

## Introduction and General Safety Instructions

Please read these Quick Start Instructions carefully before commissioning and using the VIORYTI<sup>®</sup> GATE.

The VIORYTI<sup>®</sup> GATE described in this manual is technically mature, made of high-quality materials and tested at the factory. It corresponds to the latest state of the art and the recognized technical safety rules. Nevertheless, hazards may occur even if the device is used as intended.

The VIORYTI<sup>®</sup> GATE is designed for indoor use only. The VIORYTI<sup>®</sup> GATE may only be operated by trained personnel. It may only be used for its intended purpose. It is not suitable for use in locations where children may be present.

## Product Overview

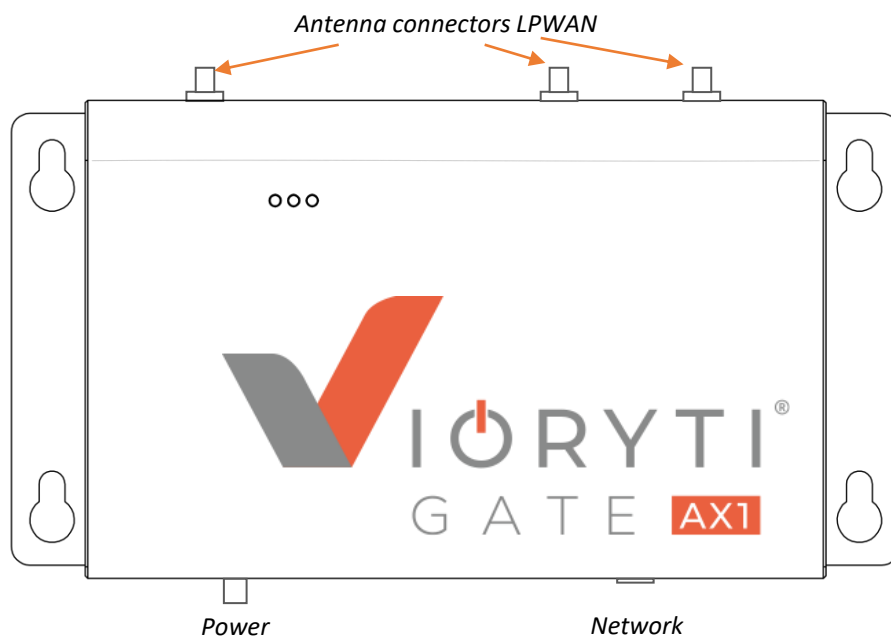
The VIORYTI<sup>®</sup> GATE is a central IoT network component with the ability to receive and transmit data telegrams using the mioty<sup>®</sup>, LoRa<sup>®</sup> and Wireless-M-Bus (wM-Bus) radio protocols.

It acts as a gateway to transmit data from suitable IoT end devices (sensors, actuators) to corresponding backend systems, which store the data and make it available to the end user in suitable applications.

The VIORYTI<sup>®</sup> GATE has the following connection interfaces:

- 3 antenna connectors for mioty<sup>®</sup>, LoRa<sup>®</sup> and wM-Bus (antennas not included in scope of delivery)
- Network connector (RJ45) for connection of a network cable (not included in scope of delivery)
- Power supply via external power supply unit (included in scope of delivery)

### Gateway View



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## Technical Data

Operating Temperature: -20 °C till 55 °C, usage only indoor

Storage Temperature: -20 °C bis 70 °C

Maximum Operating Altitude: up to 2,000 m above sea level

Dimensions with mounting rail (W x H x D): 240 mm x 70 mm x 127 mm

Weight (without packaging, incl. Mounting rail): 650 g

Power Supply / Input: AC 100-240 V~, 1.5 A, 50-60 Hz / Output: DC 12 V, 5 A max.

Housing Material: anodized aluminum and plastic

Radio Frequency: 868 MHz (EU1)

Mobile Communication: GSM900/GSM1900; UMTS FDDI/FDDV/FDDVIII; LTE B1/B3/B5/B7/B8/B20

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## For Your Safety

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Only use the original power supply unit included in the shipment package on 230 V sockets.

When mounting the active radio transmitting unit of the VIORYTI<sup>®</sup> GATE, make sure to keep a minimum distance to people, this should not be less than a distance of 1 meter.

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## Installation

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For installation, please also note the installation guide enclosed in the packaging. The installation steps are described there graphically in individual pictograms.

Please note for the antenna selection:

- Antennas are not included in the shipment package.
- The same antenna type can be used for all three antenna connections.
- Please make sure that only suitable antennas with omnidirectional polar pattern for a frequency range of 868 MHz with an antenna gain of 0 dBd / 2.2 dBi are used for bidirectional operation.
- The antennas require a suitable SMA connector (SMA: Sub-Miniature Version A).
- When connecting the antenna, follow the mounting instructions of the antenna manufacturer.

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## Initial Operation

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The commissioning of the VIORYTI<sup>®</sup> GATE is done in a few steps:

- Connect the LAN interface on the VIORYTI<sup>®</sup> GATE to your network (LAN: Local Area Network) using an Ethernet cable with RJ45 connectors.
- Connect the antennas to the antenna connectors on the VIORYTI<sup>®</sup> GATE.
- Connect the supplied power supply to the power input on the VIORYTI<sup>®</sup> GATE and connect it to an external power source (230 V).
- The VIORYTI<sup>®</sup> GATE starts automatically as soon as it is supplied with the external voltage.
- After that the configuration of the VIORYTI<sup>®</sup> GATE is done via the configuration interface, see next section.

## Configuration Interface

The configuration interface of the VIORYTI® GATE can be accessed with a web browser (e.g. Mozilla Firefox, Google Chrome) via a suitable web address or URL (Uniform Resource Locator). The URL of the configuration interface can be found on the left side of the housing on the type plate under the item "Config:" The URL can also be read out via the QR code on the type plate.

Now open a web browser on your PC and enter the Config URL. The PC must be in the same network as the VIORYTI® GATE. The network must be DHCP enabled. As the web address does not use the secure protocol https, your web browser may display a security warning; you can ignore this.



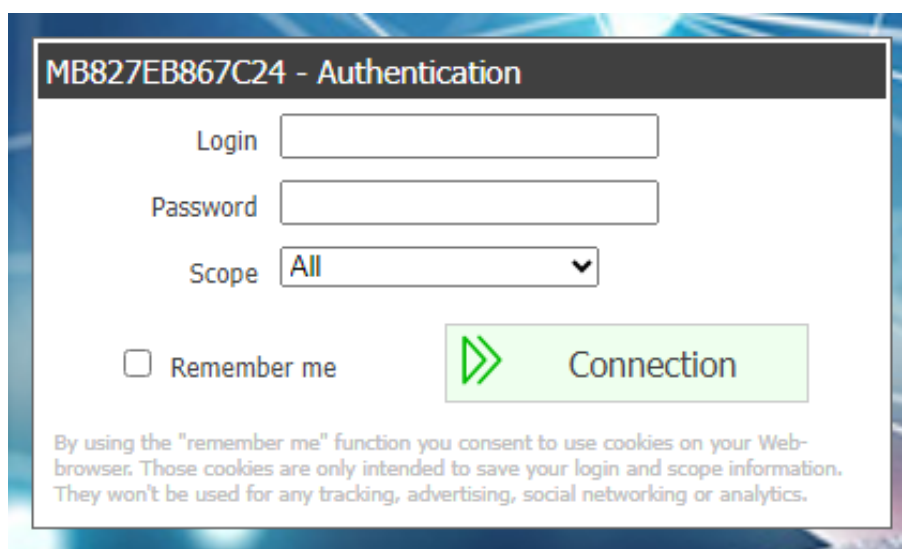
A default username and password is used for initial login.

Login: admin

Password: admin-<M-Nummer>

Replace the password <M-number> with the number of your device. You can read it e.g. from the URL (http://<M-number>.local).

When logging in to the configuration interface for the first time, you will be prompted to set a new password. Then follow the configuration wizard and enter the license key for your gateway.



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## Overview of Configuration Interface

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In the upper right corner of the screen you will find various submenus:



### Home

Here you can find an overview of the current status of your VIORYTI<sup>®</sup> GATE in a dashboard..



### Settings

Here you will find a variety of settings and information for and about the device, network, modules, operators, users and security.



### Monitoring

Here you can find a spectrogram of the mioty frequency band and the system log.



### Help and Documentation

Here you will find a wide range of instructions and help for using the gateway.



### Versions

Here you can find information about software versions and the open source licenses used.



### Log Out

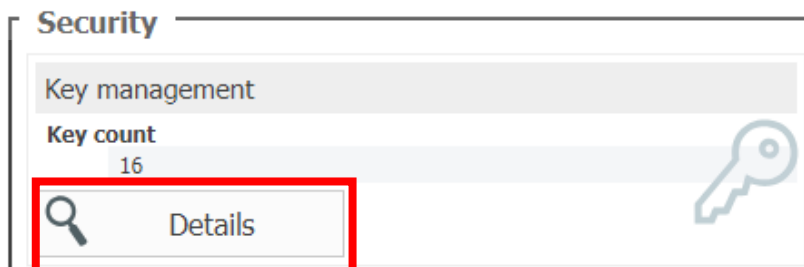
To exit the configuration interface.

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## Connect a Sensor with the Gateway

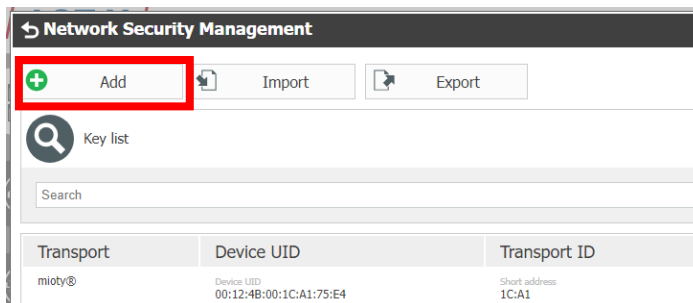
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- To connect a new sensor to the gateway, go to "Settings -> Security -> Key management -> Details".

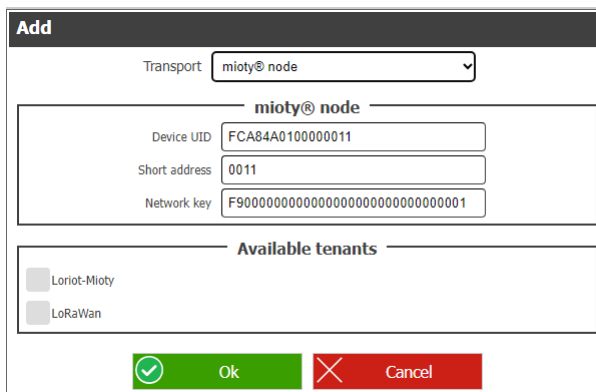


## Connect a Sensor with the Gateway (continued)

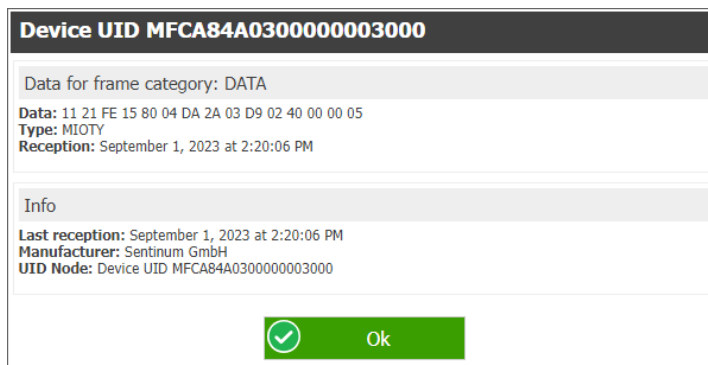
- Select „Add“.



- Select the transmission type (mioty or LoRa); with wM-Bus all telegrams are received automatically; wM-Bus sensors do not need to be connected to the gateway.
- Enter the Device UID, short address and network key of the sensor. These values are specific to each sensor; you should have received this information with the purchase of your sensor.
- Click "OK".

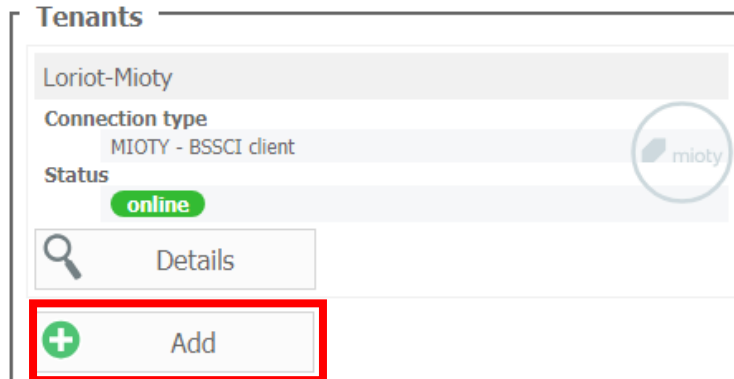


- Under "Home -> Reception -> Details" you can see the last received telegrams for each added sensor.
- Click on a telegram and select "For more information". Here you can also see the data sent in the telegram.



## Select Operator

To forward received data to your application, you need to add a suitable operator. To do this, go to "Settings -> Tenants -> Add".



The following options are available as operators:

- Diehl Metering - G5 Tertiary
- Generisch - Amazon® AWS IoT
- Generisch - MQTT Client
- Generisch - Microsoft® Azure IoT Hub
- Generisch - REST Client
- Generisch - Transfer to File Server
- LoRaWAN – Semtech UDP Packet Forwarder
- LoRaWAN - LoRa Basics Station
- MIOTY - BSSCI Client

Instructions for setting the operators can be found in the "Help and Documentation" menu.

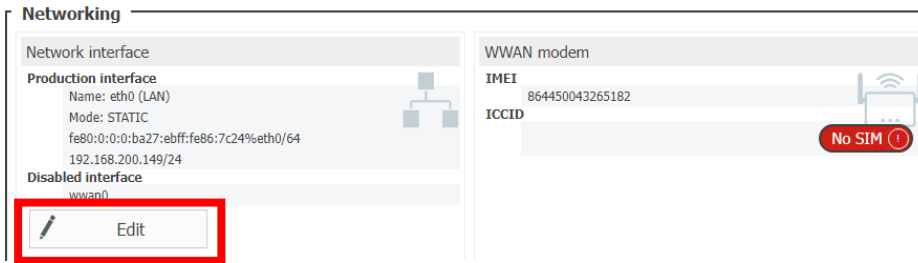
Once you have created an operator, you can adjust the filter for the data sources under the "Details" item. With this filter you can control which sensors are connected to which operators.

## Using the Gateway with a SIM-Card

The gateway can be equipped with a SIM card for operation in a mobile network. To insert the SIM card (Mini-SIM format), the housing must be opened. The position of the SIM card holder in the housing is described in the installation instructions enclosed in the packaging.

The unit must then be configured for usage of the SIM card:

- In order to use the inserted SIM-Card, navigate to „Settings -> Networking -> Network interface -> Edit“



- Under the Production interface section, select "wwan0" and enter both the Access Point Name (APN) and your PIN code. You can obtain the relevant information from your mobile phone operator who provided you with the SIM card.

