

GNOME232/422

GNOME232: Ethernet to RS232 converter

GNOME422: Ethernet to RS422 converter

Security features

Virtual serial port



GNOME232/422

Brief Datasheet

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BASIC INFORMATION

Description

GNOME232 and GNOME422 are simple and inexpensive converters between a 10/100 Ethernet interface and an RS232, respectively an RS422 line. It enables users to simply connect devices with the RS232 or RS422 interface to an Ethernet line or to extend a serial line to the other end of the world via the Internet. This solution includes a "virtual serial port" – software that creates a new serial port in the Windows operating system, and this port is directed to the GNOME232/422 module via the Ethernet interface. Configuration with the aid of intuitive control software is easy.

Applications

- A remote serial line as another COM port in your Windows system
- Connection to the Ethernet environment of devices communicating via an RS232/RS422 line
- Extension of an RS232/RS422 serial line via Ethernet
- Virtual port – controlling the remote line with the aid of its original software
- Internet communication with remote devices
- Connection of two RS232/RS422 lines via Ethernet

Features

- Converting a serial line to Ethernet
- Connecting via an RJ45 connector to a 10/100Base-T Ethernet network
- Miniature dimensions – easy to integrate into the existing devices
- Easy configuration using the included software
- Configuration with the aid of Windows software, Telnet Protocol, or a WEB interface
- TCP and UDP protocols
- RS232: Transmission speed from 300 Bd to 460 kBd
RS422: Transmission speed from 300 Bd až 921,6 kBd
- Flow control RTS/CTS, Xon/Xoff or none
- The connected devices can be supplied with power from the DTR signal
- RS232 signals: RXD, TXD, RTS, CTS, DTR, GND
- RS422 signals: Rx+, Rx-, Tx+, Tx-
- Power supply: 5 to 36 V
- Indication of power supply, data transmission, network connection and activity

Types of communication

Converters GNOME232 and GNOME422 use several ports for communication: **Data port** (for usual data transmission) is user-specific, the default setting of the port is **10001**. Port for setup via **Telnet** is **9999**. Port for setup via **WEB interface** is by default set to **80** (it is also user-specific).

TCP server/client

Upon switching on, the GNOME232/422 module expects data from the serial line and also connection request from the Ethernet interface.

If the data comes from the serial line, the TCP client mode is activated (cf. below). If a connection request comes, the module is switched over to the TCP sever mode (cf. below).

The module may remain in the activated mode, or – after a time lag – cancel the mode and wait for data from the serial line or Ethernet interface.

TCP server

Upon switching on, the GNOME232/422 module listens on the sleeted port and waits for the client connection.

As soon as a client is connected, data from the Ethernet is immediately sent to the serial line and vice versa. If the client is not connected and data from the serial line is coming, it is stored in a cache and sent immediately upon the client connecting to the server.

If the client is silent or terminates the connection incorrectly, GNOME232/422 terminates its connection after a preset time lag.

TCP client

When idle, the GNOME232/422 module waits for data from the serial line. As soon as data is received, the GNOME232/422 module tries to connect to the server at a given IP address. If the connection cannot be established, the data is stored in a cache memory. Upon establishing the connection, the data is sent out and data from Ethernet is transmitted to the serial line.

UDP

The Ethernet data is expected on a preset port. When data comes from the serial line, it is sent to the preset IP address. Within a UDP transmission, response of the opposite side is not tested; the application should be independently protected from a data loss.

Technical Parameters

Ethernet:

Connection to Ethernet	RJ45 Ethernet 10/100BASE-T
Compatibility	Ethernet version 2.0/IEEE 802.3
Supported protocols	ARP, UDP/IP, TCP/IP, Telnet, ICMP, DHCP, TFTP, BOOTP, Auto IP, HTTP

RS232 (GNOME232 only):

Connector	CAN 9 M (CAN 9 F on request)
Used signals	RXD, TXD, RTS, CTS, DTR, GND

RS422 (GNOME422 only):

Connector	Slip-on connector board
Used signals	Tx+, Tx-, Rx+, Rx-

Buffer:

Transmit (Ethernet > RSxxx).....	1,5 kB
Receive (RSxxx > Ethernet).....	2 kB

Power:

Supply voltage	5 to 36 V
Current	typ. 80 mA @ 12 V

Other parameters (GNOME232):

Weight.....	85 g
Operating temperature	-25 to +85 °C ¹
Dimensions	57 mm x 25 mm x 42 mm

Other parameters (GNOME422):

Weight.....	70 g
Operating temperature	-25 to +85 °C ¹
Dimensions (with connector).....	54 (63) mm x 24 mm x 41 mm

¹ In high performance mode only up to +75 °C.

Installing options

Communication encrypting:

- No encrypting (*standard version*)
- 128, 192 or 256bit encrypting, Rijndael algorithm

Mounting:

- Without a holder (*standard version*)
- With a DIN rail mount



Fig. 1 – with DIN rail mount

RS232 connector (GNOME232 only):

- CAN 9 M (plug) (*standard version*) (see Fig. 2)

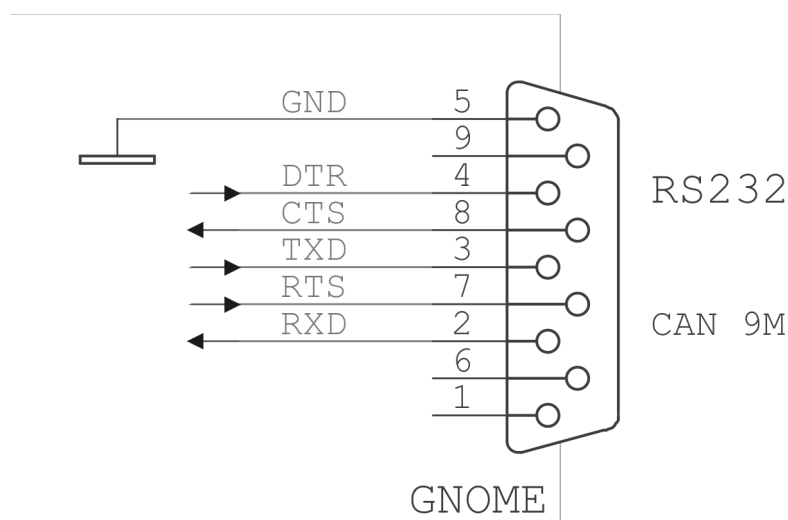


Fig. 2 – connection of RS232 (CAN 9 M)

- CAN 9 F (socket) with DCE signal distribution for direct connection to a PC (see Fig. 3)

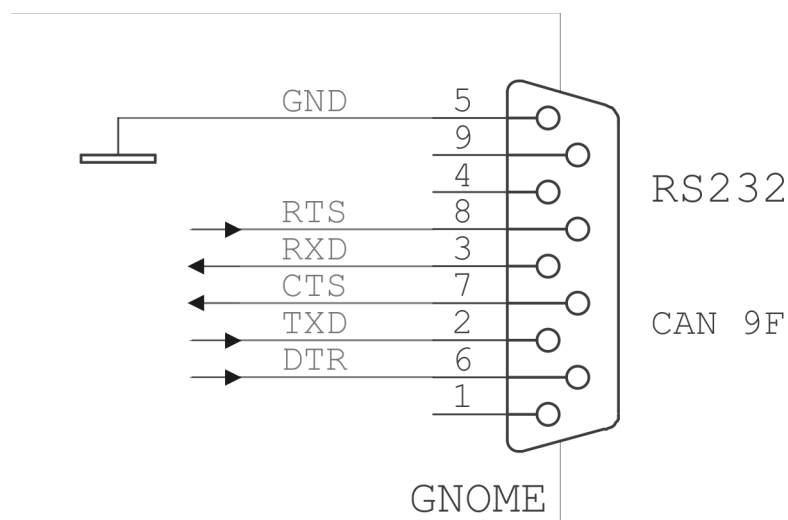


Fig. 3 – connection of RS232 (CAN 9 F)

Please do not hesitate to contact us if you have specific requirements for the GNOMExxx module's workmanship and functionality.

Connection of module GNOME232

The GNOME232 module is equipped with three connectors.



Fig. 4 – RS232 connector



Fig. 5 – Ethernet and supply



Fig. 6

Ethernet interface is connected via RJ45 connector using a standard (straight) cable to HUB or Switch. GNOME232 Ethernet interface is connected directly to a PC via a cross-over (or Patch) cable.

Power supply connector is a coaxial connector of 3,8 x 1,3 mm. The plus pole (+) is inside.

RS232 is connected via CAN 9 – usually in F version (plug; see Fig. 4). It can also be ordered in M version (socket). (RS232 connection can be found on the previous page.)

Connection of module GNOME422

The GNOME232 module is equipped with two connectors.

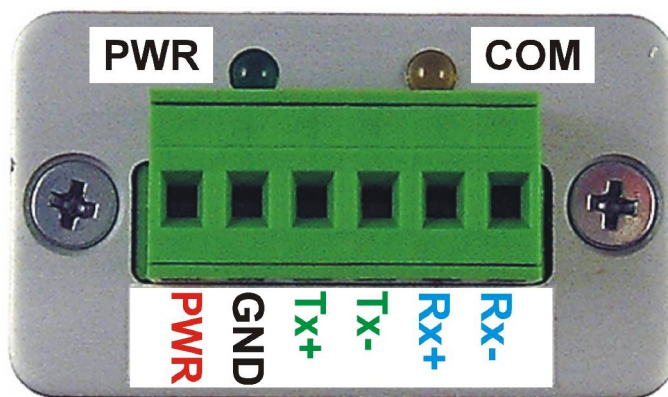


Fig. 7 – Supply and RS422 line

Ethernet interface is connected via RJ45 connector using a standard (straight) cable to HUB or Switch. GNOME232 Ethernet interface is connected directly to a PC via a cross-over (or Patch) cable.

On the backside panel of the module you can find a slip-on terminal for the connection of **power supply** (PWR; GND) and communication links of **RS422** (Tx+; Tx-, Rx+; Rx-). The slip-on terminal connection is illustrated in Fig. 7.

Connection – related products

The following items can be ordered as accessory equipment with the converters:

- Power supply 12 V (socket adaptor).
- Power supply 12 V with DIN rail holder.
- Patch cable.
- *GNOME232 only*: Power supply cable terminated with the corresponding connector (3.8 × 1.3 mm).

Indicators – GNOME232

PWR indicator (green)

Indicator of power supply voltage.

DCD indicator (yellow)

It is on when connection is established.

Link indicator

(left indicator on Ethernet connector)

Off not connected

Yellow 10Mbps

Green 100Mbps

Activity indicator

(right indicator on Ethernet connector)

Off No activity

Yellow Half-Duplex

Green Full-Duplex

Indicators – GNOME422

ON indicator (green)

Indicator of power supply voltage.

COM indicator (yellow)

It is on when connection is established.

Link indicator

(left indicator on Ethernet connector)

Off not connected

Yellow..... 10Mbps

Green 100Mbps

Activity indicator

(right indicator on Ethernet connector)

Off No activity

Yellow..... Half-Duplex

Green Full-Duplex

BASIC NETWORK INFORMATION

IP address

Within a network, GNOME232/422 must have the following settings: subnet mask, gateway IP address, and the unique IP address. The subnet mask is set as 255.255.255.0² by the manufacturer; and the IP address as 192.168.1.254.

Default IP address: 192 . 168 . 1 . 254

Default gateway IP address: 0 . 0 . 0 . 0

Default subnet mask: 255 . 255 . 255 . 0

If you change any of these IP settings, we recommend you to put down the new values:

IP address: . . .

Gateway IP address: . . .

Subnet mask: . . .

MAC address

The unique address shown on the GNOME232/422 module's label (on the bottom or side). It is a unique address of the module. It consists of six hexadecimal numbers separated with dashes – in a format such as 00-20-4A-xx-xx-xx (where xx are the unique numbers shown on the label).

MAC address: **00-20-4A-** - -

² This subnet mask is also referred to as a "type C" mask..

HOW TO EASILY SET UP YOUR GNOME232/422

This chapter gives examples of quick and easy setup of the GNOMExxx converter for typical examples of use. Select the example that is the closest to your application. (The examples are given for the basic setting of the converter.)

An Ethernet – RS232/RS422 converter (basic setting)



*Fig. 8 – a typical connection of GNOME232 as an converter Ethernet – serial line
(GNOME422 is connected in a similar way)*

This setting is meant for equipment which requires permanent connection to RS232 (resp. RS422).

- 1) Connect the converter to your network and ask your network administrator for the basic network parameters to be assigned to the converter (cf. the preceding page: the IP address, gateway IP address, and the subnet mask).
- 2) Activate the supplied configuration program³ and click on "IP setting." A wizard is thus opened, in which you first enter the MAC address of the converter (written on the label on the module's side) and then the basic network parameters. (Cf. the description of this wizard under the heading "Set up IP settings" on page 18, and also Fig. 15 and Fig. 17.)
- 3) The GNOMExxx module is now set as an Ethernet/serial line converter with the selected IP address and the following parameters of the serial line: speed 9600 Bd, 8 data bits, parity – none, and one stop-bit. If you need to change the parameters of the serial line, click on the "Data channel setting" in the main window of the program; at the top central area there is a frame with the serial line parameters (cf. Fig. 9).

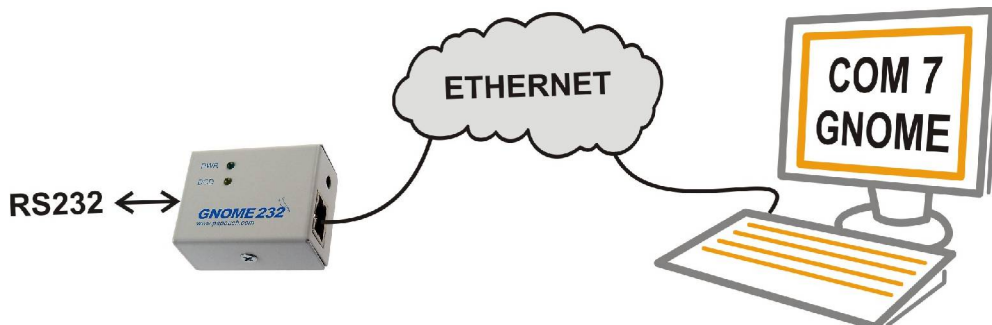
Serial line settings	
Line speed	9600
Character size	8 bits
Parity	None
Stop bit	1
Flow control	None
Response	No answer

Fig. 9 – serial line parameters

³ The program can be downloaded, at any time and free of charge, at www.papouch.com/en/products.asp?dir=ethernet.

- 4) Save the changed settings in the converter by clicking on the "Settings" button in the bottom area of the window. The GNOME232/422 module is thus set as an Ethernet/serial line converter. This setting is suitable for the basic function of the converter, without additional options for data flow control, timing, or packet creation.

Connecting an RSxxx device via Ethernet to a "local" COM port



*Fig. 10 – a typical connection for redirecting a serial line to "local" COM
(GNOME422 is connected in a similar way)*

The following setting is suitable for equipment which requires permanent connection to serial line.

- 1) Connect GNOMExxx to an Ethernet network.
- 2) Install the "Virtual Serial Port"⁴
- 3) Connect your RSxxx device to the module's serial line.
- 4) On a computer connected to an Ethernet network (which must be interconnected with the network in which the GNOMExxx module is connected), activate the application which communicates with your device on the RSxxx line, and select from the ports' list the COM port set by the Virtual Serial Port..
- 5) The program now works as if via the RSxxx line, which is in fact connected via the GNOMExxx module and an Ethernet interface.

⁴ A detailed description of the installation is <http://www.lantronix.com/device-networking/utilities-tools/com-port-redirector.html>.

Extension of an serial line via Ethernet

On Fig. 11 is a typical connection of two converters for extension of a serial line via Ethernet.

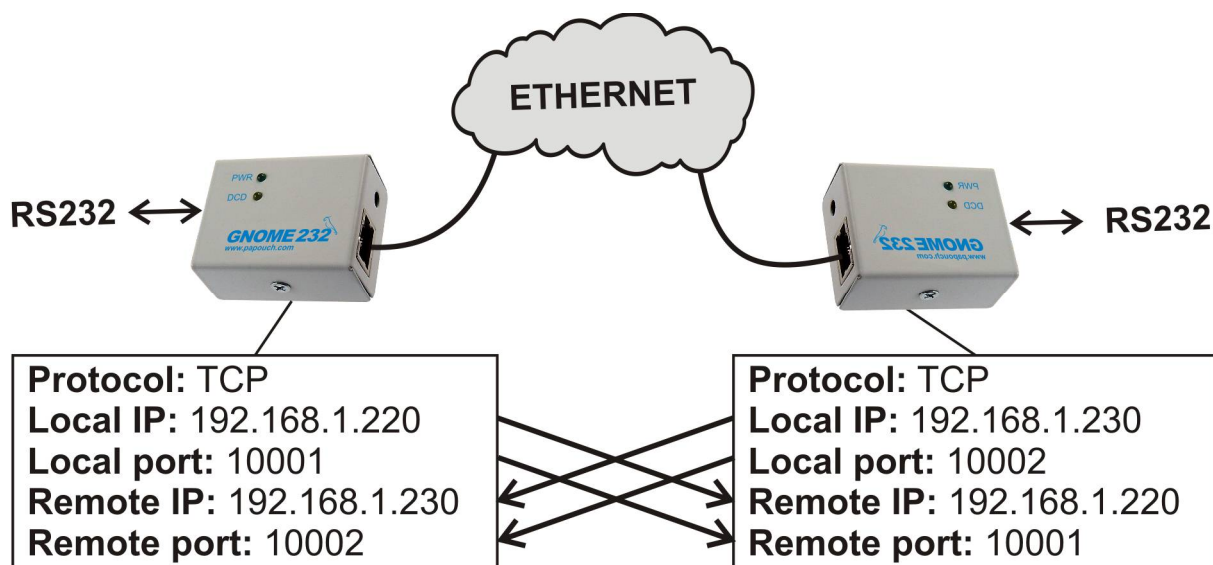


Fig. 11 – typical connection of two converters for extension of a serial line via Ethernet

Setting the first GNOME232/422 module

- 1) Connect the converter to your network and ask your network administrator for the basic network parameters to be assigned to the converter (cf. page 4: the IP address, gateway IP address, and the subnet mask).
- 2) Activate the supplied configuration program⁵ and click on "IP setting." A wizard is thus opened, in which you first enter the MAC address of the converter (written on the label on the module's side) and then the basic network parameters. (Cf. the description of this wizard under the heading "Set up IP settings" on page 18, and also Fig. 15 and Fig. 17.)

Setting the second GNOME232/422 module

- 3) Select an IP address for this module (it must be different from the address of the first module).⁶ Activate the configuration program and set the address, using the procedure similar to setting the first module.⁷ If the second module is in another network, the gateway and subnet mask will probably have to be changed as well.

Common settings

- 4) Set the remote IP address on both converters. This means: for each of these two converters, set the IP address of the opposite converter in "Remote IP address" item of the "Data channel settings" section of the main window to.

⁵ The program can be downloaded, at any time and free of charge, at www.papouch.com/en/products.asp?dir=ethernet.

⁶ If you are not sure what values of the IP address, gateway and mask to set, contact your network administrator, who will give you the data.

⁷ If both converters are connected within the same network and the first converter has the original IP address (from the manufacturer), disconnect the first converter before connecting the second one. Two devices with identical IP addresses cannot be connected within one network.

- 5) Further, set the Local and Remote ports. This means: for each of these two converters, set the same value (we recommend 1001) in the "Local port" and "Remote port" items of the "Data channel settings" section of the main window.
- 6) Set the remote server/client mode on both converters. The server mode is the default, hence setting the client mode will be sufficient. For both converters, select "Establish connection upon receipt of any character" in the "Active connection" item of the "Data channel settings."
- 7) The initial configurations of the serial ports on both modules have the following parameters:
Speed9,600 Bd
Number of data bits8
Paritynone
Number of stop-bits1
If you need to change the parameters of the serial line, click on the "Data channel setting" in the main window of the program; at the top central area there is a frame with the serial line parameters (cf. Fig. 9). Save the changed settings by clicking on the "Settings" button in the bottom area of the converter configuration windows.
- 8) The setting procedure is completed.

METHODS OF SETTING THE PARAMETERS

- 1) Windows configuration software (via Ethernet)
- 2) Using a Web browser (via Ethernet)⁸
- 3) Telnet protocol (via Ethernet)⁹

CONFIGURATION SOFTWARE

The configuration software can be used for easy settings of the converter parameters. The main window of the program is shown in Fig. 12. (By clicking on the flag icons in the top right corner you can switch between Czech and English.)

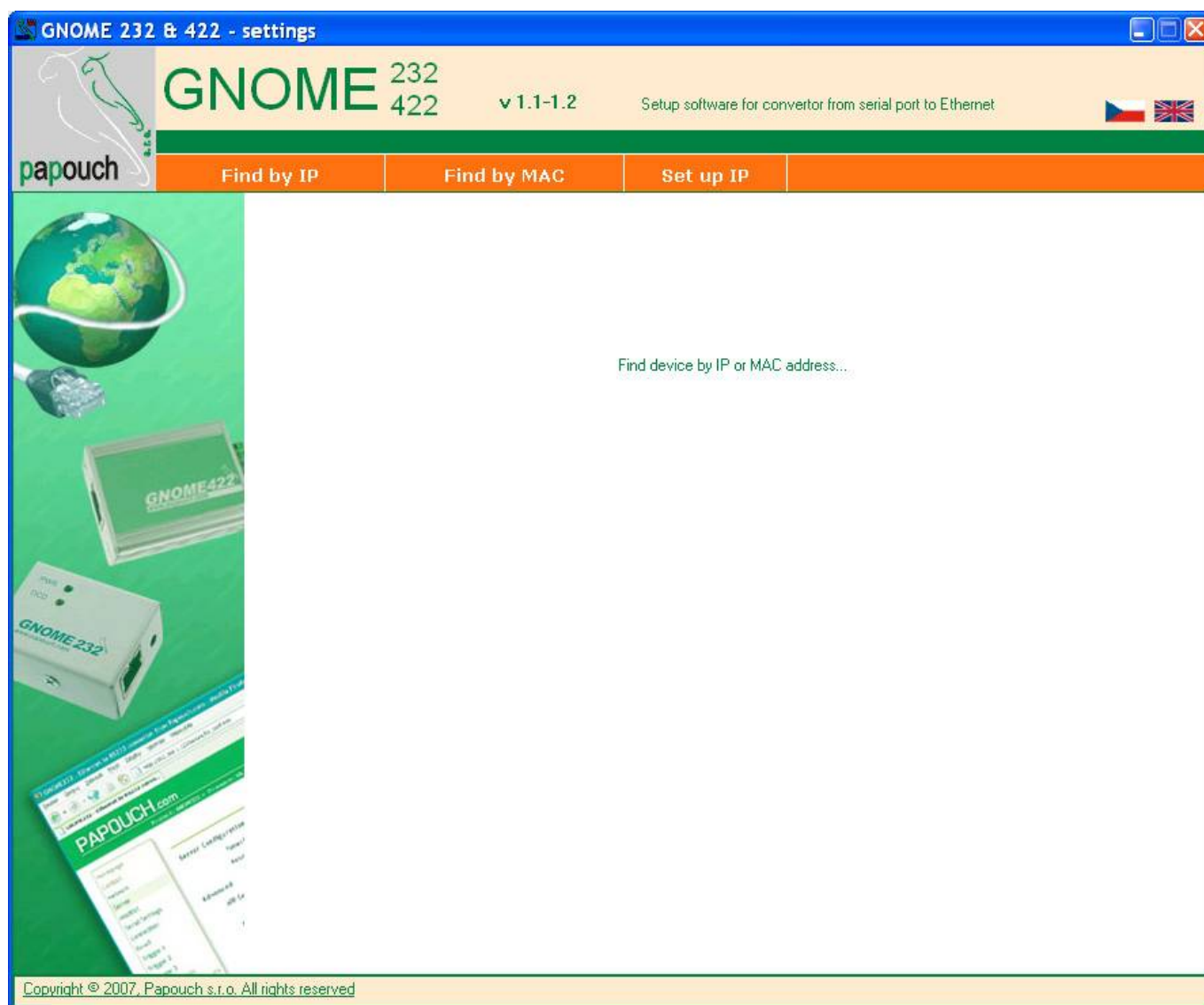


Fig. 12 – main window of configuration program

If you need to configure the converter after the first connection in your network, we recommend you to follow the instructions given under the heading "Set up IP" on page 18.

⁸ The GNOME provide its own WEB pages. It could be browsed by entering the Gnome's IP address to address field of your Internet browser.

⁹ Configuration via Telnet is accessible on the converter IP address and port 9999.

Search by IP address

This command enables you to find the GNOME module in the network according to its IP address. When you click on this button, the window shown in Fig. 13 is displayed. Write the IP address in the line and push "OK."



Fig. 13 – entering the IP address to look for

If the converter can be found at the given IP address, its settings are displayed in the settings window.

Not found?

- 1) Check whether the converter is connected and is active (indicators on its Ethernet connector are on or flashing).
- 2) Check the correct IP address (it is set to 192.168.1.254 by the manufacturer).
- 3) The converter's IP address may not be compatible with your network. Change the IP address using the "Set up IP" command (page 18).

I don't know the converter's IP address

Search the GNOME by MAC address (written on the label on the modules' side) using the "Find by MAC" command (page 18) or assign to your converter an IP address suitable for your network. You can set the IP address using the "Set up IP" procedure (page 18).

Search by MAC address

You can use this command if you need to find the converter according to its unique MAC address (it is written on the label on the module's side). When you click on this button, the window shown in Fig. 14 is displayed. Write the MAC address¹⁰ and push "OK."

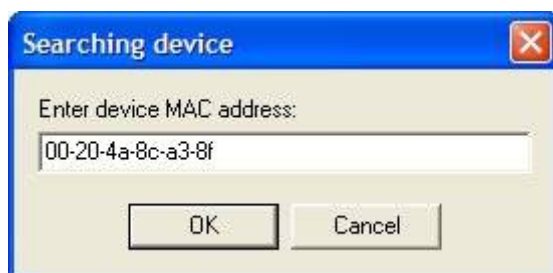


Fig. 14 – entering the MAC address to look for

If the converter with the given address can be found, its settings are displayed in the settings window.

Not found?

- 1) Check whether the converter is connected and is active (indicators on its Ethernet connector are on or flashing).
- 2) Check the correct MAC address on the label placed on the converter.
- 3) The converter's IP address may not be compatible with your network. Change the IP address using the "Set up IP" command.

Set up IP

Using this command, you can assign a new IP address to the converter. This procedure is specifically suitable for connecting converters in production, because the basic parameters can be adapted for a new network. When you click on this button, the window shown in Fig. 15 is displayed. Write the MAC address to look for¹⁰ and push "OK."



Fig. 15 – the first screen of the new IP setting wizard

¹⁰ The address is written on the label placed on the converter. It can be entered in the format AB-CD-EF-GH-IJ-KL or ABCDEFGHIJKL. It is not case sensitive (you can enter lower-case or capital letters).

Now the desired MAC address will be searched. If found, a window as illustrated in Fig. 17 will be displayed. If not found, a prompt shown in Fig. 16 will appear.



Fig. 16 – the entered address was not found

By clicking the **Abort** button, you will abort the process of IP address allocation.

By clicking the **Retry** button, you will repeat the attempt to search the desired MAC address

By clicking the **Ignore** option, you will continue even though the MAC address was not found.

Set parameters suitable for your network in the screen shown in Fig. 17. If you are not sure what parameters you should choose, contact your network administration, who will give you the required data.

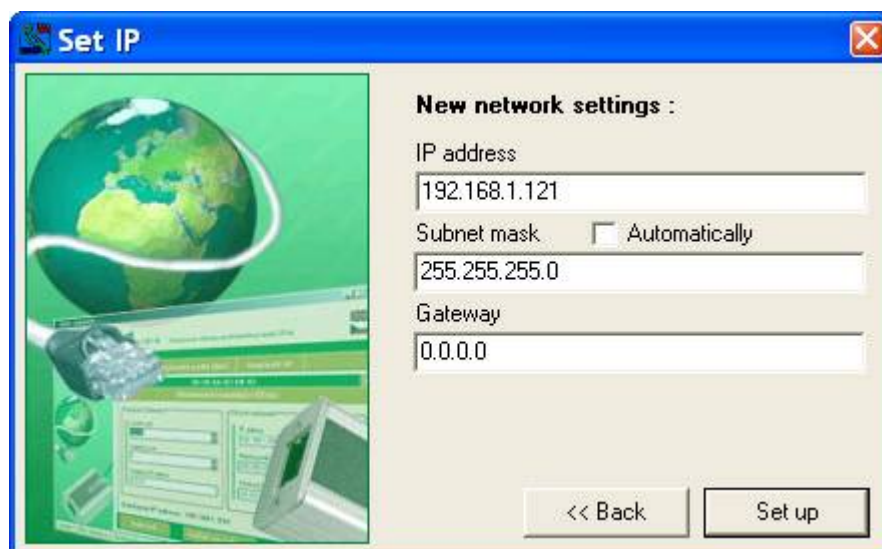


Fig. 17 – IP settings wizard > setting the IP address, subnet mask and gateway

If the MAC address was not found the prompt as illustrated in Fig. 19 will be displayed.

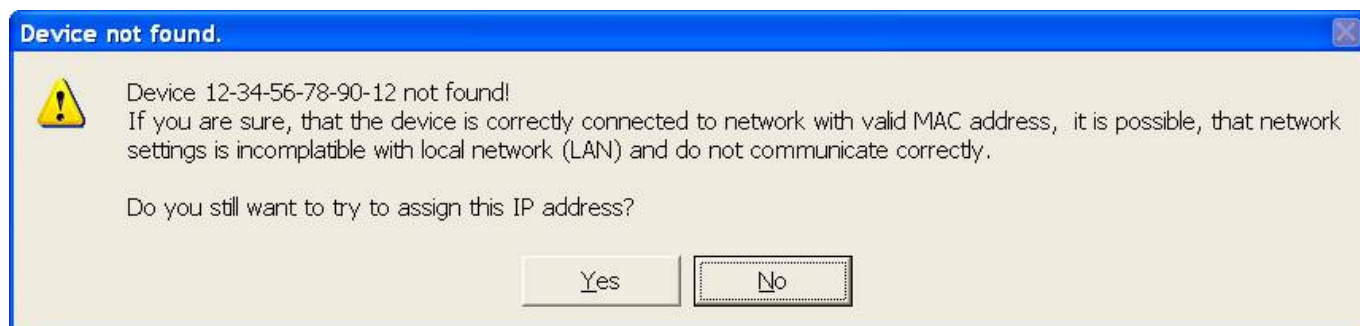


Fig. 18 – MAC address was not found

If you are sure the equipment is connected to the network properly and that the MAC address is entered in the right way, click Yes. The program must send a command to the entered MAC address to reset network parameters. Information saying whether the setting was carried out successfully or not will appear after a while.

The module is now set as an Ethernet/RSxxx converter, with the IP address, subnet mask and gateway you chose, and the other parameters set by the manufacturer. No more settings are necessary for the basic functions of an Ethernet/RSxxx converter¹¹.

A small window will be displayed, asking if you wish to "set the device." If you click "Yes," the program activates the procedure for setting additional parameters of the converter. The "Data channel settings" section of the main window will be displayed (cf. chapter "Data channel settings" on page 20).

Data channel settings

When you click on the "data channel settings" tab after connecting the converter, the setting window (Fig. 19) is displayed.

00-20-4A-8C-A3-8F

Data channel options

Network settings

Ethernet settings

Local port
10001

Remote port
0

Remote IP address
0.0.0.0

☐ UDP datagram mode

Incomming connection
Enable

Active connection start-up
Disabled

Function with MODEM MODE option

☐ Port password

Idle timer
0 min 0 s

Serial line settings

Line speed
9600

Character size
8 bits

Parity
None

Stop bit
1

Flow control
None

Response
No answer

Creating packets from serial line

Packing algorithm
Disable

Idle time
12 ms

Trailing characters
None

Character 01
00

Character 02
00

Erasing cache memory

Input

With active connection
Disable

With active connection
Disable

When disconnected
Disable

Output

With passive connection
Disable

With passive connection
Disable

When disconnected
Disable

Set up

Load from device

Default values

Fig. 19 – Data channel settings

Local port

Data channel options > Ethernet settings > Local port
Default value: 10001
Recommended references: Fig. 19

Number of the port on which the converter expects connection from Ethernet.

¹¹Within the initial setting, the RS232/422 line of the converter has the following parameters: speed: 9,600 Bd, number of bits: 8, parity: none, number of stop-bits: 1.

This item is only meaningful if the "Incoming connection" option (cf. page 21) is set to "Allowed" (the so-called TCP Server mode).

Remote port

Data channel options > Ethernet settings > Remote port

Default value: 0

Recommended references: Fig. 19

The remote port to which the converter is connected (for the TCP Client mode).

Remote IP address

Data channel options > Ethernet settings > Remote IP address

Default value: 0.0.0.0

Recommended references: Fig. 19; "Types of communication" (page 5)

The IP address to which the converter is connected (for the TCP Client mode).

UDP Datagram mode

Data channel options > Ethernet settings > UDP Datagram mode

Default value: False (not checked)

Recommended references: Fig. 19; "Types of communication" (page 5)

By checking this field you will activate the UDP mode.

Incoming connection

Data channel options > Ethernet settings > Incoming connection

Default value: Allowed

Recommended references: Fig. 19; "Types of communication" (page 5)

This setting determines the converter's response to connection coming from Ethernet.

Allowed:

The converter will always accept a connection request coming from Ethernet.

Forbidden:

The converter will ignore all connection requests coming from Ethernet.

Active connection start-up

Data channel options > Ethernet settings > Active connection start-up

Default value: Forbidden

Recommended references: Fig. 19; "Types of communication" (page 5)

This setting determines whether the converter will establish connection to Ethernet upon occurrence of different events. If established, the connection will be with the "Remote IP address" and the "Remote port."

Disabled:

The converter will never establish connection automatically.

Establish connection after any character on serial line:

The converter will establish the connection if any character comes from the serial line.

Establish connection after CR character is received:

The converter will establish the connection if the CR character is received (carriage return; Enter; Decimal: 13; Hexadecimal: 10) from the serial line.

Manual setting (C + address):

The converter will try to establish the connection if it receives from the serial line a command in the following format: C[IP address]/[port]

Example of a command received from the RS232/422 serial line to establish connection with IP 192.168.1.105, port 4567: C192.168.1.105/4567

If the subnet mask restricts the range of the network's IP addresses, for example to 8 bits (the "C type" mask – 255.255.255.0), the command can have an abridged format as follows: C105/4567

Autostart outbound connection:

The converter will establish the connection immediately upon activation.

Modem mode:

This option activates modem emulation by the GNOME232/422 module. All communication is then controlled by AT commands from the serial line. The following item, "Module actions within the Modem mode", is directly related to this mode.

Function with MODEM MODE option

Data channel options > Ethernet settings > Function with MODEM MODE option

Default value: Echo off

Recommended references: Fig. 19; "Modem mode:" (page 22)

(This item is only available if the "Modem mode" is activated as the "Active connection start-up" option. Cf. the heading above.)

This setting specifies the converter's actions within the modem emulation mode.

Without echo:

No information is written locally (to the serial line).

With echo:

The "echo" is sent locally (to the serial line) with the connection status info.

Numeric modem result codes:

The modem response is expressed as one character.

Port password

Data channel options > Ethernet settings > Port password

Default value: no password (not checked)

Recommended references: Fig. 19

Immediately upon receiving a connection request from Ethernet, password is required. If the wrong password is given, the converter will disconnect the line. The maximum length of the password is 15 characters. Enter the selected password in the text field below the checkbox.

Idle timer

Data channel options > Ethernet settings > Idle timer

Default value: 0:0 (off)

Recommended references: Fig. 19

If Ethernet connection has been established and no communication occurs in either direction for a preset time interval, the connection is cancelled. Minutes and seconds are entered separately. If the time is entered as 0:0, this function is switched off.

Line speed

Data channel options > Serial line settings > Serial line speed

Default value: 9,600 Bd

Options [Bd]: 300; 600; 1,200; 2,400; 4,800; 9,600; 19,200; 38,400; 57,600; 115,200; and 230,400

Recommended references: Fig. 19

This option enables the user to set the communication speed of the serial line in Bauds.

Character size

Data channel options > Serial line settings > Character size

Default value: 8 bits

Options [bits]: 8, 7

Recommended references: Fig. 19

Setting of the number of data bits on the serial line.

Parity

Data channel options > Serial line settings > Parity

Default value: none

Options: none, even, odd

Recommended references: Fig. 19

Setting of the parity for data on the serial line.

Stop bit

Data channel options > Serial line settings > Stop bit

Default value: 1

Options: 1, 2

Recommended references: Fig. 19

Setting of the number of the stop bits for data on the serial line.

Flow control

Data channel options > Serial line settings > Flow control

Default value: none

Options: none, XON/XOFF, RTS/CTS

Recommended references: Fig. 19

Setting for the data flow control on the serial line.

None:

The data flow is not controlled.

XON/XOFF:

The data flow is controlled with the aid of special characters sent within the data – XOFF (transmission off) and XON (transmission on).

RTS/CTS:

Hardware control with the aid of the RTS and CTS signals.

Response

Data channel options > Serial line settings > Response

Default value: No answer

Options: No answer, Character response

Recommended references: Fig. 19

If "Character response" is selected, the converter sends to the serial line a character depending on the Ethernet connection status:

C.....connected

D.....disconnected

N.....the server is unavailable

Packing algorithm

Data channel options > Serial line packeting> Packeting

Default value: Disable

Options: Disable, Enable

Recommended references: Fig. 19

Control of packet creation of data coming from the serial line. The "Enable" setting will make available two more options for specification of packeting.

Idle time

Data channel options > Serial line packeting> Idle time

Default value: 12 ms

Options: 12 ms; 52 ms; 250 ms; 5,000 ms

Recommended references: Fig. 19

(This option is only available if "Packeting" is set to "Enable".)

This setting determines the idle time interval (of no data from RS232/422) after which the received data is packed and sent to Ethernet.

Trailing characters

Data channel options > Serial line packeting> Trailing characters

Default value: none

Options: none, one, two

Recommended references: Fig. 19

(This option is only available if "Packeting" is set to "Enable".)

This option determines the number of characters that are deemed a signal for packet preparation to be sent. As soon as the character(s) is/are received, the, packet is prepared and subsequently sent as soon as another character is received (any). (This option can be used for recognising characters, e.g., preceding the checksum. The character that is always received before a checksum is set here. As soon as such a character is received, the converter will wait for another byte, which is then incorporated into the packet and the packet is sent.)

Characters 01, 02

Data channel options > Serial line packeting> Characters 01, 02

Default value: none

Recommended references: Fig. 19

(This option is only available if "Packeting" is set to "Enable".)

The last but one characters in a packet are saved here (cf. the explanation of the preceding option).

With active connection

Data channel options > Erasing cache memory > Input > With active connection

Data channel options > Erasing cache memory > Output > With active connection

Default value: Disable

Options: Disable, Enable

Recommended references: Fig. 19

This option can be set separately for the input (from RS232/422 to Ethernet) and output (from Ethernet to RS232/422) cache memories.

As soon as the converter establishes connection with Ethernet, the cache is deleted (input and/or output, according to the settings).

As soon as the converter receives connection established from Ethernet, the cache is deleted (input and/or output, according to the settings).

With passive connection

Data channel options > Erasing cache memory > Input > With passive connection

Data channel options > Erasing cache memory > Output > With passive connection

Default value: Disable

Options: Disable, Enable

Recommended references: Fig. 19

This option can be set separately for the input (from RS232/422 to Ethernet) and output (from Ethernet to RS232/422) cache memories.

As soon as the converter establishes connection with Ethernet, the cache is deleted (input and/or output, according to the settings).

As soon as the converter receives connection established from Ethernet, the cache is deleted (input and/or output, according to the settings).

When disconnected

Data channel options > Deleting cache memory > Input > When disconnected

Data channel options > Deleting cache memory > Output > When disconnected

Default value: Disable

Options: Disable, Enable

Recommended references: Fig. 19

This option can be set separately for the input (from RS232/422 to Ethernet) and output (from Ethernet to RS232/422) cache memories.

The cache is deleted (input and/or output, according to the settings) when the connection is broken.

Network settings

When you click on the "Network settings" after connecting the converter, the setting window (Fig. 20) is displayed.

00-20-4A-8C-A3-8F

Data channel options

Network settings

Device network settings

IP address
192.168.1.254

Subnet mask ☐ Automatically
255.255.255.0

Gateway
0.0.0.0

Telnet password

Current IP address : 192.168.1.121

Set up Load from device Default values

Fig. 20 – Network settings

IP address

Network settings > Device network settings > IP address

Default value: 192.168.1.254

Recommended references: Fig. 20

Setting of the IP address for the GNOME232/422 module. It uniquely identifies the module within the respective network.

Subnet mask

Network settings > Device network settings > Subnet mask

Default value: 255.255.255.0 (C type mask)

Recommended references: Fig. 20

It sets the subnet mask (a range of IP addresses used within the network segment) of the GNOME232/422 module. Letter codes are sometimes used for masks.(A stands for 255.0.0.0; B for 255.255.0.0; and C represents 255.255.255.0)

If the "Automatically" field is checked, the subnet mask is set as 0.0.0.0.

Gateway*Network settings > Device network settings > Gateway**Default value: 0.0.0.0**Recommended references: Fig. 20*

The default gateway stands for the IP address of the computer through which the GNOME232/422 module is connected to the higher-level networks (possibly the Internet as well).

Telnet password*Network settings > Device network settings > Telnet password**Default value: none**Recommended references: Fig. 20*

The password for connection via Telnet or a web interface. Maximum length is four characters (letters and/or numerals).

Set up

When you push this button at the bottom of the window, the changed settings are saved.

Read from device

When you click here, the actual settings are read from the converter. (The same reading of actual settings is carried out when the converter is connected.)

Default values

This option will return all settings to their initial values as set by the manufacturer.

Papouch s.r.o.

Data transmission in industry, line and protocol conversions, RS232/485/422/USB/Ethernet/GPRS/WiFi, measurement modules, intelligent temperature sensors, I/O modules, and custommade electronic applications.

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