



GLOBAL
FIRE EQUIPMENT

GSM LOADER

GFE-GSM-INT - Configuration Software

INSTRUCTION MANUAL - Version 1.0 - 07/2014

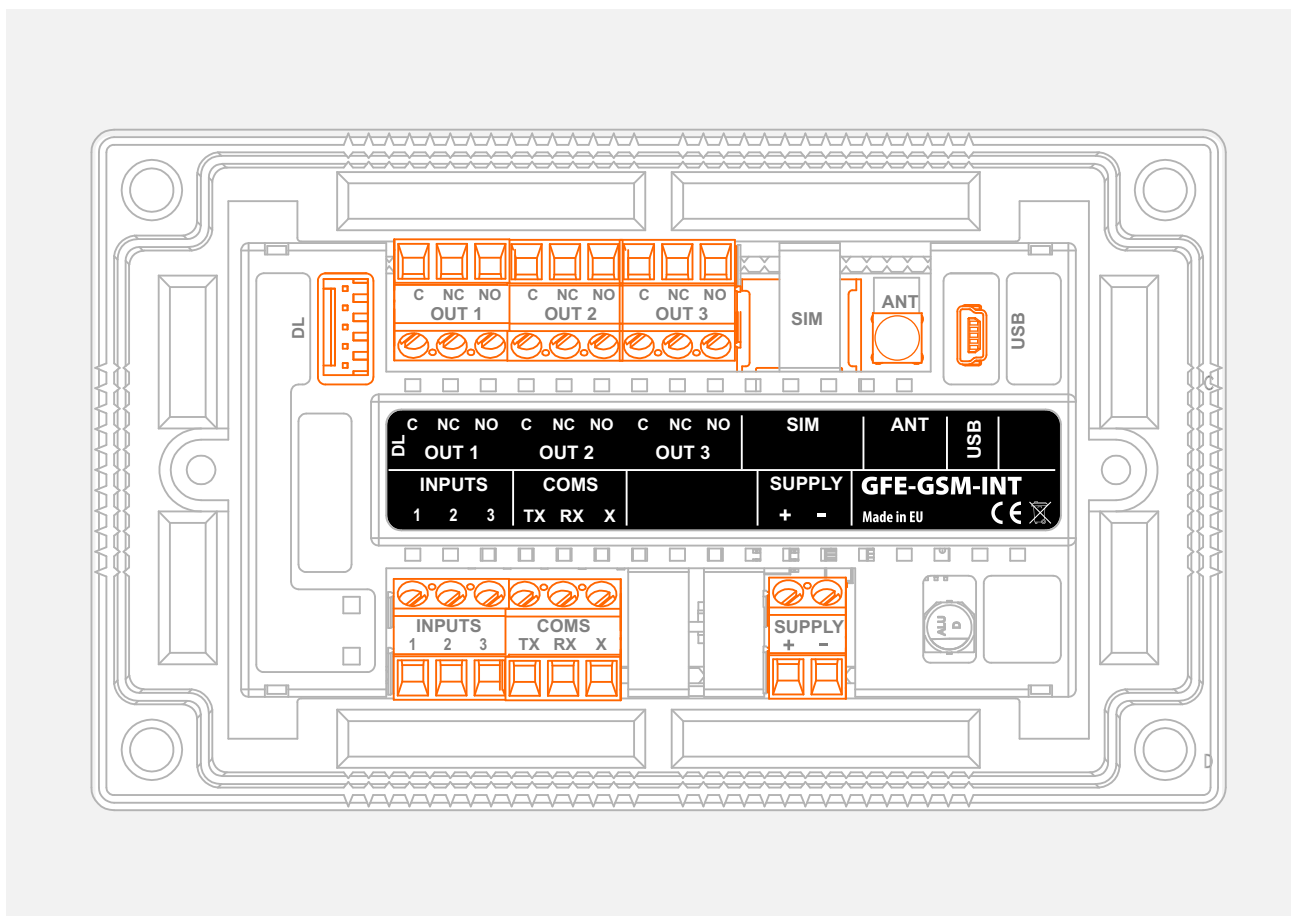


Introduction

GFE-GSM-INT is a Global Fire Equipment interface allowing remote control and monitoring of GFE's panels using either GSM or GPRS communication. The interface can alternatively be used in standalone mode as each of these units is provided with both digital inputs and outputs (relays).

Technical Specification

Characteristics	Description
Weight	<ul style="list-style-type: none"> • 282 g
Dimentions	<ul style="list-style-type: none"> • 102.80 x 51.60 mm
Band	<ul style="list-style-type: none"> • Quad-Band GSM: 1900/1800/900/850 MHz
RF Power	<ul style="list-style-type: none"> • Output Power 2W Max.
GSM Gain	<ul style="list-style-type: none"> • GSM 859/900 MHZ: -108.5 dBm • GSM 1800/1900 MHZ: -108 dBm
Operating Temperature	<ul style="list-style-type: none"> • -20°C to 70°C
Supply Voltage	<ul style="list-style-type: none"> • 24VDC
Protocols	<ul style="list-style-type: none"> • Data Loop
Sim Card	<ul style="list-style-type: none"> • SIMM Card 1.8V / 3.0V 6 pins
Audio	<ul style="list-style-type: none"> • ADPCM / WAP • Vocoder: FR, EFR, HR and AMR • Echo suppression support
GPRS	<ul style="list-style-type: none"> • GPRS multi-slot class 10 • GPRS Class 10, DL: 85.6 kbps / UL: 42.8 kbps • Encoding mode: CS 1 / CS 2 / CS 3 / CS 4 • Supporting PBCCH • CSD data service Up to 14.4 kbps
Functions	<ul style="list-style-type: none"> • DTMF, IOS, USB • USSD, temperature sensor • TCP/IP & UDP/IP, GPRS.
Current Consumption	<ul style="list-style-type: none"> • 42 mA during network search GSM • 13,5 mA a Command Wait • 8,3 mA em Low Power
Outputs	<ul style="list-style-type: none"> • 3 relay contacts NO/NC 0.5 A 125 VAC
Inputs	<ul style="list-style-type: none"> • 3 voltage free inputs • 1 Configuration Input
Communications	<ul style="list-style-type: none"> • Data Loop • Serial Bus UART (TTL) • USB



Connector

Description

SUPPLY

- Supply +24 VDC / 0V

OUT 1

- Relay Output 1.

OUT 2

- Relay Output 2.

OUT 3

- Relay Output 3.

DL

- Data Loop Connector

COMS

- RX UART / TX UART

INPUTS

- Inputs 1; 2; 3

ANT

- Antennae GSM / GPRS

SIM

- SIMM Card

USB

- USB Connection

GSM / GPRS

The antenna should be placed in a location chosen which maximises the strength of the received signal. A weak GSM network signal can prevent this device from operating properly.

The interface has 3 relay outputs which can be operated independently via SMS over the GSM network. There are also 3 non-isolated digital inputs which can be monitored for status change. These inputs should be operated using a voltage-free contact which when closed a SMS or voice message can be sent.

Access Levels

There are 2 access levels when using the GFE-GSM-INT:

- a) Installer
- b) User

The default installer code is 1111.

Installer Access Level: This access level will have one telephone number and one code associated and these will enable the installer to perform all programming functions and add new users up to a maximum of 4. Each new event will be reported to the Installer.

User Access Level: A maximum of 4 users can be added and each user will have its own code associated.

Reset Interface to Factory Defaults

This procedure can only be performed locally and it will clear all programming on the interface reverting all parameters to factory defaults. All voice messages together with events registered by the data logger function will be erased and codes will revert to initial factory setup which is 1111. In order to accomplish this interface reset the following steps have to be taken:

1. Remove power to the interface.
2. Connect, using a wire link, interface pins X to 0V (GND).
3. Apply power to the circuit. LED STA D7 will be initially steady ON and after a few seconds it will start to flash. After a few seconds will this LED will be turned OFF. At this moment the wire link between pins X to 0V (GND) should be removed.
4. When RESET procedure is complete LED D7 will start to flash and interface news to be programmed including associated installer telephone number.

SMS Commands

The general structure of a command which is to be sent via SMS is as follows:

#[PIN]*[COMAND][VALUE]

Initial Configuration

This procedure should be performed when the interface is connected for the first time or when all configurations are cleared to factory defaults. The default code is 1111 for all interfaces and for both USER and INSTALLER. This code should be altered in order to avoid unauthorised access.

Send the following SMS: **ADMX**

Upon reception of this message, the interface will reinitialize with the new administrator phone number already associated to the interface. Upon completion the user should receive a welcome message indicating time and date programmed on the interface's Real Time Clock. Indicating that the programming was successful and the interface is ready to operate.

Configure Time and Date via SMS

In order to configure the time and date of the interface the following SMS command should be sent:

#[PIN]*OK

With this command both time and date are automatically adjusted according to data retrieved directly from the GSM network. Alternatively the following SMS can be sent to adjust date and time:

#[PIN]*RTC"yy/mm/dd,hh:mm:ss"

- yy - year
- mm - month
- dd - day
- hh - hours
- mm - minutes
- ss - seconds

Sample #7856*RTC"14/07/25,23:05:00"

PIN/ CODE Configuration via SMS

In order to program new PIN codes send the following command via SMS using the registered administrator phone number:

#1111*COD[PIN1][PIN2] Sample command #1111*COD99997856

All PIN numbers should always be 4 digit long. PIN1 is used by the general user and PIN 2 should be used by the SYSTEM ADMINISTRATOR and REGISTERED USER NUMBERS (4 MAXIMUM).

The administrator is able to read the PIN numbers by sending the following command via SMS

#[PIN2]*PIN

The user will receive a SMS message containing the following information PIN USER: **** PIN ADMIN: ****.

The first 4 digit code will correspond to PIN1 and the second set of 4 digits is assigned to PIN2.

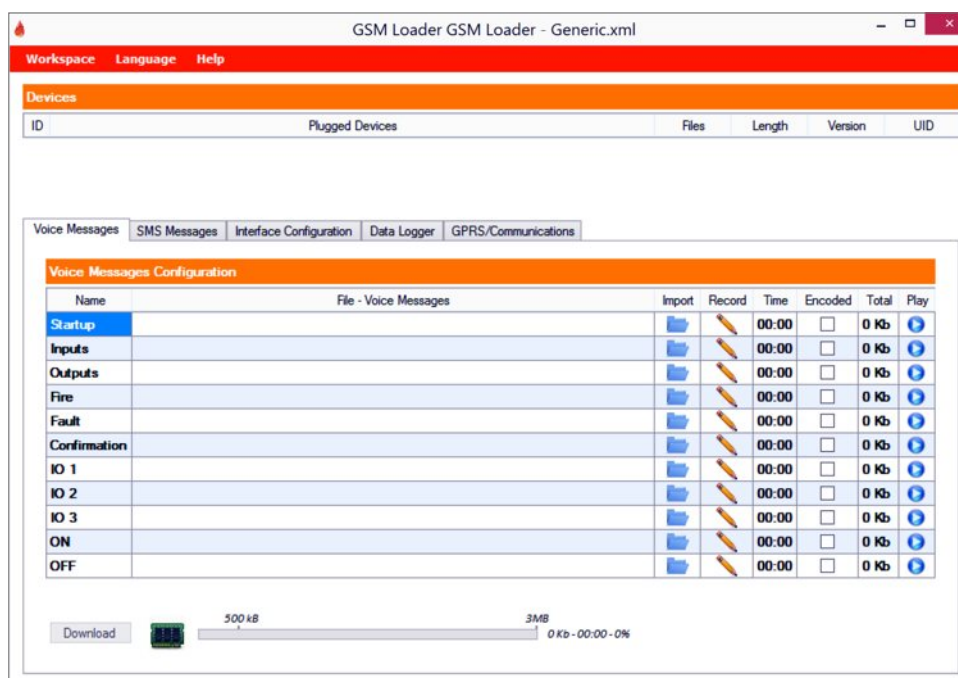
GSM Loader

GFE-GSM-INT can be easily configured using GFE's proprietary software GSM Loader. The interface connects to the PC using the USB connector provided.

Download the software directly from GFE's web site www.globalfire.pt.

Install software on PC. GSM Loader is compatible with Windows 8, 7, Vista and XP for both 32 and 64 bits versions.

After succesfull instalation run software as administrator. The following window will be displayed:



Connect the interface, using the USB connector provided on board to a USB port on the PC. After a successful connection LED D7 will flash for a few seconds and then it will stop. LED D7 will always be ON when GSM Loader software communicates with interface.

After connection is successful the panel will recognise that a GFE-GSM-INT is connected:

Devices					
ID	Plugged Devices	Files	Length	Version	UID
0	GSM Module	0	00:00	05	15

In this table, the following information is provided:

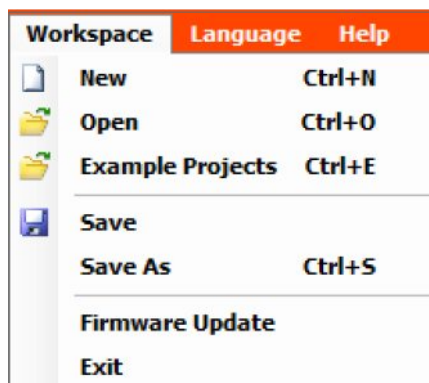
Files: Total number of voice messages stored in the interface.

Length: Total duration time of voice messages stored in the interface expressed in minutes and seconds.

Version: Software version of the interface.

UID: Unique device identifier for GFE-GSM-INT. It should always be 15.

The interface configurations are all stored in a file called a project.



The TAB Workspace will allow the user to create a new project, open and edit an existing project. Parallel to this, you are also able to save altered projects and perform firmware updates to the interface.

In order to help the user to get acquainted with the software and the configurations required, a sample project folder is provided. Select this option and open sample project folder. Double click on .xml file of the sample project and explore all options available.

Voice Messages

GFE-GSM-INT can be configured so that events are reported via aVOICE MESSAGE. Selecting the Voice Messages TAB on GSM Loader software will allow the user to configure the messages for each event.

Name	File - Voice Messages	Import	Record	Time	Encoded	Total	Play
Startup		📁	⚡	00:00	<input type="checkbox"/>	0 Kb	▶
Inputs		📁	⚡	00:00	<input type="checkbox"/>	0 Kb	▶
Outputs		📁	⚡	00:00	<input type="checkbox"/>	0 Kb	▶
Fire		📁	⚡	00:00	<input type="checkbox"/>	0 Kb	▶
Fault		📁	⚡	00:00	<input type="checkbox"/>	0 Kb	▶
Confirmation		📁	⚡	00:00	<input type="checkbox"/>	0 Kb	▶
IO 1		📁	⚡	00:00	<input type="checkbox"/>	0 Kb	▶
IO 2		📁	⚡	00:00	<input type="checkbox"/>	0 Kb	▶
IO 3		📁	⚡	00:00	<input type="checkbox"/>	0 Kb	▶
ON		📁	⚡	00:00	<input type="checkbox"/>	0 Kb	▶
OFF		📁	⚡	00:00	<input type="checkbox"/>	0 Kb	▶

There are 11 separate voice messages available. Each message is stored in a separate file. You can use GSM Loader to record messages or alternatively pre-messages can also be used. Messages should be recorded in .WAV audio file format. After creating a new message or loading an existing one, the duration and size is indicated for each message in turn. The user is also able to listen to the messages by pressing the associated PLAY button.

Each message will be associated with a specific event:

STARTUP: This message will be sent after the module is RESET, powered up or when accessed remotely.

INPUTS: This message is sent when any of the INPUTS has changed state.

OUTPUTS: This message is sent when any of the OUTPUTS has changed state.

FIRE: This message will be sent when the first FIRE event is detected. Interface needs to be connected to any of GFE's panels via the Data Loop connection available.

FAULT: This message will be sent when the first FAULT event is detected. Interface needs to be connected to any of GFE's panels via the Data Loop connection available.

CONFIRMATION: This message is sent when no confirmation has been received after new event transmission.

IO1: This message will be sent when either INPUT or OUTPUT associated with channel 1 has changed state.

IO2: This message will be sent when either INPUT or OUTPUT associated with channel 2 has changed state.

IO3: This message will be sent when either INPUT or OUTPUT associated with channel 3 has changed state.

ON: This message will be sent when either INPUT or OUTPUT has changed to the ON condition.

OFF: This message will be sent when either INPUT or OUTPUT has changed to the OFF condition.

In order to download messages press **DOWNLOAD** button. All messages are downloaded to interface.



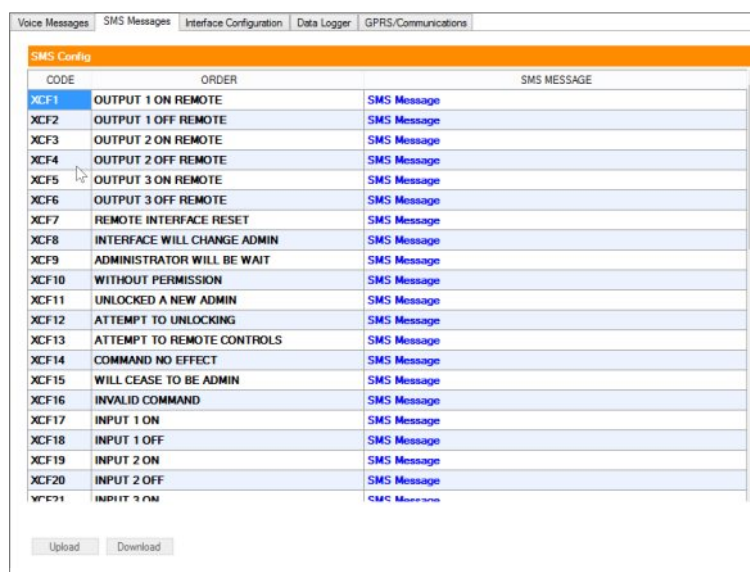
An indication is given of the total amount of memory taken by the voice messages.

If required memory taken by each message can be decreased by selecting the associated Encoded check mark. The new message size will be calculated and displayed.

SMS MESSAGES

SMS messaging can be used to acknowledge events recorded by GFE-GSM-INT.

The SMS messages configuration is reached by selecting the SMS Messages TAB.



Before programming SMS messages the user should retrieve all messages which have already been programmed on the interface by pressing the **UPLOAD** button.

The following list describes all SMS messages available and their associated functions/ event.

XCF1	OUTPUT 1 ON REMOTE	Output 1 switched ON via Remote Command
XCF2	OUTPUT 1 OFF REMOTE	Output 1 switched OFF via Remote Command
XCF3	OUTPUT 2 ON REMOTE	Output 2 switched ON via Remote Command
XCF4	OUTPUT 2 OFF REMOTE	Output 2 switched OFF via Remote Command
XCF5	OUTPUT 3 ON REMOTE	Output 3 switched ON via Remote Command
XCF6	OUTPUT 3 OFF REMOTE	Output 3 switched OFF via Remote Command
XCF7	REMOTE INTERFACE RESET	Interface RESET remotely
XCF8	INTERFACE WILL CHANGE ADMIN	Change of Administrator (Installer)

XCF9	ADMINISTRATOR WAIT	Administrator Please Wait
XCF10	WITHOUT PERMISSION	No permissions for this command
XCF11	UNLOCKED A NEW ADMIN	Interface Unlocked for New Administrator
XCF12	ATTEMPT TO UNLOCKING	Attempt to Unlock Interface
XCF13	ATTEMPT TO REMOTE CONTROLS	Attempt to send Remote Control
XCF14	COMMAND NO EFFECT	Command sent remotely was cancelled
XCF15	WILL CEASE TO BE ADMIN	Present Administrator Cancelled
XCF16	INVALID COMMAND	Invalid Command sent Remotely
XCF17	INPUT 1 ON	INPUT 1 switched ON
XCF18	INPUT 1 OFF	INPUT 1 switched OFF
XCF19	INPUT 2 ON	INPUT 2 switched ON
XCF20	INPUT 2 OFF	INPUT 2 switched OFF
XCF21	INPUT 3 ON	INPUT 3 switched ON
XCF22	INPUT 3 OFF	INPUT 3 switched OFF
XCF23	USB ON	Interface Connected to USB on PC
XCF24	WELCOME TO INTERFACE	Connection to Interface Successful
XCF25	FIRE ALARM	Fire Alarm Detected on Panel
XCF26	RESET PANEL FIRE	Fire Panel Reset
XCF27	FAULT FIRE PANEL	Fault detected on Fire Panel
XCF28	UNLOCKED A NEW COMMANDS	Output 1 switched ON via Remote Command
XCF29	DISABLE FIRE PANEL	Fire Panel with Disablements
XCF30	INTERFACE TO A TEMPERATURE	Report Interface Temperature
XCF31	OUTPUT 1 ON A TIME	Output 1 ON for a finite period of time
XCF32	OUTPUT 1 OFF BACK TO STATE	Output 1 back to OFF state
XCF33	OUTPUT 2 ON REMOTE	Output 2 ON for a finite period of time
XCF34	OUTPUT 2 OFF BACK TO STATE	Output 2 back to OFF state
XCF35	OUTPUT 3 ON REMOTE	Output 3 ON for a finite period of time
XCF36	OUTPUT 3 OFF BACK TO STATE	Output 3 back to OFF state
XCF37	ADMIN COMMAND SUCCESSFULLY	Output 1 switched ON via Remote Command
XCF38	WELCOME ASSOCIATE	Welcome new User
XCF39	WAITING FOR CONFIRMATION	Waiting Event Reception Confirmation
XCF40	PIN CODES OK	Pin Codes Accepted
XCF41	PRE- ALARM PANEL FIRE	Pre-Alarm detected on Fire Panel
XCF42	NO SETUP	Not configured
XCF43	NO SETUP	Not configured
XCF44	COMMAND TO SUCCESS	Output 1 switched ON via Remote Command
XCF45	SIGNAL NETWORK	Report GSM Network Signal Strength
XCF46	NO SETUP	Not configured
XCF47	NO SETUP	Not configured
XCF48	NO SETUP	Not configured
XCF49	NO SETUP	Not configured
XCF50	NO SETUP	Not configured

Interface Configuration

Use this TAB to configure the communication parameters for the GFE-GSM-INT.

The screenshot shows the 'Interface Configuration' tab selected. The interface includes several sections:

- Installation Name:** A text field containing 'GFE-GSM-INT' and radio buttons for 'Visible' (selected) and 'Not Visible'.
- User Numbers:** Four stacked text input fields labeled 'User Number 1' through 'User Number 4'.
- Administrator Number:** A text input field.
- Feedback method for Alarms or Events:** A dropdown menu with 'SMS' selected.
- Print "Data Loop" via SMS:** A dropdown menu with 'NO' selected.
- Silence Mode:** A dropdown menu with 'NO' selected.
- Contact ID:** A text input field.
- Server DTMF:** A text input field.
- Server SMS:** A text input field.
- Input/Output Codes:** A table with two columns: 'Input' and 'Output'.

Input 1 Code	Output 1 Code
141	144
Input 2 Code	Output 2 Code
142	145
Input 3 Code	Output 3 Code
143	146

 At the bottom, there are 'Upload' and 'Download' buttons.

Start by uploading present interface configurations for this section by pressing UPLOAD button.

Introduce site identification label

A close-up of the 'Installation Name' field, which is a text input box with an orange header. The text 'GFE' is entered into the field.

Each interface can be configured to connect to 4 different user numbers.

A close-up of the four 'User Number' input fields. Each field has an orange header and a white text input area. A mouse cursor is pointing at the 'User Number 2' field.

This box will display registered Administrator number

Administrator Number

Select Event Reporting Method: SMS, Voice, Both or Ring

Feedback method for Alarms or Events
SMS

Silence Mode
NO

Print "Data Loop" via SMS
NO

Not available. Future Use.

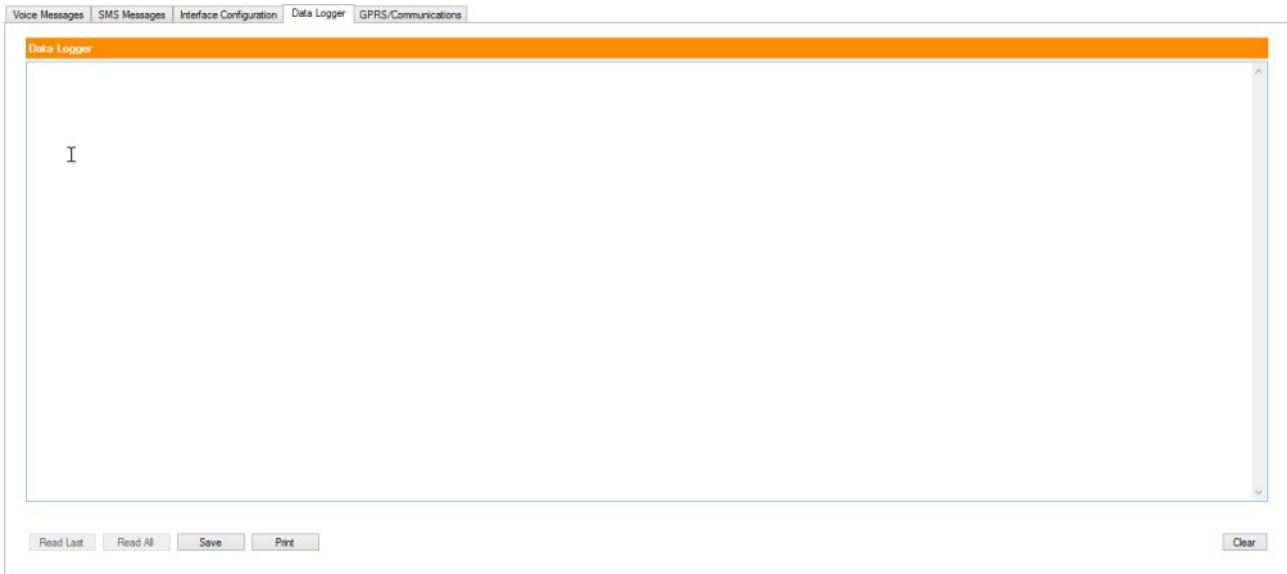
Contact ID	
Server DTMF	
Server SMS	
Input 1 Code	Output 1 Code
141	144
Input 2 Code	Output 2 Code
142	145
Input 3 Code	Output 3 Code
143	146

When configurations are complete, download to module.

Data Logger

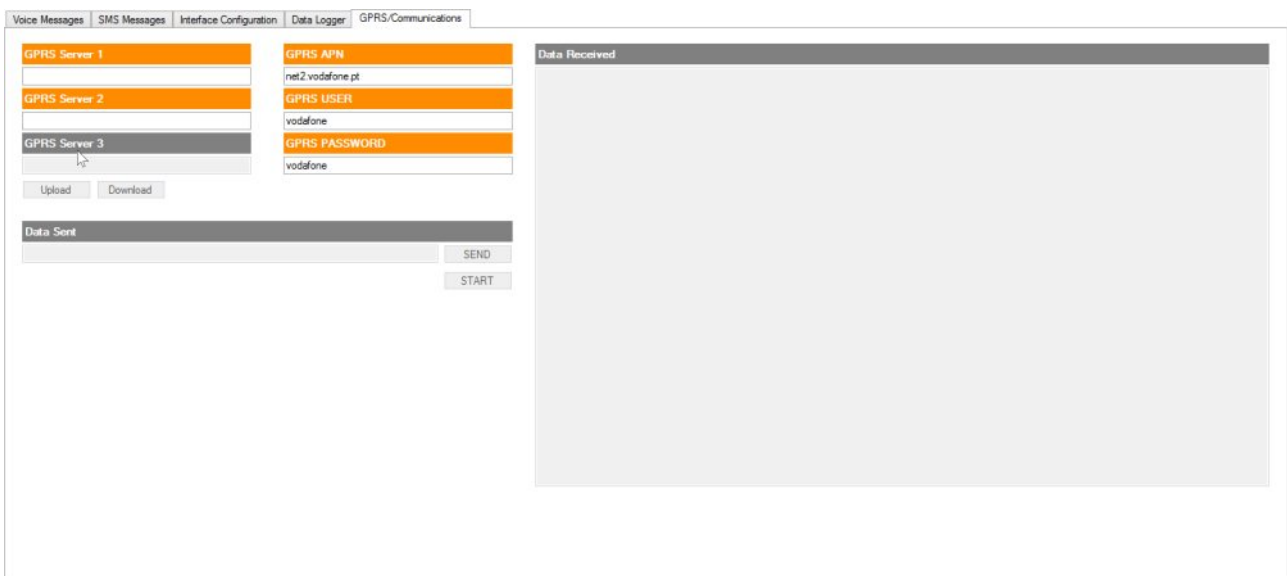
Using this TAB the USER will be able to retrieve a LOG of events.

If the Read Last button is pressed the software will show the last event recorded. Read All will retrieve all events recorded. By pressing Save or Print a text will be created with all events. In the near future pressing Print button will send output directly to available printer.



GPRS

GPRS configurations are not available at the moment. This is for future use.



USSD - *Unstructured Supplementary Service Data*

What is USSD?

USSD is a short message service specifically designed to be used over mobile networks. Using this service, we can remotely access information such as the amount of credit in the SIMM card or its validity. This interface allows the operator to send USSD codes and obtain information remotely according to the command sent. Information is displayed on the LCD of a cellular phone.

