



SECURECOM

SC-VoLTE M2

Analog phone line simulator (4G/landline gateway) or translation of Contact ID signals to SMS messages and alarm calls

Installation manual v2.0

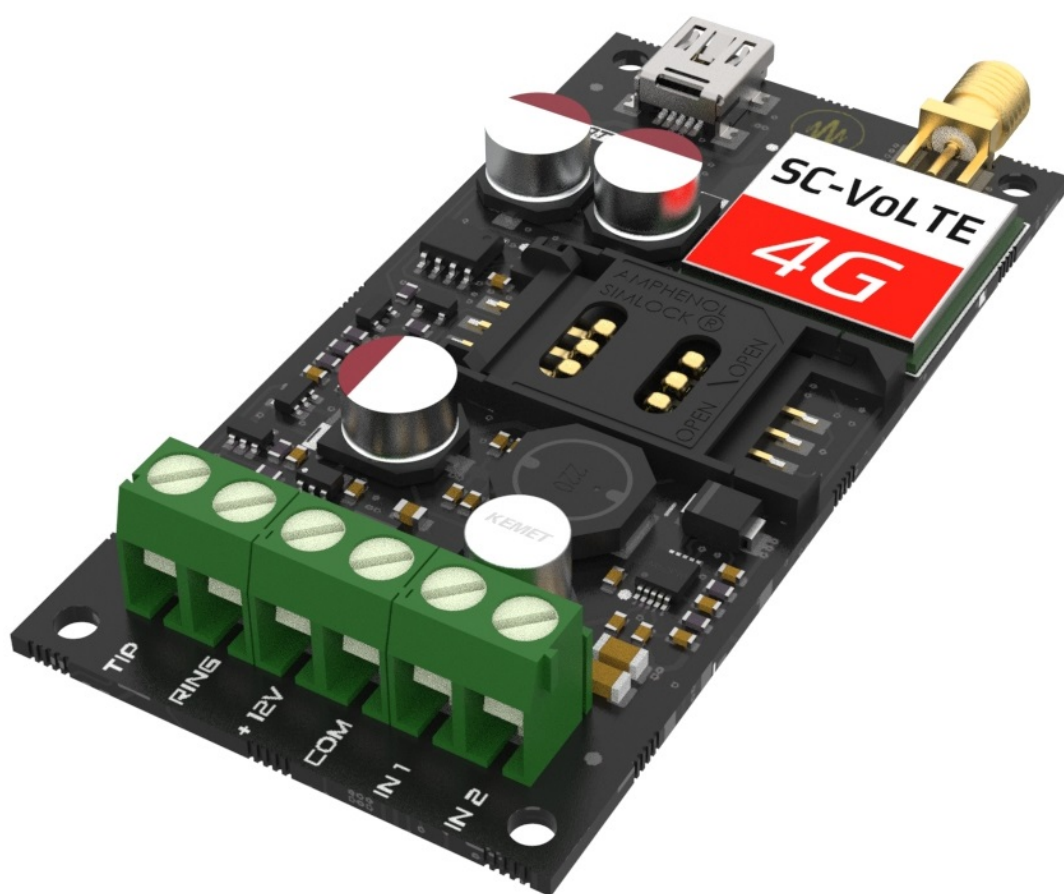


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1 General information

The SC-VOLTE M2 is an alarm system communicator with 2 types of operation.

In standalone mode, it generates an SMS message and an alarm call from Contact ID reports from alarm control panels or from status changes in its own contact inputs. Operation: it compares the event codes of the reports from the alarm system (Contact ID) with the event codes predefined in the program table that require an alarm notification and, when the corresponding event code occurs, it sends the text assigned to the code as an SMS message to the specified phone numbers or triggers an alarm call (generating a siren sound). As a result, users can be notified of any alarm event with individual messages, i.e. not only the fact of the alarm, but also its location can be specified in the SMS message, and the user's activity - e.g. opening/closing - can be tracked by name.

In transparent mode, the device is capable of VOLTE voice calls with phone line simulation. The device can connect the alarm system to the user via a mobile call or can be used as a simple phone line in other applications in places where a public phone line is not available (lifts, SOS or INFO call points, holiday homes, etc.) The device does not handle incoming calls and cannot ring the connected phone line device.

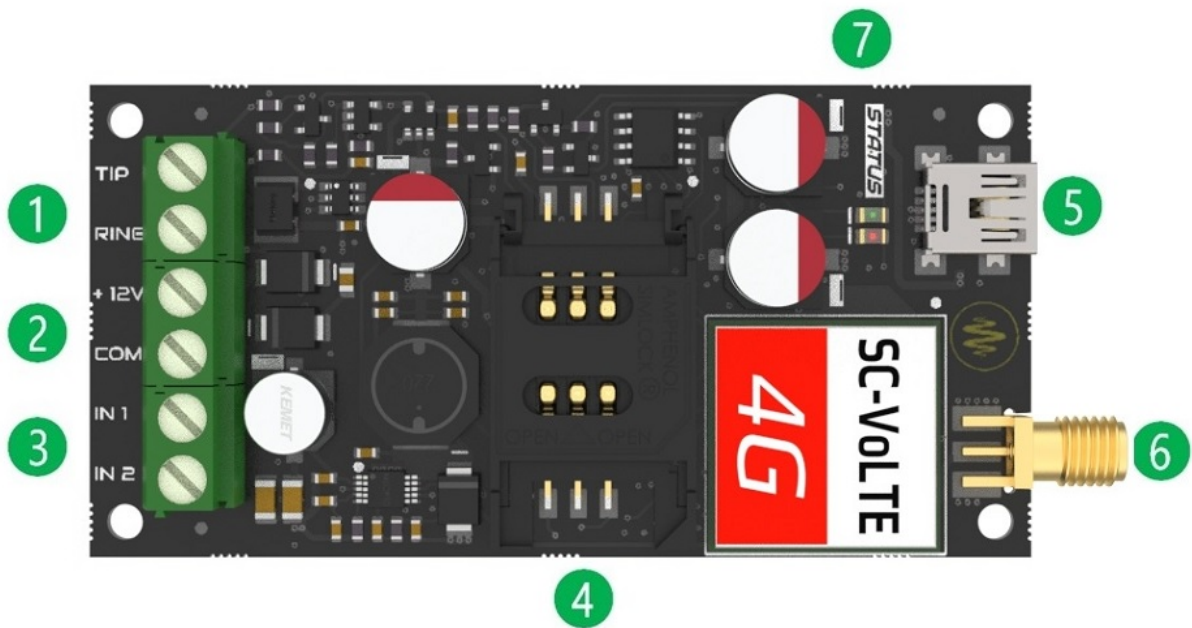
1.1 Key features

- 2 separate operating modes in one device
- Telephone line simulation for alarm TIP/RING communicator
- Send SMS and alarm calls based on up to 64 Contact ID codes
- Notification to 4 user phone numbers
- 2 contact inputs, with independent signaling
- SMS forwarding to the specified phone number
- Setup and diagnostics via USB connection

1.2 Difference compared to the SC-GSM VolTE previous model

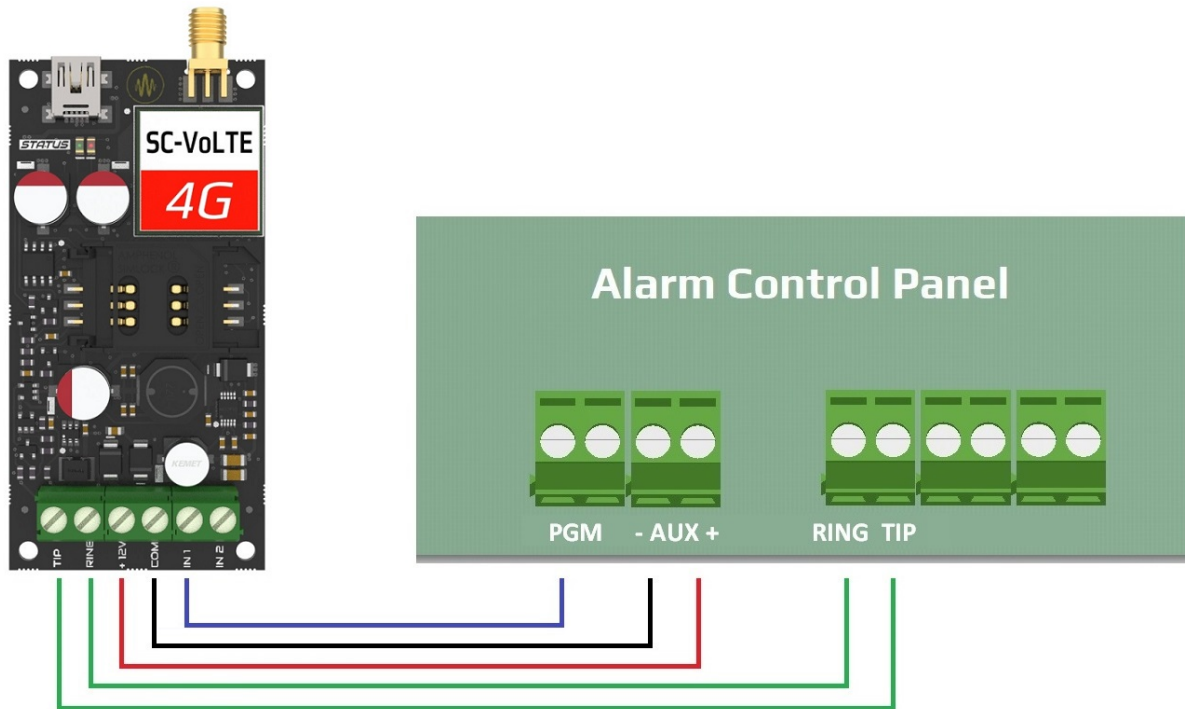
- Instead of 32 events, 64 Contact ID events can be notified
- The timing settings for the notification can be freely parameterized
- Extended event log, every detail of the communication can be monitored
- No USB back-up memory
- No possibility to ring out on incoming calls
- The device programming software has changed

2 Structure



- 1 TIP/RING Communication terminals, generated phone line output**
Simulated PSTN line for connection to TIP/RING alarm panel input terminals
- 2 Power supply terminals**
Power requirements: DC 9-30V / 300mA
- 3 Alarm contact inputs**
Triggered to negative supply (with dry contact)
- 4 SIM card holder**
Type: 2FF/mini SIM
- 5 USB mini B connector for configuration**
- 6 4G antenna connector, SMA type**
- 7 Status signaling LEDs**

3 Suggested wiring diagram



4 Required setting of alarm panel

The connected alarm panel must have following settings:

- Phone communication should be enabled in the alarm centre
- DTMF (Tone) dialing should be selected
- A minimum 4 digit phone number should be set for dialing (anything is acceptable, e.g. 1111)
- Object identifier should be set
- Contact ID (Full) should be selected

The device will accept the Contact ID reports from alarm panel as a monitoring receiver, and forward them to IP monitoring receiver. Only after the reporting was acknowledged by monitoring station, the acknowledge signal will be transmitted to alarm panel.

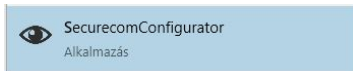
5 Status signals

With the status LED **7**, the device can display these basic statuses.

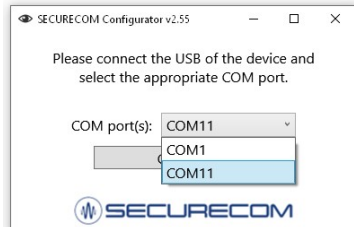
Signals	Device status
Flashing RED	Connecting to network / SIM or network failure after 1 minute
Flashing GREEN	Idle state (Device is ready, waiting for report from alarm panel)
Continuous GREEN	Communication with alarm panel in progress
Flashing RED & GREEN	Low signal strength, below 30%

6 Settings

To set up the device install the SECURECOM CONFIGURATOR software. The installation file (securecomconfiguratorsetup.exe) is available on <https://www.securecom.eu/sc-volte>. Run the installer, it will make the software available from the start menu.



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. For example:



Once connected, device settings can be found on the following interface.

ÁLLAPOTJELZŐ

16:36:41: HANGUP
 16:36:41: CALL #2: skip
 16:36:41: CALL #3: skip
 16:36:41: CALL #4: skip
 16:36:41: CALL #1: +36301234567
 16:37:06: STOP RINGING
 16:37:06: HANGUP
 16:37:07: CALL #1: +36301234567

MODUL ÁLLAPOTA

Mobilhálózat: EDGE (2G) Vodafone
 Jelerősség: 51%
 Bemenetek: 1 | 2
 Riasztó TIP/RING: INAKTÍV
 Tápfeszültség: 13.50V
 Dátum/Idő: 2022-10-06,16:37:04

ÁLTALÁNOS BEÁLLÍTÁSOK

SIM PIN:
 Kicsengetési idő (mp): 20
 Hívás hossz (mp): 20
 Riasztás időtartam (mp): 300
 SMS korlátozás/nap: 20
 Hívás korlátozás/nap: 20
 Működési mód: Ónálló
 Teszt SMS (periódus): 7 nap
 Teszt SMS szövege: Test OK! TESZT

TELEFONSZÁM BEÁLLÍTÁSOK

Telefonszám	Nyugta	SMS tov.	Teszt SMS
1 +36301234567	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

BEMENETI ESEMÉNYEK ÁTJELZÉSE TELEFONSZÁMRA

Riasztás neve	Érzékenység	Típus	Hívás				SMS üzenet	SMS küldés			
			1	2	3	4		1	2	3	4
IN1 riasztás	0,3 mp	NO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IN1 alarm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IN1 visszaállítás			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IN1 alarm restore	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IN2 riasztás	0,3 mp	NO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IN2 alarm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IN2 visszaállítás			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IN2 alarm restore	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CONTACT ID ESEMÉNYEK ÁTJELZÉSE TELEFONSZÁMRA

E/R	Kód	Part	Zóna/ Felh.	Hívás				SMS üzenet	SMS küldés			
				1	2	3	4		1	2	3	4
1	130	01	001	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Általános riasztás	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	302	00	000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Akkumulátor lemerült	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1	402			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Riasztó élesítve	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	402			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Riasztó kikapcsolva	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Új eseményszűrő hozzáadása Kiválasztott eseményszűrő törlése ▲ ▼

Attention: To validate the changes, settings must be downloaded into device!



Downloading of settings is performed with icon. The latest events panel will show the changes. When any parameter value is changed in software, the background color of icon becomes red, showing that the displayed values are not the valid ones (in the device), so they should be downloaded.

6.1 Standalone mode

This mode can be selected in the **Operation mode** field of the **GENERAL SETTINGS** window. This mode is used to send notifications and information from alarm panel directly to USERS. When the alarm panel transmits any Contact ID event Code to communicator (through emulated phone line on RING/TIP terminals), the device simulates a monitoring receiver, accepts the code and confirms the event reception to alarm panel. After that, the received Code is compared to all codes set in the „event filter” table, and if it exists in the table, the communicator makes the notification procedure-starts a voice call or sends SMS messages to selected user numbers (1-4).

During communication, the communicator expects signals according to the Contact ID standard. Contact ID messages are structured as follows:

Account number: 4 character	Protocol ID 18	Event Qualifier Event= 1 Restore= 3	Event Code 3 character	Group/Partition 2 character	Zone or USER 3 character
e.g. 1234	18	1	130	01	001

The first 6 characters of the Contact ID code (Account number and Protocol ID) are ignored by the event filter. The other characters must be entered in the event filter table according to the expected event. If Partition and Zone/User are not filled in, SMS and Call notifications are always sent when an event occurs, thus the filter does not take into account the Zone and Partition values.

To trigger an SMS message and alert CALL for a given event, you need to select the phone numbers to be notified and enter the text of the SMS to be sent. These can be entered in the event filter table in the event row to be notified.

The telephone numbers of the persons to be notified can be entered in the **PHONE NUMBER SETTINGS** window, up to a maximum of 4 telephone numbers, with an acknowledgement option to be ticked if necessary. By setting the acknowledgement, the communicator will continue to call the telephone number until the customer presses any number (0-9) on the telephone keypad during the siren. At that point the device will know that the alarm has been received. If the alarmed person does not acknowledge the alarm, the telephone number will be dialed until the alarm duration specified in the **GENERAL SETTINGS** window.

6.2 Transparent mode

The mode can be selected in the **Operation mode** field in the **GENERAL SETTINGS** window. In transparent mode, the device acts as a direct PSTN-VOLTE gateway. The voice signals of connected analog phone device or alarm panel (siren or tone signals) are transmitted via the VOLTE network to the called user telephone number. The alarm panel (or analog phone) connected to the RING/TIP outputs dials the calling number and the communicator establishes the voice channel through which all voice signals are transmitted via the mobile network. The device does not handle the incoming call, so it cannot ring the connected telephone line.

6.3 Contact inputs events setting

The device has 2 contact inputs, with NO or NC setting. For alarm notifications, the contacts must be connected to the DC - negative supply voltage. Sensitivity means that the event (short circuit or interruption) that triggers the alarm must persist for at least the time set there. In case of a contact event, the alarm device shall notify the selected telephone numbers by means of an alarm call and/or SMS message. The SMS message can be specified individually.

INPUT EVENT REPORTING TO PHONE NUMBER											
Alarm name	Sensitivity	Type	Phone call				SMS message	SMS send			
			1	2	3	4		1	2	3	4
IN1 alarm	0,3 sec	NO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IN1 alarm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IN1 restore			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IN1 alarm restore	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IN2 alarm	0,3 sec	NO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IN2 alarm	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IN2 restore			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IN2 alarm restore	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6.4 General settings

In this window you can change the parameters related to the operation of the communicator.

GENERAL SETTINGS	
SIM PIN	
Ring time (sec):	20
Call time (sec):	20
Alarm time (sec):	300
SMS limit/day:	20
Call limit/day:	20
Operation mode:	Standalone
Test SMS (period):	7 day(s)
Test SMS text:	Test OK! TEST

SIM PIN: the PIN code of the inserted SIM card must be entered if PIN code request is set

Ring time: ringing time of the called phones in seconds (for limiting voicemail)

Call time: the siren time on the called telephone in seconds

Alarm time: event notification expiry time in seconds

SMS limit: daily limit for sending SMS

Call limit: daily limit for alarm calls

Operation mode: mode selector for the desired use (as mentioned above)

Test SMS period: frequency of periodic test report that the unit works properly

Test SMS text: message of periodic test report that the unit works properly

6.5 Module status window

This window shows the operational status of the communicator.

MODULE STATUS		
Mobile network:	4G Vodafone	→ Type of connection and operator name
Network signal (%):	83%	→ Mobile network signal strength (0-100)
Inputs:	1 2	→ Control status of inputs
Dial capture:	-	→ Alarm panel dialer status
Supply voltage:	13.50V	→ Supply voltage value
Date/Time:	2022-10-16,09:51:56	→ Network date and time

6.6 Latest events window

In this window, you can monitor the communication between the communicator and the alarm system, the sending of notifications to the user's phones and the current error messages from the device.

LATEST EVENTS
09:44:48: Phone off
09:44:48: Swap phone on/off period
09:44:48: Phone on
09:45:28: Phone type: M66
09:45:28: ICCID: 89367031562011009239
09:45:28: Network time synchronization: 2022-10-16,09:45:28
09:45:28: Phone access technology: EDGE (2G)
09:45:28: Phone ready!




6.7 Administrative window

The administration window of SecurecomConfigurator contains the following basic information about the device.



- Product type ID
- Microcontroller program version
- Administrative tools
- Language selection

The function of the administration icons is as follows:

-  Open and load saved settings to the screen
-  Save settings to file
-  Save the configurator screen settings into the device memory

7 Technical data

- Network connection VoLTE (4G)
- Supply voltage: 9 V - 30 V DC
- Rated current 100 mA
- Maximum current 300 mA
- Operating temperature -20°C - +70 °C
- Dimensions 40x80x15 mm

8 Device package content

- SC-VoLTE M2 communicator
- Antenna
- USB cable
- Plastic pegs
- Warranty