

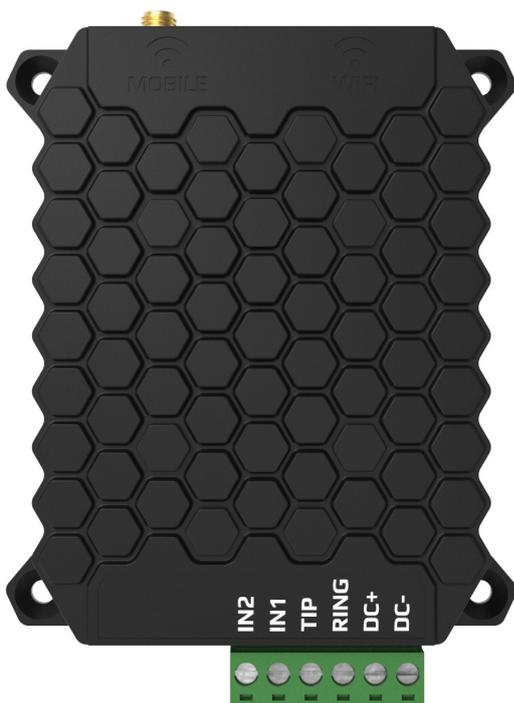


SECURECOM

SC-2G / SC-4G

Remotely manageable alarm monitoring communicators

User manual v1.0



SC-2G: GPRS



SC-4G: LTE/GPRS

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1 General Information

The SC-2G and SC-4G devices are a modern remote monitoring communicator which operates on the 2G or 4G mobile network, converts the Contact ID signals of alarm control panels into SIA DC-09 digital format and forwards to the predefined remote monitoring station's receivers.

The 2 communicators described are functionally identical, the difference is between their mobile network communication capabilities. While **SC-2G** is only capable for GPRS or EDGE connection, **SC-4G** has all data transfer possibilities of the network. (except the 5G protocols)

Operation: the communicator (simulating a landline towards the alarm system) receives the Contact ID report codes from the alarm panel, then forwarding those to the remote monitoring station via the mobile network (in the form of TCP/IP or UDP packets), as it is defined in the SIA DC-09 standard. If sending is successful, the acknowledgement received from the monitoring receiver is signalled to the alarm centre. In the same time it can forward the contact signals received on its own inputs, to the monitoring station.

The unit will turn itself off, if the power supply drops below 10.5V. (battery protection)

Key Features

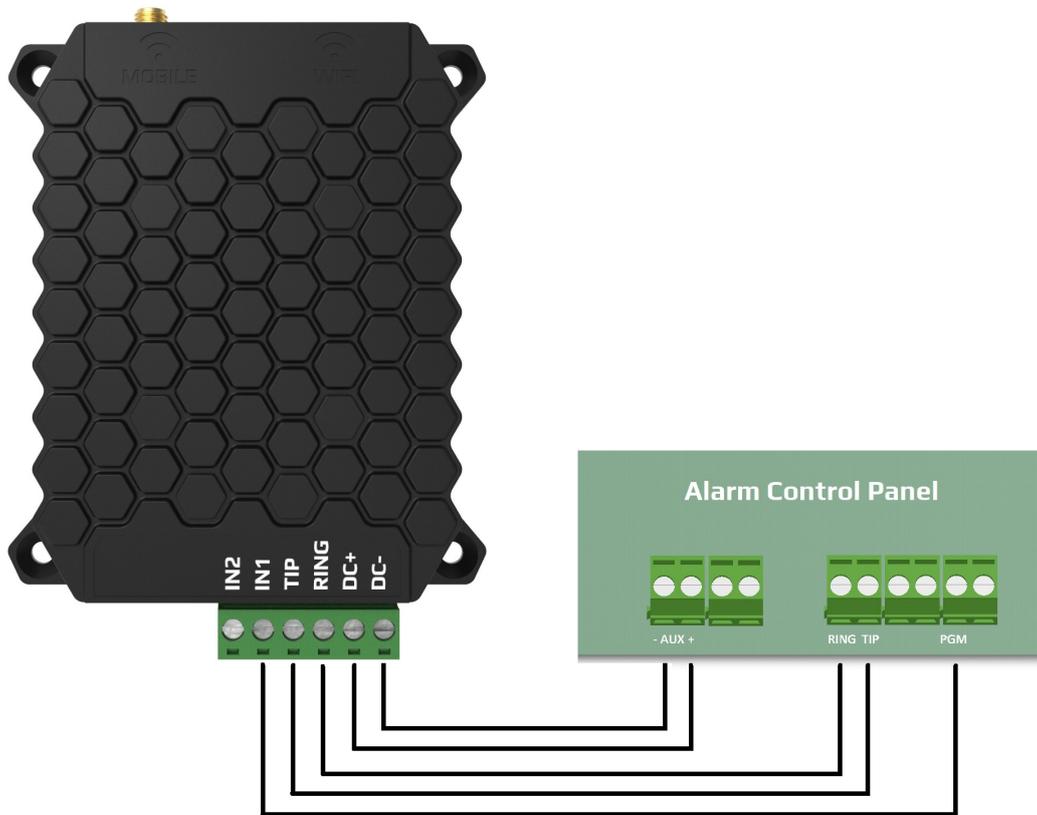
- Compatible with control panels that communicate using the Contact ID format
- 2 monitoring stations address
- 2 on-board contact inputs
- Measuring and signaling power failure
- Remotely manageable device (it can be configured via internet browser)
- Alarm systems can be accessed remotely via unit (eg. programming the alarm system or downloading event list)

2 Appearance



- 1 Terminal block for connecting to the alarm system
- 2 Mobile antenna terminal
- 3 Pushbutton for service purposes
- 4 Device ID data sheet
- 5 Serial connector for alarm system remote programming
- 6 USB mini B connector for setup
- 7 Status LED
- 8 SIM card holder (mini SIM -2FF, push – push)

3 Wiring Diagram



4 Required Settings of the Alarm System

In the communication settings of the connected alarm system, the following actions are required:

- Phone communication should be enabled in the alarm system
- DTMF (Tone) dialling should be selected
- A simple phone number must be entered (e.g. 1111) minimum 4 character
- Account number should be set
- Contact ID (Full) should be selected

The module receives the signals of the alarm system as a remote monitoring receiver, forwarding those to the IP address of monitoring station.

5 Status Indicators

The LED status indicator, next to the antenna, provides the following status information.

Status of the mobile network (GPRS, LTE)

Continuous red	APN or SIM missing
Blinking red	Network connection in progress
Blinking green	Idle mode, any receiver is available
Continuous green	Communication with alarm system in progress

6 Configuring the Device

In order to setup the details of communication, install the SECURECOM CONFIGURATOR program first. The program can be downloaded from the this site: http://securecom.eu/applications/securecom_configurator

Detailed description of setup is provided on this page.

After running the program, connect the USB port of the device to the PC, and select the appropriate serial port, then push the “Connect” button. When the connection is established, the following screen is shown:

SECURECOM Configurator v2.09

SECURECOM
 TYPE: SC-2G
 FIRMWARE: v1.14.264
 Device ID: 8a2597050a0e6fed

LATEST EVENTS
 DTMF process: 0 (48)
 DTMF process: 1 (49)
 DTMF process: 1 (49)
 CID: 5969183401020011, 1
 CRC: OK
 KISSOFF
 Play: kissoff

WARNING! Remote programming of the security system during USB connection is not allowed!

MODULE STATUS		MONITORING STATION 1 SETTINGS		MONITORING STATION 2 SETTINGS	
Mobile network:	EDGE (2G) Vodafone	IP address:	siatest.securecom.eu	IP address:	80.98.22.89
Network signal (%):	67%	Port:	9998	Port:	7777
Monitoring station 1:	OK	Protocol:	UDP	Protocol:	UDP
Monitoring station 2:	OK	SIA prefix:		SIA prefix:	
Dial capture:	ONHOOK	Object identifier:	6667	Object identifier:	6667
Input 1:	INACTIVE	Replace obtained identifier:	NO	Replace obtained identifier:	NO
Input 2:	INACTIVE	Dialed number by alarm system:		Dialed number by alarm system:	
Supply voltage:	13.54	Link test period:	3 mins	Link test period:	3 mins
		Link test code:		Link test code:	

SERIAL PORT SETTINGS		MODEM AND GPRS SETTINGS		COMM. EVENT CODES		INPUT 1 SETTINGS		INPUT 2 SETTINGS	
Baud rate:	9600	PIN code:		Battery low:	314	Sensitivity:	0.3 sec	Sensitivity:	0.3 sec
Data bits:	8	GPRS APN:	m2m.sim.com	Setup changed:	306	Contact type:	NO	Contact type:	NO
Parity:	None	User:				Event code:	130	Event code:	130
Stop bit:	1	Password:							

Attention: validity of the modified setting on the unit, require that the new variant is downloaded to the module!



To download, click on the  icon, which will initiate the changes displayed in the STATUS INDICATOR window. After modification, the background of the icon becomes red, showing downloading is necessary.

6.1 Mobile Network Connection Settings

In order to set up the network connection, insert a correct SIM card in the SIM card holder **8**, on the side of the device (according to the marking on the back), with the following requirements:

- mobile data capable
- active
- known data of APN connection
- PIN code of the card is known, or PIN is not required

If PIN is required for the SIM card, it has to be entered in the **SIM PIN code** field. In order to establish the data connection, the APN data have to be provided. (Generally there is no user name and password, only APN name)

MODEM AND GPRS SETTINGS	
PIN code:	
GPRS APN:	m2m.sim.com
User:	
Password:	

After downloading the parameters, the module restarts, and in about 30 seconds the established the network data connection and should be shown by the blinking green LED . In addition the information window shows the appropriate text as well.

6.2 Monitoring Station Settings

Connection with SIA DC-09 remote monitoring receivers (e.g. IPR-5000) requires the following settings:

MONITORING STATION 1 SETTINGS		MONITORING STATION 2 SETTINGS	
IP address:	siatest.securecom.eu	IP address:	80.98.22.89
Port:	9998	Port:	7777
Protocol:	UDP	Protocol:	UDP
SIA prefix:		SIA prefix:	
Object identifier:	6667	Object identifier:	6667
Replace obtained identifier:	NO	Replace obtained identifier:	NO
Dialed number by alarm system:		Dialed number by alarm system:	
Link test period:	3 mins	Link test period:	3 mins
Link test code:		Link test code:	

IP address	IP address or domain name of the receiving station. (e.g. siatest.securecom.eu)
Port	End point of the IP address subnet, where the receiving computer is directed on the router
Protocol	Selectable communication transfer protocol: TCP or UDP
SIA prefix	2-character addition, it is necessary when the monitoring receiver expects a 6-character client ID, but the one generated by the alarm is only 4-character long
Object identifier	Account number of communicator unit (to send own reports: link test code, errors)
Replace obtained identifier	When enabled, replaces the original Account number in Contact ID report to the characters given in Object identifier , in all CID signals coming from the alarm
Dialed number by alarm system	The dialed phone number forces the actual signaling towards the given receiver Eg. general reports go to receiver 1, while service events are sent to receiver 2
Link test period	Setting the frequency of the test report
Link test code	Setting the code sent in the test report. If left empty, the null test set in the standard, is sent to the receiver.

The communicator can keep contact up to 2 remote monitoring receivers. The primary direction is the MONITORING STATION 1, thus all signals are sent to this address, until the test report or other signals are successfully completed. If there is no successful acknowledgement from MONITORING STATION 1, the unit switches to the direction of MONITORING STATION 2, and forwarding the signals of the alarm and inputs there. In case acknowledgement from MONITORING STATION 1 becomes successful again, sending is directed back to the address of the primary receiver.

In case you want to send some of the signals (e.g. service reports) to STATION 2, a different phone number has to be entered in the **Dialed number by alarm system** field of STATION 2 in the device. This will force the communicator to send the given report to STATION 2, instead of the primary one.

The communicator takes any phone number from the alarm system, thus can be adapted to old systems without modification of the dialed phone number of the alarm system.

The replacement of the client ID enables inserting old systems in the client registry system of the remote monitoring company.

6.3 Input Settings

The device contains 2 contact inputs, with either NO or NC setting. Contacts are considered, compared to **DC** - negative supply voltage. Upon an input event, the module generates a Contact ID report, with a given event code. In this report, the client ID will be the one set in the **Object identifier** field, while the value of the partition is 01. The serial number of the zone is 001 for IN1, and 002 for IN2. Sensitivity means that the duration of events triggering the signal shall be at least the time set there.

INPUT 1 SETTINGS		INPUT 2 SETTINGS	
Sensitivity:	0.3 sec ▾	Sensitivity:	0.3 sec ▾
Contact type:	NO ▾	Contact type:	NO ▾
Event code:	130	Event code:	130

6.4 Standalone Reports of the Communicator

The unit is continuously monitoring its supply voltage, and signals when it drops below 11V. This is important, because low supply voltage has a negative effect on the security of communication. When sensing a voltage drop, a report will be generated with the set event code, then a reset if the voltage reached and exceeded 12V again. In this report code, the client ID will be the one set in the **Own client ID** field, while the value of the partition is 00, the value of the zone is 000. It will signal is settings are changed, with a unique event code to be set up.

COMM. EVENT CODES	
Battery low:	314
Setup changed:	306

6.5 Status Indicators

The current status of the module is shown in the MODULE STATUS window.

MODULE STATUS		
Mobile network:	EDGE (2G) Vodafone	➔ SIM card status, and the name of the mobile provider
Network signal (%):	67%	➔ Signal strength of the mobile network (0-100)
Monitoring station 1:	OK	➔ REMOTE MONITORING RECEIVER 1 connection status
Monitoring station 2:	OK	➔ REMOTE MONITORING RECEIVER 2 connection status
Dial capture:	ONHOOK	➔ Status of the dial capture hook (TIP/RING)
Input 1:	INACTIVE	➔ Status of IN1
Input 2:	INACTIVE	➔ Status of IN2
Supply voltage:	13.54	➔ Value of supply voltage

6.6 Displaying the text of events, statuses

In the **LATEST EVENTS** window of the configurator, the communication between the communicator and the alarm, the sending of signals to the receiver, and the actual error signals of the unit, can be monitored.

6.7 Administrative window

The administrative window of the SecurecomConfigurator application contains the following important data of the device.

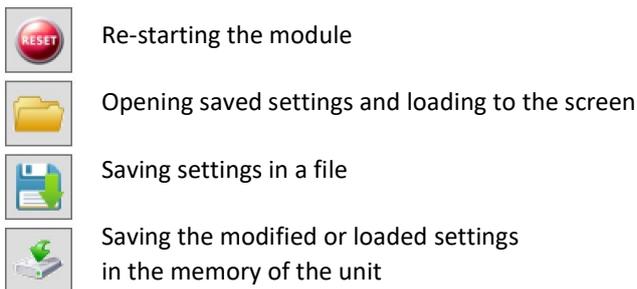


- Type ID of the product
- Program version of the micro controller
- Unique device ID code

- Administrative tools

- Selection of language

Function of the administrative tools is as follows:



Using the unique device ID code, the product can be accessed remotely from a WEB page, similarly to the PC setup program. These options are described in a separate document.

7 Technical data

- Supply Voltage: 11 to 30 V DC
- Current consumption, idle 120 mA
- Current consumption, max. 500 mA
- Operating Temperature -20 to +70 °C

8 Content of the package

- SC-2G / SC-4G communicator
- Antenna
- Users manual
- Warranty