



ADVANTECH Serial To Network Proxy Ser2net Router App User Guide

[Home](#) » [Advantech](#) » ADVANTECH Serial To Network Proxy Ser2net Router App User Guide 

Contents

1 ADVANTECH Serial To Network Proxy Ser2net Router App

2 Documents / Resources

2.1 References

3 Related Posts



ADVANTECH Serial To Network Proxy Ser2net Router App

Status
System Log
Configuration
Port 1
Port 2
Port USB
Customization
Return

Used symbols

- **Danger** – Information regarding user safety or potential damage to the router.
- **Attention** – Problems that can arise in specific situations.
- **Information** – Useful tips or information of special interest.
- **Example** – Example of function, command or script.

Changelog

1.1 Serial to network proxy (ser2net) Changelog

- v1.0.0 (2017-07-24)
 - First release.
- v1.0.1 (2017-07-25)
 - Increased size of internal buffers. v1.0.2 (2017-08-21)
- Fixed non valid telnet IAC in received data.
 - v1.0.3 (2017-11-12)
- Upgraded ser2net to version 3.5. v1.0.4 (2018-02-28)
- Increased chardelay-max to prevent splitting of the data to more packets.
 - v1.0.5 (2018-03-07)
- Added option “Intercharacter Delay” into configuration.
- Improved stopping of ser2net from init script.
 - v1.0.6 (2018-09-27)
- Added expected ranges of values to JavaScript error messages.

Module Usage

Module Description

Router app 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.

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.

The main menu is a vertical stack of sections. It starts with a dark blue header 'Status' containing a link 'System Log'. Below this is another dark blue header 'Configuration' containing links 'Port 1', 'Port 2', and 'Port USB'. The next section is a dark blue header 'Customization' followed by a link 'Return'.

Figure 1: Main menu

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.

The 'Port 1 Configuration' form has a title bar and a checkbox 'Enable serial to network proxy'. Below are several input fields and dropdown menus: 'TCP Port' (1000), 'Command Port *' (966), 'State' (Telnet), 'Timeout' (0) with a note '[s] 0 - disabled', 'Intercharacter Delay' (2) with a note '2 - 20 characters', 'Baudrate' (9600), 'Parity' (None), 'Stopbits' (1), and 'Databits' (8). At the bottom, there is a note '* can be blank' and an 'Apply' button.

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 <i>Telnet</i> . This functionality must also be supported by client's SW.
State	Choose the <i>raw</i> or <i>Telnet</i> protocol for the communication. Note that <i>raw</i> protocol does not support RFC 2217.
Timeout	The time (in seconds) before the port will be disconnected if there is no activity on it. A zero value disables this function.

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Item	Description
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 <i>none</i> , <i>even</i> or <i>odd</i> 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

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.

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.

Documents / Resources

	<p>ADVANTECH Serial To Network Proxy Ser2net Router App [pdf] User Guide</p> <p>Serial To Network Proxy Ser2net Router App, Serial, To Network Proxy Ser2net Router App, Network Proxy Ser2net Router App, Proxy Ser2net Router App, Ser2net Router App, Router App, App</p>
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References

- [A Advantech 4G, 5G Cellular Routers & Gateways for IoT applications - Engineering Portal](#)
- [A Advantech 4G, 5G Cellular Routers & Gateways for IoT applications - Engineering Portal](#)

-  [DevZone - Cellular Routers Engineering Portal](#)
-  [Router Apps - Cellular Routers Engineering Portal](#)
-  [Router Models - Cellular Routers Engineering Portal](#)
-  [RFC 2217 - Telnet Com Port Control Option](#)
-  [Share Serial port Over Ethernet with Serial to Ethernet Connector](#)
-  [HW VSP3 - Virtual Serial Port | HW-group.com](#)
- [User Manual](#)

Manuals+.