

M2M Easy 2 Security Communicator®

Installation Guide

for firmware v2.1 R08



Rev: 2.2

2017-02-09

Document specifications

This documentation was compiled for the **M2M Easy 2 Security Communicator**[®] with the SW v2.1 R08 or newer versions, which were developed by *WM Systems LLC.*, and contains the step-by-step description of its installation, the program update process and the detailed introduction of the setup parameters necessary for its operation.

Document Type:	Installation Guide for v2.1 R08
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Document revision:	REV 2.2
Pages:	85
Hardver version:	v8.21
Firmware version:	V2.1 R08
Bootloader version:	REV 0.95
EasyTerm Software version:	REV 1.3.1 2017.01.19.
Document Status:	Final
Availibility:	Public
Made at:	2nd of July, 2014.
Last Modification:	9nd of Februar, 2017.
Valid from:	9nd of Februar, 2017.

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Chapter 1. Connecting the ports

4.12 Connecting/wiring possibilities

■ Input, output connections

- 1 – SIM-card holder (push-insert)
- 2 – SMA antenna connector (GSM/GPRS antenna, 50 Ohm)
- 3 – PWR +/-: Power supply connector (8-24VDC, min. 800mA)
- 4 – IN1, IN2: 2pcs connector for input lines (for sensors, sabotage)
- 5 – Jumpers for the input lines (IN1, IN2) to select the operation mode (voltage, contact (cut or short))
- 6 – OUT: 1pc relay output (for switching a siren/bark)
- 7 – ALR: Alarm line (TIP RING input (for alarm center analogue phone line connection))
- 8 – PROG: RJ11 connector (for configuration, software upload) for RJ11-RS232 cable
- 9 – Expansion board connector (used in case of applying the *Easy 2 IO* expander)



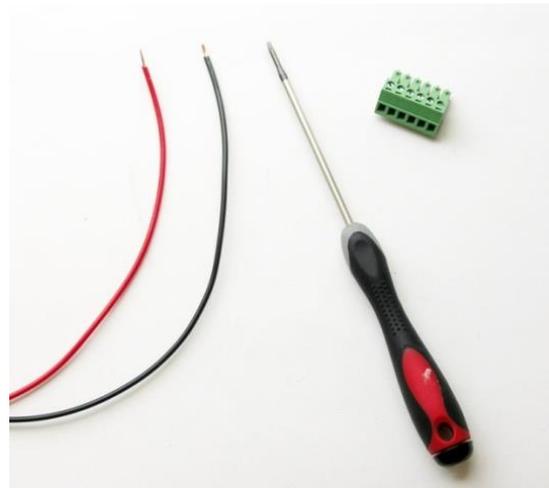
1.2 Wiring

■ Preparation

Take the 4 spacer fixing tabs provided with the device, and place them into the PCB holes as shown in the picture.



Prepare a screwdriver, the 2 terminal blocks provided with the device, and the stripped wire pair necessary for connection, with appropriate distinctive colors (power connector – e.g. black-red, input-output wire pairs – e.g. black-blue, alarm input – e.g. black-white).



■ Connecting the inputs

The device has 2 input lines (**IN1**, **IN2**), where sensors can be connected by connecting its wire pairs, in accordance with the standard connection method shown below, by fixing the cable wire pairs for each input.

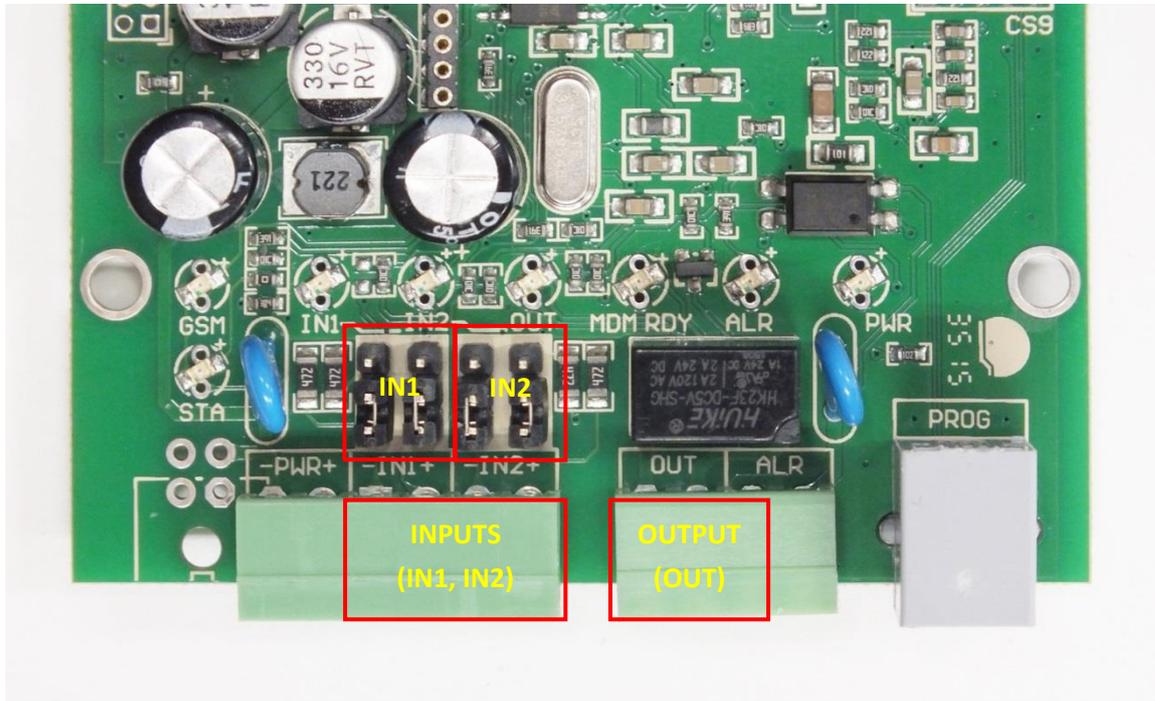
In case of voltage inputs make attention to the order of polarity (+/-), the assembly must be done according to the inputs line titles (on PCB board). Take care for the proper position of the input line jumpers.

The device is able to detect wire cut on its input lines.

The inputs may also be used for anti-sabotage purposes – e.g. detecting/monitoring the opening of the alarm system cover (magnetic switch).

In voltage input operation mode, the input lines can be activated with 5-24V DC voltage, in opposite way these are inactive.

The proper operation mode can be configured as well with the *EasyTerm* application.



These can be configured separately to operate as a voltage or contact mode for the input. These settings can be setup with the jumpers besides the terminal blocks of the input lines – according to the input line nr. titles.

Choosable input line operation modes (with the jumpers):

- **Contact mode**
 - The input line jumper pairs - approach from the connector side
 - The ground point of the input lines (-) are common
 - The wiring of input lines has independent polarity
- **Voltage mode**
 - The input line jumper pairs – approach from the LED's side
 - Galvanically divided and independent input lines
 - Make attention to the polarity when wiring!

Mode	Contact	Voltage
Not inverted	<ul style="list-style-type: none"> • NO (Normal Open) • Inactive mode: contact opened • Active mode: contact closed 	<ul style="list-style-type: none"> • High active • Inactive mode: 0...1V • Active mode: 5...24V
Inverted	<ul style="list-style-type: none"> • NC (Normal Closed) • Inactive mode: contact closed • Active mode: contact opened 	<ul style="list-style-type: none"> • Low active • Inactive mode: 5...24V • Active mode: 0...1V

Signal levels:

- Input high signal level: 5-24V
- Input low signal level: 0-1V
- Current in active status (for the Easy 2 inputs): 0.3-3mA
- Current in active status (for the further Easy 2 IO inputs): 1-12mA

In case of using the *Easy 2 IO*-expander board, further 6 pcs of inputs are available (IN3..IN8), which has the same operation and configuration possibility as listed here above.

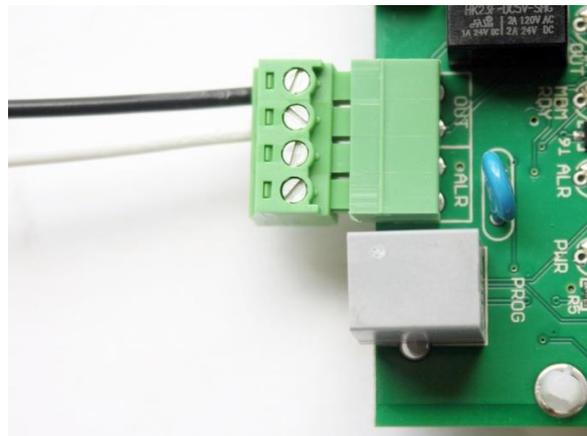
When the input were activated (IN1, IN2) the **IN1**, **IN2** titled LEDs are signing the active (closed) status during the operation, with the proper light and colour. See LED signals part.

The device has 2 input lines (IN1, IN2). They can be configured separately to operate as a voltage or contact mode for the input. These settings can be setup with the jumpers besides the IN1, IN2 input line's terminal blocks.

■ Connecting the relay output

One switchable output device can be connected to the relay output (OUT) of the mainboard), according to the next figure. Connect the cable wire pair to the **OUT** title output line's terminal block (by sliding the companion piece and inserting the stripped wire pair, then fixing the screws).

Through the relay output a 2A - 120VAC or 2A - 24VDC voltage can be switched. When activating the output, the **OUT LED** – beside the output - indicates the active (closed) position with the appropriate color/light - during the operation.



ATTENTION

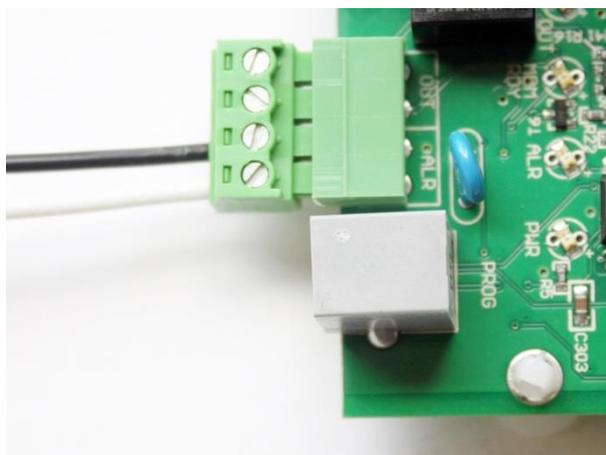
Always switch off power supply before the wiring!

Check that the metal parts of the connected wires are not touch to each other!

■ **Connecting the alarm line (ALARM line)**

The alarm system can be connected to the **ALR** input through a wire pair, thus it will be able to forward its alarm signals – in Contact ID format – to the remote dispatcher centre.

Connect the cable wire pair to the **ALR** title Alarm line's terminal block (by sliding the companion piece and inserting the stripped wire pair, then fixing the screws).



When activating the output, the **ALR LED** – beside the output - indicates the active (closed) position with the appropriate color/light - during the operation.

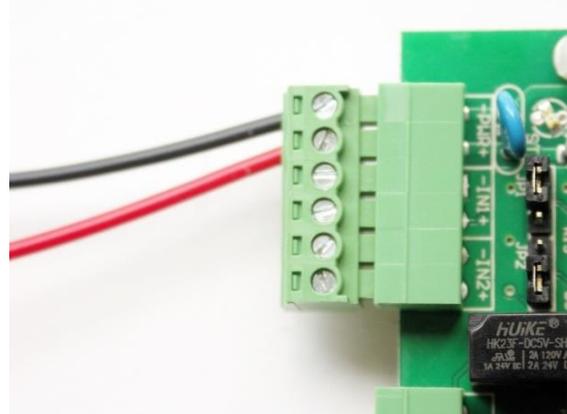
■ **Inserting the M2M Easy 2 IO board (optional)**

The *M2M Easy 2 Security Communicator*[®] firmware can handle the operation of the *IO-expander* board (extra 6 pcs of inputs, 3pcs of outputs), whereas further parameters are available in the device software and in the *EasyTerm* configuration tool.

■ Connecting the power supply

The 8-24V power-supply voltage (typically 12V power adapter, or 24V power supply) can be connected to the **PWR** input through a wire pair. When connecting the power, the device will be immediately started to operating, when the **PWR LED** will indicate it with the appropriate color/light.

Attention! Do not forget to insert the SIM-card previously – see Chapter nr. 2.



1.3 LED signals

The status LEDs are helping to understand the current operation of the device.

LED	Function	Description	LED	Behaviour
GSM	GSM receiving signal strenght	Signs the available signal strenght – more flashes = better signal strenght	red	flashing
STA	GPRS modem status	In case of normal operation it signs the GPRS communication status See the detailed description of STA LED part	yellow	flashing /lights
IN1	Input #1 signal	Signs the status of the #1 input line (I1INV or IDELAY parameters are applied) lights if the input wires are closed (active)	green	lights
IN2	Input #2 signal	Signs the status of the #2 input line (I2INV or IDELAY parameters are applied) lights if the input wires are closed (active)	green	lights
OUT	Output relay signal	Lights: relay closed, not lights: relay opened	yellow	lights
MDM RDY	Modem operation	Modem status. Flashes intermittently if the modem operates and accessible.	red	flashing
ALR	Alarm center signal	Status of the alarm center line (Tip-Ring), signs: speaker on, not lights: speaker off or no alarm center presented	green	flashing
PWR	Operation	Signs the presence of the processor power supply (3,3V)	green	lights

GSM: GSM/GPRS status LED - red

The numbers of the **GSM LED** flashing sequence signs the current RSSI signal strength of the GSM module (more flashes are meaning a better signal reception).

There is 10 seconds between the flash signals. One flashing takes 50 msec, then half a second breaking continues.

RSSI value (AT+CSQ)	GSM receiving signal strength	LED flashing (GSM)
99	unknown, faulty value	0
0..7	-113 dBm.. -99 dBm	1
8..11	-97... -91 dBm	2
12..15	-89... -83 dBm	3
16..19	-81... -75 dBm	4
20..23	-73... -67 dBm	5
24..27	-65... -59 dBm	6
28..31	-57... -51 dBm	7

STA: Status LED - yellow

The **STA LED** assures information about the current operation. It has 3 modes:

It will be active only if the GPRS signal transmission permitted. In this case from the beginning of the signal transmission the LED starts to flashing.

- lights continuously: the last GPRS signalling was successful
- with 3 second of breaks * nr. of flashing (the light interval period is half a seconds), failure code (see later)
- Turned off: GSM operation mode, no error

Failure codes – for signing the device operation troubles – **in case of a failure, read the Chapter nr. 9!**

- **1 flash - Module failure**

The serial connection is not operating properly between the module and the *Easy 2* board. After 1 minute, the device automatically tries to restart the module.

- **2 flashing - SIM card failure**

Possible reasons:

- there is no SIM card inserted
- SIM card pinpad contact error

The device in this status will not continue its initialization, the receiving of serial port commands is still active (for parametrizing). After 1 minute, the device automatically tries to restart the module.

- **3 flashing - PIN authentication failure**

Possible reasons:

- wrong PIN code
- PUK code (security code) is necessary to give in

The device in this status will not continue its initialization, the receiving of serial port commands is still active (for parametrizing). After 5 minutes, the device automatically tries to restart the module.

- **4 flashing – The device cannot login to the GSM network**

A hibajelzés a hálózati regisztráció alatt, vagy a GSM hálózatról való leszakadáskor azonnal aktiválódik. Ha a hiba 5 percig folyamatosan fennáll, az eszköz automatikusan újraindítja a modult.

- **5 flashing – the GPRS is allowed (GPRSEN=1), but the device cannot login to the GPRS network**

Possible reasons:

- wrong APN settings
- the GPRS service is inactive for the SIM card
- low signal strength
- the RADIUS server is out of operation
- maintenance/service tasks by the M.O.

- **6 blinkings** – the device is registered to the GPRS network, it has an IP address, but **cannot login to the server**

Possible reason: the primary and the secondary server is not available/accessible

Visible symptoms:

- the opening of the TCP/UDP port was not successful (e.g. wrong server settings applied),
- unsuccessful data sending
- timeout when tries to receive data or wrong answer

The signal will be active, until the device will be successfully signalling to a server.

IN1, IN2: Input #1, #2 is active - green

When the input is active (if the 2 pair wire closed; or in case of voltage the power voltage is 5-24VDC) then the **INx LED** will light according to the related input.

OUT: Output is active – yellow

The output active indicator **OUT LED** shows the status of the primer-side of the relay. When the output is active (the relay pair of wires are closed), then the output **OUT LED** will light.

MDM RDY: Modem stand-by – red

During the inicialization the **MDM LED** blinks quickly (approx. twice per seconds). When the modem is already accessible and operating and has an active communication on the GSM network, then it will blinking with less frequency.

Main important lights:

- **not lights:** the module was turned off
- **longer periodic blinking:** 600 msec filling in / 600 msec filling out: the module not registered to the network (possible causes: no SIM card, PIN authorization failure, network search is in progress, login is in progress, etc.)

- **periodic short blinking:** 75 msec filling in / 3 sec filling out: normal operation, connected to the GSM network
- **continuously lights:** voice call active (e.g. during GSM signal transmitting)

ALR: Alarm center active - green

When the device connected to the alarm center it shows the status of the the alarm line (Tip-Ring). Lights: speaker pulled on, not lights: speaker put down or alarm center not presented.

PWR: Power voltage active - green

Signs when the *Easy 2* is under power and voltage and operating. When it has no light, the *Easy2* is powered off and has no active power source.

1.4 Operation requirements

■ **General conditions**

- 8-24V power supply with adapter, or 12V DC (800mA) connected to 230V AC or connected to the 12V/24V output of the alarm center.
- In case of GPRS signal transmitting: Activated SIM card with public access and GPRS data service assured by the Mobile Operator. If it is recommended with private APN access.
- *There can be differences between the Mobile Operator conditions at APN service charges and data traffic unit fees (depend on available rates). Ask for more Info at Your MO.*
- GSM/GPRS mobile network connection with noticable signal strength.

■ **Configuration needs**

- RS232 (serial) - RJ11 data cable connection to connect the device to a computer
- Optional: notebook USB port usage with USB \leftrightarrow RS232 converter, to connect the device to Your computer

- Computer with serial port (RS232) or USB port capabilities, and installed Microsoft Windows XP/Vista/Win7 operation system and .Net 4.0 framework. Microsoft link: <https://www.microsoft.com/en-us/download/details.aspx?id=53344>
- Downloading the *EasyTerm*[®] configurator application from our website, at the **Downloads / M2M Easy 2 Security Communicator** product:
Win7/Win8/Win10 version:
http://www.m2mserver.com/m2m-downloads/EasyTerm_v1_3_1_EN.ZIP
WinXP version:
http://www.m2mserver.com/m2m-downloads/EasyTerm_v1_3_1_XP_EN.ZIP
- *M2M Easy 2 Security Communicator*[®] firmware R08 (system software – uploaded to the device by factory default) – if it is needed the related .BIN extension firmware file
http://www.m2mserver.com/m2m-downloads/EASY2_V21R08E7.bin

■ **Software installation and configuration options**

Software and parameter upload options	Local software refresh	<ul style="list-style-type: none"> • with <i>EasyTerm</i> software (RJ11 serial port)
	Remote software refresh	<ul style="list-style-type: none"> • FTP server (<i>EasyTerm</i>)
	Local configuration	<ul style="list-style-type: none"> • with <i>EasyTerm</i> software (configuration file, parameter values)
	Remote configuration	<ul style="list-style-type: none"> • with SMS text message commands • with <i>EasyTerm</i> software (via TCP/IP connection)

Chapter 2. Installation of the device

For the *Easy 2* installation follow the next steps.

When the device was already installed, jump to the Installation part and check the current firmware version of the device (**SWVER** value in the *EasyTerm* application). When the version is not V2.1 R08 or newer (e.g. R08) then IMMEDIATELY change it for the firmware!

2.1 Installation on location site

1. It is a logical step to place and install the device to a protected position - as usual placed into a safety coverage or into the enclosed alarm system box. When cover will not be applied, then it shall be located to a protected zone.
2. Take care that the communicator is not under power voltage, it is turned off and the LEDs lights are not lighting or flashing before continue the following steps!
3. Mount the GPRS antenna (piece of the package) as it can be seen in the picture to the copper **SMA** connector, until it sleeves. (In case of wired antenna find a place to the magnetic antenna and connect it to the connector.)

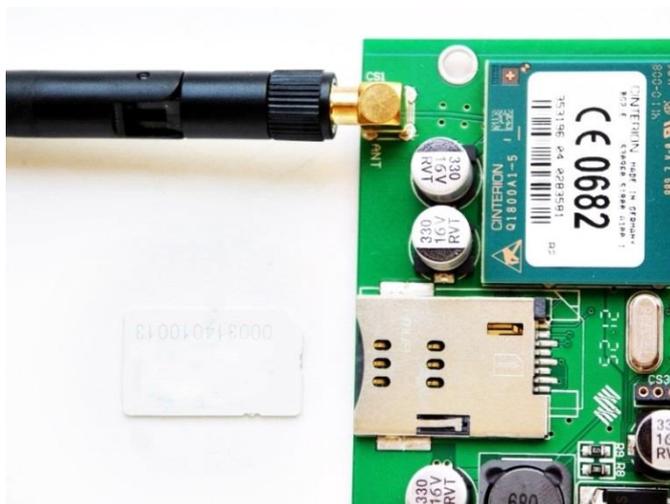
4. The **SIM card must be inserted or removed only in turned off status of the Easy 2 device!**

For inserting the SIM-card slide the card (provided by the Mobile Operator) into the metal SIM card bay at the direction when the chip on the card looks down, and the MO logo looks upside, and the card's cutted corner looks

to the PCB board (as it is shown in the picture). Push the card until it seize - while the a click noise will be heard (then it will be fixed).

(If it s needed You can remove the card with pushing it again – **only if the device was turned off!**)

5. Wire the cables pairs to the input terminal blocks (which will be required to monitoring) Use the **IN1, IN2** titled input lines. For the output, wire the cable pair to the **OUT** titled connector terminal block.



For the sabotage protection feature it is suitable to monitoring the cover opening of the safety devices (as alarm system or alarm center) with connecting the magnetic switch of it to the input line of the Easy2. You can connect a siren to the output of the device.

6. If you would like to use the device as an alarm center signal transmitter (as operates by default), then connect the alarm center to the alarm input line (**ALR** titled).
7. You can setup the input lines with its jumper pairs behind the input lines (**IN1, IN2**)The jumpers are used for interpreting the proper operation mode of the input line - contact or voltage.
8. Connect the 12V/24V DC power - with the power chord of the alarm center (or by a power adapter (12V 800mA) to the power plug's terminal block (**PWR** titled). Then the device will be under voltage, turned on and operating and its LEDs are flashing according the proper operation – as listed in chapter 2.2.

If the device needs to be powered off:

When the power line will be removed or the power supply will be disconnected, the device will be turned off.

2.2 Turning on the device

After starting the *Easy 2*, it is required ca. 40-60 seconds from the startup to the complete operation (successful GSM/GPRS communication, etc.), which will be signed by the status LEDs according to the following sequence step-by-step.

- When the power voltage added, the devices turns on. The green **PWR LED** continuously lights.
- If the input(s) are wired then the **IN1, IN2 LEDs** are continuously lights with green.
- Then later the **MDM RDY LED** blinks a several times with red, that the GSM modem is started.
- Soon the **STA LED** will be lightning intermittently a few times (3-times in a second with some breaking between the light-sequences). Then the Easy2 loads and initializes the system firmware.
- Then the **GSM LED** (red) blinks a few times intermittently, which means that the GSM modem network registration has started.
- The yellow light of the **STA LED** signs that the network registration was successful.
- Then the device is operating related to the configuration parameter settings and it sends data through and life signals through the network periodically.
- For the further LED status signals see the *LED signals* table.



When you will notice a different operation of the device, check the Problem troubleshooting part of the Chapter nr. 9!

When your device was already installed, check the current firmware version of the device (SWVER value in the *EasyTerm* application). When the version is not V2.1 R08 or newer (e.g. R08) then IMMEDIATELY change it for the firmware!

Chapter 3. Connecting the device to a computer

3.1 Required software components

The necessary softwares can be downloaded from our website – registration is required – at the Support/**Downloads** menu: <http://www.m2mserver.com/en/support>

Download the following files (**Security alarm transmitters** part in the list), then uncompress the files:

➤ **Easy 2 Security Communicator EasyTerm configuration application (v1.3.1)**

File: EasyTerm_v1_3_1_EN.ZIP

Contains:

- **EasyTerm – for software updates, parameter configuration:**

Terminal- and configurator tool, which can be used for firmware refresh and programming the device.

Execute: EasyTerm.exe

The EasyTerm software requires the Microsoft .Net Framework 4.0. In it is necessary, download and install the component!

Manufacturer website:

<https://www.microsoft.com/en-us/download/details.aspx?id=53344>

- **Configuration files**

Pre-defined configuration file with default settings for the *Easy 2*.

Upload and modification with the *EasyTerm*[®].

File: EASY2_V21R08D_CFG_EN_STANDARD_IO.cfg

➤ **Easy 2 Security Communicator Firmware V2.1 R08**

Easy 2 system firmware (.BIN) – for firmware upload/refresh

The operation software of the device. Always check the website and download the latest version and upload to the device with the *EasyTerm*[®] tool.

File: EASY2_V21R08E7.bin (firmware) – or newer version

➤ **By optionally:** UC232a RS232-USB driver

Windows driver for PC↔*Easy 2* cable connection for serial terminal port connection. The driver must be installed on the computer!

Állomány: uc232a_win7_xp_vista_v1.0.075.zip

3.2 Connecting with a computer

a.) In case of using RS232 serial port

Due to the serial port cable connection, there is no need to install a driver into the Windows system. In accordance with the serial port inputs available on the computer, the availability of the ports can be checked under **Control Panel / System / Device Manager / Ports**. This can be found under the name **COM**.... The proper port number must be used in the *EasyTerm* tool at the port settings.

b.) In case of using USB port

When using the converter cable (this is not included in the package), the download and installation of the driver is necessary for accessing the *Easy 2*.

It is important that at this point neither the Easy 2 device, nor the USB connector must NOT be connected to the computer!

On your computer, at the **Control Panel / System / Device Manager** check that the driver has been installed properly.

This may be found in the **Ports** menu, where a **COM** port distribution for the product has to be indicated.

Afterall, connect the serial RS232 connector of the *Easy 2* to the USB converter and the computer!

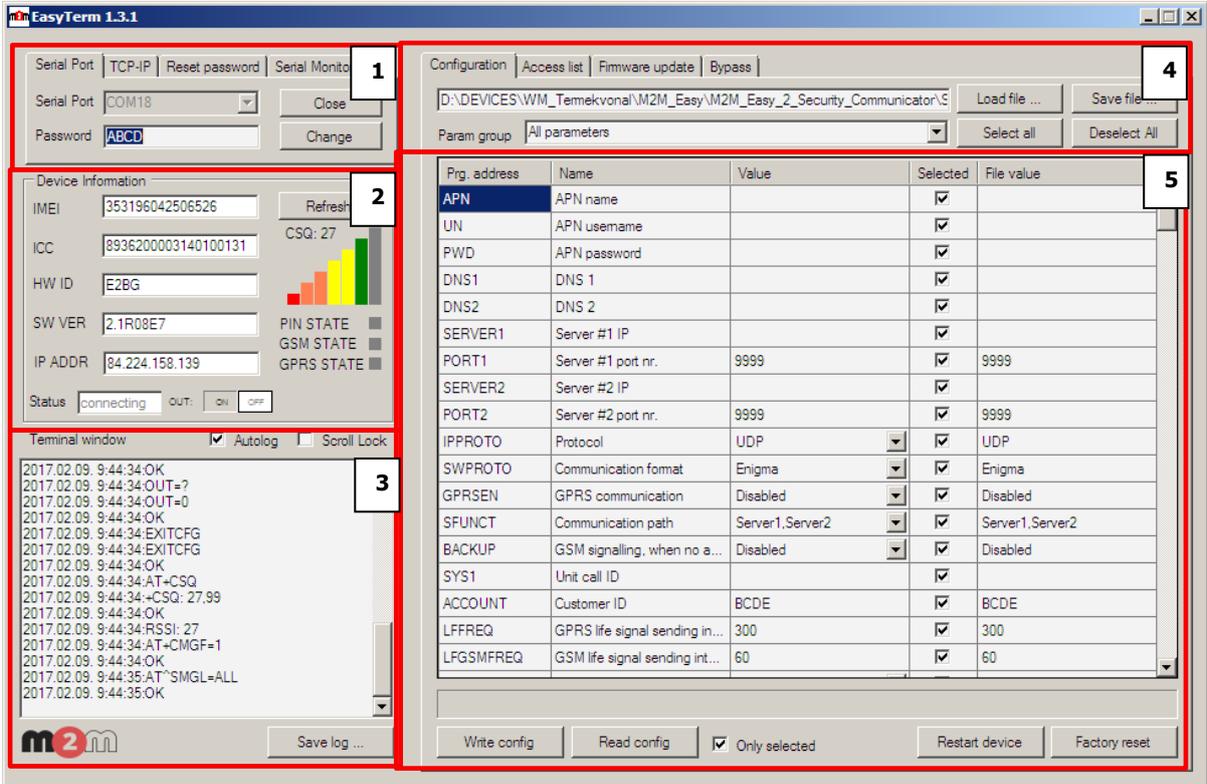
Chapter 4. EasyTerm (configuration, software refresh)

4.1 Introducing the EasyTerm tool

The device is shipped with factory firmware and configuration. By default – without any configuration changes – the *Easy 2* is operating as a GSM transmitter (therefore, it will forward the incoming signals of the Tip-Ring connected alarm system through the GSM network - with CID codes – to the centre. Every further needs are configurable with the *EasyTerm*[®] software. The program is suitable for checking and monitoring the current operation of the *Easy 2* and refreshing the firmware, controlling and switching the outputs (e.g. gate opening via output) and of course for the operation of the devices as a standalone alarm system – for arming/disarming the alarm status of the system.

According to the unique usages, some different parameter configuration settings of the *Easy 2* versions are available for downloading in pre-defined configuration files - which can be loaded into the device by the *EasyTerm*. The changed parameter modifications can be saved into the files – for further (or by group) configuration.

Execute the **EasyTerm.exe**, then the following application screen appears.



Application windows:

- 1 – Connection settings
- 2 – Status window
- 3 – Terminal window
- 4 – File handling
- 5 – Parameter configuration

4.2 Connecting to the device

a.) Serial data connection

In the **Connection settings** window (1), at the **Serial Port** tab choose the proper and available COM port for the **Serial port** fiel.

You can remotely access the device through GPRS at the **TCP-IP** tab. You also can **Reset Password**, and monitorize the serial port through the terminal at **Serial Monitoring** tab.

Attention!

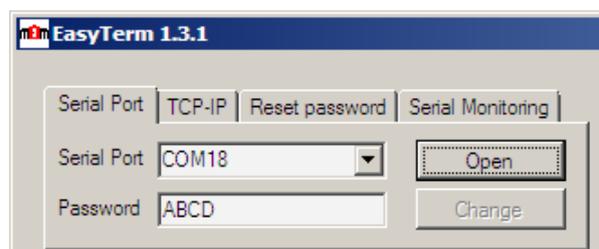
By factory default the Easy 2 is configured for transmitting the incoming alarm signals of the connected alarm system through GSM connection!

When you would like to use the device as a GPRS-transmitter or as a standalone alarm system or any other proposal, then take consider the value Address and Port number when setup and connect to the device. Let's configure the further necessary parameters for the proper operation!

When the device can be seen on the serial port in the **Connection window** (1), at the **Serial Port** the application will offer the option to choose from the available COM ports.

The **Password** must be filled (by default the password is „ABCD“, which will be filled automatically). If you won't change it, then just leave it as it is – or fill the value password then push the **Open** for connecting.

Then the port opening messages will appear at the **Terminal window** (3), then soon the device and modem, SIM identifiers in the **Status part** (2).



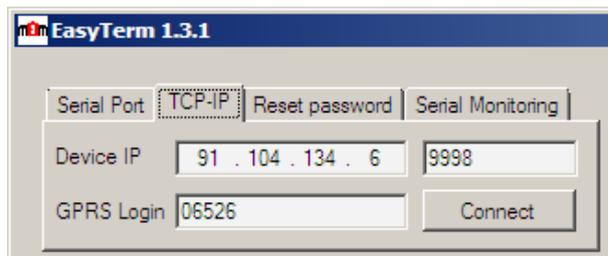
Attention! If you cannot connect to the device, then check the serial port, the USB-converter Windows driver installation or the computer which cannot handle properly the serial port connection.

b.) Connecting through TCP IP (remotely)

In the **Connection window (1)** at the **TCP-IP** tab you will find the necessary IP settings for the GPRS connection.

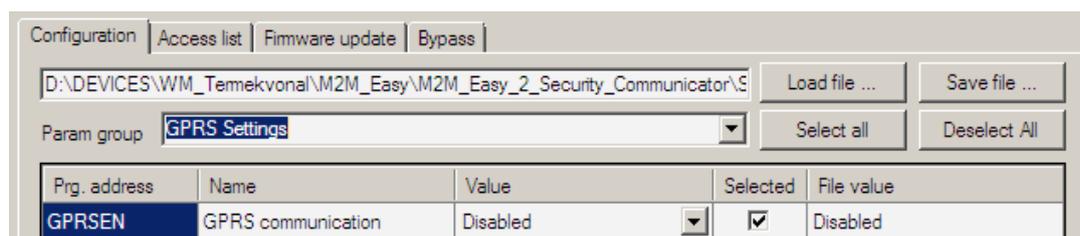
Fill the SIM card IP address to the **Device IP** (get the information from your mobile service provider).

Fill the port number what you want to the field right from the **Device IP**. (The port number by default is **9998**). To the **GPRS Login** you have to fill the device IMEI **last 5 character** (you can read/copy it from the left side at the IMEI column).



Attention

You can connect on GPRS only when the **GPRSEN** parameter is enabled at the **GPRS Settings!**



Push the **Connect** for the GPRS connection. (The button is active only if the serial connection is currently inactive (**Close** status)).

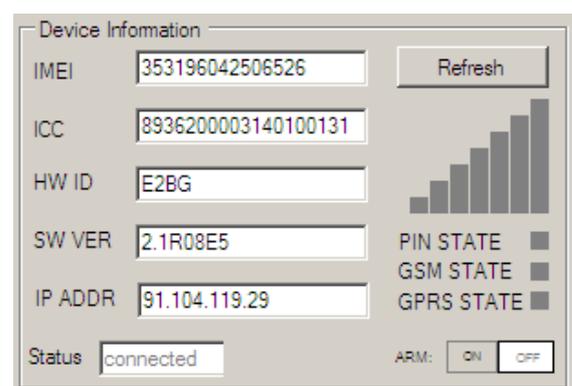
(For login the necessary device IMEI and IP address can be requested by the **INFDEV** or **DEVSTAT** SMS text commands.)

Hint: When you can connect on serial port, before connecting it is useful to check the **Serial Port** tab according to the description **a.)** shortly when the device will readout the value IMEI, IP data. After all you can split the connection with the **Close**, then at the **TCP-IP** tab you can connect with the readout data filling to the **Device IP** and **GPRS Login** fields.

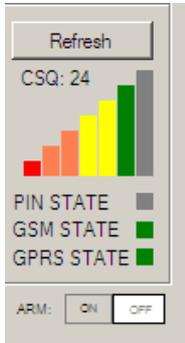
After the successful connection...

When connecting, the signal strength diagram and status pictograms will be grey for a short time. This means that currently there are no available status and signal strength values.

Later the **PIN/GSM/GPRS status** and **signal (CSQ)** values will be visible by colours.



During this time, the device transmits the life signal and signal strength values frequently, according to the settings.



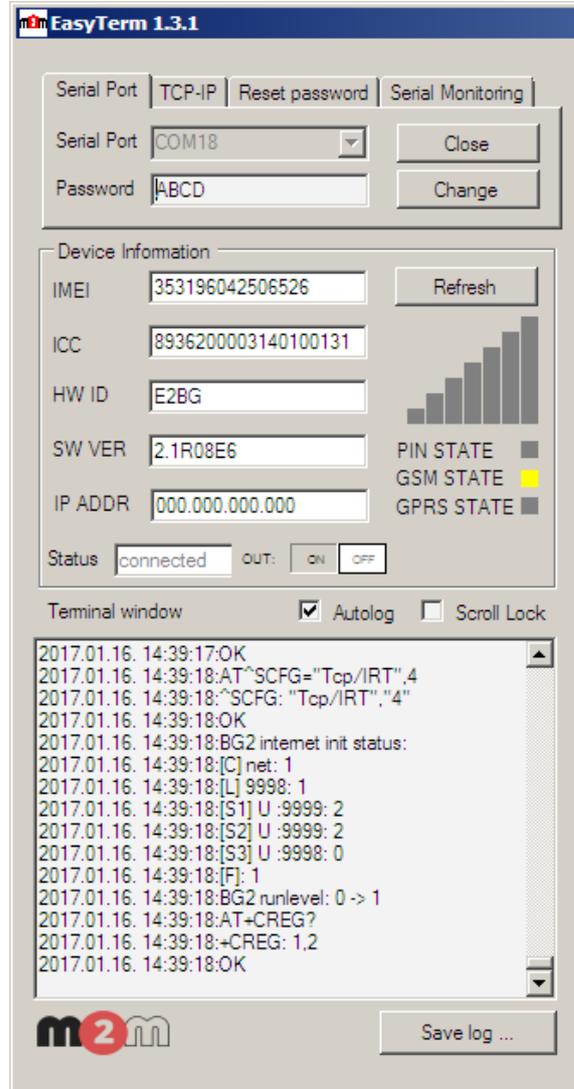
When connecting to the GSM or GPRS network, the *Easy 2* checks the filled PIN code and will assign that the password was accepted or not. (In case of PIN failure it restarts the module.)

In case of failure read the Chapter nr. 9!

Status window (2):

- When the „**connected**’ title appears, this means that the serial connection to the device was **performed successfully**.
- The „**disconnected**’ assigns the **disconnection of the device from the serial port**, which means that it is not available through the port (reconnect the cable and the device or restart device when it is necessary) – if the cable is already connected, then push the **Connect** button for connecting.

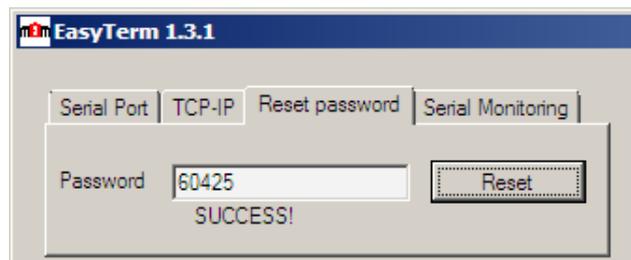
When the *EasyTerm* is not necessary to use further, and you’d like to split the connection, then push the **Close** button in the **Connection window (1)**, and the serial connection will be closed immediately (in case of GPRS connection, you can close the connection by the **Disconnect** button. Remove the serial connector from the Computer.



If you will get the **Login Failed** message several time in the **Terminal window (3)**, that means the password you were filled in is wrong. Fill the proper password to the **TCP-IP** connection at the **GPRS Login** and retry the connection.

Password reset:

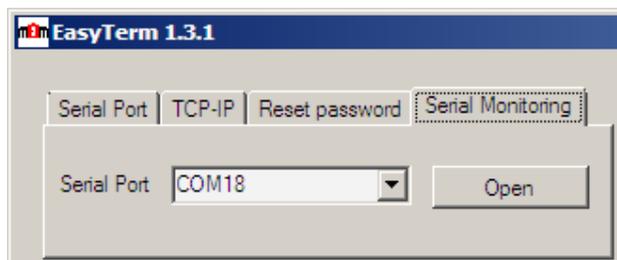
On the **Reset password** tab, at the *Password* field, fill or copy the IMEI’s **middle 5 characters**, then push the **Reset** button.



Then the *Easy 2* password will be restored and recovered to the *ABCD* default value.

Monitoring the serial port messages:

At the 4th tab, at the **Serial Monitoring**, you can **Open** it, and connect to the device in surveillance (read only) mode, when only the left side of the window is active with the signal strength data and terminal window messages.



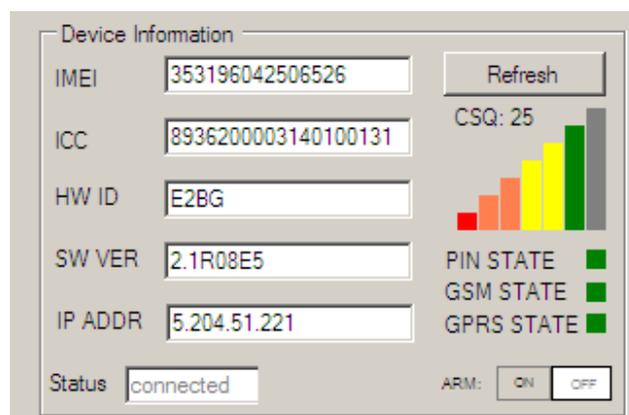
This feature is provided for monitoring, checking the *Easy 2* current operation without any intervention or configuration change. Further details on the Chapter **4.4**.

When you are attempted to **Close** the monitoring, after all you should click to the **Serial Port** tab, for connecting the device for parameter configuration.

4.3 Status and device data

In the **Statusz window** (2) you will receive the device identifiers as IMEI number (GSM modem identifier), ICC (SIM card identifier), HW ID (*Easy 2* unique hardware ID), SW VER (firmware version), IP ADDR. (modem IP address on the network).

At the right side of the status window, the CSQ value is listed (signal strength and its graph), with the following 3 statuses:



- **PIN STATE** – SIM PIN status (**grey**, when there is no available data; **green** when the PIN code was accepted by the device)
- **GSM STATE** – GSM connection status (**grey**, when there is no available data; **yellow** when the connecting is in progress; **green** when the network connecting of the device was successfully performed; **red** when the connection was refused)
- **GPRS STATE** – GPRS connection status (**grey**, when there is no available data; **yellow** when the connecting is in progress; **green** when the network connecting of the device was successfully performed; **red** when the connection was refused)

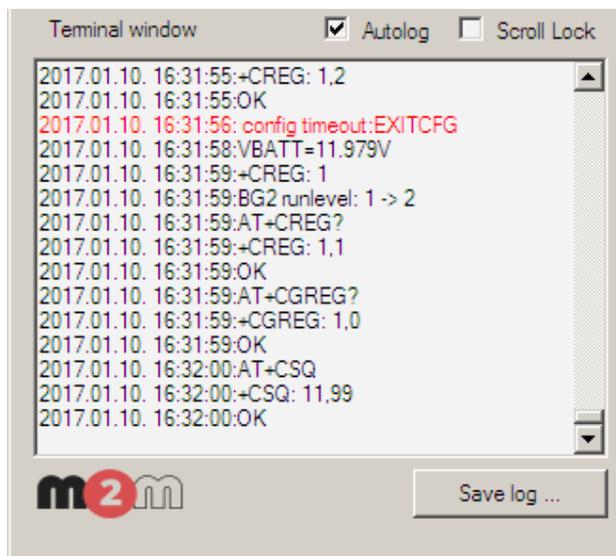
The **GSM state** or the **GPRS state** are always signing the current and exact connection status and informs about the used protocol on the mobile network. Furthermore, the device statuses can be **Refreshed** (by its button).

One-key arm/disarms or output control:

At the **ARM** title you can see the **ON/OFF** status of the status – **in case of standalone alarm system mode only!** – that the alarming is currently turned **ON** or **OFF**. With these buttons you can also control the alarming status: **ON**-arm, **OFF**-disarm the alarm status of the *Easy 2* alarm system.

When the output is configured to *GATE* mode (as a gate opening system) then this will appear as **GATE** with the proper statuses. Therefore, you can control the gate opening by the **ON/OFF** buttons.

4.4 Terminal window, communication messages



In the **Terminal window** (3) the device and modem communication messages, data and values are continuously incoming.

Here you can check the modem information messages, the executed AT-commands (**black**) and the modem answers and *EasyTerm* messages (**blue**) as the failure messages (**red**). There you can track the exact operation of the *Easy 2*.

In case of necessary, you can **Save log** and all of the *Terminal* messages into a text file – just add the path and filename and push on the **Save**.

The **Autolog** feature is enabled by default, which means that the *EasyTerm* is generating and writing a log file into the directory where the program was started. You can disable this feature when it is not necessary to use.

The messages will be scrolled down – to the last message - automatically. If the scrolling is too fast (e.g. at initialization, when loading a file or read out or restart the device), and when you would like to check the previous messages, then turn on the **Scroll lock feature** which stops the scrolling. Then you are allowed to page up. (The new messages will be inserted to the end of the list as usual, but the message list will not be scrolled down).

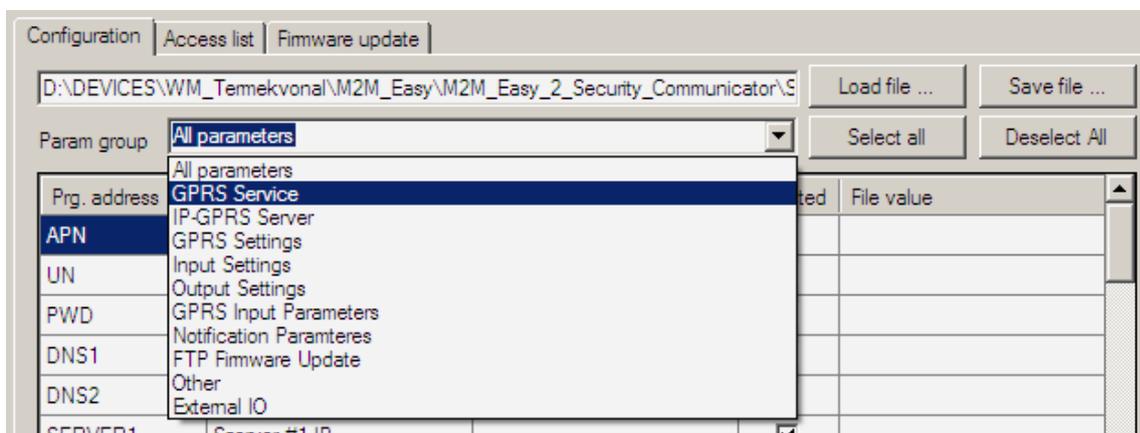
4.5 File handling

In the **File handling window** (4) you can **Open** or **Save** a configuration file (**Configuration** tab). For the opening, **Browse** a .CFG file from the *EasyTerm* directory.

Then the program will load all parameters and their values from the configuration file (at the **Param group**: *All parameters*).

You can filter the listed parameters with the **Param. group**. Therefore you can list and modify only the interesting, related parameters.

Attention! The configuration of the *Easy 2* device is empty by general! If you are attempted to use the device at the very first time, then let's open the configuration file and send all default parameters to the device at first! Use the Write config button! Every further configuration should be performed only after the first parameter upload!



The **Prg. Address** column lists the parameter **Name**. The parameter **Value** shows the current configured value for the parameter (5). The **File value** shows the default value (of the configuration file).

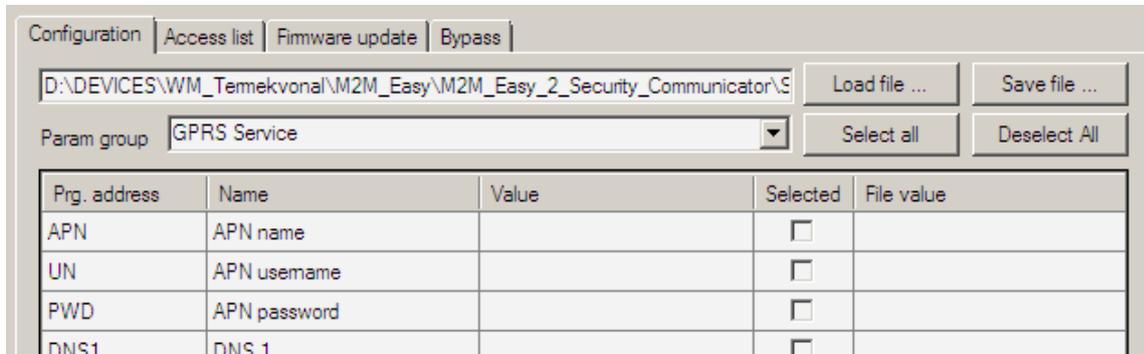
Prg. address	Name	Value	Selected	File value
APN	APN name		<input checked="" type="checkbox"/>	
UN	APN username		<input checked="" type="checkbox"/>	
PWD	APN password		<input checked="" type="checkbox"/>	
DNS1	DNS 1		<input checked="" type="checkbox"/>	
DNS2	DNS 2	2.2.2.2	<input type="checkbox"/>	

Domain Name Service secondary server IP address (optional)

When you'll modify a parameter **Value**, the program will be assigning the change by **bold** highlight.

If you click on a parameter name, the hints of the current parameter will be displayed in a small sub-window below the current line - as a help for the better understanding and configuration. (When you click again to the window, the small window will disappear).

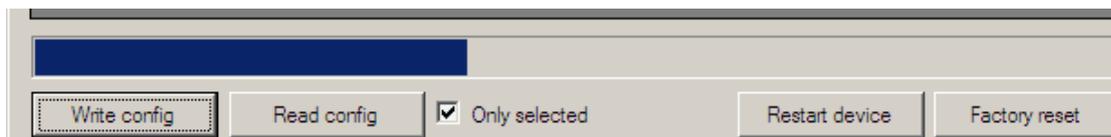
By the **Select all** button you can choose (mark) all parameters or **Deselect All** (unmark). This will help you later to write/read the marked parameters to the device.



Attention!

When you were modified a parameter value, the device will not notified from the change, while you will send the parameter value to the *Easy2*! For this you have to mark the required parameter - in the **Selected** column. The *Only selected* option at the bottom of the window assigns that only the selected and marked parameters will be sent – when the checkbox is unmarked, then all displayed and listed parameters will be sent.

For sending the parameter(s) to the device push the **Write config** button at the bottom of the screen. The selected values will be sent to the *Easy2*. The progress indicator signs the current status of the method. After the successful parameter upload, the device will be restarted.



If you choosed the **Select All** before you push the **Write config** then all listed parameters were sent. (The further – not listed - parameter group will be not sended.)

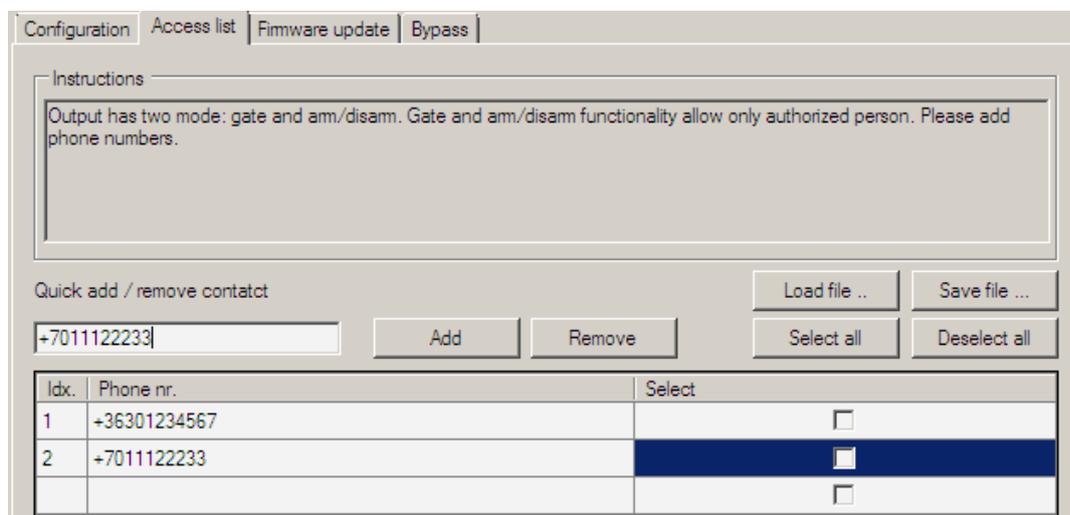
If you wouldn't like to send all listed parameter to the device then push to the **Deselect all** and mark only the required parameters on the parameter groups which you are attempt to sended. Then push the **Write config** button. Only the selected parameters will be sent.

The detailed parameter description can be found in the Chapter nr. 5.

4.6 Contact list for output control and gate opening

The output and gate control settings can be found in the **Configuration file window** (4), at the **Access List** tab.

You can define phone call numbers– max. 125 – which are allowed to remotely control the output line – or the connected device or gate opening system. The device will be control its output line only due to the received command SMS text messages – or ringings - of the listed numbers!



This feature is very useful for hotels parking houses, companies, condominiums. The control type can be: alarm status change (arming/disarming the alarm system), gate openin/closing (enginge control).

First of all, readout the stored numbers from the device by the **Read contacts** button. The read out numbers will be listed. Wait while the process will be finished.

When you are attempted to define and send a new number to the device, then fill the phone number at the **Add** button – in value format (e.g. +49201234567 or 0049301234567) – then push the **Add** button to record the number to the device's contact list.

Adding multiply numbers to the list, you can repeat the sequence with the **Add** button as described.

You can modify the registeret numbers in the **Phone nr.** coloumn when click on the phone number. The program signs the modification with **bold** highlight. **The performed modification is still not sent to the device!**

The configured or modified phone numbers can be sended by checking in the **Select** mark and pushing the **Write contacts** button. You can send multiply numbers to the device.

You can **Save file** with .ACL file extension to your computer. The **Load file** restores the saved list from your computer to the *EasyTerm*.

Attention! The *Only selected* feature is attempted to perform operations only for the

selected phone numbers. When you will not check this box, the operation is valid for the complete list - be careful!

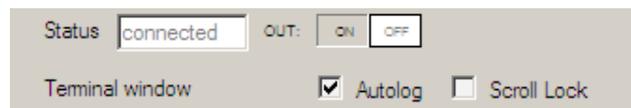
When you already had multiple phone numbers in your contact list, then you are attempted to modify them and **Save** to the list and record to the device by the **Write** button.

Deletion of some phone numbers can be performed by the **Select** mark selection and pushing **Delete contacts** button. The *EasyTerm* will **delete all the marked position from the device directly! Check the Select mark before using the Delete contacts button!**

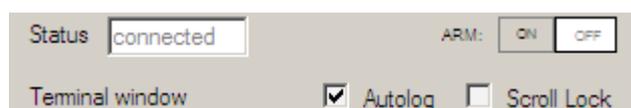
When you are attempted to delete only one number from the contact list, but you wouldn't like to search the number from the list, then just fill the number in the empty field and just push the **Remove** button. This will delete the written phone number from the device directly.

Over the recorded phone numbers, now you can manually control the output lines – even the gate opening – from this feature at here. You can check the current status of the output(s) at the left side of the screen and you can control by the buttons, manually.

When the gate opening parameter is enabled (**Configuration: Output settings, OUTMODE: Gate**), then at the left side of the screen you can close the gate by the **OUT** title with the **ON** button, and open by the **OFF** (when the *Easy2* sends the control command to the gate opening system).



When the alarm feature was activated (**Configuration: Output settings, OUTMODE: Alarm**) then the armin status can be checked with the **ARM ON/OFF** statuses and here you can arm the alarm system by the **ON** button or disarm by the **OFF** button.



Important! Over the manual control, these features can be remotely controlled via SMS text messages and initiating a voice call (ringing).

4.7 Firmware upload/refresh

When you are attempted to upload a newer software to the *Easy 2* then choose the **Firmware update** tab from the **Configuration upload window** (4).

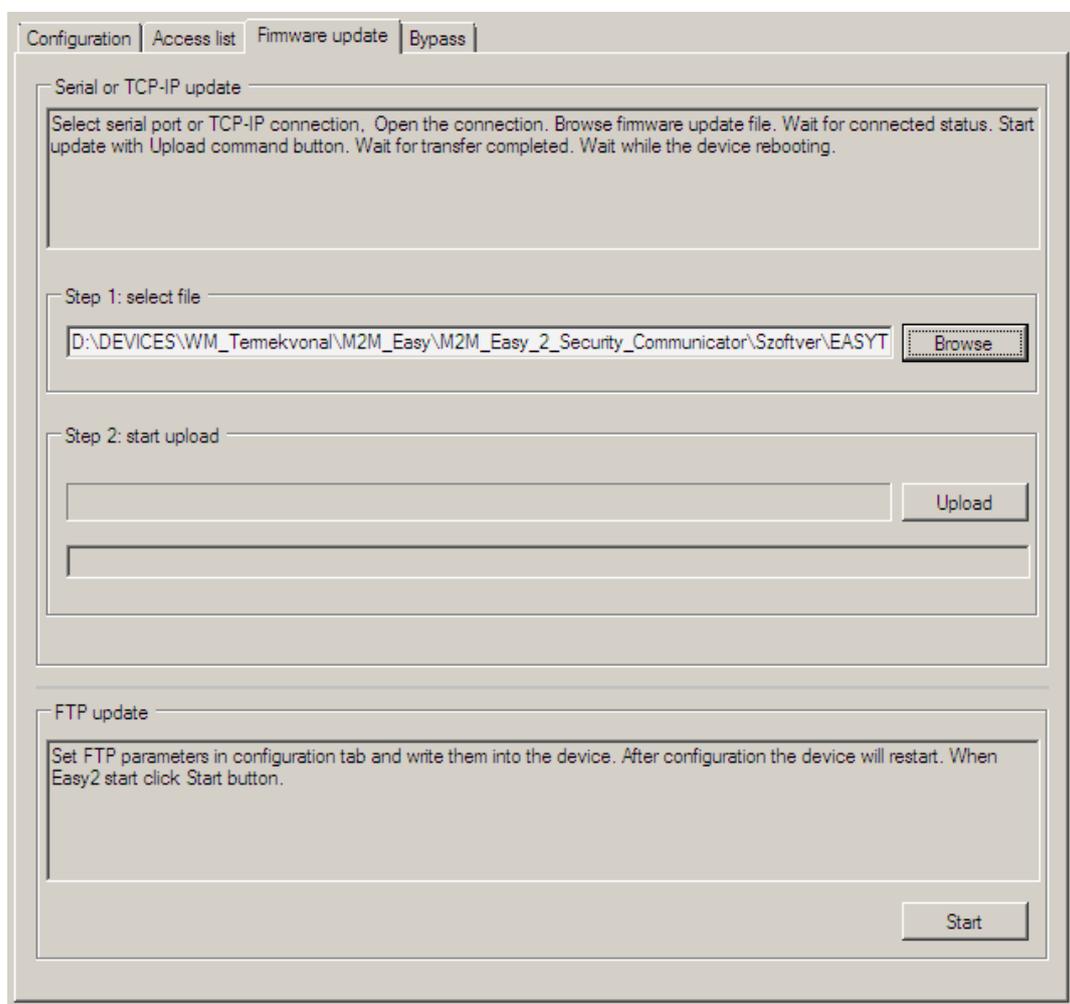
Before uploading a firmware file, always ensure about the **SW VER** (software version) at left side of the screen (2) which should be older than the version which are attempted to upload.

The refresh can be performed through the serial port (when it was connected on **Serial Port**), via TCP IP (when it was connected through **TCP-IP (GPRS)**). The program will

automatically handle it. During a TCP/IP firmware refresh the *Easy 2* will send installation progress CID codes.

In case of firmware upload from the serial port, **Browse** the required firmware binary file (the filename contains the software version – e.g. EASY2_V21R08.bin – means version 2.1, R08 = release nr. 8). To start the firmware upload method, push the **Upload** button. Then the *Easy 2* will receive the firmware file through the serial connection and starts to refresh its system software.

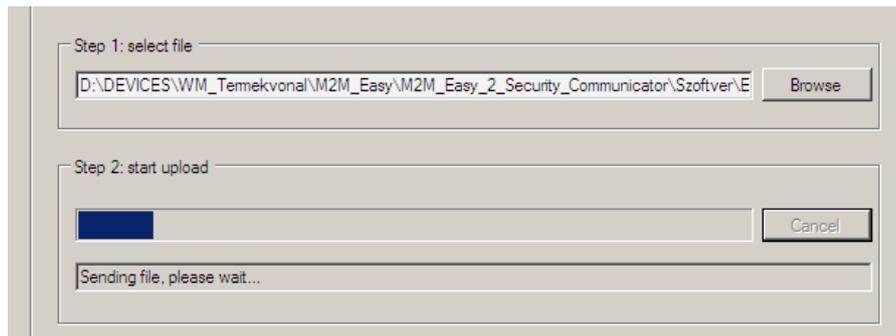
The installation progress can be followed at the **Terminal window (3)**, and by the progress indicator bar at the **Upload** part, and due to the status messages. First, the „*Wait for bootloader...*” message will appear, then soon you will receive the „*Sending file, please wait...*” title.



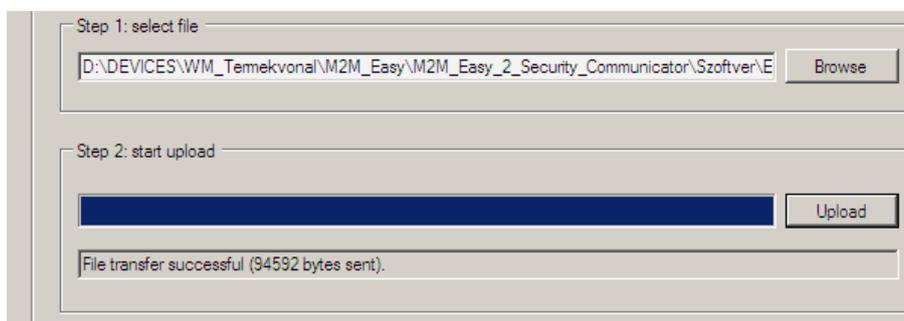
The installation takes about 2-3 minutes. NEVER stop the device power supply or its operation during the installation process, because this can cause the malfunction of the device!

The EasyTerm program window will not answer for any intervention or action during the upload. Do not change the focus from the program!

During the refresh method, the device has only a limited functionality. It does not receive signals of the alarm system, does not transmit the incoming input signal changes and events, does not send life signals and does not process the incoming SMS messages!



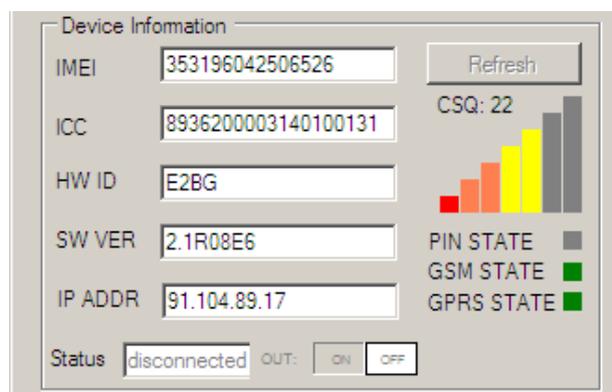
During the installation you can see the „Sending file.. please wait...” message. Wait for the finishing the upload method and the end of the installation!



At the end of the installation you will get the „File transfer successful...” message then the device restarts and it will be disconnected! The serial port will be closed.

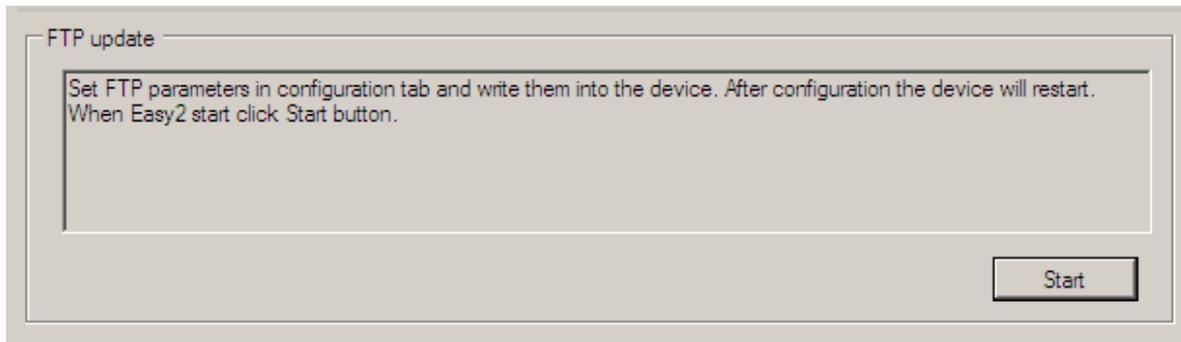
For it connecting again, **Open the Serial Port** connection. After the serial **connecting, check the current software version** (at **SW VER** value) that it is matched to the uploaded version or not!

If the installation was successful, that the device will have and operating according to the new firmware. The usual communication messages are appearing. The firmware refresh process now has finished.



If you are attempted to install the new firmware from an ftp server...

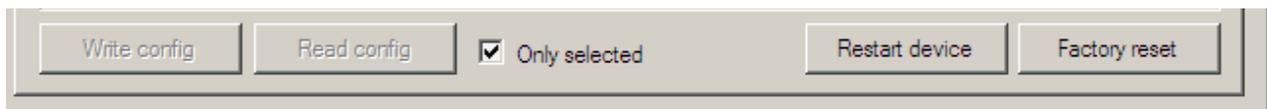
At the right side of the screen in the **Firmware update** window, at the bottom of the page at the **FTP update** part you can receive and start central firmware installations of the ftp server.



For the proper centrel installation, the relevant ftp parameters must be defined first. When you were **Started** the remote installation, and the ftp server is available, in the first phase the firmware download will be started. This will be assigned by the status messages hereby – according to the serial port firmware refresh. At the and of the process, the device will restart and disconnected from the serial port connection.

4.8 Device restart

If you are attempted to restart the *Easy 2*, then click on the right-side **Restart device** button at the bottom of the screen.

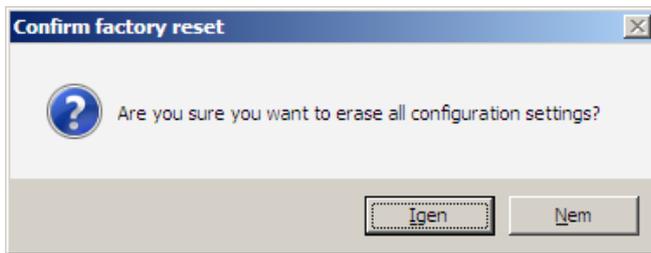


Then the device will send the **RESET** command in the **Terminal window** (3) to the *Easy 2*. The signal strength and statuses will be faded out.

The **Restart device** message appears, then the device will be restarted. After booting it reconnects to the serial port. When the status and signal values will be available, these will be assigned to the status part with the colour LED statuses.

4.9 Factory default settings

If you would like to delete the current configuration and restore the original settings of the *Easy 2*, then click on the **Factory reset** button at the bottom of the screen, then answer **Yes** to confirm the erase configuration command to perform.



The device will execute the **ERASECONF** command. After 30 seconds, the device will be rebooting when the **^SHUTDOWN** message appears. The statuses will be faded out during the config restore method.

Important! The device will started without any configuration settings!

Open the configuration file and send it (Write conf.) to the Easy2 as we described, then perform the necessary parameter configuration according to the Chapter nr. 5.

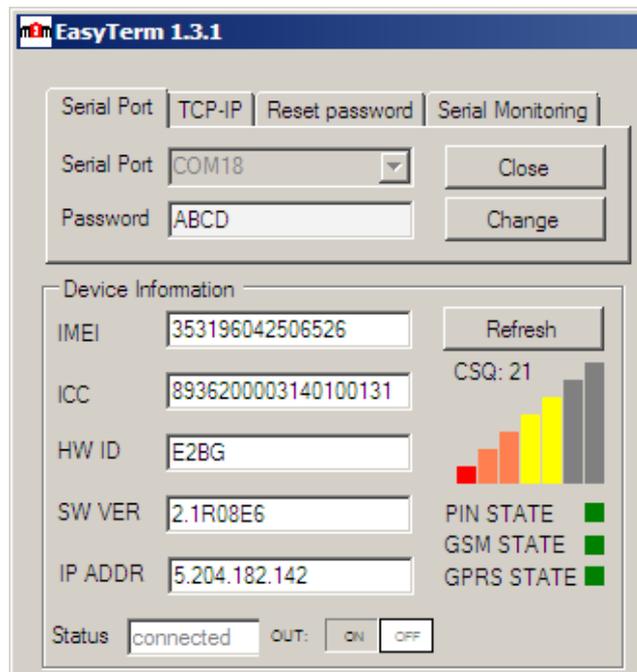
4.10 Manual arming

The *Easy2* alarming can also be controlled manually from the *EasyTerm*.

You can control it, besides the **ARM** title in the **Status window** with the **ON/OFF** buttons – **in case of using the Easy2 as a standalone alarm system!**

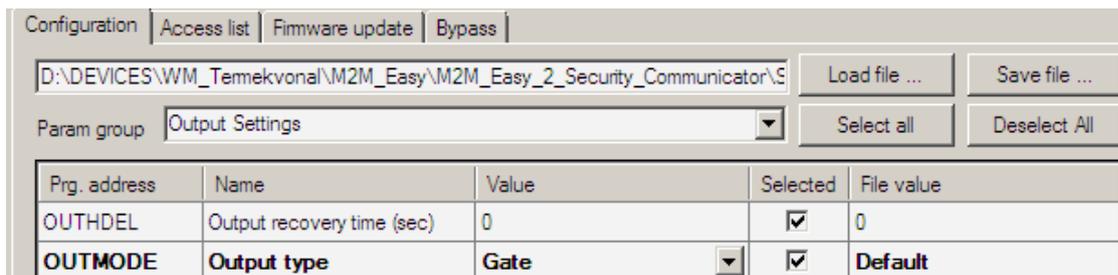
Here, you can check that the alarm system was armed (**ON**) or disarmed (**OFF**) – due to the current status.

Anyway, it is possible to remotely control the *Easy2* arming through SMS messages.



4.11 Gate opening

The *Easy 2* output can also be manually controlled with the *EasyTerm*. When the output was configured (**OUTMODE** parameter) to *GATE*, than the output will be used as a gate opening system.



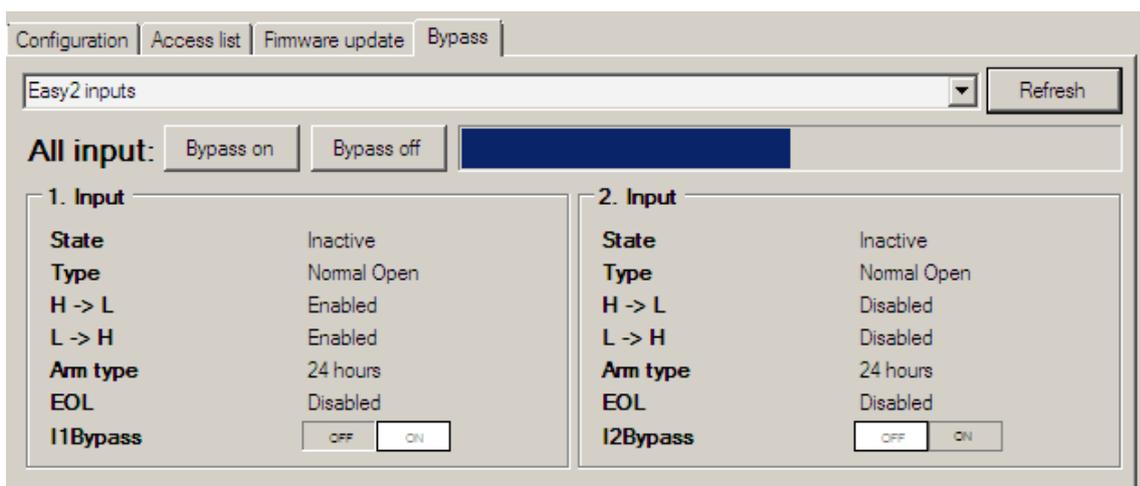
Then you can check the current status of the gate opening at the **OUT** title. You also can control it by the **ON/OFF** buttons.



Furthermore, the stored phone numbers (recorded Customers in the contact list) can remotely control – open/close - the *Easy2* through SMS messages, ringing.

4.12 Disabling zones (Bypass mode)

At the right top side of the screen you will find the **Bypass** tab. When opening, you can drop-down a list and choose the **Easy 2 inputs** item. Regarding the choice, the program reads out the input information of the related zones, parameters, life signals. The reading process is assigned by the progress bar.



Here you can check the status (*State*), and the input settings (as *Type*, *H->L* (High-to-Low) and *L->H* (Low-to-High), *Arm type* *EOL*, and the armed/disarmed or disabled zone statuses (**IxBypass**)).

Furthermore, you can disable all zones for the inputs by the **Bypass on** button or you can enable them by the **Bypass off**. Then disabling turns on the alarming for all listed inputs. In case of disabled zones, the zone events will not alarmed and signalled further as alarms, the device will forward the zone events as normal events.

You can define the zone bypass for each inputs, as the **I1Bypass** is valid for the input #1, the **I2Bypass** for the nr. #2, and so on. There you can also control the bypass with the **ON**

button to turn the bypass on (turns off the alarming for the zone) or turn **OFF** the bypass for it (turns on the current zone alarming).

The zone bypass enabling is also possible through SMS commands by text messages – see later.

In case of using the IO-expander board, you can also define the bypass feature for the furtherp inputs (from nr. 3 to nr. 8), you have to choose the **IO board inputs** item from the subselect list and the required input zones will be listed.

5. Configuring the Easy 2

The device is capable for using and operating for the following type of tasks. Then you will found the main important configuration options for the listed operation modes, using the *Easy2* as:

1. **GSM transmitter (pre-configured to this mode, by default):** the alarm system is connected to the TIP-RING input, the incoming CID codes are forwarding and transmitting with the signals through the GSM network to the remote dispatching centre.
2. **Transmitting to Enigma IP receiver:** the alarm system is connected to the TIP-RING input, the incoming CID codes are forwarding and transmitting with the signals through the GPRS network with Enigma protocol to an Enigma IP receiver.
3. **GPRS transmitting to the dispatching centre:** the alarm system is connected to the TIP-RING input, sabotage switch is connected to the input for monitoring, the incoming signals are converted to Contact ID codes and they are forwarding and transmitting through the GPRS network to the IP address of the remote centre.
4. **Standalone alarm system:** sensors/sabotage switch are connected to the input lines (2pcs of inputs, by the IO-expansion max. 8pcs); siren/bark connected to the output; the signals are transmitted through GPRS to the server IP address.
5. **Input monitoring, gate opening:** sensors/sabotage switch are connected to the voltage/contact inputs (2pcs inputs, by IO-expansion max. 8pcs). The input line short/wire cut sensing is possible. The relay output(s) are controllable remotely (the output nr.#1. is capable of using gate opening, any further outputs are capable of switching external devices). In this operation mode, the device uses the GPRS network for remote control, the GSM network is using for SMS notification and ringing. The GPRS signalling is optional, but available for transmitting to remote IP address.

First steps for every operation mode! Download the factory default configuration .CFG file from our website. Then **Browse** the file and send it to the *Easy2* by the **Write config** button. Wait, until the default configuration process performs and it has finished and the device reboots.

5.1 GSM transmitter settings

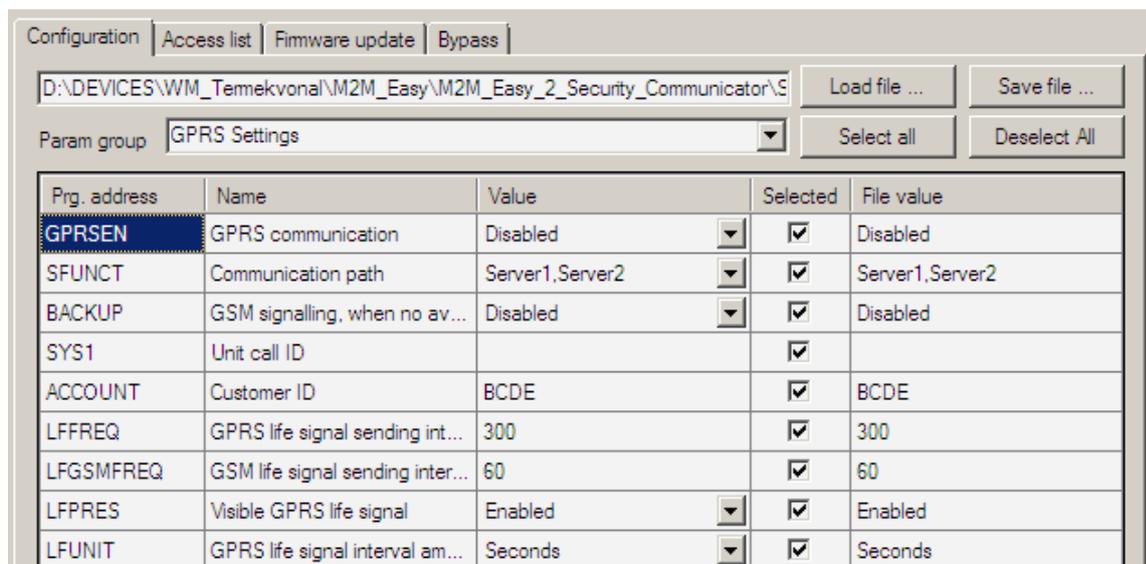
The *Easy 2* has programmed by default for performing the GSM-transmitter operation mode. The default configuration parametrisation shall be checked before using and modify it in case off necessary.

GSM transmitter settings

Load the factory default .CFG file by the **Browse** button.

Choose the **GPRS Settings** parameter group at the **Device Type**. Then the program will load the related parameters.

Check that the **GPRSEN** value is *Disabled*, which means that the device operating as a GSM transmitter. The **SYS1** value equals the phone number of the dispatcher centre.



Prg. address	Name	Value	Selected	File value
GPRSEN	GPRS communication	Disabled	<input checked="" type="checkbox"/>	Disabled
SFUNCT	Communication path	Server1,Server2	<input checked="" type="checkbox"/>	Server1,Server2
BACKUP	GSM signalling, when no av...	Disabled	<input checked="" type="checkbox"/>	Disabled
SYS1	Unit call ID		<input checked="" type="checkbox"/>	
ACCOUNT	Customer ID	BCDE	<input checked="" type="checkbox"/>	BCDE
LFFREQ	GPRS life signal sending int...	300	<input checked="" type="checkbox"/>	300
LFGSMFREQ	GSM life signal sending inter...	60	<input checked="" type="checkbox"/>	60
LFPRES	Visible GPRS life signal	Enabled	<input checked="" type="checkbox"/>	Enabled
LFUNIT	GPRS life signal interval am...	Seconds	<input checked="" type="checkbox"/>	Seconds

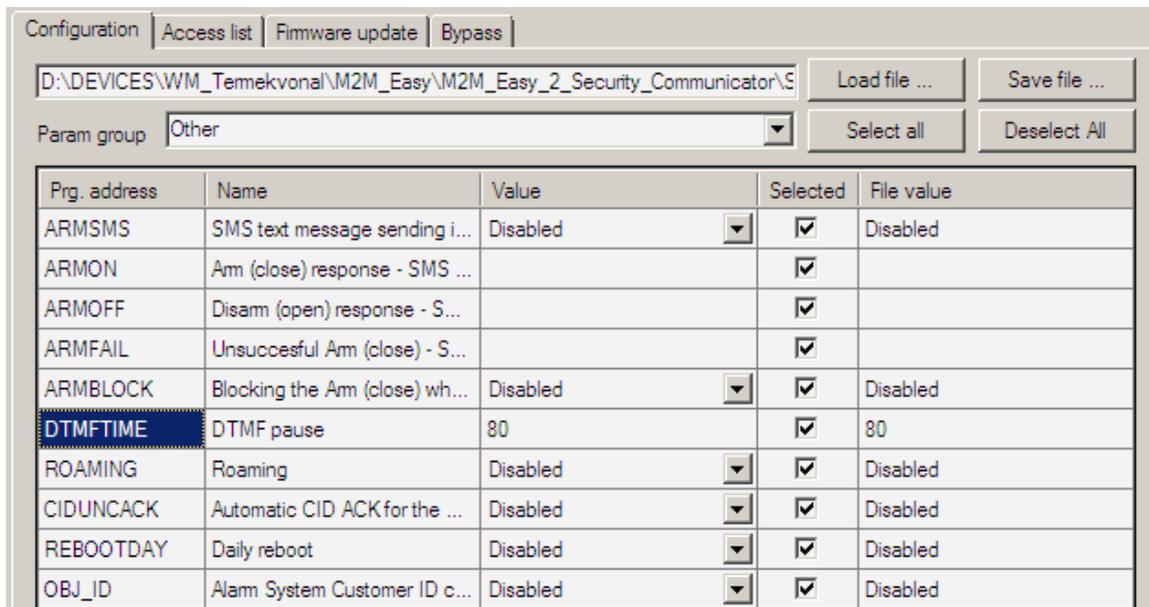
You can modify the **ACCOUNT** parameter value if you are attempted to signalling an own customer ID for the identification.

The **LFGSMFREQ** is the life signal sending frequency on GSM channel, which is setup to 60 seconds by general. Check that it is fine or not.

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* coloumn) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

Then, open the **Other** parameter group at the **Device Type**. Then the program will load the related parameters.

Check thath the **DTMFTIME** 80 seconds value is proper for applying a break between the TIP-RING Contact ID signals.



By *enabling* the **OBJ_ID** parameter, you can request that the *Easy 2* overwrite the incoming event's Contact ID code – incoming on TIP-RING line from the alarm system - Customer ID by its own (**ACCOUNT** parameter). If you'll enable it, then this will be transmitted to the center by this identifier.

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

If it is necessary, you can save the configuration to your computer by the **Save file** button at the right upper side of the screen.

For further settings, please check the chapter 5.6.

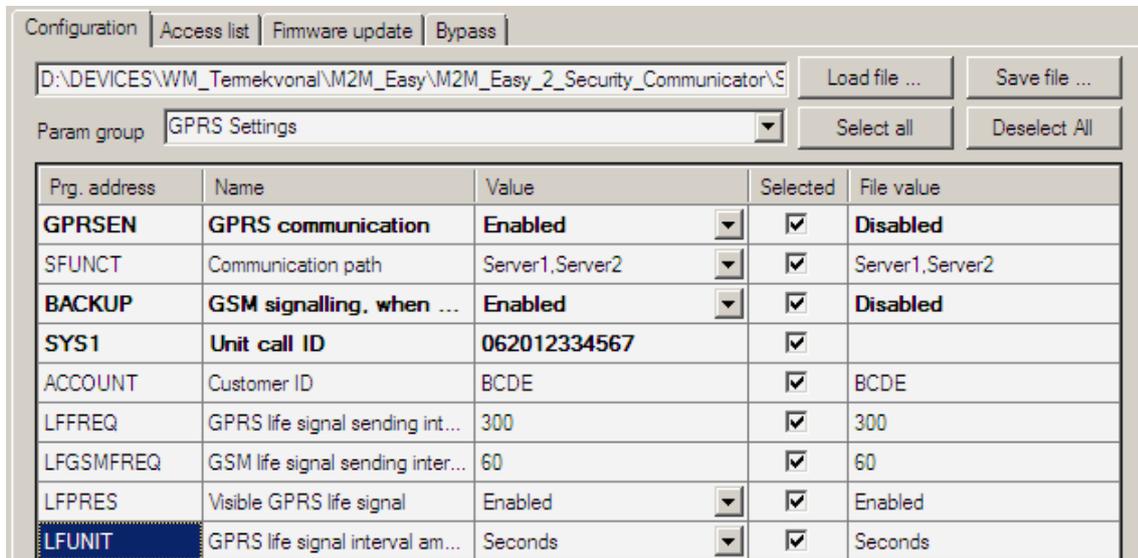
5.2 Transmitting to Enigma IP-receiver (Settings)

When you are attempted to transmitting the incoming signals through GPRS to the remote dispatcher center's IP address, the following settings must be checked. If that is necessary, you can change them.

GPRS transmitter settings

Load the factory default .CFG file by the **Browse** button.

Choose the **GPRS Settings** parameter group at the *Device Type*. Then the program will load the related parameters.



Change the **GPRSEN** value to *Enable* status for the GPRS transmitting.

At the **SFUNCT** parameter you can define that the primary or secondary server IP address will be the first in the signalling sequence.

The **BACKUP** parameter allows a backup signalling to the centre through GSM - in case of mobile network fall/outage. The GSM-relevant parameters must be also configured – e.g. **SYS1**.

You can modify the **ACCOUNT** parameter value if you are attempted to signalling an own customer ID for the identification. If it is not used, the BCDE code will be signalled.

The **LFFREQ** is the life signal sending frequency on GPRS channel, which is setup to 300 seconds by general. Check that it is fine or not. The **LFUNIT** value is the amount for the **LFFREQ** in seconds or minutes.

By *disabling* the **LFPRES** value you can send hidden life signals (P603) to the dispatcher center/IP-receiver (if it is supported). By *enabling* it, the normal GPS value will be sent.

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. The program will indicate the configuration progress by the progress bar at the bottom of the screen and at the *Terminal window* (3). At the end

of the parameter sending, the device is restarting by using the new settings.

GPRS service and APN settings

Then, let's open the **GPRS Service** parameter group at the **Device Type** for the **APN settings**. Then the program will load the related parameters.

Prg. address	Name	Value	Selected	File value
APN	APN name	net	<input checked="" type="checkbox"/>	
UN	APN username		<input checked="" type="checkbox"/>	
PWD	APN password		<input checked="" type="checkbox"/>	
DNS1	DNS 1		<input checked="" type="checkbox"/>	
DNS2	DNS 2		<input checked="" type="checkbox"/>	

At the **APN** value, you have to define the APN name for the SIM-card related GPRS data package service. When using a username or password are needed for the access – e.g. in case of chap authentication – then define the **UN** and **PWD** values based on the information proven by your mobile service provider.

When you would like to use a DNS or DDNS server, you can allow it by the **DNS1**, **DNS2** parameters in the next format – e.g. **wmsupport.dyndns.org**

Then open the **IP-GPRS Service** parameter group at the **Device Type**. Then the program will load the related parameters.

Prg. address	Name	Value	Selected	File value
SERVER1	Server #1 IP	10.10.10.10	<input checked="" type="checkbox"/>	
PORT1	Server #1 port nr.	9999	<input checked="" type="checkbox"/>	9999
SERVER2	Server #2 IP		<input checked="" type="checkbox"/>	
PORT2	Server #2 port nr.	9999	<input checked="" type="checkbox"/>	9999
IPPROTO	Protocol	UDP	<input checked="" type="checkbox"/>	UDP
SWPROTO	Communication format	Enigma	<input checked="" type="checkbox"/>	Enigma

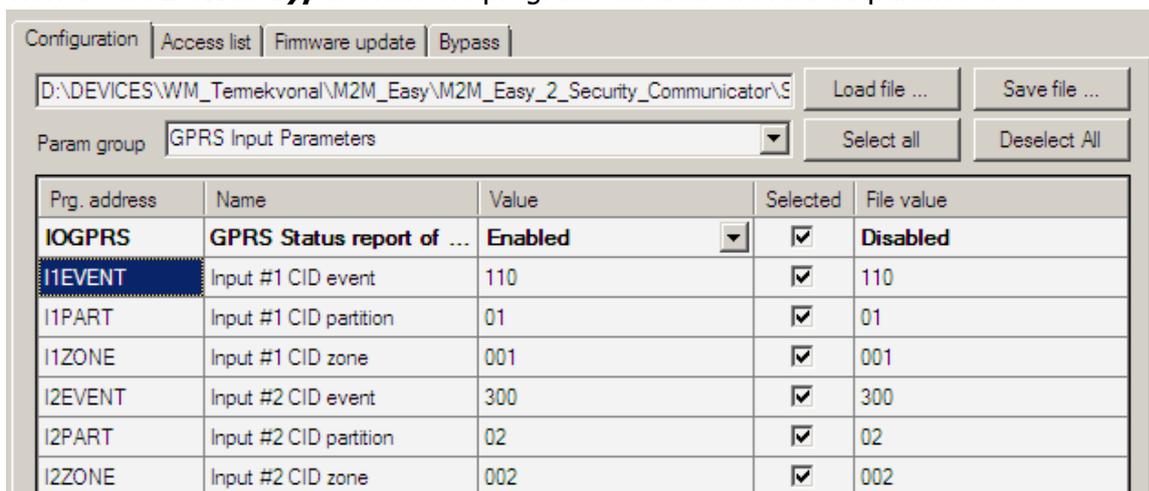
At the **SERVER1** parameter fill the IP address of the IP-receiver and the **PORT1** value for the port number.

Change the **IPPROTO** protocol's format to **UDP** and the **SWPROTO** communication format to **Enigma** which means a standard Contact ID protocol. (The *M2M* format means the modified ContactID protocol, which can only be used with the following IP receivers or remote dispatcher software as Enigma II, Enigma IP2 receiver devices, Alarmsys and SIMS software).

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

Input line's Contact ID settings

For *configuring the input line's event transmitting* let's open the **GPRS Input Parameters** view at the **Device Type**. Then the program will load the related parameters.



All detected and received signals and events of the *Easy 2* input lines are stored in a puffer with their timestamps, where 32 events can be stored temporary by the system. These will be transmitted/forwarded by the device through GPRS network to the defined address, then by the handshake communication reply message the buffered event will be deleted after its transmission. When the puffer is full, the next event will be ignored.

First, the device tries to sending the incoming events on GPRS connection to the primary IP address. In case of unsuccessful sending (e.g. outage or fall of the IP-receiver or a network trouble), then after some delay it retries to send.

You have to *enable* the **IOGPRS** parameter for transmitting the input line's event and status changes.

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device

(regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

If it is necessary, you can save the configuration to your computer by the **Save file** button at the right upper side of the screen.

For further settings, please check the chapter 5.6.

5.3 GPRS transmitting settings

In this operation mode the *Easy 2* is transmitting to the dispatcher center's IP address or to the remot dispatching software - through GPRS. The further settings are recommended to check or modify in case of necessary.

Load the factory default .CFG file by the **Browse** button.

GPRS transmitting settings

For the *GPRS settings* choose the **GPRS Settings** parameter group at the **Device Type**. Then the program will load the related parameters.

Prg. address	Name	Value	Selected	File value
GPRSEN	GPRS kommunikáció	Engedélyezve	<input checked="" type="checkbox"/>	Tiltva
SFUNCT	Kommunikáció iránya	Szerver1,Szerver2	<input checked="" type="checkbox"/>	Szerver1,Szerver2
BACKUP	GSM átjelzés, ha nincs GPRS kap...	Engedélyezve	<input checked="" type="checkbox"/>	Tiltva
SYS1	Vevőegység hívószáma	06201234567	<input checked="" type="checkbox"/>	
ACCOUNT	Ügyfélazonosító	BCDE	<input checked="" type="checkbox"/>	BCDE
LFFREQ	GPRS életjel küldés (mp)	300	<input checked="" type="checkbox"/>	300
LFGSMFREQ	GSM életjel küldés (perc)	60	<input checked="" type="checkbox"/>	60
LFPRES	Látható GPRS életjel	Engedélyezve	<input checked="" type="checkbox"/>	Engedélyezve
LFUNIT	GPRS életjel egység	Másodperc	<input checked="" type="checkbox"/>	Másodperc

Change the **GPRSEN** value to *Enable*, to operate the device as a GPRS transmitter.

At the **SFUNCT** parameter you can define that the primary or secondary server IP address will be the first in the signalling sequence.

The **BACKUP** parameter allows a backup signalling to the centre through GSM - in case of mobile network fall/outage. The GSM-relevant parameters must be also configured – e.g. **SYS1**.

You can modify the **ACCOUNT** parameter value if you are attempted to signalling an own customer ID for the identification. If it is not used, the BCDE code will be signalled.

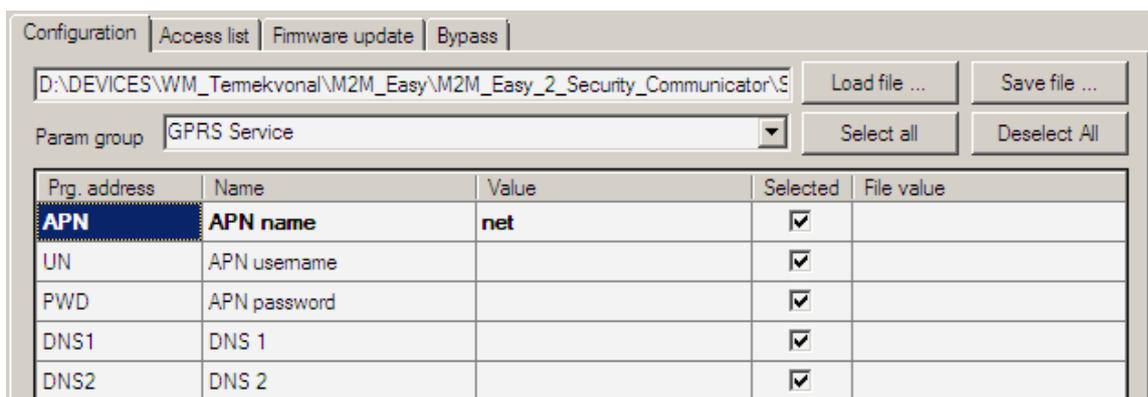
The **LFFREQ** is the life signal sending frequency on GPRS channel, which is setup to 300 seconds by general. Check that it is fine or not. The **LFUNIT** value is the amount for the **LFFREQ** in seconds or minutes.

By *disabling* the **LFPRES** value you can send hidden life signals (P603) to the dispatcher center/IP-receiver (if it is supported). By *enabling* it, the normal GPS value will be sent.

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. The program will indicate the configuration progress by the progress bar at the bottom of the screen and at the **Terminal window** (3). At the end of the parameter sending, the device is restarting by using the new settings.

GPRS service and APN settings

Then, let's open the **GPRS Service** parameter group at the **Device Type** for the **APN settings**. Then the program will load the related parameters.



At the **APN** value, you have to define the APN name for the SIM-card related GPRS data package service. When using a username or password are needed for the access – e.g. in case of chap authentication – then define the **UN** and **PWD** values based on the information proven by your mobile service provider.

When you would like to use a DNS or DDNS server, you can allow it by the **DNS1**, **DNS2** parameters in the next format – e.g. **wmsupport.dyndns.org**

Then open the **IP-GPRS Service** parameter group at the **Device Type**. Then the program will load the related parameters.

Prg. address	Name	Value	Selected	File value
SERVER1	Server #1 IP	10.10.10.10	<input checked="" type="checkbox"/>	
PORT1	Server #1 port nr.	9999	<input checked="" type="checkbox"/>	9999
SERVER2	Server #2 IP	20.20.20.20	<input checked="" type="checkbox"/>	
PORT2	Server #2 port nr.	9999	<input checked="" type="checkbox"/>	9999
IPPROTO	Protocol	TCP	<input checked="" type="checkbox"/>	UDP
SWPROTO	Communication format	Enigma	<input checked="" type="checkbox"/>	Enigma

At the **SERVER1** parameter fill the primary IP address of the IP-receiver and the **PORT1** value for the port number. Setup the secondary IP address to the **SERVER2** and its port to the **PORT2** (if it is also necessary).

Change the **IPPROTO** protocol's format to **TCP** and the **SWPROTO** communication format to **Enigma** which means a standard Contact ID protocol. (The *M2M* format means the modified ContactID protocol, which can only be used with the following IP receivers or remote dispatcher software as Enigma II, Enigma IP2 receiver devices, Alarmsys and SIMS software).

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

Input line's Contact ID settings

All detected and received signals and events of the *Easy 2* input lines are stored in a puffer with their timestamps, where 32 events can be stored temporary by the system. These will be transmitted/forwarded by the device through the defined network channel (GSM or GPRS connection) to the configured IP address. Then by the handshake communication reply message the buffered event will be deleted after its transmission. When the puffer is full, the next event will be ignored.

In case of unsuccessful sending (e.g. outage or fall of the primary IP address or a network trouble), then after some delay it retries to send. If it is also unsuccessful, then it tries to send the events to the secondary IP address. If it will not success then it drops the event. (In case of a voice call the whole event sequence will be transmitted during a call.)

For *configuring the input line's event transmitting* let's open the **GPRS Input Parameters** view at the **Device Type**. Then the program will load the related parameters.

You have to *enable* the **IOGPRS** parameter for transmitting the input line's event and status changes.

When it is necessary to define the current input line's CID event code (**IxEVENT**), or the partition number (**IxPART**), zone (**IxZONE**) for monitoring sensors or a sabotage switch, these parameters must be defined (**x** means the number of the input line in the name of the parameter).

Prg. address	Name	Value	Selected	File value
IOGPRS	GPRS Status report of ...	Enabled	<input checked="" type="checkbox"/>	Disabled
I1EVENT	Input #1 CID event	110	<input checked="" type="checkbox"/>	110
I1PART	Input #1 CID partition	01	<input checked="" type="checkbox"/>	01
I1ZONE	Input #1 CID zone	001	<input checked="" type="checkbox"/>	001
I2EVENT	Input #2 CID event	300	<input checked="" type="checkbox"/>	300
I2PART	Input #2 CID partition	02	<input checked="" type="checkbox"/>	02
I2ZONE	Input #2 CID zone	002	<input checked="" type="checkbox"/>	002

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

Input settings

For *configuring the input lines operation* open the **Input Settings** parameter group at the **Device Type**. Then the program will load the related parameters.

On the input lines of the device it is capable of generating Contact ID messages and transmitting them by the ascending edge (L→H) and descending (H→L) edge. (The number of the current input is signed here by 'x').

The length of the time frame can be configured by the **IDELAY** in 20 msec steps, which is *enabled* by default for the inputs to the ascending and descending edges without inverting in an 500 msec time frame (here the delay value is 25 * 20msec).

The edges can be *enabled/disabled* by the **IxLHEN** (low-to-high) and **IxHLEN** (high-to-low) parameters for every input line. The *direction* of the *edge detection* (ascending, descending) can be reversed by the **IxINV** (as NO= Normal Open, NC=Normal Close) parameter.

At this time, the ascending and descending edges are filtered through a time frame (the inputs must be hold for a minimal interval in the current status, to perform the further status change while the change is acknowledged).

The screenshot shows a configuration window with a tabbed interface. The 'Configuration' tab is active. Below the tabs, there is a file path field containing 'D:\DEVICES\WM_Temekvonal\M2M_Easy\M2M_Easy_2_Security_Communicator\...', and buttons for 'Load file ...' and 'Save file ...'. Below that, a 'Param group' dropdown is set to 'Input Settings', with 'Select all' and 'Deselect All' buttons. The main part of the window is a table with the following data:

Prg. address	Name	Value	Selected	File value
IDELAY	Input delay (x20msec)	25	<input checked="" type="checkbox"/>	25
I1INV	Input #1 basic op. mode	Normal Open (NO)	<input checked="" type="checkbox"/>	Normal Open (NO)
I2INV	Input #2 basic op. mode	Normal Open (NO)	<input checked="" type="checkbox"/>	Normal Open (NO)
I1LHEN	Input #1 change (L->H)	Enabled	<input checked="" type="checkbox"/>	Enabled
I2LHEN	Input #2 change (L->H)	Enabled	<input checked="" type="checkbox"/>	Enabled
I1HLEN	Input #1 change (H->L)	Enabled	<input checked="" type="checkbox"/>	Enabled
I2HLEN	Input #2 change (H->L)	Enabled	<input checked="" type="checkbox"/>	Enabled
I1ARM	Input #1 type	24 hours	<input checked="" type="checkbox"/>	24 hours
I2ARM	Input #2 type	24 hours	<input checked="" type="checkbox"/>	24 hours
I1EOL	Input #1 sabotage sensing	Disabled	<input checked="" type="checkbox"/>	Disabled
I2EOL	Input #2 sabotage sensing	Disabled	<input checked="" type="checkbox"/>	Disabled

The **IxARM** parameter is for granting that the current input line can transmit signal only in *Armed* status (value is **Armed**), or whether it is useful to transmit every status changes – even in *Disarmed* status (value is **24 hours**). The *armed* value is used for window & door detectors/sensors by classic, the *24 hours* arming is capable of protecting the secured zones – as protecting the front door in *night mode*.

The *end of line resistor* can be configured by the **IxEOL** parameter for the current input, to detect cable wiring cut (sabotage detection feature). It generates alarm at every case.

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

Notification sending settings

For the *alarm notification and messaging settings* open the **Notification Parameters** parameter group at the **Device Type**. Then the program will load the related parameters.

TELx –SMS notification can be setup for max. 4 phone numbers

Prg. address	Name	Value	Selected	File value
TEL1	Phone nr #1	06201234567	<input checked="" type="checkbox"/>	
TEL2	Phone nr #2		<input checked="" type="checkbox"/>	
TEL3	Phone nr #3		<input checked="" type="checkbox"/>	
TEL4	Phone nr #4		<input checked="" type="checkbox"/>	
I1S	Input #1 SMS Phone nr	1 - 1	<input checked="" type="checkbox"/>	0 -
I2S	Input #2 SMS Phone nr	0 -	<input checked="" type="checkbox"/>	0 -
I1V	Input #1 ringing Phone nr	0 -	<input checked="" type="checkbox"/>	0 -
I2V	Input #2 ringing Phone nr	0 -	<input checked="" type="checkbox"/>	0 -
IVSMS	In case of unsuccessful ringi...	Disabled	<input checked="" type="checkbox"/>	Disabled
I1ON	Input #1 - active - SMS text ...		<input checked="" type="checkbox"/>	
I1OFF	Input #1 - inactive - SMS te...		<input checked="" type="checkbox"/>	
I2ON	Input #2 - active - SMS text ...		<input checked="" type="checkbox"/>	
I2OFF	Input #2 - inactive - SMS te...		<input checked="" type="checkbox"/>	
SMSFWD	SMS message forwardi...	Enabled	<input checked="" type="checkbox"/>	Disabled
ISABEVENT	Sabotage CID code	331	<input checked="" type="checkbox"/>	331
ISABON	Sabotage event SMS t...	Sabotage.OUT	<input checked="" type="checkbox"/>	
ISABOFF	Sabotage recovery SM...	Sabotage.IN	<input checked="" type="checkbox"/>	

It can be defined by the **IxS** parameter that in case of input status changes for which phone numbers must the device sending SMS text message notification. Choose one from the possible notification sequence combinations.

The **IxV** is operating quite similar, but it is useful for ring notification. You can configure that which phone numbers must the device ring in case of input line changes.

IVSMS parameter – in case of unsuccessful calling/ringing the SMS text message sending can be allowed.

The **IxON** parameter is used for SMS messaging for the input status, when the signal level is ascending from low→high, while the **IxOFF** is for the descending value from high→low (recovery).

SMSFWD – forwarding only messages in SMS text messages to the phone number #1 (the mobile provider SMS notifications and SMS commands will be not forwarded).

ISABEVENT – in case of a sabotage event or wire cut the forwarded CID code can be defined.

In case of a sabotage, wire cut, the SMS message can also be configured by the **ISABON** parameter. The recovery message by the **ISABOFF** definition.

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

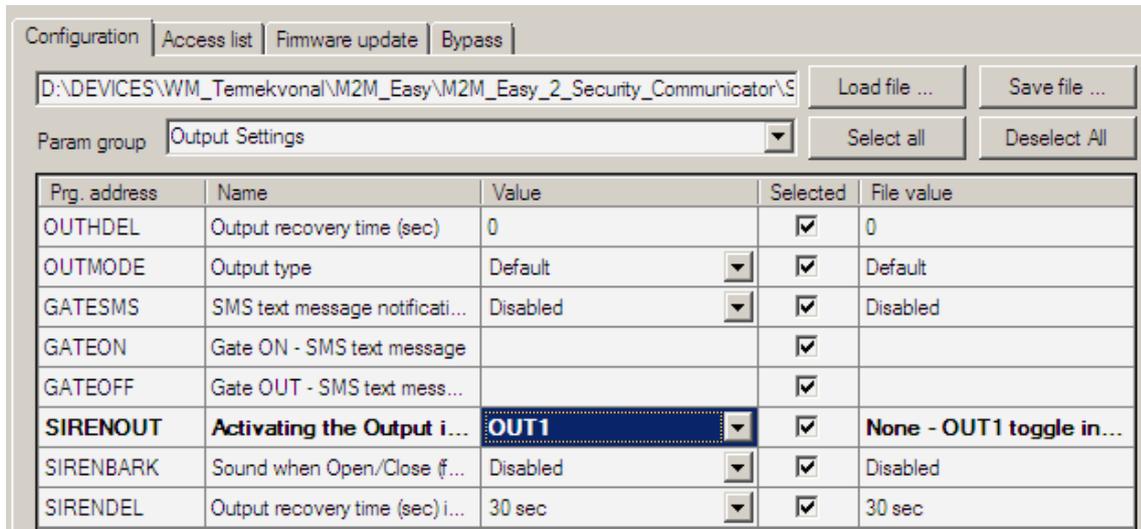
Output settings

For *configuring the siren/bark and output operation* of the **Output Settings** parameter group at the **Device Type**. Then the program will load the related parameters.

The output control is deactivated in this mode by default, then leave the **OUTMODE** value on **Default** value.

If you are attempted to use and switch the siren then allow the input line alarm event to the siren by the **SIRENOUT** parameter (in case of alerting, the siren will be turned on). The **SIRENDEL** defines the recovery time for the output (the siren will be turned off (muted) after this defined interval).

For alarm system *arming or disarming* applying the „bark“ sound can *enabled* by the **SIRENBARK** parameter.



In case of necessary you can save the configuration to your computer by the **Save file** button. Please, also check the Chapter 5.6

5.4 Standalone Alarm System mode settings

In this operation mode the *Easy 2* is operating as a standalone alarm system, when it is transmitting to a remote IP address or to the dispatching software - through GPRS. The further settings are recommended to check or modify in case of necessary.

Load the factory default .CFG file by the **Browse** button.

GPRS communication and APN settings

For the *GPRS settings* choose the **GPRS Settings** parameter group at the *Device Type*. Then the program will load the related parameters.

Change the **GPRSEN** value to *Enable*, to operate the device as a GPRS transmitter.

At the **SFUNCT** parameter you can define that the primary or secondary server IP address will be the first in the signalling sequence.

The **BACKUP** parameter allows a backup signalling to the centre through GSM - in case of mobile network fall/outage. The GSM-relevant parameters must be also configured – e.g. **SYS1**.

You can modify the **ACCOUNT** parameter value if you are attempted to signalling an own customer ID for the identification. If it is not used, the BCDE code will be signalled.

Prg. address	Name	Value	Selected	File value
GPRSEN	GPRS communication	Enabled	<input checked="" type="checkbox"/>	Disabled
SFUNCT	Communication path	Server1,Server2	<input checked="" type="checkbox"/>	Server1,Server2
BACKUP	GSM signalling, when no av...	Disabled	<input checked="" type="checkbox"/>	Disabled
SYS1	Unit call ID		<input checked="" type="checkbox"/>	
ACCOUNT	Customer ID	1130	<input checked="" type="checkbox"/>	BCDE
LFFREQ	GPRS life signal sending int...	300	<input checked="" type="checkbox"/>	300
LFGSMFREQ	GSM life signal sending inter...	60	<input checked="" type="checkbox"/>	60
LFPRES	Visible GPRS life signal	Enabled	<input checked="" type="checkbox"/>	Enabled
LFUNIT	GPRS life signal interval am...	Seconds	<input checked="" type="checkbox"/>	Seconds

The **LFFREQ** is the life signal sending frequency on GPRS channel, which is setup to 300 seconds by general. Check that it is fine or not. The **LFUNIT** value is the amount for the **LFFREQ** in seconds or minutes.

By *disabling* the **LFPRES** value you can send hidden life signals (P603) to the dispatcher center/IP-receiver (if it is supported). By *enabling* it, the normal GPS value will be sent.

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. The program will indicate the configuration progress by the progress bar at the bottom of the screen and at the **Terminal window** (3). At the end of the parameter sending, the device is restarting by using the new settings.

Then, let's open the **GPRS Service** parameter group at the **Device Type** for the **APN settings**. Then the program will load the related parameters.

Prg. address	Name	Value	Selected	File value
APN	APN name	net	<input checked="" type="checkbox"/>	
UN	APN username		<input checked="" type="checkbox"/>	
PWD	APN password		<input checked="" type="checkbox"/>	
DNS1	DNS 1		<input checked="" type="checkbox"/>	
DNS2	DNS 2		<input checked="" type="checkbox"/>	

At the **APN** value, you have to define the APN name for the SIM-card related GPRS data package service. When using a username or password are needed for the access – e.g. in case of chap authentication – then define the **UN** and **PWD** values based on the information proven by your mobile service provider.

When you would like to use a DNS or DDNS server, you can allow it by the **DNS1**, **DNS2** parameters in the next format – e.g. **wmsupport.dyndns.org**

GPRS transmittins settings

Open the **IP-GPRS Service** parameter group at the **Device Type**. Then the program will load the related parameters.

Prg. address	Name	Value	Selected	File value
SERVER1	Server #1 IP	10.10.10.10	<input checked="" type="checkbox"/>	
PORT1	Server #1 port nr.	8888	<input checked="" type="checkbox"/>	9999
SERVER2	Server #2 IP	20.20.20.20	<input checked="" type="checkbox"/>	
PORT2	Server #2 port nr.	8989	<input checked="" type="checkbox"/>	9999
IPPROTO	Protocol	TCP	<input checked="" type="checkbox"/>	UDP
SWPROTO	Communication format	M2M	<input checked="" type="checkbox"/>	Enigma

At the **SERVER1** parameter fill the primary IP address of the IP-receiver and the **PORT1** value for the port number. Setup the secondary IP address to the **SERVER2** and its port to the **PORT2** (if it is also necessary).

Change the **IPPROTO** protocol's format to **TCP** and the **SWPROTO** communication format to **M2M** which means the modified, special Contact ID protocol. This can be used only with the Enigma II, Enigma IP2 receiver devices, Alarmsys and SIMS dispatching software).

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

Input line's Contact ID settings

For *configuring the input line's event transmitting* let's open the **GPRS Input Parameters** view at the **Device Type**. Then the program will load the related parameters.

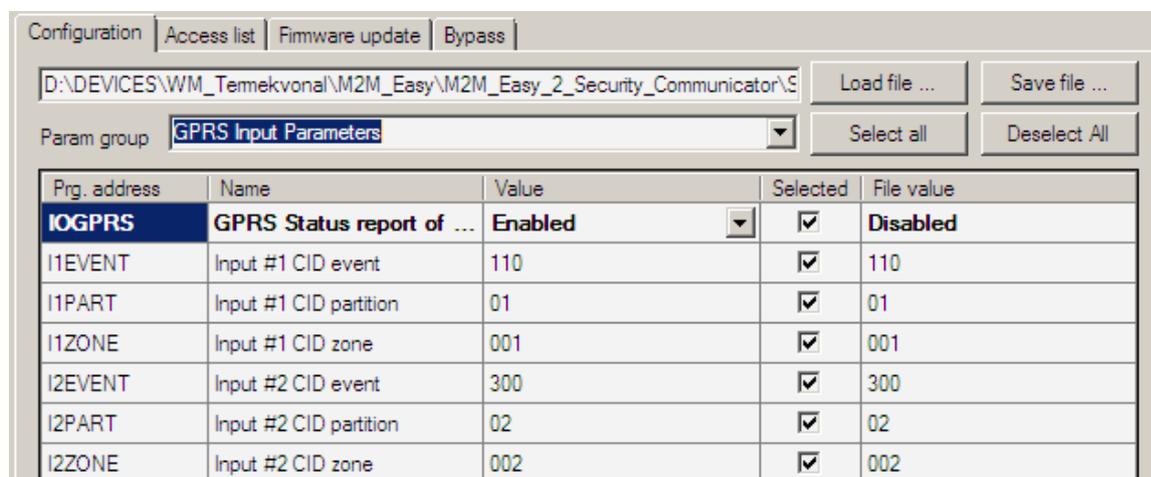
All detected and received signals and events of the *Easy 2* input lines are stored in a puffer with their timestamps, where 32 events can be stored temporary by the system. These will be transmitted/forwarded by the device through the defined network channel (GSM or GPRS connection) to the configured IP address. Then by the handshake communication reply message the buffered event will be deleted after its transmission. When the puffer is full, the next event will be ignored.

The device tries to signalling the incoming events through GPRS connection to the primary IP address. In case of unsuccessful sending (e.g. outage or fall of the primary IP address or a network trouble), then after some delay it retries to send. If it is also unsuccessful, then it tries to send the events to the secondary IP address. If it will not success then it drops the event.

You have to *enable* the **IOGPRS** parameter for transmitting the input line's event and status changes.

For monitoring a sabotage switch or further sensors, the CID event code must be defined at the **IxEVENT** parameter, with the partition number (**IxPART**), zone (**IxZONE**). (The **ix** means the number of the input line in the name of the parameter).

Here you can define values only for the input line nr. #1 and #2. The IO-expansion settings will be listed later.



Prg. address	Name	Value	Selected	File value
IOGPRS	GPRS Status report of ...	Enabled	<input checked="" type="checkbox"/>	Disabled
I1EVENT	Input #1 CID event	110	<input checked="" type="checkbox"/>	110
I1PART	Input #1 CID partition	01	<input checked="" type="checkbox"/>	01
I1ZONE	Input #1 CID zone	001	<input checked="" type="checkbox"/>	001
I2EVENT	Input #2 CID event	300	<input checked="" type="checkbox"/>	300
I2PART	Input #2 CID partition	02	<input checked="" type="checkbox"/>	02
I2ZONE	Input #2 CID zone	002	<input checked="" type="checkbox"/>	002

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

Input settings

For *configuring the input lines operation* open the **Input Settings** parameter group at the **Device Type**. Then the program will load the related parameters.

Here you can define values only for the input line nr. #1 and #2. The IO-expansion settings will be listed later.

On the input lines of the device it is capable of generating Contact ID messages and transmitting them by the ascending edge (L→H) and descending (H→L) edge. (The number of the current input is signed here by 'x').

The length of the time frame can be configured by the **IDELAY** in 20 msec steps, which is *enabled* by default for the inputs to the ascending and descending edges without inverting in an 500 msec time frame (here the delay value is 25 * 20msec).

Prg. address	Name	Value	Selected	File value
IDELAY	Input delay (x20msec)	25	<input checked="" type="checkbox"/>	25
I1INV	Input #1 basic op. mode	Normal Open (NO)	<input checked="" type="checkbox"/>	Normal Open (NO)
I2INV	Input #2 basic op. mode	Normal Open (NO)	<input checked="" type="checkbox"/>	Normal Open (NO)
I1LHEN	Input #1 change (L->H)	Enabled	<input checked="" type="checkbox"/>	Enabled
I2LHEN	Input #2 change (L->H)	Enabled	<input checked="" type="checkbox"/>	Enabled
I1HLEN	Input #1 change (H->L)	Enabled	<input checked="" type="checkbox"/>	Enabled
I2HLEN	Input #2 change (H->L)	Enabled	<input checked="" type="checkbox"/>	Enabled
I1ARM	Input #1 type	24 hours	<input checked="" type="checkbox"/>	24 hours
I2ARM	Input #2 type	24 hours	<input checked="" type="checkbox"/>	24 hours
I1EOL	Input #1 sabotage sensing	Disabled	<input checked="" type="checkbox"/>	Disabled
I2EOL	Input #2 sabotage sensing	Disabled	<input checked="" type="checkbox"/>	Disabled

The edges can be *enabled/disabled* by the **IxLHEN** (low-to-high) and **IxHLEN** (high-to-low) parameters for every input line. The *direction* of the *edge detection* (ascending, descending) can be reversed by the **IxINV** (as NO= Normal Open, NC=Normal Close) parameter.

At this time, the ascending and descending edges are filtered through a time frame (the inputs must be hold for a minimal interval in the current status, to perform the further status change while the change is acknowledged).

For the standalone alarm system modem there are some safety settings as the **IxARM** parameter, which is capable of granting that the current input line can transmit signal only in *Armed* status (value is **Armed**), or whether it is useful to transmit every status changes – even in *Disarmed* status (value is **24 hours**). The *armed* value is used for window & door detectors/sensors by classic, the *24 hours* arming is capable of protecting the secured zones – as protecting the front door in *night mode*.

The *end of line resistor* can be configured by the **IxEOL** parameter for the current input, to detect cable wiring cut (sabotage detection feature). It generates alarm at every case.

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

Notification sending settings

For the *alarm notification and messaging settings* open the **Notification Parameters** parameter group at the **Device Type**. Then the program will load the related parameters.

Here you can define values only for the input line nr. #1 and #2. The IO-expansion settings will be listed later, at the External IO parameter group.

TELx – SMS notification can be setup for max. 4 phone numbers

It can be defined by the **IxS** parameter that in case of input status changes for which phone numbers must the device sending SMS text message notification. Choose one from the possible notification sequence combinations.

The **IxV** is operating quite similar, but it is useful for ring notification. You can configure that which phone numbers must the device ringin gin case of input line changes.

IVSMS parameter – in case of unsuccessful calling/ringing the SMS text message sending can be allowed.

Prg. address	Name	Value	Selected	File value
TEL1	Phone nr #1	06201234567	<input checked="" type="checkbox"/>	
TEL2	Phone nr #2		<input checked="" type="checkbox"/>	
TEL3	Phone nr #3		<input checked="" type="checkbox"/>	
TEL4	Phone nr #4		<input checked="" type="checkbox"/>	
I1S	Input #1 SMS Phone nr	1 - 1	<input checked="" type="checkbox"/>	0 -
I2S	Input #2 SMS Phone nr	0 -	<input checked="" type="checkbox"/>	0 -
I1V	Input #1 ringing Phone nr	0 -	<input checked="" type="checkbox"/>	0 -
I2V	Input #2 ringing Phone nr	0 -	<input checked="" type="checkbox"/>	0 -
IVSMS	In case of unsuccessful ringi...	Disabled	<input checked="" type="checkbox"/>	Disabled
I1ON	Input #1 - active - SM...	Error.	<input checked="" type="checkbox"/>	
I1OFF	Input #1 - inactive - SMS te...		<input checked="" type="checkbox"/>	
I2ON	Input #2 - active - SMS text ...		<input checked="" type="checkbox"/>	
I2OFF	Input #2 - inactive - SMS te...		<input checked="" type="checkbox"/>	
SMSFWD	SMS message forwardi...	Enabled	<input checked="" type="checkbox"/>	Disabled
ISABEVENT	Sabotage CID code	331	<input checked="" type="checkbox"/>	331
ISABON	Sabotage event SMS t...	Sabotage.OUT	<input checked="" type="checkbox"/>	
ISABOFF	Sabotage recovery SM...	Sabotage.IN	<input checked="" type="checkbox"/>	

The **IxON** parameter is used for SMS messaging for the input status, when the signal level is ascending from low→high, while the **IxOFF** is for the descending value from high→low (recovery).

SMSFWD – forwarding only messages in SMS text messages to the phone number #1 (the mobile provider SMS notifications and SMS commands will be not forwarded).

ISABEVENT – in case of a sabotage event or wire cut the forwarded CID code can be defined.

In case of a sabotage, wire cut, the SMS message can also be configured by the **ISABON** parameter. The recovery message by the **ISABOFF** definition.

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

Siren and output settings

For *configuring the siren/bark and output operation* of the **Output Settings** parameter group at the **Device Type**. Then the program will load the related parameters.

Here you can define values for the output line nr. #1 only. The IO-expansion settings for the further 3 outputs (nr. 2-4) will be listed later, at the External IO parameter group.

Fig. address	Name	Value	Selected	File value
OUTHDEL	Output recovery time (sec)	0	<input checked="" type="checkbox"/>	0
OUTMODE	Output type	Arm/disarm	<input checked="" type="checkbox"/>	Default
GATESMS	SMS text message notificati...	Disabled	<input checked="" type="checkbox"/>	Disabled
GATEON	Gate ON - SMS text message		<input checked="" type="checkbox"/>	
GATEOFF	Gate OUT - SMS text mess...		<input checked="" type="checkbox"/>	
SIRENOUT	Activating the Output i...	OUT1	<input checked="" type="checkbox"/>	None - OUT1 toggle in...
SIRENBARK	Sound when Open/Close (f...	Disabled	<input checked="" type="checkbox"/>	Disabled
SIRENDEL	Output recovery time (sec) i...	30 sec	<input checked="" type="checkbox"/>	30 sec

For controlling the output – to remotely switch by SMS text message or a voice call/ringing – change the **OUTMODE** value to **Arm/disarm** (for the alarm system).

To switching the siren you can add it for the incoming input line alarm events by the **SIRENOUT** parameter (when alerting, the siren will be turned on).

The **SIRENDEL** defines the recovery time for the output (the siren will be turned off (muted) after this defined interval).

For alarm system *arming or disarming* applying the „bark“ sound can *enabled* by the **SIRENBARK** parameter.

The output has two peration mode: a mono-stable and a bi-stable. The mode can be configured by the **OUTHDELx** parameter. It holds on the output until the configured interval, then it switches off.

When its value is:

- 0 or not defined: it is in bi-stable mode
- 1-86400 (seconds): it's in mono-stable mode.

In mono-stable mode the output will be in standby (the relay contacts are opened) until a trigger event will be occurred. In case of a trigger the output relay will close (shortened), then after a pre-defined delay interval automatically recovers to stand-by position.

During the delay interval when a trigger comes then the timing will be restarted (e.g. for restartable mono-stable multivibrator).

In case of parameter value '0' the output operates in normal mode, then it will not switch back.

In Bi-stable mode there is no delay. From the opened or closed standing positions the relay can be switched or changed its position in case affect of the appropriate trigger.

The trigger event can be also for mono-stable and bi-stable modes the **OUTON** and **OUTOFF** command value or ringing (e.g. gate opening).

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

IO-expansion settings (for input lines nr. #3-8, and output lines nr. #2-4)

For configuring the parameters of the *IO-expansion* open the **External IO** parameter group at the **Device Type**. Then the program will load the related parameters.

Prg. address	Name	Value	Selected	File value
I3INV	Input #3 basic op. mode	Normal Open (NO)	<input checked="" type="checkbox"/>	Normal Open (NO)
I4INV	Input #4 basic op. mode	Normal Open (NO)	<input checked="" type="checkbox"/>	Normal Open (NO)
I5INV	Input #5 basic op. mode	Normal Open (NO)	<input checked="" type="checkbox"/>	Normal Open (NO)
I6INV	Input #6 basic op. mode	Normal Open (NO)	<input checked="" type="checkbox"/>	Normal Open (NO)
I7INV	Input #7 basic op. mode	Normal Open (NO)	<input checked="" type="checkbox"/>	Normal Open (NO)
I8INV	Input #8 basic op. mode	Normal Open (NO)	<input checked="" type="checkbox"/>	Normal Open (NO)
I3LHEN	Input #3 change (L->H)	Enabled	<input checked="" type="checkbox"/>	Enabled
I4LHEN	Input #4 change (L->H)	Enabled	<input checked="" type="checkbox"/>	Enabled
I5LHEN	Input #5 change (L->H)	Enabled	<input checked="" type="checkbox"/>	Enabled

The listed input parameters starting by the **character „I”** are value for the input numbers from #3 to #8 - according the requirements.

The listed output parameters starting by the **character „O”** are value for the output numbers from #2 to #4.

The **'x'** assigns the number of the current input/output line.

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

Standalone alarm system settings

For the *configuration of the standalone alarm system arming/disarming operation* open the **Other** parameter group at the **Device Type**. Then the program will load the related parameters.

Prg. address	Name	Value	Selected	File value
ARMSMS	SMS text message sen...	Enabled	<input checked="" type="checkbox"/>	Disabled
ARMON	Arm (close) response - ...	Armed	<input checked="" type="checkbox"/>	
ARMOFF	Disarm (open) respons...	Disarmed	<input checked="" type="checkbox"/>	
ARMFALL	Unsuccessful Arm (clos...	Arm.Failed	<input checked="" type="checkbox"/>	
ARMBLOCK	Blocking the Arm (clos...	Enabled	<input checked="" type="checkbox"/>	Disabled
DTMFTIME	DTMF pause	80	<input checked="" type="checkbox"/>	80
ROAMING	Roaming	Disabled	<input checked="" type="checkbox"/>	Disabled
CIDUNCACK	Automatic CID ACK for the ...	Disabled	<input checked="" type="checkbox"/>	Disabled
REBOOTDAY	Daily reboot	Disabled	<input checked="" type="checkbox"/>	Disabled
OBJ_ID	Alarm System Customer ID c...	Disabled	<input checked="" type="checkbox"/>	Disabled
DOALLDIAL	Ringng all phone num...	Enabled	<input checked="" type="checkbox"/>	Disabled
CALLBARTIME1	Call or ring interval between ...	300	<input checked="" type="checkbox"/>	300
CALLBARTIME2	Interval between calls (sec)	300	<input checked="" type="checkbox"/>	300
CALLTOKENS	Number of calls	2	<input checked="" type="checkbox"/>	2
STARTUPCID	Startup notification CID	Disabled	<input checked="" type="checkbox"/>	Disabled

You can *enable* the **ARMSMS** parameter, which notifies about the remote *arm/disarm* events.

The **ARMON** and **ARMOFF** parameters are for defining the SMS notification messages for the *arming on* and *arming off* events. The **ARMFAIL** equals with the unsuccessful arming/disarming event SMS notification message.

By the **ARMBLOCK** parameter, you can *enable* that only the arming will be allowed only for the closed zones (and for the sensors with closed status) – which can be reasonable by safety needs.

When there is an opened zone during performing an ARM event (arm pushed), then the **ARMFAIL** message will be notifies the persons with the opened zone number and partition nr.

The **DOALLDIAL** parameter is for *enabling* that in case of an incoming event signal call the pre-defined phone number(s). It is working together with the **CALLBARTIME1**, and **CALLBARTIME2**, and **CALLTOKENS** parameters regarding its values.

In case of necessary you can save the configuration to your computer by the **Save file** button.

Please, also check the Chapter 5.6

5.5 Monitoring input lines and gate opening settings

In this operation mode the *Easy 2* is operating very similar to the mode which have been described at the Chapter 5.4, but the signaling is not performed to the dispatcher centre. In this mode, the GPRS network is used for remote control of the output lines, and the GSM network is utilized for messaging, for calling. The further settings can be important to check or to modify in case of necessary.

Input settings

Load the factory default .CFG file by the **Browse** button.

For *configuring the input lines operation* open the **Input Settings** parameter group at the **Device Type**. Then the program will load the related parameters.

Here you can define values only for the input line nr. #1 and #2. The IO-expansion settings will be listed later.

On the input lines of the device it is capable of generating Contact ID messages and transmitting them by the ascending edge (L→H) and descending (H→L) edge. (The number of the current input is signed here by 'x').

The screenshot shows a configuration window with the following structure:

- Navigation tabs: Configuration, Access list, Firmware update, Bypass
- File path: D:\DEVICES\WM_Temekvonal\M2M_Easy\M2M_Easy_2_Security_Communicator\...
- Buttons: Load file ..., Save file ..., Select all, Deselect All
- Param group: Input Settings
- Table with columns: Prg. address, Name, Value, Selected, File value

Prg. address	Name	Value	Selected	File value
IDELAY	Input delay (x20msec)	25	<input checked="" type="checkbox"/>	25
I1INV	Input #1 basic op. mode	Normal Open (NO)	<input checked="" type="checkbox"/>	Normal Open (NO)
I2INV	Input #2 basic op. mode	Normal Open (NO)	<input checked="" type="checkbox"/>	Normal Open (NO)
I1LHEN	Input #1 change (L->H)	Enabled	<input checked="" type="checkbox"/>	Enabled
I2LHEN	Input #2 change (L->H)	Enabled	<input checked="" type="checkbox"/>	Enabled
I1HLEN	Input #1 change (H->L)	Enabled	<input checked="" type="checkbox"/>	Enabled
I2HLEN	Input #2 change (H->L)	Enabled	<input checked="" type="checkbox"/>	Enabled
I1ARM	Input #1 type	24 hours	<input checked="" type="checkbox"/>	24 hours
I2ARM	Input #2 type	24 hours	<input checked="" type="checkbox"/>	24 hours
I1EOL	Input #1 sabotage sen...	Enabled	<input checked="" type="checkbox"/>	Disabled
I2EOL	Input #2 sabotage sen...	Enabled	<input checked="" type="checkbox"/>	Disabled

The length of the time frame can be configured by the **IDELAY** in 20 msec steps, which is *enabled* by default for the inputs to the ascending and descending edges without inverting in a 500 msec time frame (here the delay value is 25 * 20msec).

The edges can be *enabled/disabled* by the **IxLHEN** (low-to-high) and **IxHLEN** (high-to-low) parameters for every input line. The *direction* of the *edge detection* (ascending, descending) can be reversed by the **IxINV** (as NO= Normal Open, NC=Normal Close) parameter.

At this time, the ascending and descending edges are filtered through a time frame (the inputs must be hold for a minimal interval in the current status, to perform the further status change while the change is acknowledged).

By the **IxARM** parameter, which is capable of granting that the current input line can transmit signal only in *Armed* status (value is **Armed**), or whether it is useful to transmit every status changes – even in *Disarmed* status (value is **24 hours**). Change it to the *24 hours* arming value.

The *end of line resistor* can be configured by the **IxEOL** parameter for the current input, to detect cable wiring cut (sabotage detection feature), which is the most important in case of

monitoring external devices through the input line. The feature generates alarm at every signals change.

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

Notification sending settings

For the *alarm notification and messaging settings* open the **Notification Parameters** parameter group at the **Device Type**. Then the program will load the related parameters.

Here you can define values only for the input line nr. #1 and #2. The input lines nr. #3-8 settings will be listed later, at the External IO parameter group.

Prg. address	Name	Value	Selected	File value
TEL1	Phone nr #1	06201234567	<input checked="" type="checkbox"/>	
TEL2	Phone nr #2	06301234567	<input checked="" type="checkbox"/>	
TEL3	Phone nr #3	06701234567	<input checked="" type="checkbox"/>	
TEL4	Phone nr #4	+49207654321	<input checked="" type="checkbox"/>	
I1S	Input #1 SMS Phone nr	15 - 1,2,3,4	<input checked="" type="checkbox"/>	0 -
I2S	Input #2 SMS Phone nr	1 - 1	<input checked="" type="checkbox"/>	0 -
I1V	Input #1 ringing Phone nr	0 -	<input checked="" type="checkbox"/>	0 -
I2V	Input #2 ringing Phone...	2 - 2	<input checked="" type="checkbox"/>	0 -
IVSMS	In case of unsuccessful...	Enabled	<input checked="" type="checkbox"/>	Disabled
I1ON	Input #1 - active - SM...	Input 1.ON	<input checked="" type="checkbox"/>	
I1OFF	Input #1 - inactive - S...	Input 1.OFF	<input checked="" type="checkbox"/>	
I2ON	Input #2 - active - SM...	Input 2.ON	<input checked="" type="checkbox"/>	
I2OFF	Input #2 - inactive - S...	Input 2.OFF	<input checked="" type="checkbox"/>	
SMSFWD	SMS message forwardi...	Enabled	<input checked="" type="checkbox"/>	Disabled
ISABEVENT	Sabotage CID code	331	<input checked="" type="checkbox"/>	331
ISABON	Sabotage event SMS text m...		<input checked="" type="checkbox"/>	
ISABOFF	Sabotage recovery SMS tex...		<input checked="" type="checkbox"/>	

TELx – SMS notification can be setup for max. 4 phone numbers

It can be defined by the **IxS** parameter that in case of input status changes for which phone numbers must the device sending SMS text message notification. Choose one from the possible notification sequence combinations.

The **IxV** is operating quite similar, but it is useful for ring notification. You can configure that which phone numbers must the device ringing gin case of input line changes.

IVSMS parameter – in case of unsuccessful calling/ringing the SMS text message sending can be allowed.

The **IxON** parameter is used for SMS messaging for the input status, when the signal level is ascending from low→high, while the **IxOFF** is for the descending value from high→low (recovery).

SMSFWD – forwarding only messages in SMS text messages to the phone number #1 (the mobile provider SMS notifications and SMS commands will be not forwarded).

ISABEVENT – in case of a sabotage event or wire cut the forwarded CID code can be defined.

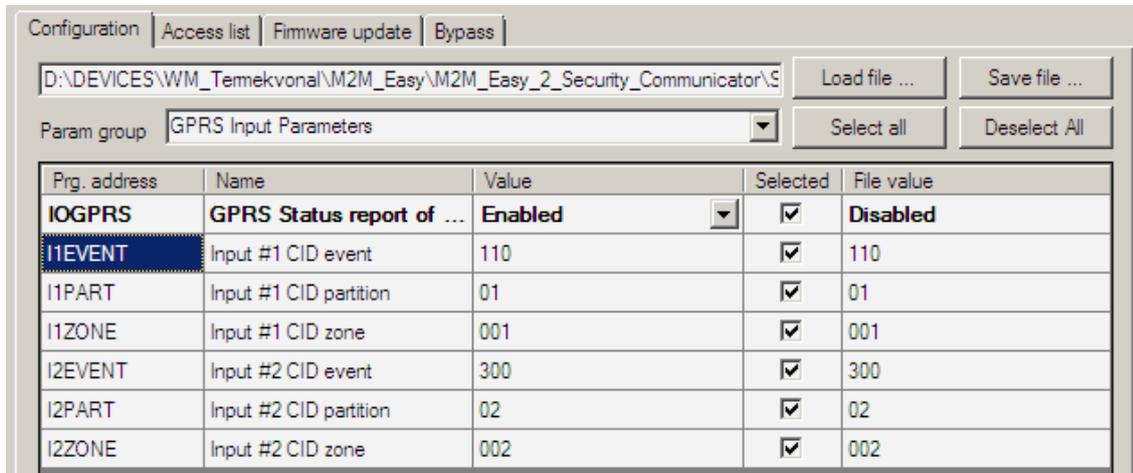
In case of a sabotage, wire cut, the SMS message can also be configured by the **ISABON** parameter. The recovery message by the **ISABOFF** definition.

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* coloumn) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

When you are also attempted to signalling CID codes ... (optional)

For *configuring the input line's event transmitting* let's open the **GPRS Input Parameters** view at the **Device Type**. Then the program will load the related parameters.

For remote monitoring pf the signal- and status changes of the input lines, you have to *enable* the **IOGPRS** parameter.



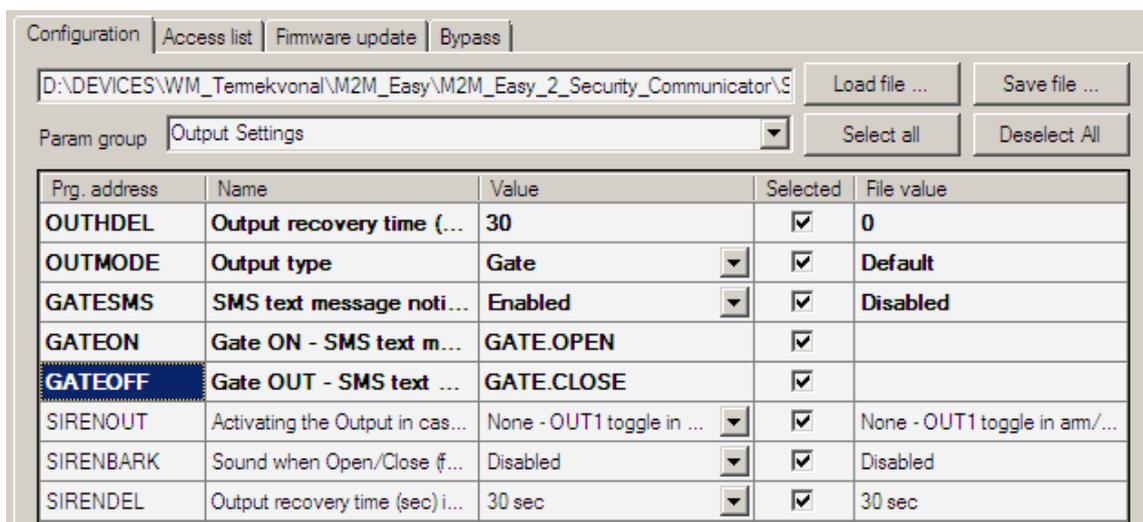
For monitoring a sabotage switch or further sensors, the CID event code must be defined at the **IxEVENT** parameter, with the partititon number (**IxPART**), zone (**IxZONE**). (The **ix** means the number of the input line in the name of the parameter).

Here you can define values only for the input line nr. #1 and #2. The IO-expansion settings will be listed later.

Gate opening and output controlling settings

For *configuring the gate opening* open the **Output Settings** parameter group at the **Device Type**. Then the program will load the related parameters.

Attention! The gate opening can be used only through the output nr. #1. Through the IO-expansion nr. #2-4 you can remotely control or switch further external devices (see in the next part (IO-expansion settings)).



For *gate opening, controlling the output line* – to remotely switch by SMS text message or a voice call/ringing –change the **OUTMODE** value to **Gate**.

The output has two operation mode: a mono-stable and a bi-stable. The mode can be configured by the **OUTHDELx** parameter. It holds on the output until the configured interval, then it switches off.

When its value is:

- 0 or not defined: it is in bi-stable mode
- 1-86400 (seconds): it's in mono-stable mode.
- for the defined interval, it will hold the output on, then it will switch it off.

In mono-stable mode the output will be in standby (the relay contacts are opened) until a trigger event will be occurred. In case of a trigger the output relay will close (shortened), then after a pre-defined delay interval automatically recovers to stand-by position.

During the delay interval when a trigger comes then the timing will be restarted (e.g. for restartable mono-stable multivibrator).

In case of parameter value '0' the output operates in normal mode, then it will not switch back.

In Bi-stable mode there is no delay. From the opened or closed standing positions the relay can be switched or changed its position in case affect of the appropriate trigger.

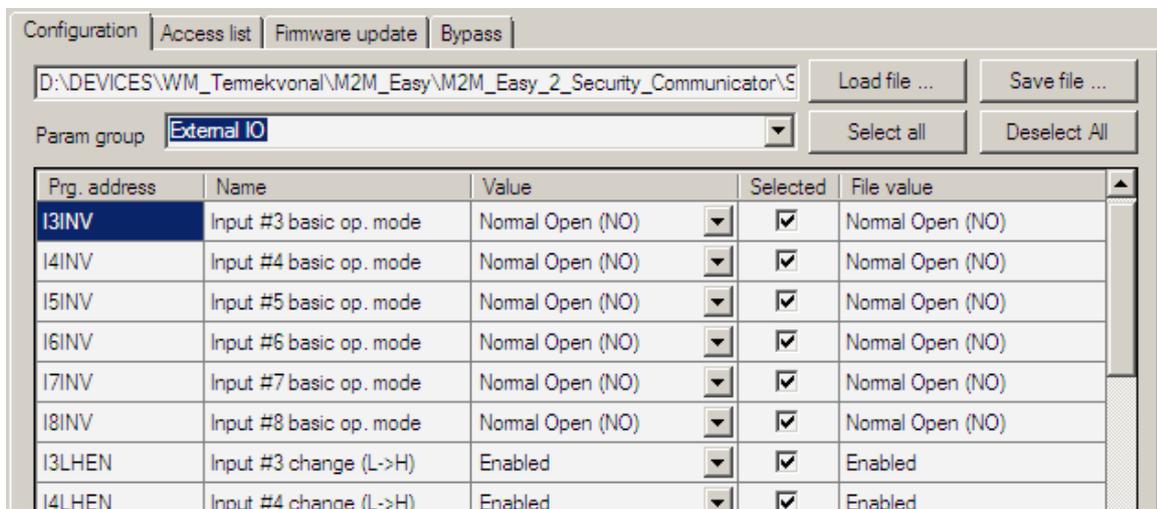
The trigger event can be also for mono-stable and bi-stable modes the **OUTON** and **OUTOFF** command value or ringing (e.g. gate opening).

By the **GATESMS** parameter you can *enable* that the gate opening events will be notified to the phone number where the remote control were initiated from. The **GATEON** defines the message for the gate opening event, and the **GATEOFF** it the gate closing event message.

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

IO-expansion settings (for input line nr. #3-8, and output line nr. #2-4)

For configuring the parameters of the *IO-expansion* open the **External IO** parameter group at the **Device Type**. Then the program will load the related parameters.



The listed input parameters starting by the **character „I”** are value for the input numbers from #3 to #8 - according the requirements.

The listed output parameters starting by the **character „O”** are value for the output numbers from #2 to #4.

The **‘x’** assigns the number of the current input/output line.

Attention! You cannot use the output lines nr. #2-4 for gate opening! These output line can only be applying for remote switch of external devices.

If you’ve changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* coloumn) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

In case of necessary you can save the configuration to your computer by the **Save file** button.

Please, also check the Chapter 5.6

5.6 Further safety settings

In the **Other** parameter group you will found further general safety and alarm feature’s settings which is used in case of the security and safety aimed tasks.

By the **CIDUNCACK** parameter you can *enable* that the *Easy 2* will send immediate and automatic acknowledge to the alarm center – independently that the signalling to the centre was sent successfully or not.

This could be important for some alarm centers where the handshake for alarm signalling is not important or not available. When the surveillance centre is not able to send a response acknowledge to an incoming alarm event, this can be helpful to apply.

You can use this feature only for your own risk!

The **STARTUPCID** parameter allows the immediate status sending and signalling when the device starting up. When it is *enabled*, then in case of a restart or turning off the *Easy2* will automatically send the restart status (e.g. CID code: E901 – Restart (by software), or CID code: E900 – Turning on (by hardware)).

By the **REBOOTDAY** parameter you can *enable* the industrial- and safety standard daily once device restart event.

The screenshot shows a configuration window with a table of parameters. The 'STARTUPCID' parameter is highlighted in blue. The table has the following data:

Prg. address	Name	Value	Selected	File value
ARMSMS	SMS text message sending i...	Disabled	<input checked="" type="checkbox"/>	Disabled
ARMON	Am (close) response - SMS ...		<input checked="" type="checkbox"/>	
ARMOFF	Disam (open) response - S...		<input checked="" type="checkbox"/>	
ARMFAIL	Unsuccessful Am (close) - S...		<input checked="" type="checkbox"/>	
ARMBLOCK	Blocking the Am (close) wh...	Disabled	<input checked="" type="checkbox"/>	Disabled
DTMFTIME	DTMF pause	80	<input checked="" type="checkbox"/>	80
ROAMING	Roaming	Enabled	<input checked="" type="checkbox"/>	Disabled
CIDUNCACK	Automatic CID ACK for...	Enabled	<input checked="" type="checkbox"/>	Disabled
REBOOTDAY	Daily reboot	Enabled	<input checked="" type="checkbox"/>	Disabled
OBJ_ID	Alarm System Customer ID c...	Disabled	<input checked="" type="checkbox"/>	Disabled
DOALLDIAL	Ringing all phone numbers	Disabled	<input checked="" type="checkbox"/>	Disabled
CALLBARTIME1	Call or ring interval between ...	300	<input checked="" type="checkbox"/>	300
CALLBARTIME2	Interval between calls (sec)	300	<input checked="" type="checkbox"/>	300
CALLTOKENS	Number of calls	2	<input checked="" type="checkbox"/>	2
STARTUPCID	Startup notification CID	Enabled	<input checked="" type="checkbox"/>	Disabled

The **ROAMING** feature *enables* the roaming operation on the mobile network, which is necessary to be also supported by the mobile operator of the SIM card. When you are attempted to use the roaming, then you have to fill the value country code prefixes (e.g. the +49 prefix for Germany in case of national usage or the 0049 prefix usage in case of

international useg – between foreign mobile operators through the roaming). Always be informed about the international (roaming) usage conditions of the SIM card and GPRS data transmitting service – ask you mobile operator!

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

In case of necessary you can save the configuration to your computer by the **Save file** button.

5.7 Firmware update/refresh from FTP server

The saved configuration can be distributed for one or multiply devices. The ftp server usage prerequisite is for the device to access the ftp server IP address through the mobile network.

By the **FTPSERVER** parameter you can define the ftp server IP address. Where the **FTPPORT** means the server port number (by default it is equal to port 21). You have to add the .BIN firmware file path and filename to the **FTPFILE** parameter.

The screenshot shows a configuration window with the following elements:

- Navigation tabs: Configuration, Access list, Firmware update, Bypass
- File path: D:\DEVICES\WM_Temekvonal\M2M_Easy\M2M_Easy_2_Security_Communicator\...
- Buttons: Load file ..., Save file ..., Select all, Deselect All
- Param group: FTP Firmware Update
- Table with columns: Prg. address, Name, Value, Selected, File value

Prg. address	Name	Value	Selected	File value
FTPSERVER	FTP server IP	30.30.30.30	<input checked="" type="checkbox"/>	
FTPPORT	FTP server port	21	<input checked="" type="checkbox"/>	
FTPFILE	Firmware file name (.BIN)	EASY2_V21R08E.BIN	<input checked="" type="checkbox"/>	
FTPUN	FTP username	user	<input checked="" type="checkbox"/>	
FTPPWD	FTP password	pws	<input checked="" type="checkbox"/>	
FTPSMS	SMS report from the so...	Enabled	<input checked="" type="checkbox"/>	Disabled
FTPSUCC	Successful update - S...	FW.Update.OK	<input checked="" type="checkbox"/>	
FTPFAIL	Unsuccessful update -...	FW.Update.Fail	<input checked="" type="checkbox"/>	

The **FTPUN** is the username and the **FTPPWD** is the related password for accessing the ftp server by the device.



You can define and *enable* the firmware refresh progress status SMS notification (in case of installation from an ftp server) by the **FTPSMS** parameter. You can setup the success text message for case of successful installation (by **FTPSUCC** parameter) and for case of failure (**FTPFAIL** parameter).

Chapter 6. Further information about the Easy2 operation

In this chapter you will find the main important information about the *Easy 2* operation.

6.1 Primary and secondary communication channel

The *Easy 2* is capable of signalling the incoming events to two communication channels to the remote dispatcher centre, via GPRS and by a GSM call.

The 2 channels can be enabled or disabled independently from each other. When all the two channel is enabled, then the GPRS has priority and the voice call is activated only in case of GPRS communication and transmission failure. If all the two channel is disabled, then the signalling and life signal sending are inactive.

6.2 Using the secondary channel

There can be two server configured for transmitting the signals, but only for one server will be transmitted the data. The other server will be used as backup. The order of the primary and secondary server operation can be defined by the **SFUNCT** parameter. The device switches from the primary to the secondary server when the primary server cannot transmit data. If the secondary server will successfully receiving the data, then the data will be still sent for more 5 seconds to this server. Every signal transmitting will reset the counter of this time limit. When the timeout spent it will switch back to the primary server.

The sending is successful, when a handshake reply is received back from the server within 6 seconds after the device sent.

Transmitting options in case of defining multiply IP addresses:

Signalling to 2 IP addresses (e.g. Server1: remote dispatcher centre which replies ACK response; Server2: server, no ACK response).

Use cases:

- It will sending only for the primary server (**GPRSEN** enabled, **SERVER1** filled, **PORT1** filled)
- It will sending to the secondary server (backup/spare) when the primary is not available (**GPRSEN** enabled, **SERVER1** filled, **PORT1** filled, **SERVER2** filled, **PORT2** filled, **SFUNCT** value is *Server1, Server2*)

6.3 Signalling by GSM call

When the device is communicating with the alarm system, after the inclusion of the shell, the alarm will get the dial tone only, when there is no active call in progress.

In this mode the device has no active communication, only allows calls to the alarm system dialed phone number and after finishing the call it disconnects the connection.

The calls are limited, as it can ring the same number only once in every 5 minutes. In case of voice call notification (ringing), the system sends an SMS text message notification: "*Easy 2 call failed*".

The device stores the last dialed phone number in the **SYSL** parameter. When the **SYS1** parameter is not configured, then the *Easy 2* will dial the last called number (which were called by the alarm system) and reads the number from this **SYSL** parameter. When either the **SYS1**, nor the **SYSL** parameters are not defined, then the device is unable to signalling!

6.4 Receiving the signalling of events

The device can receive events from two sources: from the alarm system (TIP-RING port or its input line) or through the input lines. There is an important difference between these, while the incoming events from alarm system need immediate response and signalling, then the incoming events from the input lines will be handled one-by-one by buffer and will be waiting for processing which will be performed by the events time sequence.

Independently from the operation mode, the event types can be signalled through GPRS or GSM voice call.

Furthermore, the input line events are able to generate SMS text message or voice call notification.

6.5 Life signals

In case of thicker heartbeats/life signals the device will traffic more data through the network, which is unnecessary in some cases. You can easily exceed the allowed data limit of the SIM card. It is recommended to configure the default *300sec* or greater (more rare) interval for life signal sending frequency.

Visible and invisible life signal

The visible life signal means that, when the device will send information to the dispatcher software only from the life signal outages. When the life signal is visible, then all sent life signals by the device will be visible in the dispatcher software.

6.6 Voice call notification (ringing)

For an input *trigger* event the assigned phone numbers will be activated (related to the input lines). The ringing of the active phone numbers will be performed by index number sequence, regardless of which input has been activated for a specific number.

The ringing is successfully performed, when the assigned numbers to the related input lines will be inactivated – which means that the further configured numbers will be not notified, as it is setup by default. (Unless you have specific parameters defined for this.)

When the ringed phone number was also active at the other input line, then the other input assigned numbers will be also inactivated.

The ringing is successful, when the called number is receiving or rejected the call within 20 seconds. In other case, the device continuous the ringing sequence by the next defined phone number (if here is further). Furthermore, by a special parameter you can *enable or disable* the sending of SMS notification about the unsuccessful ringings.

In case of receiving the call/ringing the device will hangs up the call without any delay.

You can *enable* the SMS message notification from the unsuccessful ringing by the **IVSMS** parameter (*disabled* by default).

The device cannot handle a difference between the busy call and rejected call.

The voicemail also means a received call, therefore the notification cannot be received in this case.

The ringing will be also unsuccessful, when the called number is busy during the notification and the call waiting service is not enabled to the phone.

6.7 Gate opening

In mono-stable operation mode the voice call (ringing) initialising a timing, in bi-stable mode the output changes its status by affection for the ringing.



The authentication will be performed by checking the caller's number. The communicator rejects the call without any delay within the success of the authentication.

In case of successful authentication when the **GATESMS** parameter was *enabled*, the caller (who remotely controls the gate) will receive an SMS notification about the status of the input (in mono-stable mode the delay value will be also reported).

The definition of the phone numbers and deletion of the can be performed via several ways. The further condition for this, that the **OUTMODE** parameter must be configured to „**Gate**“ value.

The addition and deletion of the phone numbers is possible through several ways.

Chapter 7. Configuration by SMS messages

In this chapter you will find the executable commands and their descriptions which are possible to send through SMS text messages.

By parametrizing the device by SMS commands the following rules must be considered:

- In one SMS message you can send more commands, but maximum 158 characters can be used in one SMS message.
- The commands must contain only english alphabetical letters (without any special characters) and numbers.
- You are allowed to use the following special signs: ! " # \$ % & ' () * + , - . / : ; < = > ? @
- The order and divide of the commands is possible with comma sign without a space character.
- The parameter value (after the = character) can be empty.
- The question mark („?”) after the parameter means the query of the current parameter.
- You cannot use any of the commands or responses – as „OK” or „NO” or „ERROR” – for parameter values.

The execution order of the sent commands will be performed by the same sequence as it is in the SMS text message.

The customer will receive a notification SMS message from the successful processing of the SMS command that he sent (where the following are reported: number of sent commands, process success/failure). For answering the sent SMS commands, an acknowledge response SMS message will be received (e.g. „OK” or the queried values).

7.1 Authentication command

In every SMS command (!) you have to define the password in the first position! E.g.

„PW=...”

Command	Description
PW	Connection / authentication password

7.2 Query commands

You can send several query commands in the same SMS text message, but cannot mixed with further value-additional commands!

You will receive a response SMS text notification with the queried values for answering the sent SMS command message.

Command	Response content
INFDEV or DEVSTAT	It will response a SMS report with the current statuses of the <i>Easy 2</i> : account nr. (customer ID), signal strength, software version, hardware identifier, device IMEI identifier, SIM card ICC identifier, battery status, IP address Containing parameter values: ACCOUNT, SQ, SWVER, HWID, IMEI, SIMICC, VBATT, IP
INFIO	Current status of the input lines and the output line. Containing parameters: ACCOUNT, SQ, current status of the inputs lines & the output line
INFTEL	Configured voice/SMS notification settings, phone numbers and notification (SMS text message) order sequence, voice call (ringing) order sequence will be responded. Containing parameters: ACCOUNT, SQ, TEL1, TEL2, TEL3, TEL4, I1S, I2S, I1V, I2V
INFSMS	Input SMS notification settings. Containing parameters: ACCOUNT, SQ, I1ON, I1OFF, I2ON, I2OFF
INFIP	Server connection settings. Containing parameters: ACCOUNT, SQ, IMEI, IP, SERVER1, PORT1, SWPROTO

7.3 Parametrizing by commands

Hereby we collected all SMS command parameters which are NOT handled by the *EasyTerm* software.

For sure, you can use all further listed commands (exact *EasyTerm* parameter names and value).

You always have to use password authentication, in every parametrizing SMS command message! The last command in every SMS command message must be the **RESET** command which performs a device restart after the succesful configuration of the new, required settings!

Device restart, restore of factory defaults, password

Command	Description
RESET	Restarts the device (manual restart which is needed to use after every parametring SMS command)
ERASECONF	Deletion of every the stored parameters and settings from the device memory (whole configuration delete)
PWNEW	Password change, adding the new password for connection authentication

Firmware refresh from the server – started by SMS command message

Command	Description
FWLOAD	Starting the Ftp firmware updates, with the already configured ftp parameter settings

Important to define the necessary Ftp connection parameters to the succesful ftp firmware update – as port, IP address, ftp username and password, etc.

Bypass – disabling a zone – specific commands

The **BYPASS** parameters can be only executed via SMS commands – and also possible to control from the *EasyTerm* (**Bypass** tab).

Due to these, there is possible to disabling the alarm of the zones. By the **ARMBLOCK** parameter, when the **BYPASS** is *enabled* for the current zone, the device can be *armed* as well (as an alarm system) - whether an opened zone.

In case of activated BYPASS for a zone, the events of the current zone will be not signalled as alarms.

Command	Description
IxBYPASSON	Disabling the alarming for the nr. x input/zone
IxBYPASSOFF	Enabling the alarming for the nr. x input/zone
BYPASSON	Turning off the the alarming for all inputs/zones
BYPASSOFF	Turning on the the alarming for all inputs/zones

Standalone Alarm System specific commands – Arming/Disarming

Command	Description
ARM	Arming the alarm status of the <i>Easy 2</i> (activates the arming)
DISARM	Disarming the alarm status of the <i>Easy 2</i>

Gate opening, remote output control specific commands

Command	Description
GATE or CONT or CTRL	For affection of the command the added new phone number will be recorded to the contact list into the argumented position. Values: <n> position in the contact list (1 – 125). In case of '0' the current number will be deleted. The <i>phone number</i> value can be added at here. <phonenumber> - the <i>phone number</i> value can be added here. When it is already exists or the memory is full, then there is no affection.
GATERM	Hatására a megadott sorszámú hívószám törlődik a listából. Value: <telefonszám> sequence number of the phone number in the contact list (1-125) When executing this command the given phone number will be deleted from the contact list.
OUTON	Gate opening in Bi-stable mode: Relay contact will be closed (shortened) in Mono-stable mode: Starts the timing
OUTOF or OUTOFF	Gate closing in Bi-stable mode: Relay contact will be opened in Mono-stable mode: Stops the timing

7.4 Examples for SMS command parameters

According to the SMS text message format standard, in one SMS message command you can use max. 158 characters can be used in one SMS message.

When the required parameters are not able to fit in one SMS command message, you can start a new, by using the **PW=** password authentication at first, then you can continue by the next parameter or command. You always have to use password authentication, in every parametrizing message the **RESET** command as the last!

The command messages can be sent one-by-one, each after then the device will get and processed them in a time order sequence. Take consider that the device will restarted at every RESET command, which with all the sent parameters and commands can all cause minutes to wait while the whole configuration will be finished. Always wait while the device will be ready for proper usage and signalling of the incoming events.

The parametrisation can be performed due to the parameter names and values which have been described in the chapter 5 and 6.

You can found some examples for some more complex parameter command SMS messages in the following.

1. **GSM transmitter (pre-configured for this operation mode by general):** The alarm system is connected to the TIP-RING input port, the received CID codes are forwarded through the GSM network and signalling to the remote dispatcher centre.

```
PW=ABCD, GPRSEN=0, SYS1=1, ACCOUNT=1130, LFGSMFREQ=60, DTMFTIME=60, RESET
```

2. **Signalling and trasmitting to an Enigma IP-receiver:** The alarm system is connected to the TIP-RING input port, the received CID codes are forwarded through the GPRS network by the Enigma protocol and signalling to Enigma IP receiver.

```
PW=ABCD, GPRSEN=1, SFUNCT=1, BACKUP=1, SYS1=1, ACCOUNT=1130, LFFREQ=300, LFPRES=1, APN=NET, SERVER1=89.133.189.139, PORT1=9999, IPPROTO=UDP, IOGPRS=1, RESET
```

3. **GPRS transmitting to the dispatcher centre:** The alarm system is connected to the TIP-RING input port, sabotage switch monitoring connected to the input line, the incoming received signals are converted to Contact ID codes and they are transmitted through the GPRS network for the remote dispatcher centre IP address.

```
PW=ABCD, GPRSEN=1, SFUNCT=1, BACKUP=1, LFFREQ=300, LFPRES=1, APN=NET, SERVER1=89.133.189.139, PORT1=9999, SERVER2=10.197.251.10, PORT2=8010, IPPROTO=TCP, SWPROTO=2, RESET
```

```
PW=ABCD, IOGPRS=1, I1EVENT=110, I1PART=01, I1ZONE=001, IDELAY=25, I1LHEN=1, I1INV=0, I1ARM=0, TEL1=0036201234567, I1S=1, I1V=1, IVSMS=1, I1ON=FAIL, I1OFF=GOOD, SMSFWD=1, RESET
```

```
PW=ABCD, ISABEVENT=331, ISABON=SABOTAGE, OUTMODE=0, SIRENOUT=1, SIRENDEL=30, RESET
```

4. **Standalone alarm system operation mode:** There are sensors/sabotage switch connected to the input lines (2pcs of devices, by IO-expansion max. 8pcs) for monitoring, the siren is connected to the output line, and the signals are transmitted through GPRS network to the remote server IP address.

```
PW=ABCD, GPRSEN=1, SFUNCT=0, ACCOUNT=1130, LFFREQ=300, LFPRES=1, APN=NET, SERVER1=89.133.189.139, PORT1=9999, SERVER2=10.197.251.10, PORT2=8010, IPPROTO=TCP, RESET
```

```
PW=ABCD, SWPROTO=1, IOGPRS=1, I1EVENT=110, I1PART=01, I1ZONE=001, IDELAY=25, I1LHEN=1, I1INV=1, I1ARM=1, TEL1=0036201234567, TEL2=36207654321, I1S=1, I1ON=FAIL, RESET
```

```
PW=ABCD, I1OFF=GOOD, SMSFWD=1, ISABEVENT=331, ISABON=SABOTAGE, ISABOFF=GOOD, I1S=1, I2S=1, OUTMODE=1, ARMSMS=1, ARMON=ARM, ARMOFF=DISARM, ARMFAIL=ARM.FAIL, RESET
```

```
PW=ABCD, ARMBLOCK=1, DOALLDIAL=1, CALLTOKENS=30, RESET
```

5. **Input monitoring (surveillance) and gate opening:** There are sensors and sabotage switch connected to the voltage/contact inputs (2pcs of devices, by IO-expansion max. 8pcs) for monitoring. The short/wire cut detection of the input lines is possible. The relay output(s) are able to controlled remotely (the output nr. #1 can be also used for gate opening the further 3pcs of inputs are possible to use for switching external devices). The GPRS network is using for remote controlling in this mode, the GSM network is only used for SMS notification and ringing (voice call). The GPRS signalling can also be performed to an IP address – by option.

```
PW=ABCD, GPRSEN=1, IDELAY=25, I1INV=1, I1S=1, I1ARM=1, TEL1=0036201234567, OUTMODE=1, GATESMS=1, GATEON=GATE.ON, GATEOFF=GATE.OFF, RESET
```

Chapter 8. CID code table

We've collected the *Easy 2* special Contact ID codes here into the following tables.

Event	CID code
Alarm by an event - recovery	1407
Alarm by an event	3407
Alarm failure by an event	3454
Login tried by wrong password (2)	1461
Login (3)	1627
Logout (4)	1628
Device startup (1) – by hardware	1900
Device restart (1) – by software	1901
Sabotage detection on the input line	1141
Sabotage - recovery	3141
Ftp firmware update started	1991
Ftp firmware update succesfully finished	1992
Ftp firmware update in progress	1993

(1) Device start: in case of hw startup /restart by software

Parameter	Description
STARTUPCID	<p>When the parameter is <i>enabled</i>, then in case of restart or hw-startup the <i>Easy2</i> will sending the reason of the start by automatically.</p> <p>CID code: E901 – Restart CID code: E900 – HW-Startup</p>

(2) Attempting to login with wrong password

Parameter	Description
-	<p>The zone value informs about the interface source where the login where tried to attempted.</p> <p>CID code: E461 Partition: 99</p>

	Zone: <ul style="list-style-type: none"> • SMS – 0x10 • TCP – 0x20 • Serial – 0x30
--	---

(3) Login to Programming mode (for dispatcher centre)

Parameter	Description
-	<p>In the <i>Easyterm</i> in case of password authentication after login, the following event generates, when the <i>Easyterm</i> sends the LOGIN command to the device. The CID code generates with the zone value, which shows the interface where the login were attempted.</p> <p>CID code: E627 Partition: 99 Zone:</p> <ul style="list-style-type: none"> • TCP – 0x20 • Serial – 0x30

(4) Logout from Programming mode (for dispatcher centre)

Parameter	Description
-	<p>In the <i>Easyterm</i> in case of <i>the</i> LOGOFF command will be sent before the EXIT or EXITCFG commands, the <i>it</i> generates a CID code. There, the zone value shows the interface where the logout from the programming mode were attempted.</p> <p>CID code: E628 Partition: 99 Zone:</p> <ul style="list-style-type: none"> • TCP – 0x20 • Serial – 0x30

Chapter 9. Troubleshooting

9.1 A failure signed by the LED flashing

Attention!

In case of not proper wiring of the input or output lines the LED flashes of the IOs will not signs the wrong wiring. The IN1, IN2 input LEDs and OUT output LED and the ALR alarm LED lights only when the wiring was successful.

1. The STA (yellow) and GSM (red) LEDs are flashing simultaneously - SIM card failure

Please, check that you've inserted the SIM card properly into the device, ensure about the active status and APN/data traffic availability of the SIM-card at your mobile operator.

2. The MDM RDY (red) LED is lighting continuously or flashing slowly – the SIM card is not inserted properly.

Kérjük, hogy ellenőrizze a SIM kártya behelyezését, vagy helyezze be újra a foglalatba.

Remove the SIM card then insert it again. Please, check that you've inserted the SIM card properly into the device.

3. The STA LED is flashing continuously - APN failure or wrong APN name or unavailable IP address. The GSM network connection was not performed successfully.

Please, ensure about the APN name or IP address and check the configuration of the device. Reconfigure the settings and wait while the device will be started by the new settings and operating properly.

4. Failed operation

Check the *Easy 2* firmware version (by the **SWVER** value at the *EasyTerm* statuses). When it is not V2.1 R08 or newer then refresh the firmware to a newer version immediately.

9.2 Signing the status and signal strength problems

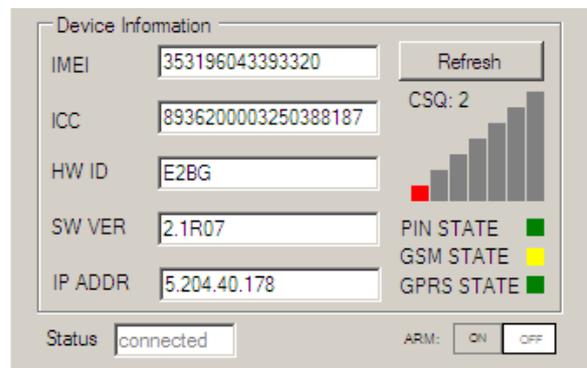
In the *EasyTerm*, at the **Status window** (2) the „**disconnected**‘ status signs that the device was disconnected from the serial port and it is not accessible (then reconnect the wire and the device or restart the *Easy2*). The successful connection will be notified by the „**connected**‘ status. When the device was restarted or you’ve removed the power supply, close the *EasyTerm* application.

When you will adding the power adapter for the device or you’ve restarted it, and the operation of the *Easy 2* was prepared, then close the connection in the **Connection window** (1), by the **Close** button and remove the serial connection from the computer side. Then reconnect the cable and push on the **Open** button.

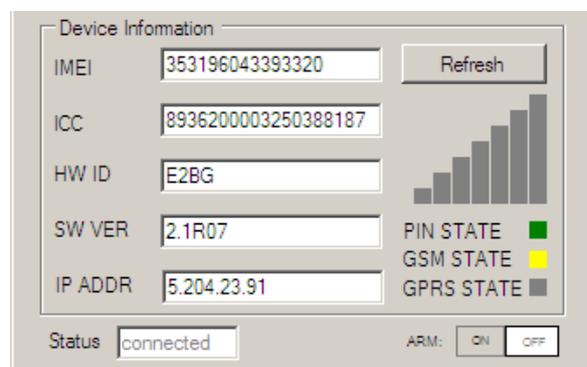
If you’ve received the **Login Failed** message in the **Terminal window** (3) several times, then repeat these all above.

In the next possible failure status cases you can find some examples about the operation malfunction and failure statuses. The figures will help you to identify about the proper situation.

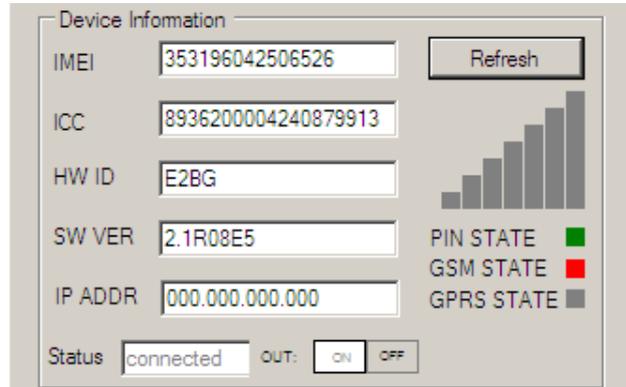
Low signal strength: move the antenna to a different position, wait for 30 seconds and recheck the status by the **Refresh** button.



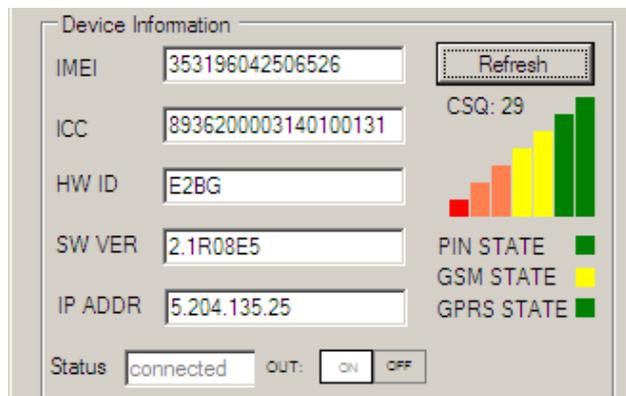
No available signal strength/no antenna fitted: recheck that the antenna was mounted and fitted to the device SMA antenna port and wait for 30 seconds and recheck the status by the **Refresh** button.



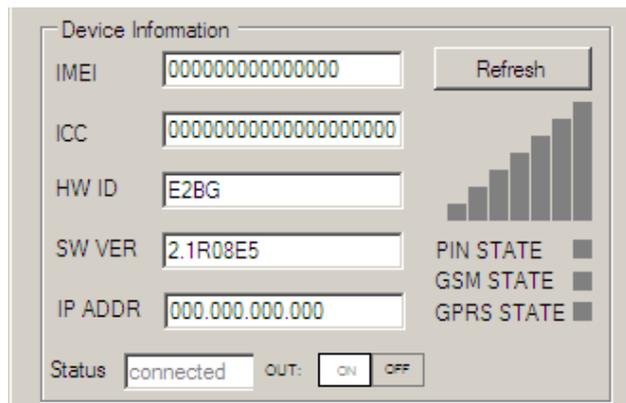
Inactive SIM card or SIM failure: Check that the SIM card was inserted properly. Contact with your mobile operator that the SIM is active and available.



Mobil network service failure: If you are sure about the mobile network outage or providing trouble, and the *GSM state* is not available, wait for a couple of minutes and push on the **Restart device** button for the device restart. Then, please check the network connection and statuses again.

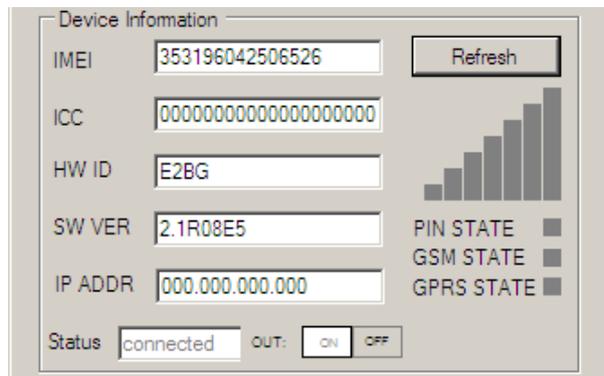


GSM module failure: When there is no available *IMEI* identifier, and you will receive the null values, and the *Status* is „**connected**“, then the module has been malfunctioned, recheck the operation and call our support line.



No SIM card presented or wrong SIM:

When there is no available *SIM ICC* identifier. Turn off the device, and check the proper SIM card insertion, and start the device. Reconnect and check the settings.



Chapter 10. Support availability

Should you have any questions regarding the usage of the device, you can contact us in the following ways:

Email: support@m2mserver.com

Telephone: +36 20 333 1111

10.1 Support help

For identifying the device, please, use the sticker on the PCB, which contains important information to the support staff.



ATTENTION

The product sticker removal causes loss of the warranty!

10.2 Product support

Click the following link to download the available product documentations and software:

<http://m2mserver.com/en/products/m2m-easy-2-security-communicator>

The documents and softwares related to the product are available at our website:

<http://m2mserver.com/en/downloads>

Online product support can be used at here:

<http://m2mserver.com/en/product-support>

Chapter 11. Legal notice

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Warning

Any errors occurring during the program update process may result in failure of the device.