SECURECOM

LANCOM

Remote manageable alarm monitoring communicator for SIA DC-09 remote monitoring signal transmission, with smartphone App and wired LAN connection.

Users manual v1.0

Contents

1 General information

The LANCOM module is a signalling device, communicating over the Internet (over a wired Ethernet network), which can forward the reports of any alarm system, which has an established TIP/RING connection, to mobile applications and IP-based remote monitoring receivers. The module simulates an analogue telephone line for the alarm, so that the alarm can send its messages like those were sent directly to a monitoring receiver.

The communication between the alarm and the LANCOM module can be in Contact ID (SIA DC-05 Standard) format, or in SIA FSK Level 1.2 (SIA DC-03 Standard) reporting format, depending on the communication settings of the alarm, done with automatic protocol recognition.

For example the CONTACT ID reports of the alarm are forwarded by the LANCOM digitally in SIA-IP (SIA DC-09) format, to the remote monitoring receiver.

1.1 Key features

- TIP/RING line simulation for the alarm centre
- Automatic recognition of Contact ID and SIA FSK Level 1.2 reporting formats
- Ethernet network connection (LAN)
- Support of dynamic (DHCP) and static IP assignment
- Signalling to 2 independent remote monitoring receivers in SIA IP format
- Signalling and control with mobile application
- 2 contact inputs with autonomous signalling
- 2 independent relay outputs for alarm control (with 1 sec impulse control), up to 2 partitions
- Serial connector for the remote programming of alarms (Paradox and DSC centres)
- Management of auxiliary communicator (optional structure, in LANCOM TR+ version)
- Remotely accessible and configurable device (on the puloware.com interface)
- Event filter for naming the unique messages
- Measuring and signalling power supply failure
- USB connection for PC configuration

1.2 Application areas

- Linking the alarm system to the mobile App by sending event messages with unique names.
- Alarm monitoring communicator for surveillance
- Remote access, download and configuration of alarms systems
- Monitoring of contact events, and remote control of relays

2   Panel layout
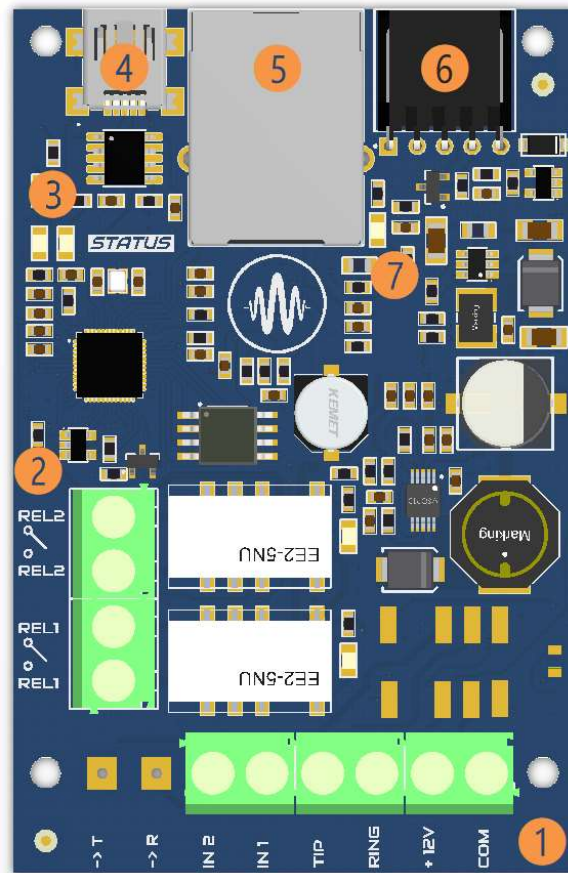

①   Terminal block for connecting to the alarm system

IN2	IN1	TIP	RING	+12V	COM
Contact input To be connected to the negative potential of COM	Contact input To be connected to the negative potential of COM	Simulated phone line to AS TIP/RING port for Contact ID communication		Positive supply	Negative supply

②   Connecting terminal for wiring

REL2	REL1
Pulse controlled relay for partition 2 (open/close)	Pulse controlled relay for partition 1 (open/close)

③   Status LEDs

④   USB mini B connector for PC configuration

⑤   Ethernet network connector (RJ45/LAN)

⑥   Serial connector for remote programming of alarm sytem

⑦   Ethernet status LED

3   Wiring diagram
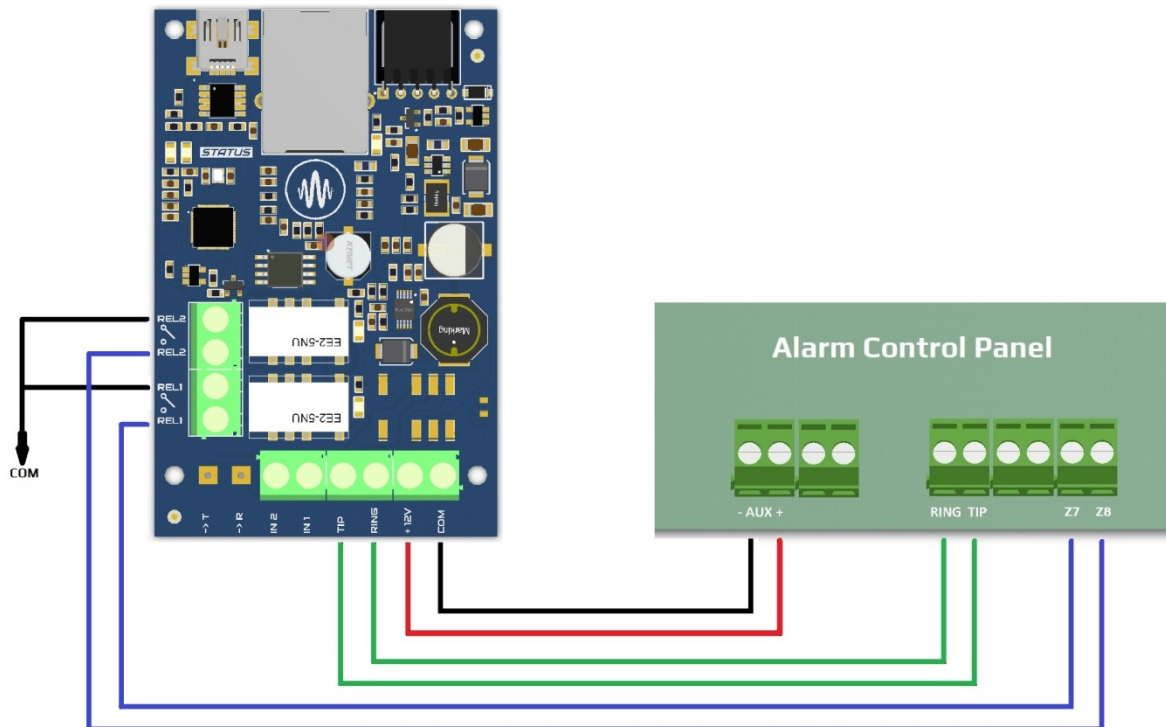
4   Required settings of the alarm

These settings are required if the alarm system is linked to mobile application too!
The alarm system is controlled (such as open/close) by the mobile application via the control relays on the module. Physically the relays, simulating the momentary key switch, turn the alarm on/off by 1 second closing pulses, via the preset zone inputs of the alarm.

The communicator translates the Contact ID reports sent by the alarm on the TIP/RING line and sends them to the applications. The Contact ID report codes are assigned by the system to the SIA standard schema messages and displayed in the phone application. If a personalized message is required, any custom message can be assigned to the CID report codes in the message filter on the server.

In the connected alarm system, the following settings have to be made:

– The momentary key switch should be set for 1 or 2 partition as required

– Phone communication should be enabled in the alarm centre

– DTMF (Tone) dialling should be selected

– A minimum 4 digit phone number should be set for dialling (anything is acceptable, e.g. 1111)

– Object identifier should be set

– Contact ID (Full) should be selected

– It should be set, that sends the disarm event after every disarm action (not only after an alert)

After that the module receives the signals of the alarm centre as a remote monitoring receiver, and forwarding those to the receiver.

The alarm system is controlled from the communicator, by 1 second relay pulses, thus the zone inputs, arming/disarming the alarm, should be set to momentary key switch, using NC type.
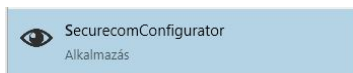
5 Status indicators

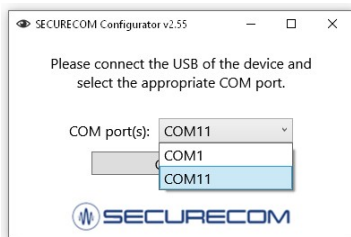Status indicator LEDS ③ provide the following status information on the operation of the communicator.

Continuous red	Network connection setup is missing
Blinking red	Network connection in progress, but if exceeds 60 seconds, than faulty setting or any failure
Blinking green	Standby operation
Continuous green	Alarm system communicates with the module

6 Settings

In order to enter settings, install the SECURECOM CONFIGURATOR program first. The program can be downloaded from the webpage of **securecom.eu**
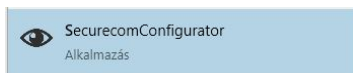
After running the [SecurecomConfigurator Alkalmazás] program, connect the USB port of the device to the PC, and select the appropriate serial port, then push the "Connect" button. For example:

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

The following basic settings are required for operation:
- Setting DHCP or static IP address
- Setting remote monitoring receivers if remote monitoring is required

Attention:
if the settings have been changed, the changes must be downloaded to the module to be valid!

After changing parameters, the colour of the download icon turns to red, indicating a download is necessary. Clicking on the download icon, setting of the unit are modified.

6.1 Administrative window

The administrative window of the SecurecomConfigurator program 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:

	Re-starting the module
	Test of RELAY1
	Test of RELAY2
	Opening saved settings and loading to the screen
	Saving settings in a file
	Full blocking of the access of the unit, with password protection
	Blocking of personal settings with password protection
	Download ant activation of settings on the device

6.2 Setup of input events

The device contains 2 contact type inputs, with either NO or NC setting. Contacts are considered to be negative supply voltage, compared to **COM**. Upon an input event, the module generates a SIA IP report, with a specific event code. In this report, the client ID will be the one set in the **Object identifier** field, while the value of the partition and the value of the zone are the ones in the settings. Sensitivity means that the duration of events triggering the signal (short or open) 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
Partition:	01	Partition:	01
Zone:	001	Zone:	002

6.3 Events generated by the communicator

The unit is continuously monitoring its supply voltage, and signals when it drops below 11 Volts. 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 **Object identifier** field, while the value of the partition is 00, the value of the zone is 000. Any change to the communicator setting is sent to the monitoring station with the preset event code. The control of any output from the mobile application or from the puloware.com WEB site is also sent to the monitoring station.

COMM. EVENT CODES	
Battery low:	314
Setup changed:	306
OUT controlled:	205

6.4 Settings of the Ethernet connection

By default, the LANCOM communicator is configured for DHCP connection. This means if the local network is capable of communication with automatic DHCP address assignment, then after connecting the RJ45 port, the connection is established automatically.
If the installation is on a network using fixed IP addresses, the network parameters must be specifically configured. Setup can be initiated by clicking on the gear icon:

MODULE STATUS			Ethernet setup	
Ethernet:	Connected	⚙	IP mode:	DHCP
Monitoring station 1:	OK		IP:	192.168.0.100
Monitoring station 2:			Gateway:	192.168.0.1
Dial capture:	ONHOOK		Subnet mask:	255.255.255.0
Inputs:	1 2		DNS1:	8.8.8.8
Outputs:	1 2		DNS2:	8.8.4.4
Supply voltage:	12.79V			Save

6.5 Settings of the connection to the remote monitoring receivers

Setting is optional, to be entered only if remote monitoring communication is required.

Communication with SIA-IP (SIA DC-09 protocol) based remote monitoring receivers, requires the following settings (e. g. Securecom IPR-5000):

MONITORING STATION 1 SETTINGS	
IP address:	siatest.securecom.eu
Port:	9998
Protocol:	UDP
SIA prefix:	
Object identifier:	0000
Replace obtained identifier:	NO
Dialed number by alarm system:	
Link test period:	3 mins
Link test code:	

MONITORING STATION 2 SETTINGS	
IP address:	52.28.118.208
Port:	9999
Protocol:	TCP
SIA prefix:	
Object identifier:	4521
Replace obtained identifier:	NO
Dialed number by alarm system:	
Link test period:	3 mins
Link test code:	

IP address	IP address or domain name of the receiving station. (e.g. siatest.securecom.eu)
Port	End point of the monitoring station subnet, where is monitoring receiver
Protocol	Data transfer protocol: TCP or UDP according to
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 indetifier	Identifier of the events generated by the communicator (e.g. test code, errors)
Replace of the client ID	When enabled, replaces the original client ID to the characters given in **Object indetifier**, in all CID signals coming from the alarm
Dialed number by alarm system	The dialed phone number forces the direction of the signaling to the required receiver, for example: general alarm reports sent to receiver 1, while service events are sent to receiver 2
Link test period	Frequency of SIA null test (test report). <u>**Caution:**</u> **if the link test period value is NO, the complete remote monitoring signaling is disabled!!**
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 STATION 1.

6.6 Module status

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

MODULE STATUS		
Ethernet:	Connected ⚙	→ Status of the network connection
Monitoring station 1:	OK	→ MONITORING RECEIVER **1** connection status
Monitoring station 2:	OK	→ MONITORING RECEIVER **2** connection status
Dial capture:	ONHOOK	→ Activity of inputs (yellow if active)
Inputs:	1 2	→ Activity of outputs (yellow if active)
Outputs:	1 2	→ Status of the alarm dialler (TIP/RING)
Supply voltage:	12.79V	→ Value of supply voltage

The LATEST EVENTS window informs about the communication between the communicator and the alarm system.

LATEST EVENTS
15:50:42: Ethernet disconnected
15:50:42: Remote management went offline
15:50:48: Ethernet connected
15:50:50: Ethernet IP:192.168.1.8
15:50:51: Remote management via ethernet
15:51:07: Send event to MS1 (ethernet)
15:51:08: MS1 event response (ethernet): ACK
WARNING! Remote programming of the security system during USB connection is not allowed!

Using the unique Device ID code, the LANCOM can be accessed and configured remotely from the puloware.com WEB page, similarly to the PC setup program. These options are described in a separate document.

7   Technical data

- Supply Voltage: 10.5 to 30 V DC
- Current consumption, idle   100 mA
- Current consumption, max. 130 mA
- Type of relay outputs   NO, independent contacts, pulse mode
- Type of inputs   can be set to NO or NC
- Operating Temperature   -10 °C to +50 °C
- Dimensions   52x80x15 mm

8   Content of the package

- LANCOM communicator
- USB cable
- Plastic peg spacers
- Warranty