5:

#

Password:

0000

Log Full SMS Enable:

☒

Start GPRS User1:

☐

Start GPRS User2:

☐

Start GPRS User3:

☐

Start GPRS User4:

☐

Start GPRS User5:

☐

Write to Device

In sections **User1... User5** user must enter mobile phone numbers which will be identified as administrators. It is necessary to enter only mobile phone number of the first user (User1). Mobile phone number must be in the international format (it consist of only those digits that overseas callers must type: 44[area code][local number]) without symbol '+'.

**Password** field is used for displaying the main 4-digit password used in the system. This password is requested when sending instructions to the system via SMS messages. When entering a new password you cannot use full stops, colons and space symbols.

**Start GPRS User1...User5** settings group is used for selecting the administrators that will receive connection data calling on the mobile phone number of the SIM card (otherwise it is necessary to send SMS message with the connection command).

**Log Full SMS Enable** – activate this setting if you want the administrator to receive SMS message about a completed ESIM010 operation summary file (SMS messages will be delivered in the order starting with administrator User1 and ending with User5, until the first successful message delivery). In this case it is necessary to empty this file, i. e. to connect to the device via Internet browser and select a corresponding item (refer to chapter 3.5 “Gate Controller ESIM010 Operation Summary). Maximum file size of this summary is 44KB (1000 entries about the use of gate controller). New entries are not entered until this file is emptied.

**ATTENTION:** when **Start GPRS User1...User5** settings are activated the selected administrators will not be able to control output (relay) contacts via call. Besides, a repeated call during the session works the same way as sending SMS message for restoring GPRS connection (when the connection is interrupted).

### 3.2.3. Administration and Control Configuration

**Params**

☐ - SMS ALL

☐ - CALLBACK ENABLE

☐ - ENABLE CONTORL FROM ANY NUMBERS

Output Delay:

Write to Device

☒ - Lithuania

☐ - Russia

☐ - English

☐ - Eesti

**SMS ALL** – function, enabling (check mark is selected) the mode when, in the case input Z1-Z3 is triggered, informational SMS messages are simultaneously sent to all the administrators on Users list. By default this function is disabled (check mark is not selected) – in this case informational SMS messages are delivered in a sequence starting with the first administrator (User1). The message is sent to the next administrator only in the case the device does not receive a confirmation about a successful SMS message delivery to the recipient.

**CALL BACK ENABLE** –function enabling (check mark is selected) or disabling (check mark is not selected) the short call to the user from system ESIM010 informing about successfully enabled relay.

**ENABLE CONTROL FROM ANY NUMBERS** – function enabling (check mark is selected) or disabling (check mark is not selected) the mode when the system reacts to any user who is making a call regardless of whether his/her mobile phone number is stored on user database.

**Output Delay** – configuration of output impulse duration. The original parameter set by the manufacturer is 2 seconds.

The system ESIM010 communicates with the user via SMS messages, which are used for sending various informational messages about system status. For the sake of comfort the user has an option to choose the language in which the SMS messages will be delivered:

- Lithuania – Lithuanian language;
- Russia – Russian language;
- English – English language;
- Eesti – Estonian language;



3.2.4. Standart GPRS Parameters

**ATTENTION:** this is configuration web interface for the standart GPRS parameters (Table 1). Changes performed in this section will become effective only after the end of the current session.

Gprs Settings

Profile:

☒ Client

☐ Server

☒ TCP

☐ UDP

Server IP:

DNS1:

Server Port:

DNS2:

Local Port:

Sesion Time:

APN:

User Name:

Password:

- Client** – gate controller ESIM010 is accessible via Internet browser through the intermediate server.
- Server** – the device will operate in Server mode, i. e. it will be accessible directly via Internet browser without the use of any other additional programs. GSM operator has to provide a static external IP address to the SIM card used on the device.
- Profile** – code name of the standart GPRS parameters. The initial name provided by the manufacturer is profile1.
- APN** – GPRS diversion point provided by GSM operator of the SIM card used in the device. Entered only in the case if GSM operator requires it.
- User Name** – GPRS username (provided by GSM operator). Entered only in the case if GSM operator requires it.
- Password** – GPRS password (provided by GSM operator). Entered only in the case if GSM operator requires it.
- Server IP** – Remote server IP address or domain. It is recommended not to change default paramater.
- Server TCP Port** – Remote server parameter. It is recommended not to change default paramater.
- Session Time** – Time of one session; when this period expires the administrator has to connect anew using new login data. By factory default settings this period is 20 minutes.
- Local TCP Port** – computer TCP port number used for communication with the device. By default settings – 5000 port is activated.
- TCP / UDP** – Data transmission protocol. Currently only TCP protocol is activated.

**ATTENTION:** when the indicated session time is "0", connection session will continue until the administrator terminates it by sending a particular SMS message (please refer to chapter 2.3, "Stopping the On-going Session").

### 3.3. User Database Review

Selecting the section **Data Base View** from the initial menu you will be able to review mobile phone numbers of all users, registered on the system, who can control gate controller ESIM010 output signals by call. It also provides a brief database statistics.

Phone Num Data Base

Max Records 500

Free Records 500

**Max Records** – maximum possible number of users in the database.

**Free Records** – the number of free entries in the database.

By selecting **Database Configuration** you will be able to go to database adjustment window (refer to chapter 3.4).

### 3.4 User Database Adjustment

**Database Configuration** settings window is used for adding, removing or searching for a particular user in the current database. Each of these operations is described below:

Add Numbers: (Num1 Num2 Num3 .... up to Num9)

Add Numbers

Status:

• **Adding**

To add a new user to the database, enter his/her mobile phone number in the field below. You can enter up to 9 new users at a time; these users have to be separated by a space symbol (max capacity – 500 users). If you click the button “Add Numbers” the system will record the entered mobile phone numbers in the database and the pop-up message next to “Status:” informs about a successful/unsuccessful new entry on the database.

Numbers: (Num1 Num2 Num3 .... up to Num9)

Delete Numbers

Status:

• **User removal**

To remove the data of a particular user, enter the number of this user in the field. It is necessary that the entered mobile phone number (-s) is (are) already entered to the database. You can delete up to 9 users at a time; these users mobile phone numbers have to be separated by a space symbol. Clicking the button “Delete Numbers”, the system deletes the selected mobile phone numbers from the database and the pop-up message next to “Status:” informs about a successful/unsuccessful removal.

Number: (Num1 only)

Status:

- **Search**

In order to check whether a particular user is entered on the database you can search for this user's mobile phone number. In this case you need to enter mobile phone number in the field next to button "Check Number". When clicking this button the system performs a search and the pop-up message next to "Status:" informs about search results. You can search for one number at a time.

- **Database usage**

Used Records:0  
Free Records:500  
MAX Records:500

**Used Records** – shows the number of users entered on the database.

**Free Records** – shows the number of free spaces for entering new users on the database.

**MAX Records** – shows maximum number of users that can be saved on the database.

By selecting **Database View** you will be able to go to database review window (refer to chapter 3.3).

### 3.5. Gate Controller ESIM010 Operation Summary

Log Size:188 Bytes

Clear Log ☐

[Download Log](#)

You can review gate controller ESIM010 operation summary. i. e., see when and what user used the system, by selecting menu item **Log Management** and downloading summary file (click **Download Log**).

Log Size indicates how much space the file occupies in bytes. Maximum size of this summary file is ~44 KB, i. e., 1000 entries about the usage of gate controller. When this limit is reached no more records are entered in the summary therefore it is necessary to clear this file before further entries can be recorded. Besides, you can receive reminders by SMS message every time the summary file is full and there is no more space left (refer to chapter 3.2.2).

To delete old data from operation summary select **Clear Log** item and click the button **Update**.

## 4. Troubleshooting

**The connection with the device is lost during configuration** (a browser window informing about the lost connection with the server opens). Problem causes and possible solutions:

- **Interrupted GPRS connection with the device.** Click the button Refresh in the toolbar of the Internet browser. If browser window informing about the lost connection with the server opens repeatedly, send SMS message with the text xxxx gprsreset, where "xxxx" is the main 4-digit password, to the number of the SIM card used in the device. You should receive system reply by SMS message Gprsreset:OK and click the button Refresh in Internet browser.
- **Connection session time has expired.** The system sends SMS message with the text " Session:Stop " when the time dedicated for device configuration via Internet browser expires. This message will only be delivered to the administrator who activated the connection session. After this time expires it is necessary to re-connect to the device using the new connection data. To check how much time is left until the end of connection session send SMS message with the text "xxxx session? ", where "xxxx" is the main 4-digit password.

**NOTE:** it is necessary to wait until the webpage is fully loaded in your web browser. Otherwise corruption and mismatch of parameter representation is possible. In this case, try to re-open a webpage (click button Refresh in your web browser).

