PROGRAM "*ELT SIA-IP RECEIVER"*

- Receives messages sent by alarm systems in SIA DC-09 IP format, decodes and converts them into format understandable monitoring station software.
- Decrypts AES128, AES196 or AES256 algorithm encrypted messages.
- Does not require any additional equipment. The program can be installed on a computer that is running monitoring software or to another computer that is connected to the host computer via TCP/IP or COM interface. Data shall be transmitted to the monitoring program in SurGard MLR2000 or MLR2-DG format.
- If the program is installed on the computer that is running the monitoring software, the data may be transmitted to the monitoring program via virtual pair of sequential (COM) ports.
- Compatible with Windows 7, Windows 8, Windows 10, Windows 11.

Installation

Computer with *ELT SIA-IP RECEIVER* program installed must have internet access and unique IP address, visible on the outside. Messages of alarm systems are received via user-defined TCP/IP port. If router is used to gain access to the Internet, it is necessary in the router settings to forward this port to the computer running the SIA-IP RECEIVER program.

Installation file: *SiaRec_xxx_setup.exe*. 64-bit and 32-bit versions are available. The 32-bit version is compatible with all operating systems but runs a little slower. If your computer has a 64-bit operating system, use the 64-bit version.

During installation, you can set the program to start automatically when Windows starts.

After the installation process is complete, start and configure the program. The "Start in background mode" option allows to start the program in the background (as a service). The program window will not be visible in this case. The program can be completely closed by right-clicking on the Windows taskbar system "ELT SIA-IP Receiver" tray icon and selecting "Exit" from the pop-up menu.

SIA DC-09 receiver configuration

Set the preferred receiving TCP/IP port in *DC-09 Receiver-> Port* window.

In *Encryption* window, select the encryption algorithm and enter the encryption key. When you click *Show*, the encryption key temporarily becomes visible.

Caution! Be sure to use data encryption! Data encryption ensures that messages will be accepted only from your protected objects.

In the box *Connection Timeout* set the time after expiration of which, connection with the client is terminated automatically (if the data is not sent). In many cases, it is not necessary to change this setting.

Time Synchronization feature further increases the level of security for encrypted data. When this feature is turned on (selected), the date and time encoded in the encrypted package must be the same as the date and time of the computer that is running the receiver program. If the date and time mismatch is more than 1 minute, the program is trying to synchronize the time on the computer and the main security unit automatically. In the case of failure, packages with invalid date and time are ignored. Time synchronization it is recommended to disable (uncheck) only if this function is not supported in the alarm panel. If data encryption is turned off, the time of the data package is not checked, all the packages are received and decrypted.

After you have made the necessary settings, activate the TCP/IP port, by clicking on the *Receiver Port-> Open*. The receiver port's status and the number of connected clients is visible at the bottom of the application window, on the left side.

Save the settings by clicking  .

Configuration of automation software interface

TCP/IP interface

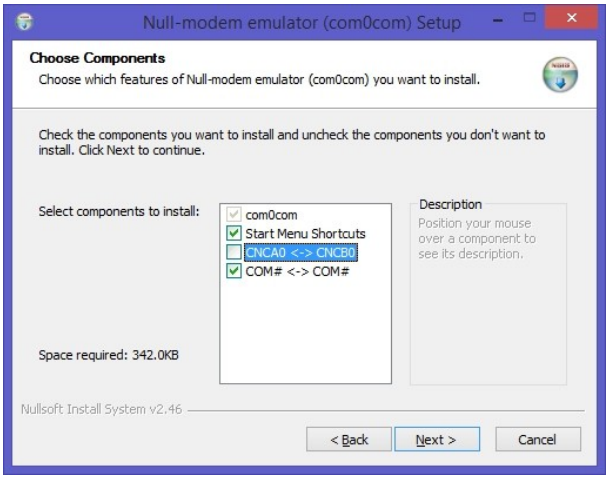
If a monitoring program can receive data via TCP/IP port, open window *Automation Software Interface*, in the window *Communication Port ->TCP/IP* enter the relevant port number. If the program is installed on the same computer where the security service monitoring program is installed, leave the local IP address 127.0.0.1. If a monitoring program is installed on another computer, type in the appropriate IP address.

If the monitoring program TCP/IP port is running in the server mode, select *Client Mode*. If the monitoring program TCP/IP port is running in the client mode, select *Server Mode*. Configure the monitoring station program port: type the port number, select SurGard MLR2000 or SG MLR2 DG format for data receiving. Activate the monitoring program TCP/IP port, then activate the *ELT SIA-IP RECEIVER* TCP/IP port (click *Communication Port -> TCP/IP -> Open*). After connecting with the monitoring program, *ELT SIA-IP RECEIVER* window shows the message *Connection with automation software established*.

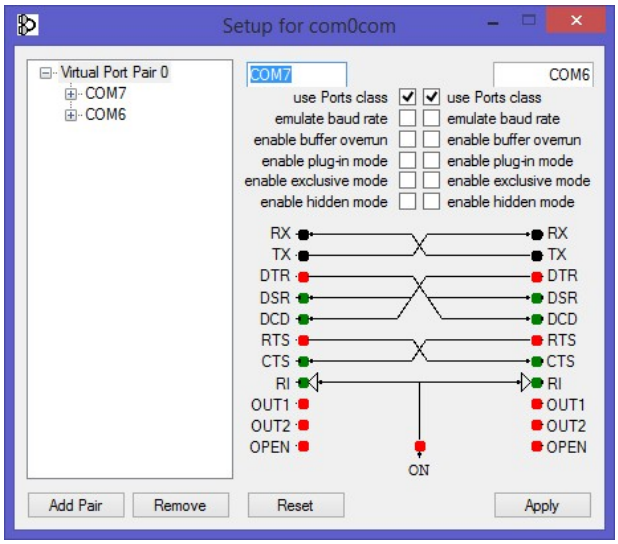
COM interface

If the monitoring station software is unable to receive data through TCP/IP port and the *ELT SIA-IP RECEIVER* program is installed on a different computer (without monitoring software), the computers need to be connected through serial COM ports using a *Null Modem* cable.

If the monitoring program is unable to receive data through TCP/IP port and the *ELT SIA-IP RECEIVER* program is installed on the same computer that is running the security service monitoring program, you need to create a pair of virtual interrelated COM ports. This can be done by installing an additional applet com0com. At the top of the program *ELT SIA-IP RECEIVER* menu, click *Virtual Serial Ports*, the installation process will be started. Recommended primary settings are shown in the table.



After the installation process is completed, click *Virtual Serial Ports* again. If installation was successful, the pop-up window shows *Virtual Com Pair 0* and the names of two newy created interrelated ports (e.g. COM7 and COM6).



It is not necessary to change the settings. Close the window. These ports are intergated into Windows operation system and will be created automatically everytime after turning on the computer or restarting the system.

Configure the security service monitoring program serial data receiving port: select one of the ports from virtual pair (e.g. COM6). Recommended port settings:

Baud Rate: 9600, Data Bits: 8, Stop Bits: 1, Parity: None, Flow Control:None.

Select SurGard MLR2000 data format. Activate the port.

In the program *ELT SIA-IP RECEIVER* window *Automation Software Interface -> Communication Port -> Serial*, select other port of the virtual pair (in this case: COM7). Activate the port (click *Open*). After connecting with the monitoring program, *ELT SIA-IP RECEIVER* main window shows the message *Connection with automation software established*.

Save the settings by clicking  .

ELT SIA-IP RECEIVER every 30 seconds sends a test signal to the monitoring program (Supervisory Heartbeat Signal). If needed, this periodicity can be changed. The test signal can be turned off by entering 0.

List of events

You can view the events received by clicking the menu item *Events*. Pop-up window shows the time of the event, the event reference data, IP address, from which the event was received, signal strength (if data is received via GPRS channel). If the event is received but not transmitted to the monitoring program, the box *Status* shows *Pending*. If the event is transmitted to the monitoring program, the word *Reported* is shown.

SIA DC-09 protocol testing messages (Null or Ping Messages) are used to check connection to the server and not transmitted to the monitoring program (status: *Not reportable*). These messages are used for the monitoring of the connection (see the section *List of objects*).

Program stores 4096 events in the memory. When this number is exceeded, the oldest events are deleted automatically. To clear the memory of the events, click a menu item *Clear Events*.

List of objects

When you click the *List of objects*, it opens the list of all objects, from which data package was received at least once. The list shows the date of last receipt of data package, the identification number (ID) of the object, event information data, protection unit IP address, the strength of the connection (if the data is received from GsmAlarm-340, GsmAlarm-500 or GsmAlarm-600 devices via GSM network, GPRS channel). If the data from the object is not received for a longer period than the time shown in the column *Ping Timeout*, the security panel monitoring program is sent a message with the event **1350** (connection problem) and the line of the object becomes red. After receipt of data or PING package, the time starts calculating again, the monitoring program is sent a message with the event **3350** (recovery), the line again becomes white. The user can change the *Ping Timeout* time. If a zero is inserted, no message on connection failure is sent.

When you click the trash icon on the right side of the line, the object line can be removed.

The list stores up to 10,000 objects. If this number is exceeded, the row with the oldest received ID is deleted and the data with the new ID is written.

System log

To view system events, click menu item *System Log*.

Program registration

By using an unregistered version of the program, you can receive up to 50 events. After that, you need to clear the memory of the events and then activate the TCP/IP port of the receiver again. The registered version does not have this limitation.

To register the program, click on the menu item *About*. In the pop-up window *Registration data*, enter your name, company name, and click on the button *Request License Key*. The program will automatically compile an email. Send this email. We will send you an email with a registration key. Copy this key, then paste it into the *Add License Key* box and click on the button *Add*.

If the email is not automatically generated, please copy the contents of the Name, Company, and ID fields, paste them into an email, and send to eltech@eltech.lt.