



User Module

USB over IP (Electronic Team)

APPLICATION NOTE



ADVANTECH

Used symbols



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



Attention – Problems that may arise in specific situations.



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



Example – Example of function, command or script.



Advantech Czech s.r.o., Sokolska 71, 562 04 Usti nad Orlici, Czech Republic
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Contents

1	Description of the module	1
2	Web Interface	2
2.1	Status	2
2.1.1	Overview	2
2.1.2	System Log	3
2.2	Configuration	4
2.2.1	Global	4
2.2.2	USB Network Gate Activation	5
2.3	Information	5
2.3.1	Licenses	5
3	Related Documents	6

List of Figures

1	Menu	2
2	Status Overview	2
3	System Log	3
4	Global Configuration	4
5	License Activation	5
6	Licenses	5

1. Description of the module



This user module is not installed on *Advantech* routers by default. See *Configuration Manual* for the description how to upload a user module to the router. For more information see the *Configuration manual*, chapter *Customization -> User Modules*.



This user module is available for routers of v3 production line only.



This user module uses third-party software. A license must be purchased, see Chapter [2.2.2](#) for more information.

The *USB over IP (Electronic Team)* user module allows you to share USB over a network and access multiple USB devices as if they were directly connected to your computer. This user module allows you to share devices such as printers, scanners, webcams, flash drives, etc. with any device connected to the network. You can use any network (Internet, LAN or WAN) to connect, making your device accessible from anywhere in the world.

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 User modules page of router's web interface.

Left part of this GUI contains menu with Status menu section, Configuration menu section and Information menu section. 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 of module's GUI is shown on Figure 1.



Figure 1: Menu

2.1 Status

2.1.1 Overview

An overview of the current status can be viewed by clicking on the *Overview* item in the main menu of module web interface. At the beginning of this page is a list of services and information about whether the corresponding service is active or not.



Figure 2: Status Overview

2.1.2 System Log

In case of any connection problems it is possible to view the system log by pressing the *System Log* menu item. Detailed reports from individual applications running in the router are displayed. Use the Save Log button to save the system log to a connected computer (the text file with the .log extension will be saved). The second button – Save Report – is used for creating detailed report (generates all information needed by support in one text file in the .txt format – statistical data, routing and process tables, system log, configuration).

The default length of the system log is 1000 lines. After reaching 1000 lines the new file is created for storing the system log. After completion of 1000 lines in the second file, the first file is overwritten with the new one.

The screenshot shows a window titled "System Log". Inside, there's a section labeled "System Messages" containing a list of log entries. At the bottom of this list are two buttons: "Save Log" and "Save Report".

```
2020-04-21 05:34:22 mwan1d[1172]: powering down
2020-04-21 05:34:24 dnsmasq[1254]: no servers found in /etc/resolv.conf, will retry
2020-04-21 05:34:26 mwan1d[1172]: powering up
2020-04-21 05:34:36 mwan1d[1172]: preparing
2020-04-21 05:34:46 mwan1d[1172]: selected SIM: 1st
2020-04-21 05:34:46 mwan1d[1172]: selected APN: gprsa.agne
2020-04-21 05:34:47 mwan1d[1172]: waiting for registration
2020-04-21 05:34:48 mwan1d[1172]: starting usbd
2020-04-21 05:34:48 usb1d[6153]: started
2020-04-21 05:34:48 usb1d[6153]: establishing connection
2020-04-21 05:34:50 usb1d[6153]: connection established
2020-04-21 05:34:50 usb1d[6153]: local IPv4 address 10.80.0.42
2020-04-21 05:34:50 usb1d[6153]: primary DNSv4 address 10.0.0.1
2020-04-21 05:34:50 usb1d[6153]: script /etc/scripts/ip-pre-up-mwan started
2020-04-21 05:34:50 bard[965]: usb0 connection is available on mwan
2020-04-21 05:34:50 usb1d[6153]: script /etc/scripts/ip-pre-up-mwan finished
2020-04-21 05:34:50 usb1d[6153]: script /etc/scripts/ip-up-mwan started
2020-04-21 05:34:50 usb1d[6153]: script /etc/scripts/ip-up-mwan finished
2020-04-21 05:34:50 bard[965]: backup route selected: "Mobile WAN"
2020-04-21 05:34:50 bard[965]: script /etc/scripts/ip-up usb0 started
2020-04-21 05:34:51 bard[965]: script /etc/scripts/ip-up usb0 finished, status = 0x0
2020-04-21 05:34:52 dnsmasq[1254]: reading /etc/resolv.conf
2020-04-21 05:34:52 dnsmasq[1254]: using nameserver 10.0.0.1#53
2020-04-21 10:38:06 http: user 'root' logged in from 10.64.0.1
2020-04-21 10:38:56 http: user 'root' added user module 'usbip_eltima.v3.tgz'
```

Figure 3: System Log

2.2 Configuration

2.2.1 Global

Configuration of this user module can be done on Global page, under Configuration menu section. All configuration items for Global configuration page are described in the table below.

Global Configuration	
<input type="checkbox"/> Enable USB over IP (Electronic Team) service	
TCP Port	3240
USB Device To Share	
Nickname	None
Encrypt	no
Authorization	no
Password	
Remote Disconnect	no
Compress	no
Compress Type	best
Log level	info
<input type="button" value="Apply"/>	

Figure 4: Global Configuration

Item	Description
Enable USB over IP (Electronic Team) service	Enabled, logging functionality of the module is turned on.
TCP Port	Enter the port number.
USB Device To Share	Enter the name of available USB device (see in Overview item in menu).
Nickname	You can use a nickname for the device.
Encrypt	Select Yes to enable the encryption.
Authorization	Select Yes to enable authorization.
Password	If you used Yes in the last line, enter the password required to connect to the USB device.
Remote Disconnect	Select the checkbox if ? connected device can be disconnected by another local user
Compress	Select Yes to enable compression.
Compress Type	Select the compression variant (<i>Best</i> or <i>Fast</i>).
Log level	Select the level of information that will be entered into the System Log.

Table 1: Configuration Example Items Description

2.2.2 USB Network Gate Activation

Activation for *USB Network Gate* product from *Electronic Team* is required for the user module to work properly. You can purchase the license from the *Electronic Team* webpages at <https://www.electronic.us/> address.

To activate the license on the router go to the *License Activation* page in the *Configuration* section. In "USB Network Gate Activation" window type the Activation Code you have received from Electronic team.

The screenshot shows a "License Activation" form. It has a single input field labeled "Activation Key" with a placeholder text box. Below the input field is a note: "* Enable USB over IP service before activating key". At the bottom is a blue "Activate" button.

Figure 5: License Activation

2.3 Information

2.3.1 Licenses

You can check the license upload on the Licenses Page in the Information section in the main menu.

USB over IP (Electronic Team) Licenses		
License Agreement		
Project	License	More Information
Eletronic Team	EULA	License Agreement

Figure 6: Licenses

3. Related Documents

- [1] Advantech Czech: **v2 Routers Configuration Manual** (MAN-0021-EN)
- [2] Advantech Czech: **SmartFlex Configuration Manual** (MAN-0023-EN)
- [3] Advantech Czech: **SmartMotion Configuration Manual** (MAN-0024-EN)
- [4] Advantech Czech: **SmartStart Configuration Manual** (MAN-0022-EN)
- [5] Advantech Czech: **ICR-3200 Configuration Manual** (MAN-0042-EN)



Product related documents can be obtained on *Engineering Portal* at icr.advantech.cz address.