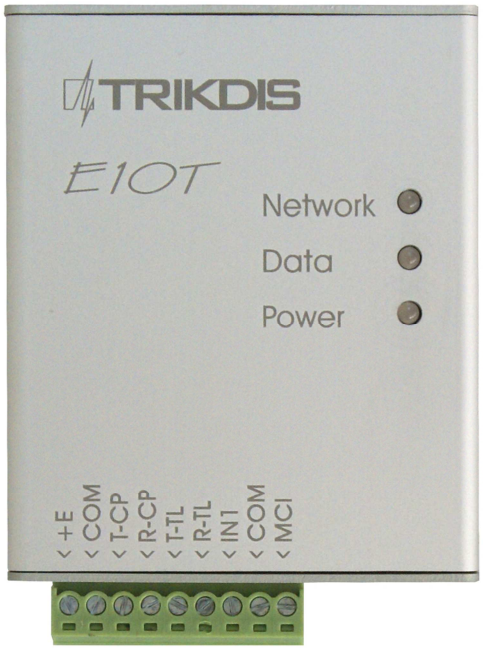

Ethernet module *E10T*

(firmware versions E10T v121024 or higher)

User manual

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Table of contents

Safety requirements

Please read this manual carefully before using the security module *E10T*.
Security module *E10T* should be installed and maintained by qualified personnel, having specific knowledge regarding the functioning of GSM devices and safety requirements. The device must be disconnected from external power supply source before starting device installation.
Module *E10T* should be mounted in places with restricted access and in safe distance from any sensitive electronic equipment. The device is not resistant to mechanical effects, dampness and hazardous chemical environment.

Liability restrictions

- When buying the Device, the Buyer agrees that the Device is a part of a security system of premises, which sends messages about security system status. The Device, when installed, does not diminish the probability of burglary, fire, intrusion or other breach of premises.
- When buying the Device, the Buyer agrees that the Device supplied by UAB “TRIKDIS” fully meets his requirements for intended use.
- UAB “TRIKIDIS” provides no guarantees that the Device shall function as declared if the Device is installed and used not according to its original purpose, user manual and relevant electronic and technical conditions.
- UAB “TRIKDIS” is in no way associated with GSM/GPRS/Internet service providers (operators), thus UAB “TRIKDIS” is in no way responsible for any defects in Device operation if they have occurred because of the loss of GSM/GPRS/Internet connection, or because of other defects in the service provider network.
- UAB “TRIKDIS” has no control and is not responsible for the prices and marketing of network services provided by the GSM/GPRS/Internet service providers.
- User manual of the Device can contain technical inaccuracies, grammatical or typographical errors. UAB “TRIKDIS” reserves the right to correct, update and/or change information in the installation manual.

Ethernet module *E10T*

Ethernet modules *E10T* are designed to transmit messages from security control panel at a secured object to a monitoring station through Internet connection.

The module *E10T* is applied for sending of DTMF tone messages coded in Contact ID protocol of security panel telephone communicator.

Features:

- Messages are transmitted to one IP address of monitoring station by TCP/IP or UDP/IP protocol;
- In case of communication failure with the main IP address, it switches transmitting of messages to backup IP address;
- Data transmission contains information in Contact ID codes;
- Two access levels for setting of operating parameters;
- Setting of operating parameters is implemented with the software *Econfig* while connected via USB or Internet connection.

Description of device operation

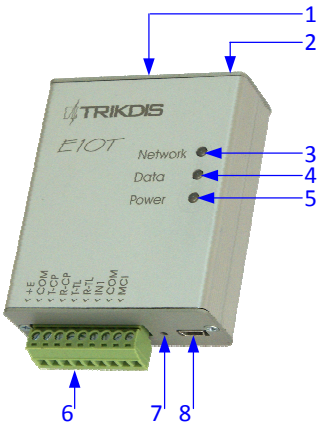
The module *E10T* is connected to security control panel contacts for connecting a telephone landline (TIP and RING) and acts like telephone receiver. In case of an event, the security control panel dials number **1234**. Module *E10T* picks up the phone and receives DTMF tone message coded in Contact ID protocol of security panel then transmits it to a specified IP address or domain of the monitoring station IP receiver. If a message fails to be transmitted to the IP receiver, the module *E10* will send it to backup IP address or domain of backup IP receiver.

The module *E10T* can be wired to an external telephone landline so it is appropriate to accordingly program control panel that in case of an event:

- Control panel would call to *E10T* module which would receive the message and would send it to IP receiver by Ethernet. If there is no Ethernet connection, the control panel would call to reserve telephonic receiver and would report through telephone landline.
- Control panel would call to telephonic receiver and would report through telephone landline. If there is no PSTN connection, the control panel would call to *E10T* which will receive the message and will send it to reserve IP receiver by Ethernet.
- Control panel would call to *E10T* and telephonic receiver. It would allow to send a message in parallel to IP receiver by Ethernet and telephone receiver by telephone landline.

IP receiver of the monitoring station monitors connection with module *E10T* by periodically receiving *PING* signals of the module.

Module overview



1 - Network socket RJ45

2 - Holes to fasten the module (2 x M3)

3 - Indicator "**Network**"

4 - Indicator "**Data**"

5 - Indicator "**Power**"

6 - Terminal block

7 - Switch "**Reset**"

8 - USB socket

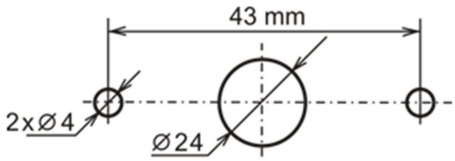
Terminal block description

Module *E10T* terminals	Purpose
+E	+12V power supply terminal
COM	Common ground terminal
T-CP	For connecting to the security control panel Tip terminal
R-CP	For connecting to the security control panel Ring terminal
T-TL	For connecting a telephone landline
R-TL	For connecting a telephone landline
IN1	1st input terminal for connection of external circuits (type NC)
COM	Common ground terminal
MCI	Provided for future use

Light indication

LED	*Operation*	*Description*
"Network" displays the status of connection to the Internet	Green ON	Module is connected to the Internet
	Yellow ON	TCP/IP session is open
"Data" displays data transfer	Green ON	Unsent messages present
	Red ON	Messages cannot be sent
	Green flashing	Messages are being received from the control panel
"Power" displays power supply status and the functioning of the microprocessor	Green flashing	Power supply is sufficient
	Yellow flashing	Power supply is not sufficient (≤11,5 V)

Module installation

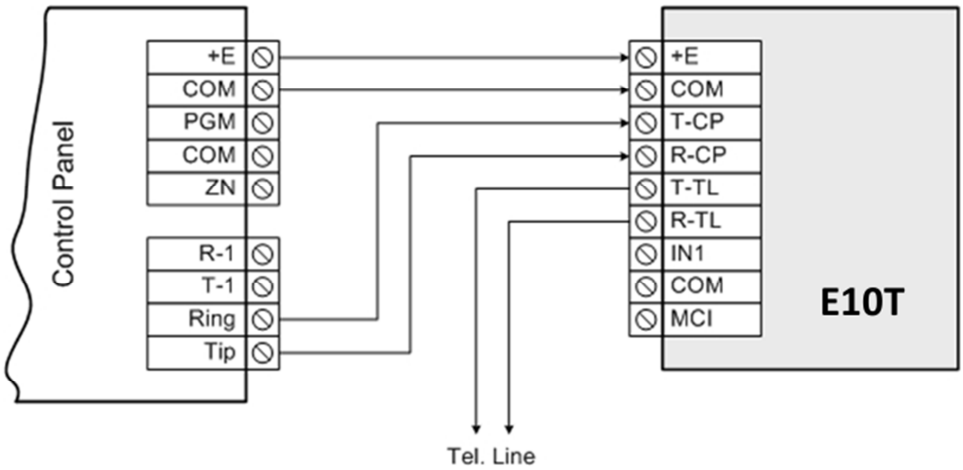
Actions	Notes
1. Set the operating parameters of module.	Follow information in chapter **Setting of operating parameters**.
2. Fasten the module in the control panel metal casing by using M3x6 screws or an adhesive fastening tape.	The position and dimensions of holes to be drilled in the casing for fastening the module: 
3. According to wiring diagrams, connect the transmitter to external equipment.	See chapter **Wiring diagrams** for wiring to control panels.
4. Connect LAN cable.	Connected network must not restrict module operation.
5. Turn on the system power supply.	
6. According to light indication evaluate if the module is properly connected to the network.	Indicator ***Network*** must illuminate green.
7. Check if the module sends messages according to its configuration.	The message must be received at the specified IP address.

Programming of control panel telephone communicator

Set the operating parameters of control panel telephone communicator according to the chosen algorithm for the transmission of messages:

1. Set the telephone numbers to be called by control panel if there is an event. The phone number of *E10T* is **1234** and it has to be dialed in DTMF tones. When control panel calls to a number **1234** and the call is accepted the report of the event is received by *E10T*.
2. Set the control panel to code event report in Contact ID protocol and send it in DTMF tones.
3. If there is an external telephone line wired to *E10T* and control panel has set telephonic receiver number of monitoring station, set the behaviour parameters of central panel then it fails to call to *E10T* or telephonic receiver.

Wiring diagrams



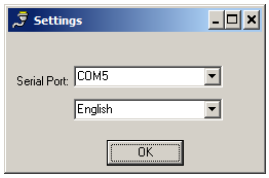
Setting of operating parameters

Operating parameters of the module *E10T* can be set with software *Econfig* (*v121116* or higher version). The software is available for download on website www.trikdis.lt.
Firmware version of the module has to be *E10T v121024* or higher version.

1. Connect the module *E10T* to a computer USB port by using a USB cable. Computer must have the USB driver installed.

   USB driver installation: If the module is connected to a computer for the first time, MS Windows OS should open the window ***Found New Hardware Wizard*** for installing USB drivers. Download the USB driver file *USB_COM.inf* for MS Windows OS from the website www.trikdis.lt. In the wizard window select the function ***Yes, this time only*** and press the button ***Next***. When the window ***Please choose your search and installation options*** opens, press the button ***Browse*** and select the place where the file *USB_COM.inf* has been saved. Follow the remaining wizard instructions to finish the USB driver installation.

2. Start the *Econfig* software.



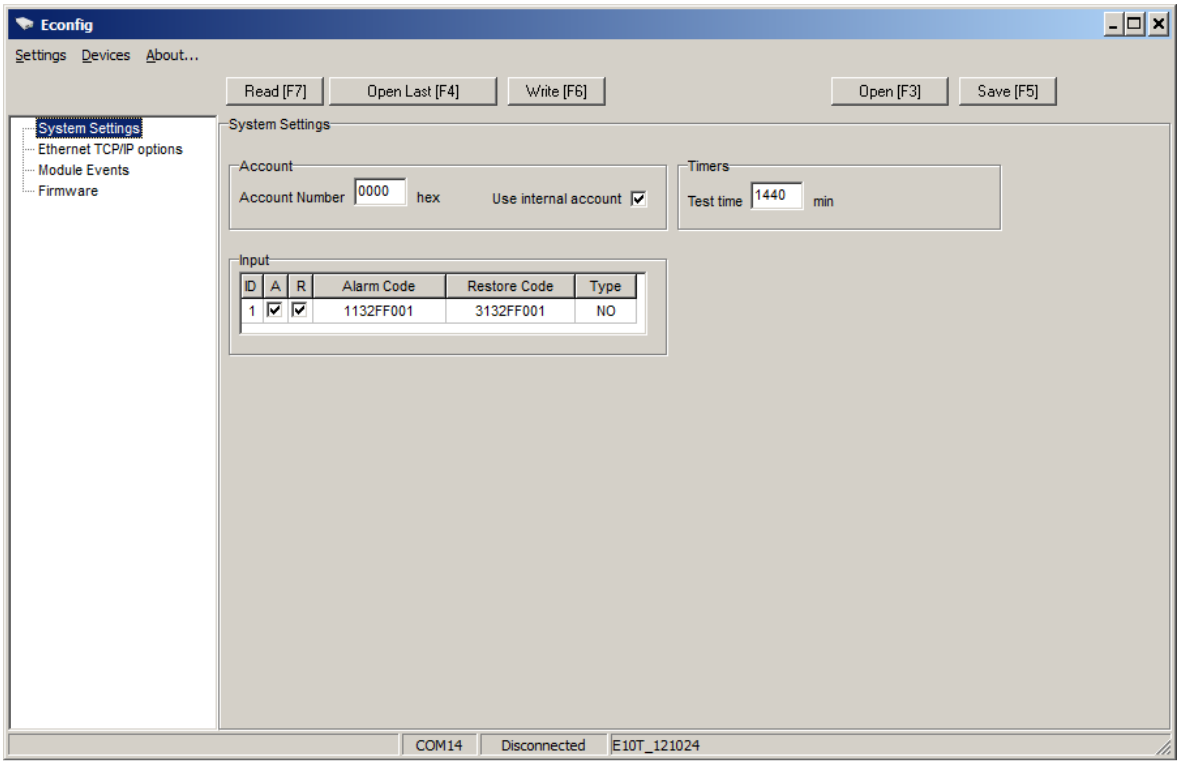
3. Choose the command ***Settings*** in the menu bar and select the port to which the module is connected in the ***Serial port*** list. Press the button ***OK***.

   Note: specific port will appear only when the module is connected and USB driver is installed correctly.

4. Choose the command ***Devices*** in the menu bar and select ***E10T***.

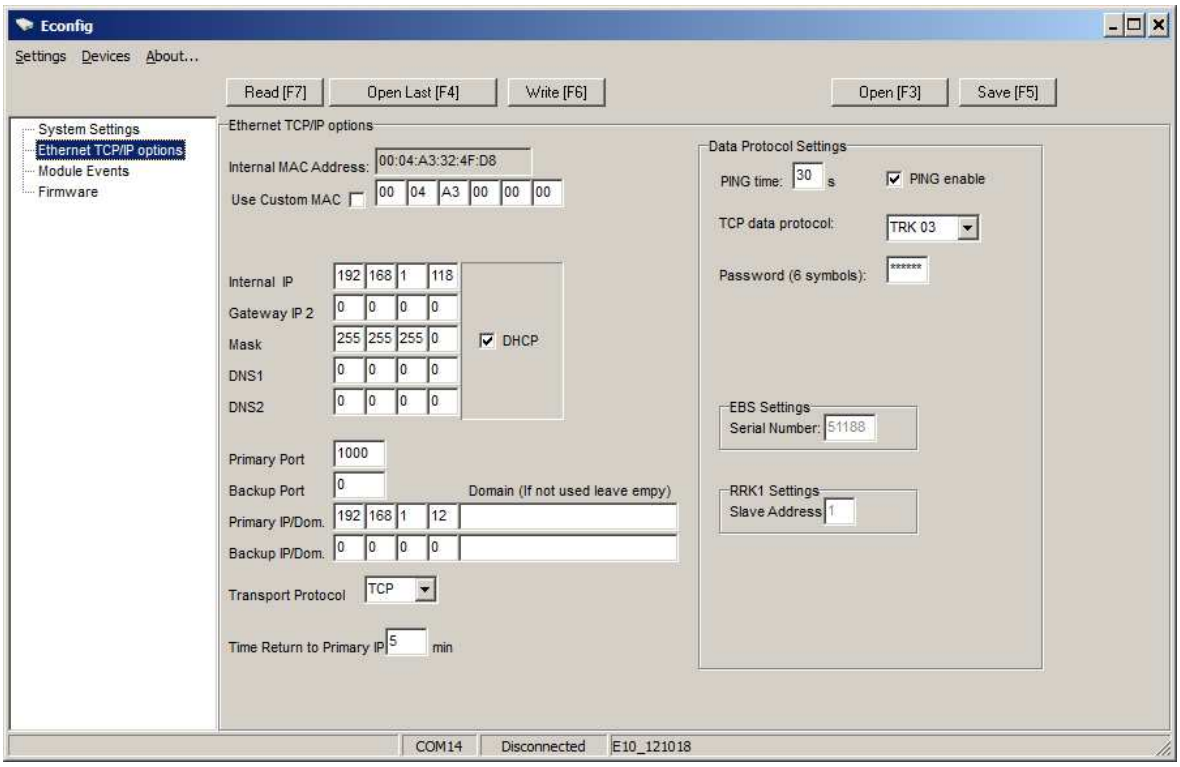
5. Press the button ***Read [F7]*** for the operating parameters set in the module to be read. If Access code request window opens, enter your personal access code and click its button ***OK***. The previously set parameters will be displayed in configuration software windows and information about the connected module will be displayed in its status bar.

6. Choose the directory ***System Settings*** and set the following parameters:



Account Number	Section for entering a 4-digit module identification code.
Use internal account	Select this checkbox if transmitted messages from the security control panel must contain its identification number.
Test time	Periodic test messages will be sent according to a time interval set in this section.
Input	After break of external circuit of input *IN*, a message will be sent with an ***Alarm Code***, and when the circuit is restored – with a ***Restore Code***.
A and ***R***	By selecting these checkboxes it can be chosen if messages about breaching external circuits of inputs IN (***A***) and their restoring (***R***) should be sent.
Type	Section for selecting the desirable type of external circuit of input *IN1*. Available types NC, NO or EOL=2.2 kΩ.

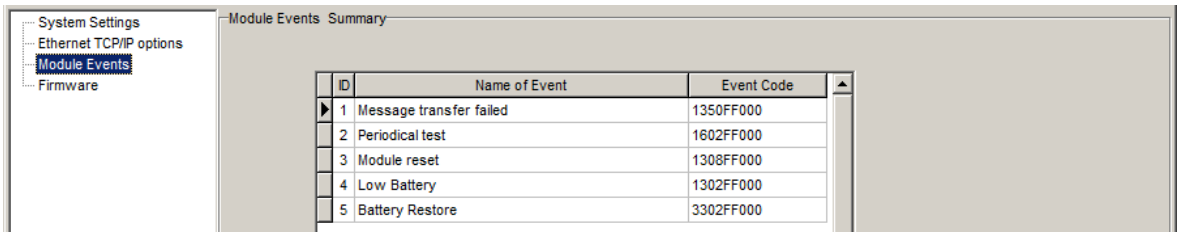
7. Choose the directory ***Ethernet TCP/IP options*** and set the following parameters for module connecting with the monitoring station:



Internal MAC Address	A unique module physical address. It can be changed by selecting the checkbox ***Use Custom MAC*** and entering desired values to the appropriate fields.
DHCP	When this checkbox is selected, module registration in the network will be done automatically. If automatic registration is unsuccessful, enter ***Internal IP*** address, ***Gateway IP 2*** address and subnet ***Mask*** manually.
Primary Port	Section for entering the port number of IP receiver at monitoring station. If a backup IP receiver exists, enter its port number in the section ***Backup Port***.
Primary IP	Section for entering the IP address of the monitoring station IP receiver. If a backup IP address exists, enter its value in the section ***Backup IP***.
Transport Protocol	List for setting transport protocol TCP/IP or UDP/IP for messages to be transmitted.
Time Return to Primary IP	This section is used when both primary and backup IP addresses are set. The duration of time should be entered for how long the module will send messages to the backup IP address when primary communication is failed.
PING time	The module sends periodic *PING* signals for Internet connection to be managed. Enter desirable time period and mark the checkbox ***PING enable***.
TCP data protocol	List for setting an encryption protocol for messages to be sent to the monitoring station.
Password	Section for entering an encryption password for messages sent to the monitoring station. This password must be identical to the decryption password entered in IP receiver.

IP address, port number, network protocol, message encryption protocol and password and other parameters should be provided by the administrator of the monitoring station.

8. In the directory ***Module Events*** a list of events is given, after occurring of the event the module will send messages with codes in Contact ID format to the monitoring station:



Event	*CID code*	*Description*
Message transfer failed	1350FF000	Message transfer error, network problems
Periodical test	1602FF000	Periodic module *Test* message
Module reset	1308FF000	Module operation has been restarted
Low Battery	1302FF000	Module power supply voltage is lower than 11,5 V
Battery Restore	3302FF000	Module power supply voltage has returned to 12,6 V

9. Press the button ***Write [F6]*** and values which were entered in fields of software *Econfig* will be transferred to the module *E10T*. Unplug the USB cable from the USB socket.

Note: Values entered in *Econfig* windows can be saved in computer by pressing the button ***Save [F5].*** A file with an extension *.tcfg* will be created. It can be used later as a template to configure other modules.

Updating module firmware version

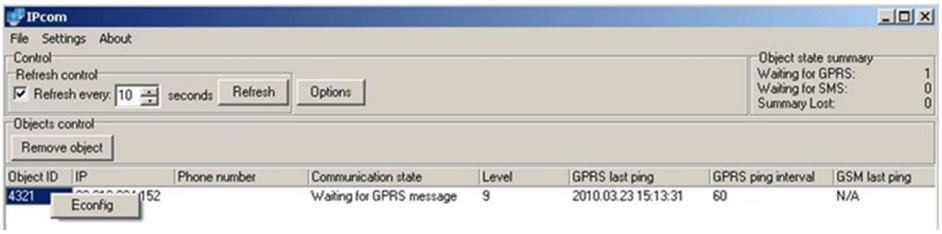
When the manufacturer adds new features to the module *E10T*, firmware of the previously bought module can be updated:

1. Download the latest *Econfig_xxx.exe* file from the website www.trikdis.lt and install it on a computer.
2. Connect the module *E10T* to the computer with USB cable. Start the software *Econfig* and select the folder ***Firmware*** and press the button ***Browse***. In a newly opened window select the file *E10T_xxx.enc* and press the button ***Open***.
3. Press the button ***Start FW Update***. Updating process starts by pushing micro switch ***Reset*** (see Module overview) on the module. After ***Updating process*** bar completely fills up push the micro switch ***Reset*** one more time on.
4. Press the button ***Read [F7].*** New firmware version will be displayed in the status bar of the software *Econfig*.
5. After firmware update parameters of the module are restored to default (factory) settings. Module parameters must be set again according to the instructions given in the chapter **Setting of operating parameters**..
6. Unplug the USB cable.

Setting of operating parameters remotely

To change settings or update firmware of the module *E10T* remotely, *Econfig* software has to be opened in *IPcom* software environment.

1. Open the window of *IPcom*. Select ID number [Object ID] of the module which will be configured and right-mouse click it on.



2. Click start button of software *Econfig* which appears beside the object ID.
3. After opening software *Econfig* window click the button ***Read*** on. If Internet connection with the module is, the software Econfig will display the state ***Connected*** of this connection in its status bar.
4. Operation parameters of the module *E10T* are configured in the same way as the module connected with USB cable (see **Setting of operating parameters**).
5. If you choose the folder ***Firmware*** of the software *Econfig* you'll be able to update the module with a new firmware version. Just click on the button ***Browse***. Select the file *E10T_Remote.enc* and click the button ***Open***. Then click the button ***Start FW Update*** on. After ***Updating process*** bar completely fills up click the button ***Read [F7]***. The firmware version of the module will be displayed in status bar of software *Econfig*.
6. After entering desirable operating parameters into boxes of software *Econfig* click the button ***Write*** for storing configuration in memory of the module. After closing the software *Econfig*, Internet connection session with the module will be cancelled too.

Technical parameters

Power supply voltage	DC 12,6 ± 3 V
Current consumption	120 mA (stand-by) Up to 250 mA (transmitting)
Ethernet connection	IEEE802.3, 10 Base-T, RJ45 socket
Data pack content	Contact ID format codes
Memory	Up to 100 messages
Input	1, NC/NO/EOL-2,2 kΩ type
Configuration	Through the USB port with software *Econfig*
Operating environment	From -10 °C to 50 °C, with relative air humidity 80% when +20 °C
Dimensions	65 x 79 x 25 mm

Package content

Module *E10T*	1 pc.
User manual	1 pc.
Two-sided adhesive tape (10 cm)	1 pc.