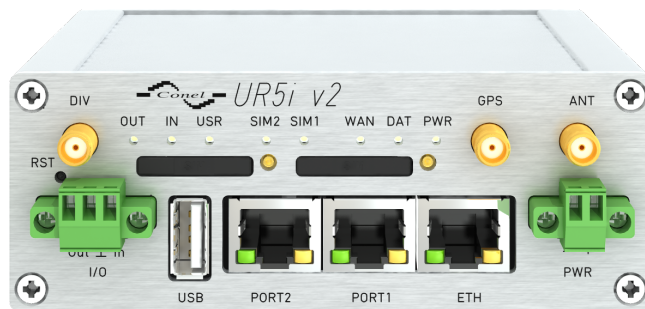


Start Guide

for v2 Routers



ADVANTECH



Safety Instructions

Please take care to following instructions:

- Use the router in compliance with national and international law and compliance with any special or additional restrictions regulating the use of the router in various applications and environments.
- To avoid possible injury and/or damage to the device, observe the relevant provisions and standards. Use only the original accessories as recommended. Unauthorized device or accessory modification or using accessories that have not been approved can result in router damage and/or violation of the regulations.
- Unauthorized device or accessory modification or using accessories that have not been approved can result in warranty termination.
- Do not open the router.
- **Caution!** Small children can swallow the SIM card.
- When connecting the device to a power supply, do not exceed the defined voltage.
- Do not expose the router to extreme ambient conditions. Protect the router against dust, moisture, and high temperature.
- It is recommended that you do not use the router at petrol filling stations. We recommend observing local restrictions concerning radio-based devices while working with explosive material, such as petrol filling stations or in chemical plants.
- While using the router close to personal medical devices, such as cardiac pacemakers or hearing aids, proceed with heightened caution.
- Operating the router too close to TV sets, radio receivers, personal computers, or telephones can cause interference.
- It is recommended that you create a copy or backup of the basic settings stored in the router's memory.



Product Disposal Instructions

The WEEE (Waste Electrical and Electronic Equipment: 2012/19/EU) directive has been introduced to ensure that electrical/electronic products are recycled using the best available recovery techniques to minimize the environmental impact. This product contains high-quality materials and components which can be recycled. At the end of its life, this product **MUST NOT** be mixed with other commercial waste for disposal. Check with the terms and conditions of your supplier for disposal information.



Open Source Software License

The software in this device uses various pieces of open-source software governed by the following licenses:

- GPL versions 2 and 3
- LGPL version 2
- BSD-style licenses
- MIT-style licenses

The list of components, together with complete license texts, can be found on the device itself. See the *Licenses* link at the bottom of the router's main Web page (*General Status*) or point your browser to this address (replace the `DEVICE_IP` string with the real router's IP address):

http://DEVICE_IP/licenses.cgi

This is a written offer valid for three years since the device purchase, offering any third party for a charge no more than the cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code on a flash drive medium. If you are interested in obtaining the source, please get in touch with us at:

cellularsales@advantech-bb.com

Modifications and debugging of LGPL-linked executables:

The device manufacturer with this grants the right to use debugging techniques (e.g., de-compilation) and make customer modifications of any executable linked with an LGPL library for its purposes. Note these rights are limited to the customer's usage. No further distribution of such modified executables and no transmission of the information obtained during these actions may be done.

First Use

Before applying power to the router, connect all the components you need for your applications.



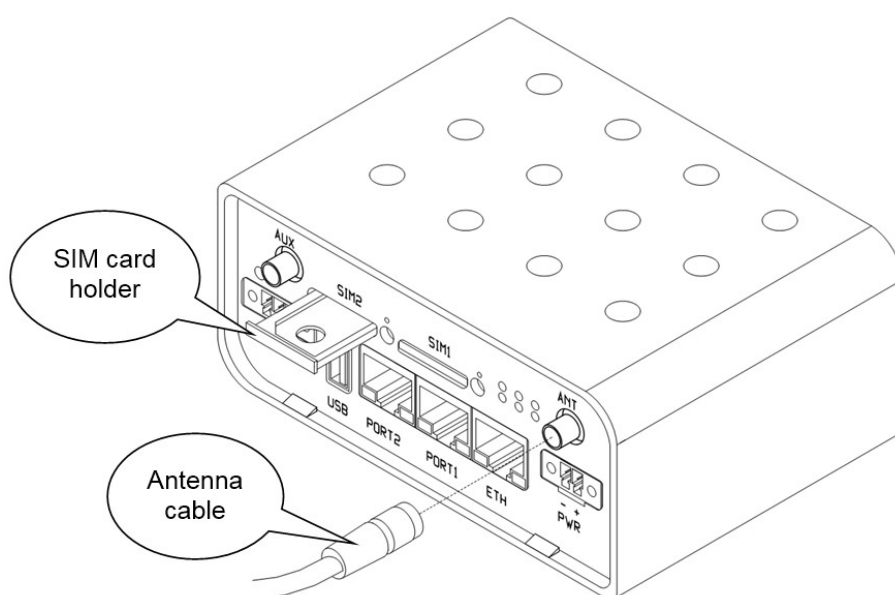
Do not run the router without an antenna connected to the main antenna connector. The energy from the transmission is effectively reflected by the open end and can damage the equipment.



XR5i v2 routers are not equipped with a cellular module, which means that SIM card readers and antenna connectors are not available on the router.

1. Antenna

Use an SMA connector to connect the antennas to the router; see the figure below. First, connect the main antenna to the **ANT** connector. Next, connect the second diversity antenna to the **DIV** connector to improve the quality and reliability of a wireless link.



2. SIM Card

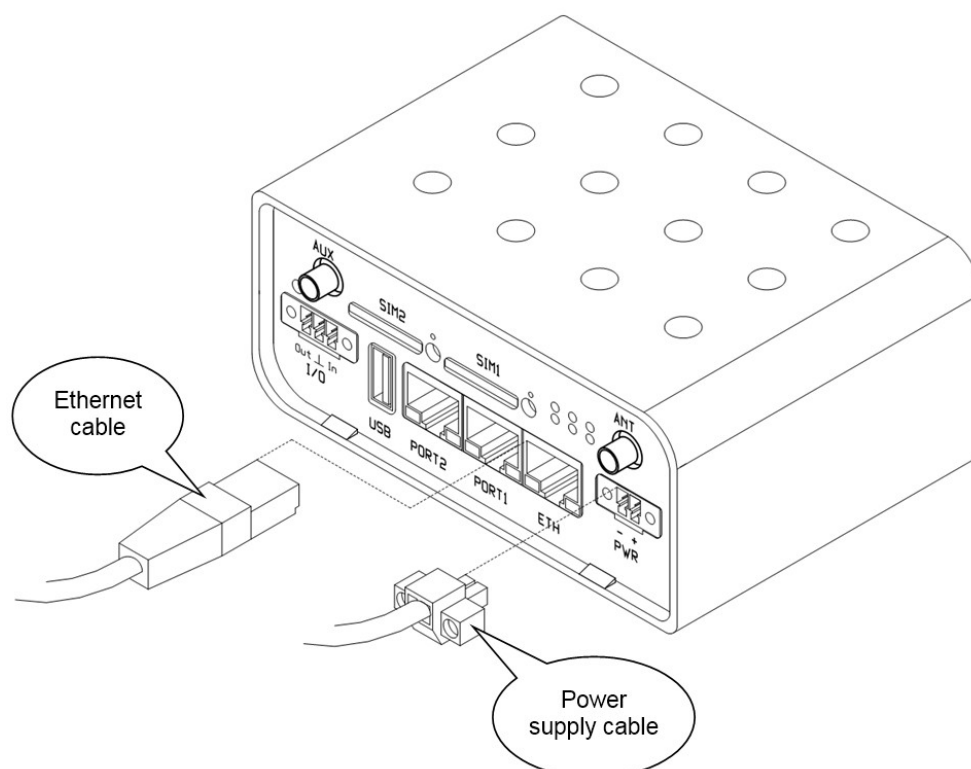
The SIM card reader for one or two Mini SIM cards (2FF with size of 25.0 x 15.0 x 0.76 mm) is located on the router's front panel. The full version of the router contains two readers. If you intend to use this device to communicate over a cellular network, please place an activated data-provisioned SIM card into the SIM card reader. Insert your SIM card into the *SIM1* or *SIM2* holder and push it to the reader, see the figure below. You can install two SIM cards simultaneously to utilize the SIM card switching feature.



Disconnect the router from the power supply before handling the SIM card!

3. Power

The router requires an external DC power supply. The DC voltage required is between +10 and +30 V DC. The router has built-in protection against reverse polarity without signaling. Connect the power supply cable to the *PWR* connector on the router's front panel (see the figure below) and tighten the locking screws.



4. Ethernet

For an initial configuration made in a web browser, connect a PC by an Ethernet cable to the default LAN interface, use the *ETH* port; see the figure above. By default, this interface has the following configuration:

Connector	Purpose	Default Setting
ETH	LAN port (default)	DHCP Server
	Connect your PC to this port to get the router web interface.	IP Address: 192.168.1.1 NetMask: 255.255.255.0



If the router is equipped with any expansion port, connect the appropriate cable to the port PORT1 or PORT2. The pin assignments for expansion ports is described in manual for corresponding expansion port.

Configuration

1. Configuring the Device Using the Web Browser

You can use a web browser running on your PC to access the router web interface. Here you can perform router monitoring, configuration, and administration. First, connect the PC to the default LAN interface described in the *Ethernet* chapter. To get the router interface, enter the <https://192.168.1.1> address in a web browser. Please note that usage of the HTTPS protocol for secure communication over the network is required.

There is just the **root user** account created on the router by default. See the **product label** on the router for its **default password**¹. Log in to the web interface by the *root* user and his password. See the configuration manual of the router for a detailed description and examples of the router configuration.

2. Configuring the Device Using the SSH or Telnet

Device management can be done by accessing the device through the *Secure Shell* (SSH) or the *Telnet* protocol. The default IP address of the device is 192.168.1.1. Standard TCP ports are used, 22 for the *SSH* and 23 for the *Telnet*. Please note, that access is permitted for users of the admin role only and that the *Telnet* protocol is disabled by default. For a detailed description of *SSH* and *Telnet* configuration, see the *Configuration Manual*.

¹ If the label does not contain a unique password, use "root" string as the password.

2. Configuration Settings via WebAccess/DMP

Your router has been pre-installed with the *WebAccess/DMP* client, which has activated the connection to the *WebAccess/DMP* server by default. You can disable this connection on the *Welcome* page when logging into the router's web interface or on the (*Customization* -> *Router Apps* -> *WebAccess/DMP Client*) configuration page. For more information see the configuration manual of your router, chapter *Basic Information* -> *WebAccess/DMP Configuration*.



The activated client periodically uploads router identifiers and configuration to the *WebAccess/DMP* server.

4. Restoring and Backing up the Router Configuration

The default factory settings will replace the current configuration if you reset the router. Therefore, we recommend you back up the router configuration before resetting the device. Refer to the configuration manual for more information.

You can restore the default router configuration once the router boots up and the *PWR* LED starts blinking. To do so, press the *RST* button on the router's front panel for more than 4 seconds. After you press this button, all settings reset to the default values, and the router will reboot.



After logging on to the device for the first time, we strongly recommend changing the default password due to security reasons. Simultaneously, you will gain access to all functions of the router.



For security reasons, we highly recommend updating the router's firmware to the latest version regularly. Downgrading the firmware to an older version than the production version or uploading firmware intended for a different device may cause the device's malfunction.

Support

All product-related manuals, documents, and software can be found and downloaded on the website at icr.advantech.cz/download address.



We, Advantech Czech s.r.o., declare that the radio equipment type **LR-77-v2L** complies with Directive Radio Equipment Regulations 2017 (**S.I. 2017 No. 1206**).



We, Advantech Czech s.r.o., declare that the radio equipment type **CR10 v2, ER75i v2, LR77 v2, LR77 v2 Libratum, RR75i v2, UR5i v2, UR5i v2 Libratum, XR5i v2, and XR5i v2E** (WiFi versions) comply with Directive **2014/53/EU**. Furthermore, **XR5i v2** and **XR5i v2E** (non-WiFi versions) comply with the essential requirements and other relevant provisions of Directives **2014/30/EU** and **2014/35/EU**.

The full text of the EU Declaration of Conformity is available at the following internet address: icr.advantech.cz/eudoc