

Supplementary instructions

Wireless router

Advantech wireless router for use with
VEGA devices



Document ID: 61842



VEGA

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1 For your safety

1.1 Appropriate use

The wireless router is used to transmit measured values and messages via the wireless network.

1.2 General instructions

This supplementary instructions manual describes the setup of the wireless router in conjunction with a VEGA device. It serves as supplement to the original operating instructions of Advantech. The original operating instructions manual of the router can be downloaded under <https://www.advantech.com>.

2 Product description

Scope of delivery

The scope of delivery encompasses:

- Wireless router
- LTE antenna
- Country-specific power supply unit (optional)
- VEGA Identification card (optional)
- Ethernet cable
- Antenna extension with magnetic base
- This operating instructions manual
- Information sheet with access code for web interface

Application area

The wireless router is used for the transmission of measured values and messages. This requires one of the following controllers, which supplies the measured values and messages.

- VEGAMET 391
- VEGAMET 624/625
- VEGASCAN 693

If several controllers are used, an Ethernet switch can also be used. This means that only one router is required to transmit the measured values and messages of all controllers.

The measured values and messages are sent via e-mail. Furthermore, the measured values can be transmitted via https to the "VEGA Inventory System" for visualisation.

The measured values and messages are transmitted via the GSM/GPRS/UMTS/LTE network. It is also possible to access the connected controller via remote parameterization.

An activated SIM card (Mini-SIM format) with data transmission option is required for setup.



Information:

The SIM card is not included in the standard scope of delivery of the device. For operation, the VEGA identification card or alternatively an own activated SIM card is required.

VEGA identification card

To make the measured value transmission and remote maintenance as easy as possible, VEGA offers the service package "User fee identification card". This package includes already the data transmission costs and the possibility of the remote maintenance through the VEGA service.

When using the VEGA identification card, you have the following advantages compared to a standard mobile phone contract:

- Remote maintenance by VEGA service possible after activation
- No roaming costs when using abroad
- Support for most popular countries and regions
- Support for all transmission paths (VEGA Inventory System, e-mail, SMS)
- Secure and stable data transmission by own APN
- Router is pre-configured and card already inserted, i.e. setup without further configuration

Measured value transmission

Data connections outgoing from wireless router are established via GPRS/UMTS/LTE (volume-based billing). Outgoing connection are used for measured value transmission via e-mail/SMS/VEGA Inventory System.

Activate SIM card

As a rule, an M2M SIM card is not provided with a PIN. If this is the case, the PIN must be deactivated.

**Information:**

When using the VEGA identification card, entering or deactivating a PIN is not required.

3 Mounting and connection

3.1 Mounting

Mounting options

The wireless router is designed for carrier rail mounting. Alternatively, the device can also be screwed to a flat surface using the mounting lugs on the rear.

Installation position

Before mounting, check whether there is sufficient network coverage (signal strength) of the selected telecommunication provider at the intended location. Place the wireless router with the antenna screwed on and the SIM card inserted at the desired location and check the display of the signal LED. It should be green or orange (very good or satisfactory signal strength). If the LED is red, mobile communication is insufficient and the location cannot be used. For more information on all LED indicators, refer to the original Advantech operating instructions manual.

If the radio communication is not sufficient, you should search for a better position. In closed rooms this would be, for example, close to a window or at least closer to an outer wall. In addition, an antenna extension with magnetic base is available which can be placed up to 3 m away from the instrument.

3.2 Connection

Voltage supply

Power is supplied via the terminals marked PWR on the front of the device. Details on the voltage supply can be found in the technical data in the appendix or in the original Advantech operating instructions. If no suitable voltage supply is available, a suitable power supply unit is available as an option.

Data cable

A standard Ethernet cable (CAT 5) is required for data transmission. Connect this to the socket of the router marked **ETH0**. The other end of the cable goes into the Ethernet socket of the controller. If several controllers are to be connected to the router, a simple network switch can be used. Please contact your IT administrator.

Antennas

Screw the supplied antenna onto the connection marked ANT. The optional antenna extensions are connected to the same socket, the antenna is then screwed onto the magnetic base.

4 Configuration/Access protection/Remote parameter adjustment

Access via web browser

The router is accessed via a web browser with the IP address 192.168.1.1. Enter the name "root" in the "Username" field.

To protect against unauthorized access, each device is provided with an individual password. The password can be found on the information sheet supplied.



Information:

After a reset has been carried out, the individual password is deleted and replaced by the password assigned by the router manufacturer. This password can be found on the type label of the router on the bottom of the device.

Remote parameter adjustment

Incoming data connections (network connection) on the wireless router can only be established if the SIM card used supports a static IP address. Incoming data connections can be used for remote parameter adjustment, e.g. by the VEGA service (only when using the VEGA identification card).

When ordering the device, it was already determined whether remote parameter adjustment by the VEGA service is permitted or blocked. This setting can also be changed later in the configuration menu of the router. Log on to the configuration menu of the router and select the menu item: "Administration - Change Profile". Select the desired profile and press the button "Apply". The router must then be restarted.

Profile - Standard

In the standard profile, the remote parameter adjustment is enabled by the VEGA service. This profile is the default setting in the ordering process.

Profile - Alternative 1

In this profile, the remote parameter adjustment is blocked by the VEGA service.



Note:

By activating remote maintenance, you agree that a VEGA employee may access wireless router and all connected devices. He therefore has full authorization to read out all parameters and measured values and, if necessary, to save or change them. If you do not agree with this, you must not activate remote maintenance.

5 Setup

5.1 SIM card

When using a VEGA identification card, all required parameters are already preset. Thus, the router is immediately ready for operation without further configuration.

If a separate SIM card is to be used, the router must be reset to the factory setting. We recommend the use of an M2M SIM card, which usually does not have a PIN. If the card is provided with a PIN, this must be deactivated permanently.

Reset to default setting



Note:

Only carry out the reset if you are using your own SIM card.

During operation, press the RST button with a sharp object for approx. one second. The router will now be restarted and set to the default settings. After approx. one minute the router is ready for operation again (PWR LED flashes).

5.2 Internet connection and measured value transmission

Internet connection

The transmission of measured values via e-mail or to VEGA Inventory System is always based on an internet connection. For connection, access data (user name/password) and the respective Access Point Name (APN) are required.

When using the VEGA service package "*User fee, identification card*" and the VEGA Inventory System, you need no access data or additional information because the required parameters are already preset by default.



Information:

Further information and a list of current mobile network providers along with their access data can be found in the online help of the controller.

Measured value transmission

The measured values can be transmitted optionally in the following ways:

- Via integrated mail client to any e-mail address
- Via https to the VEGA Inventory System

The configuration of the measured value and message transmission is carried out via the DTM of the controller connected to the router. Please refer to the operating instructions and the DTM online help of the corresponding controller.

Under the DTM menu item "*Event list*" there is a convenient assistant for setting up measured value transmission. The measured values can be transmitted at individually definable times or intervals. A message can also be triggered when a certain level is exceeded or underrun. In addition, a status-controlled measured value transmission can be carried out, for example when a fault signal occurs.

E-mail transmission

For this option, an e-mail account with the names of the inbox and outbox servers (POP3/SMTP) as well as the user name/password are required for authentication. These data are available from your e-mail provider. For secure transmission, an encrypted connection via TLS is preset. Please note that for encrypted connections, other server names must normally be used. You can find further information in the online help of the respective DTM.

The measurement data can be sent either directly in the e-mail or in an attached file. The formats TXT, CSV, HTML or XML are available.

VEGA Inventory System

For the configuration, only the URL or the IP address of the Inventory server are required. When hosting is carried out through VEGA, the server is contacted via the URL: "*data-vis.vega.com*".

6 Supplement

6.1 Technical data

Voltage supply

Operating voltage	9 ... 36 V DC
Power consumption	
– Power saving mode	10 mW
– Permanent operation	4 W
– Peak power	11 W

Mobile network

SIM card slot	Mini-SIM (25 x 15 mm)
Radio frequency	See the original Advantech instructions
Antenna connection	SMA connection 50 Ω

Ethernet interface

Data transmission	10/100 MBit
Plug connection	RJ45
Max. cable length	100 m (3937 in)

Ambient conditions

Ambient, storage and transport temperature	-40 ... +75 °C (-40 ... +167 °F)
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Network cable CAT 5

Cable length	approx. 1.5 m
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6.2 Dimensions

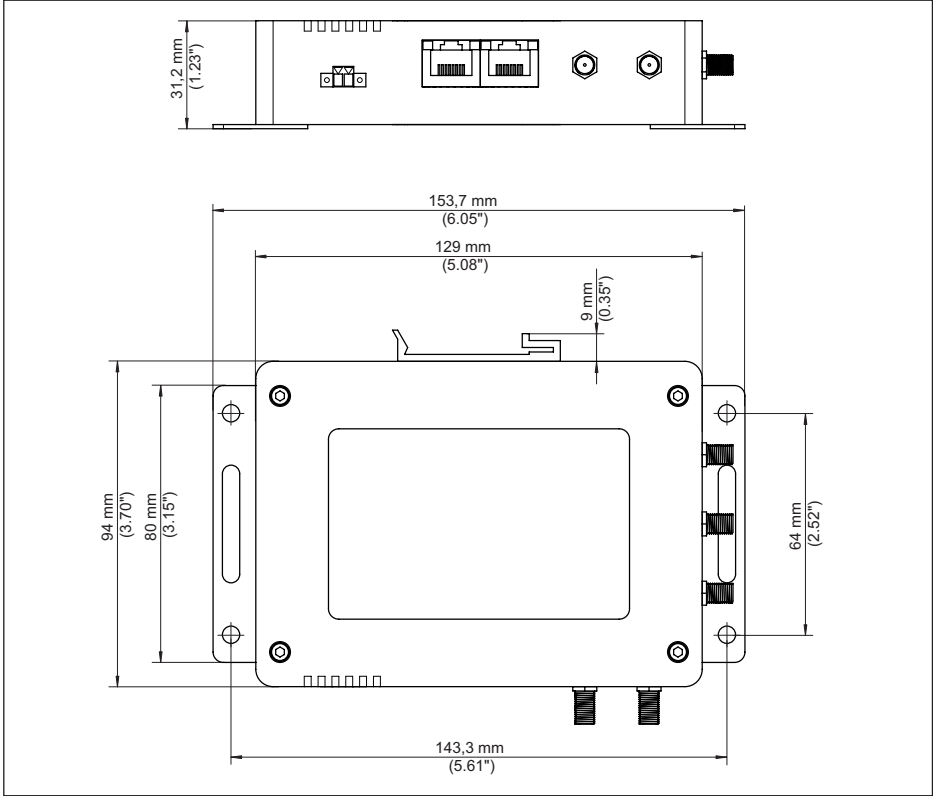


Fig. 1: dimensions wireless router

Printing date:

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All statements concerning scope of delivery, application, practical use and operating conditions of the sensors and processing systems correspond to the information available at the time of printing.

Subject to change without prior notice

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