

Program *IPcom*

(Version v.1.8)

User manual

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Table of contents

1	Definition of program <i>IPcom</i>	3
2	Description of operation	3
3	Specifications	4
4	PC requirements	4
5	Working with the program <i>IPcom</i>	4
6	Configuration of the program <i>IPcom</i>	6
7	Installation	10

3 Specifications

Input	Ethernet connection Wireless Internet connection Serial port RS232
Flow rate*	up to 50 messages/sec.
Storage of messages	up to 1000 last events
Output to monitoring software	- Serial port RS232 - Ethernet
Output protocol	<i>Surgard</i> according to codes of Contact ID table
Software language	Selectable either Lithuanian, English or Russian

* depends on parameters of the PC in operation: speed and RAM

4 PC requirements

The program **IPcom** should be installed into the PC running OS MS Windows 'XP, 'Vista, 'Win7 having Internet connection with External Static IP address. Used networking equipment should forward incoming messages to the selected port of program **IPcom** (port forwarding).

Minimum PC requirements	Processor: 1,5 GHz CPU or better
	Memory: 256MB
	RS232
	RJ45
	OS: MS Windows'2000/XP

Note: one Serial port RS232 is used for receiving alarm messages from CSD/SMS receiver **GM5**. Second Serial port RS232 is required if alarm messages are redirected to the monitoring software through the Serial port RS232.

5 Working with the program **IPcom**

Program **IPcom** starts by clicking icon .

Starting modes **Standard** and **Service** are set during installation of **IPcom**. Starting mode **Standard** means that program **IPcom** starts by clicking its icon. Starting mode **Service** means that program **IPcom** starts and operates automatically as long as OS *MS Windows* is starting and operating. Then **IPcom** is in operating mode (it automatically receives and redirects received alarm messages), its icon is visible in desktop toolbar. Opening window of **IPcom** is required only if it is necessary to supervise operation of program or to change alarm messages receiving and redirecting terms.

In order to open window of program when it is operating automatically, press the right-click of the mouse on the icon of **IPcom** at the desktop toolbar. Commands **Show IPcom** and **Exit IPcom** appear. Choose command **Show IPcom** and the main window of program will appear (see Figure 2).

It is possible to turn on filters of received messages. Mark checkbox **Show incoming events** in order to display all alarm messages, which are being received. Mark checkbox **Show incoming PING's** in order to display all Communication Control Signals (*PING*), which are being received. In order to display all incoming information, mark both checkboxes.

Program displays Date, Time, Object ID, Event classification, Event code of the received messages at the window lower area.

IPcom displays communication status with monitoring software in the area **Info panel**.

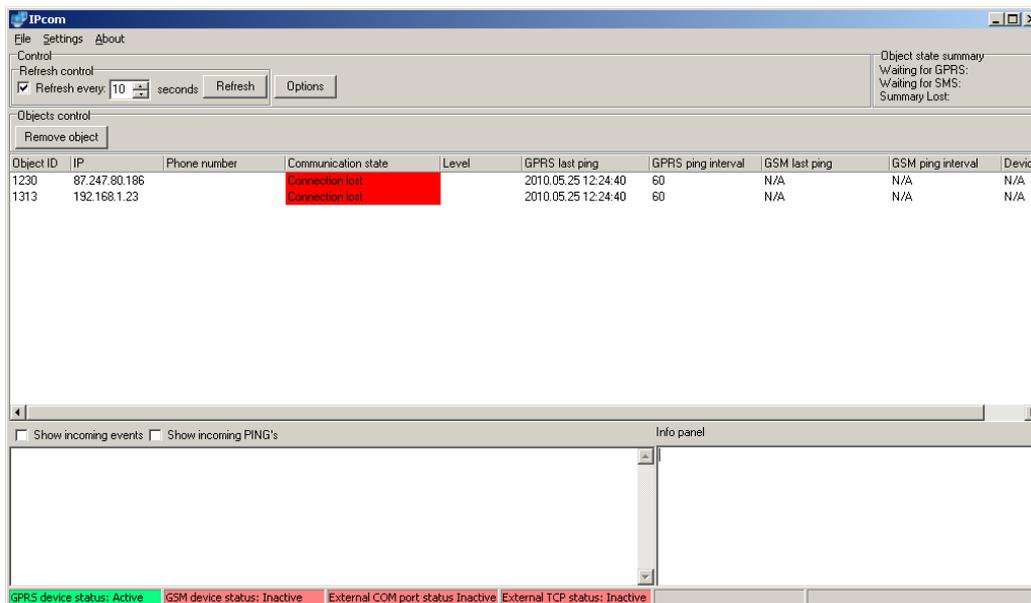
Operation modes and states of the program are indicated in the taskbar.

Area **Refresh control**. Mark checkbox **[Refresh every...]** and set time interval nearby for automated refreshing the list of transmitting devices. By pressing button **[Refresh]** it is possible to refresh the list of transmitting devices manually.

Selected row of object may be removed out of area **Objects control** by pressing button **[Remove object]**.

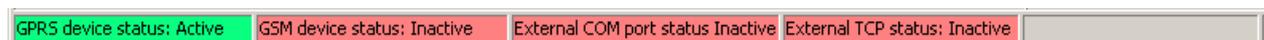
Area **Object state summary** includes:

- Row **Waiting for GPRS** means with how many transmitting devices **IPcom** has connection by protocols TCP/IP and UDP/IP.
- Row **Waiting for SMS** means with how many transmitting devices **IPcom** has CSD and SMS connection.
- Row **Summary lost** means for how many of objects communication failure is occurred.

Figure 2: Main window of program **IPcom**

Area **Objects control**:

- The column [**Object ID**] displays account number of transmitting device a message was received from.
- The column [**IP**] displays IP address of the transmitting device a message was received from.
- The column [**Phone number**] displays telephone number of the transmitting device a message was received from while alarm transmission through CSD and SMS connection is done.
- The column [**Communication State**] displays connection state with transmitting device a message was received from.
- The column [**Level**] displays GSM signal strength in relative units.
- The column [**GPRS last PING**] displays time of the last alarm message (or *PING*) received by protocols TCP/IP and UDP/IP.
- The column [**GPRS PING interval**] displays time interval between Communication Control Signals (*PING*) by protocols TCP/IP and UDP/IP.
- The column [**GSM last PING**] displays time of the last alarm message (or *PING*) received through the CSD and SMS connection.
- The column [**GSM PING interval**] displays time interval between Communication Control Signals (*PING*) through the CSD and SMS connection.
- The column [**Device**] displays Brand name of transmitting device a message was received from.

Figure 3: Status bar of **IPcom**

Status bar of **IPcom** indications (Figure 3):

- **GPRS device status: Active/Inactive** – it indicates status of data input by protocol TCP/IP.
- **GSM device status: Active/Inactive** – it indicates status of connection to CSD/SMS receiver **GM5**.

- **External COM port status: Active/Inactive** – it indicates status of COM port connection for outputting data.
- **External TCP status: Active/Inactive** – it indicates status of connection to LAN for outputting data.
- **Events in COM Buffer:** – it indicates number of messages in COM port buffer.
- **Events in TCP Buffer:** – it indicates number of messages in buffer.

Closing of the program **IPcom**.

In order to close the program, press the right-click of the mouse on the icon  at the desktop toolbar, options **Show IPcom** and **Exit IPcom** appear. Choose option **Exit IPcom** and the program will be closed (the icon program **IPcom** will be removed from the toolbar).

Note: Keys [-], [X] minimizes the program window only. However the program itself remains active.

6 Configuration of the program **IPcom**

- 6.1 In order to start configuration window **Options** (see Figure 3) click on [**Options**] button in main **IPcom** window. There are options to set terms of Communication Control Signals (*PING*) monitoring, set parameters of data Input/Output ports, specify receiver and line numbers, activate sound signals and disable free configuration access etc in options window. Window **Options / General** (see Figure 4).

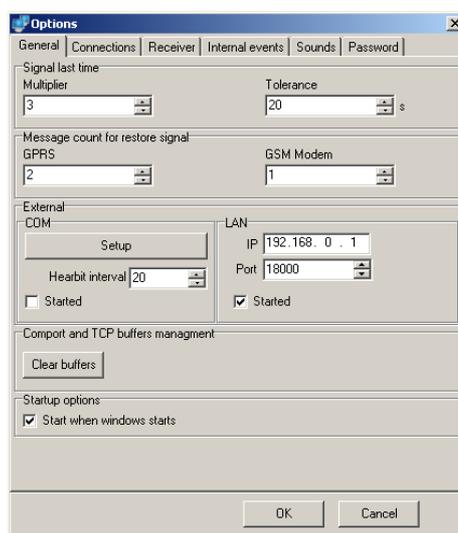


Figure 4: Window Options / General

- 6.1.1 In the area **Signal last time** terms of providing Communication Control Signals (*PING*) monitoring should be set. Conforming to values written in Figure 3 and *PING* sending interval 30 seconds is set in transmitting device, *PING* control time is 110 seconds. If this time has expired, **IPcom** forms an alarm message about communication failure with transmitting device and sends this to monitoring software.

- If received message contains the *PING* sending time interval, Communication Control Signals (*PING*) control time can be calculated by multiplying *PING* sending interval set in transmitting device by the value, written in the field [**Multiplier**] as well as by adding time correction factor [**Tolerance**].

For example:

$$PING \text{ control time} = 30 \text{ sec (PING interval)} \times 3 \text{ (Multiplier)} + 20 \text{ sec (Time correction factor)} = 110 \text{ seconds.}$$

- If received message does not contain the *PING* sending time interval, Communication Control Signals (*PING*) control time can be calculated by multiplying initial interval (120 sec.) by the value, written in the field [**Multiplier**] as well as by adding time correction factor [**Tolerance**].

For example:

$$PING \text{ control time} = 120 \text{ sec (initial PING interval)} \times 3 \text{ (Multiplier)} + 20 \text{ sec (Time correction factor)} = 380 \text{ seconds.}$$

If during Communication Control Signals (*PING*) control time any message has not been received from the transmitting device, **IPcom** will form the alarm message about communication failure and send it to monitoring software.

IPcom will form the communication failure restore message and send it to monitoring software when program will receive such amount of *PINGs* as specified in the area **Message count to restore signal**. Amount of *PINGs* should be specified for both connections: in the box [**GPRS**] while alarm transmission is done by protocols TCP/IP and UDP/IP and in the box [**GSM**] while alarm transmission is done through CSD and SMS connection.

- 6.1.2 Area **External**. There are options to set parameters of information output to monitoring software.
- If messages are redirected through Serial port RS232, press the button [**Setup**] and set parameters of comport in appeared Setup window (see Figure 5). Write in *heartbeat* signal sending interval in box [**Hearbit interval**] and mark [] box [**Started**] for enabling it.

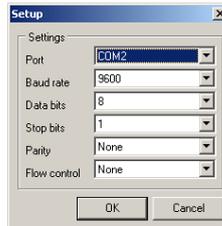


Figure 5: Window Options / General / Setup

- If messages are redirected through Ethernet, write in IP address [**IP**] and port [**Port**] of the existing monitoring software and mark [] box [**Started**] for enabling these.
- 6.1.3 In the area **Comport and TCP buffers management** by using button [**Clear buffers**] it is possible to clear buffer of not redirected messages to monitoring software.
- 6.1.4 While [**Start when windows starts**] box is marked [] in the area **Startup options**, program **IPcom** will start and operate automatically as long as OS Windows is starting and operating.
- 6.2 Settings of messages input are specified in window [**Connections**] (see Figure 6).

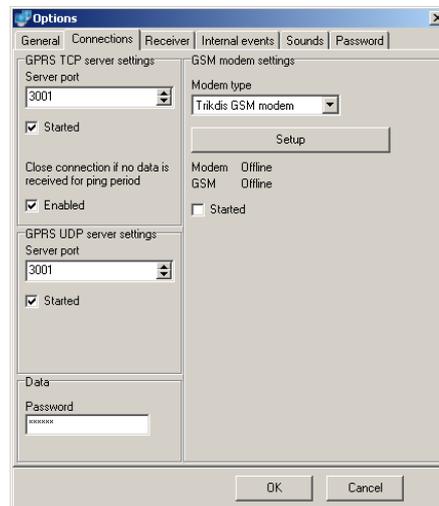


Figure 6: Window Options / Connections

- 6.2.1 If port of program **IPcom** [**Server port**] is written and enabled [] [**Started**] in the area **GPRS TCP server settings**, program **IPcom** will receive messages through Ethernet cable by protocol TCP/IP.

If it is marked [] the checkbox [**Enable**], program **IPcom** will close the GPRS session each time while it receives the message. This mode is used when receiving signals from transmitting devices of other manufacturers.

- 6.2.2 If port of program **IPcom** [Server port] is written and enabled [] [**Started**] in the area **GPRS UDP server settings** program **IPcom** will receive messages through Ethernet cable by protocol UDP/IP.
- 6.2.3 In the area **Data** password of received messages decryption should be entered [**Password**]. It is important that password entered in transmitting devices has to be the same as that specified in this field.
- 6.2.4 The type of CSD/SMS receiver connected to PC can be set in the area **GSM modem settings** selecting desirable element in the list **Modem type**.
- 6.2.5 If messages are received from CSD/SMS receiver through Serial port RS232, press the button [**Setup**] in the area **GSM modem settings** and fill the appeared window (see Figure 7) for setting parameters of input comport. CSD/SMS receiver **GM5** is used for receiving messages through the CSD and SMS connection. Mark [] the checkbox [**Started**] below for enabling input comport.

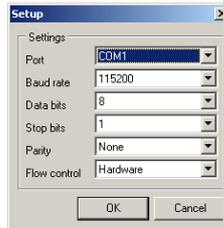


Figure 7: Window Options / Connections / Setup

- 6.3 In the window **Receiver** appropriate receiver and line numbers should be specified (see Figure 8).

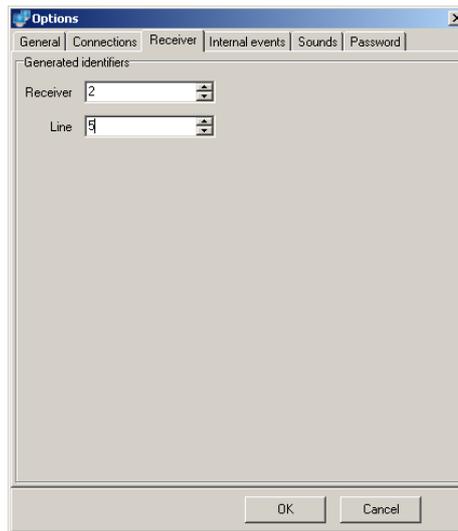


Figure 8: Window Options / Receiver

- 6.4 In the window **Internal events** are options to specify some events, which **IPcom** will form and send to monitoring software while appropriate event is happened (see Figure 9).



Figure 9: Window Options / Internal events

- 6.5 In the window **Sounds** are options to specify sound parameters, which are generated while **IPcom** stores messages not transferred to the monitoring software in its memory (see Figure 10).

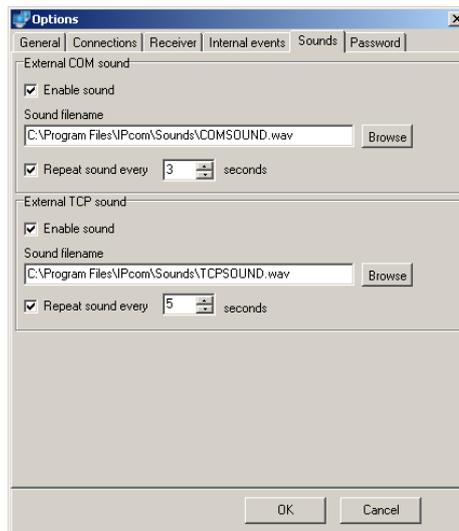


Figure 10: Window Options / Sounds

- 6.6 In the window **Password** is option to specify password of 6 characters length, without entering it, the configuration of the program **IPcom** is forbidden (see Figure 11). This feature protects the program **IPcom** from the unauthorized access or from incautious configuration. If the password is not specified, configuration of the program **IPcom** is enabled without restrictions.

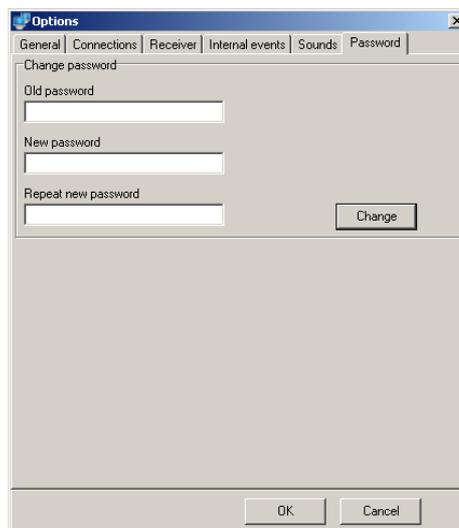


Figure 11: Window Options / Password

If the password is specified, password request window for entering access password will appear (see Figure 12) after pressing the button **[Options]** (see Figure 2).



Figure 12: Request window for entering the password

In order to change the password, fill specified fields and press the button **[Change]**. When specifying password the first time, the field **[Old password]** should be left blank. Use sequence of 6 characters.

7 Installation

Installation of the program is as follows:

- 7.1 Click **Download** link of **program IPcom v1.8** (or newer version) on website www.trikdis.it and window **File download** appears (Figure 13).



Figure 13:

- 7.2 Press button **[Run]** (Figure 13).



Figure 14:

- 7.3 Press button **[Next]** (Figure 14).



Figure 15:

- 7.4 Choose the installing direction and press button **[Next]** (Figure 15).



Figure 16:

- 7.5 Select the language and press button **[Next]** (Figure 16).



Figure 17:

7.6 Select the starting program mode and press button **[Next]** (Figure 17):

- **Standard** – clicking the icon on the desktop will activate the program.
- **Service** - the program will be started automatically upon loading OS Windows.



Figure 18:

7.7 Press button **[Install]** (Figure 18).



Figure 19:

7.8 Press button **[Finish]** (Figure 19).

Installation is complete.