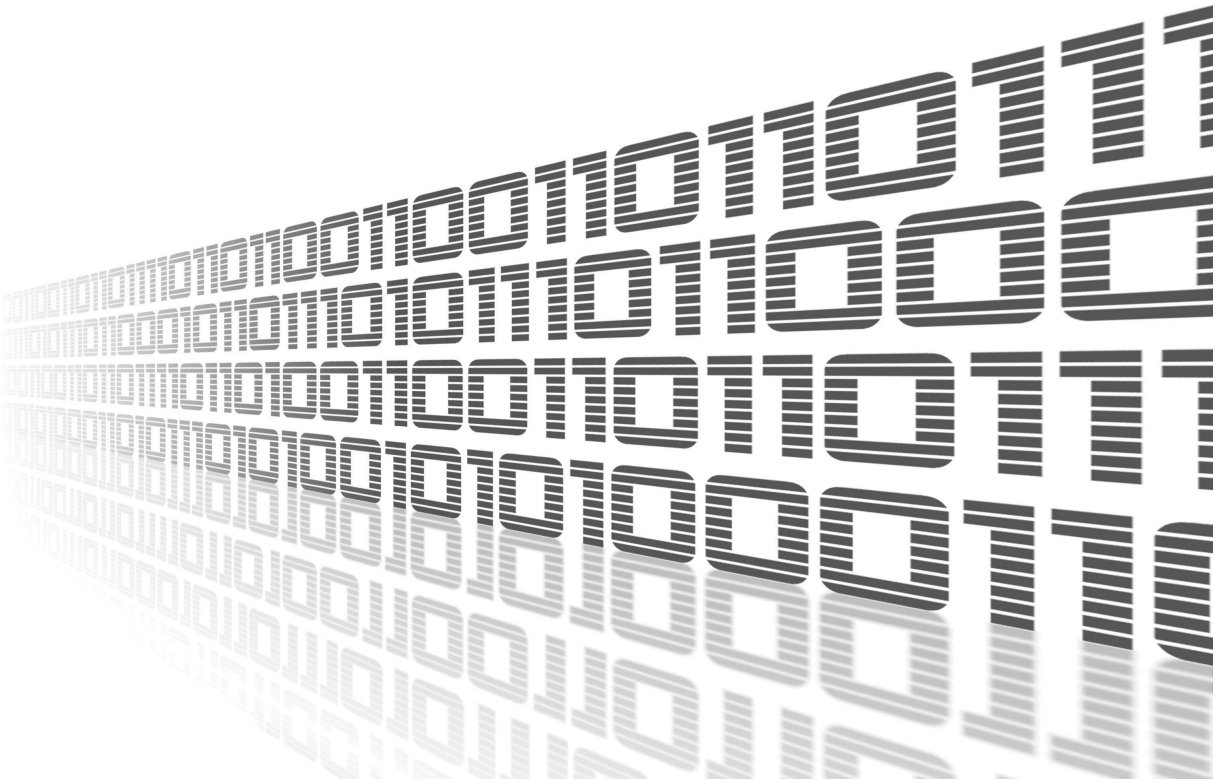
RouterApp

Serial to network proxy (ser2net)

APPLICATION NOTE



ADVANTECH

Used symbols

Danger – Information regarding user safety or potential damage to the router.

Attention – Problems that can arise in specific situations.

Information, notice – Useful tips or information of special interest.

Example – Example of function, command or script.

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Contents

List of Figures

List of Tables

1. Module Usage

1.1 Module Description

Router app *Serial to network proxy (ser2net)* is not contained in the standard router firmware. Uploading of this router app is described in the Configuration manual (see Chapter Related Documents).

This router app is not v4 platform compatible.

Configuration, which can be done in this router app, extends the basic configuration of the serial interface to communicate through the network, which can be configured in the GUI of the router (Configuration -> Expansion Port). The main benefit is that this module supports the configuration of the *Telnet* protocol supporting the RFC 2217 specification.

RS232, RS485/422 or MBUSD serial interfaces of a router can be used for this purpose. These interfaces are available as an expansion ports, see [1], [2] and [3]. Some models of *Advantech* routers can have serial interface built-in by default. USB port of the router equipped with the USB to serial converter (FTDI) can also be used by this router app.

As a client's application suitable for this purpose can be, for example, used Serial to Ethernet Connector application from *Eltima Software* or HW VSP application from *HW group*.

1.2 Web Interface

Once the installation of the module is complete, the module's GUI can be invoked by clicking the module name on the *Router apps* page of router's web interface. The main menu of module's GUI is shown on figure 1.

Left part of this GUI contains the menu with *Status* menu section, followed by *Configuration* menu section which contains the module's configuration page named as *Port1*, *Port2* and *Port USB*. *Customization* menu section contains only the *Return* item, which switches back from the module's web page to the router's web configuration pages.

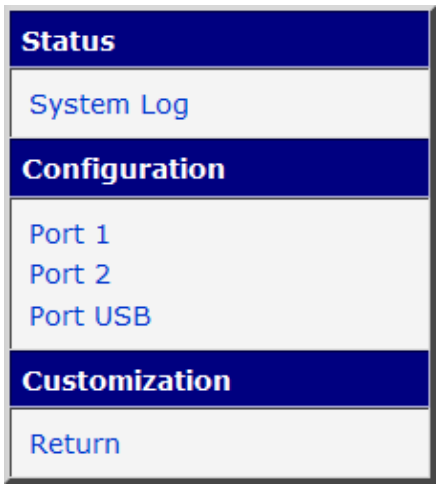

Figure 1: Main menu

1.3 Module Configuration

There are three configuration forms under *Configuration* menu section, for *Port 1*, *Port 2* and *Port USB*. The first two forms are determined for configuration of communication parameters of devices connected to the router's serial port 1 resp. port 2. *Port USB* form is determined for configuration of a device connected to the USB port equipped with a USB to serial converter. Layout for all three configuration forms is the same, see the figure 2.

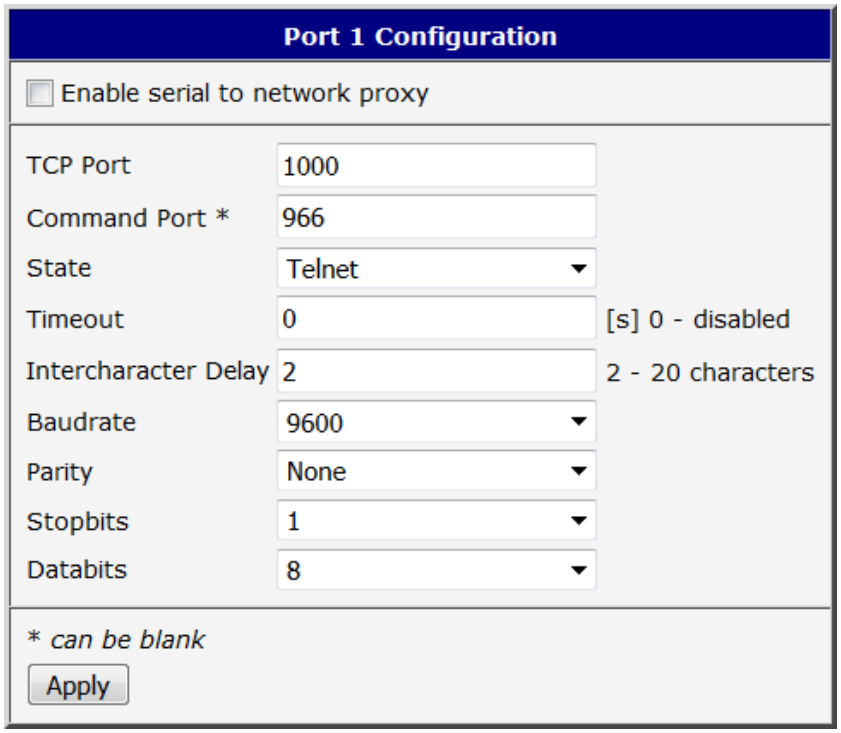

Figure 2: Configuration page

All configuration items are described in table 1.

Item	Description
Enable serial to network proxy	If enabled, proxy functionality for given port is turned on.
TCP Port	TCP port for the connection. Has to be unique for every serial interface.
Command Port	Dedicated port for command communication can be set. Supported only if the state below is set to *Telnet*. This functionality must also be supported by client's SW.
State	Choose the *raw* or *Telnet* protocol for the communication. Note that *raw* protocol does not support RFC 2217.

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Item	Description
Timeout	The time (in seconds) before the port will be disconnected if there is no activity on it. A zero value disables this function.
Intercharacter Delay	If the character delay in received data of serial communication is equal to the value set in this field, the data will be sent without waiting for the internal buffer fulfillment. This value can be set from 2 up to 20 characters.
Baudrate	Choose the baudrate for serial communication. Available values are: 300, 1200, 2400, 4800, 9600, 192000, 38400, 57600 and 115200 pbs.
Parity	Choose *none*, *even* or *odd* parity for serial communication.
Stopbits	Choose 1 or 2 stopbits value for serial communication.
Databits	Choose 7 or 8 databits value for serial communication.
Apply	Button to save and apply all changes made in this configuration form.

Table 1: Configuration items description

1.4 System Log

Log messages are available on *System Log* page, under *Status* menu section. This log contains log messages for this router app, but also all other router's system messages and is exactly the same as the system log available on *System Log* page in router's *Status* menu section.

2. Related Documents

[1] Advantech Czech: **Expansion Port RS232 – User Manual** (MAN-0020-EN)
[2] Advantech Czech: **Expansion Port RS485/422 – User Manual** (MAN-0025-EN)
[3] Advantech Czech: **Expansion Port MBUSD – User Manual** (MAN-0030-EN)

You can obtain product-related documents on *Engineering Portal* at *icr.advantech.cz* address.

To get your router's *Quick Start Guide*, *User Manual*, *Configuration Manual*, or *Firmware* go to the *Router Models* page, find the required model, and switch to the *Manuals* or *Firmware* tab, respectively.

The *Router Apps* installation packages and manuals are available on the *Router Apps* page.

For the *Development Documents*, go to the *DevZone* page.