

Velbus VMBSIG-20 Signum IoT Gateway



Velbus VMBSIG-20 Signum IoT Gateway Instruction Manual

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Velbus VMBSIG-20 Signum IoT Gateway



Specifications

- **Model:** Velbus Signum IoT Gateway (VMBSIG-20)
- **Compatibility:** Standard DIN rail cabinets
- **Connectivity:** Ethernet cable
- **Software:** Home Assistant

Product Usage Instructions

Mount & Connect Your Signum Module

1. The Signum module is compatible with standard DIN rail cabinets and should click into place.
2. Connect the Signum to your local network using an ethernet cable.
3. Connect the provided Molex-to-Molex cable with the Molex connector on your Signum and connect it with another Velbus module already installed. For older Velbus modules without Molex connectors, cut & strip one end of the Molex-to-Molex cable and connect each wire to the corresponding connection of your existing Velbus installation (Red to +, Black to H, Yellow to L, White to -).
4. Make a note of the information displayed on your Signum for future reference.
5. Ensure that the PS LED on the bottom left of the module is turned on.
6. Press the RMT button (CH1) located on the top left of the module.

Configure Your Signum Module

Your Signum IoT gateway comes equipped with Home Assistant software, offering an intuitive interface for controlling your Velbus installation remotely.

1. Download and install the latest Velbuslink software from [here](#).
2. Create a new project in Velbuslink and connect to your existing installation.
3. Select 'Connect to Signum' and choose your Signum ID from the list.
4. If your Signum is not found, ensure you are on the same network and that the RMT LED on the module is

active.

5. To set up your Velbus installation, select 'Scan my installation for modules' and 'Auto-assign addresses'. If already configured, uncheck 'Auto-assign addresses'.
6. For initial setup, choose 'Read settings from my existing installation' or start with blank modules. This process may vary in duration based on your installation size.

FAQ

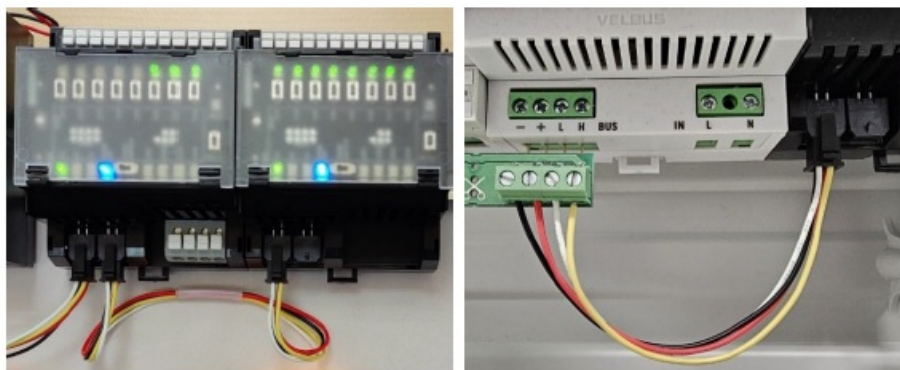
- **Q:** How can I reset my Signum IoT Gateway?
- **A:** To reset your Signum IoT Gateway, press and hold the reset button located on the device for 10 seconds until all LEDs flash simultaneously. Release the button to complete the reset process.

Mount & connect your Signum module

1. The Signum module is compatible with standard DIN rail cabinets and clicks into place.



2. Connect the Signum to your local network with an ethernet cable.
3. Connect the provided Molex-to-Molex cable with the Molex connector on your Signum and connect with another Velbus module already installed. If you have older Velbus modules without Molex connectors, cut & strip one end of the Molex-to-Molex cable and connect each wire to the corresponding connection of your existing Velbus installation.



The Velbus bus cable colors are arranged in the following order:

Colour	Connection	Indicator
Red	Power 15V ($\pm 3V$)	+
Black	Power GND	-
Yellow	CANbus High	H
White	CANbus Low	L



Write down or take a picture of the information on your Signum, you might need this information later.



Verify that the PS LED on the bottom left is turned on.



Press the RMT button (CH1) on the top left of the module.



You are now ready to configure your Signum with Home Assistant.

Configure your Signum module

Your Signum IoT gateway is equipped with the Home Assistant software, providing you with an intuitive dashboard of your Velbus installation on your smartphone, tablet or web browser. It allows you to control your Velbus installation from all over the world, wherever you have an internet connection. Please follow the next steps to configure your Signum IoT gateway with Home Assistant. You can do this via the Velbus Signum app on your smartphone (for installations that are already set up) or via Velbuslink (for installations that still need setting up).

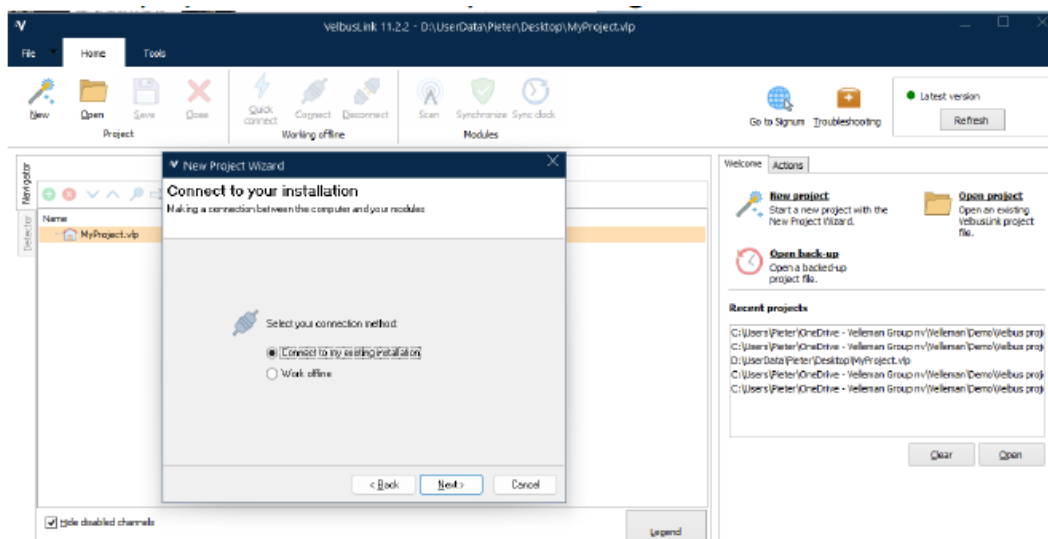
Caution: Before configuring your Signum IoT gateway and Home Assistant, ensure your Velbus installation is set up completely. This step is crucial as configuring Home Assistant should be the final step in your Velbus installation process. Failure to set up your Velbus installation beforehand will result in an empty Velbus installation in Home Assistant, necessitating a rescan when the Velbus installation has been properly configured. Use Velbuslink and our software guide to setup, configure and finish your Velbus installation.

Via Velbuslink

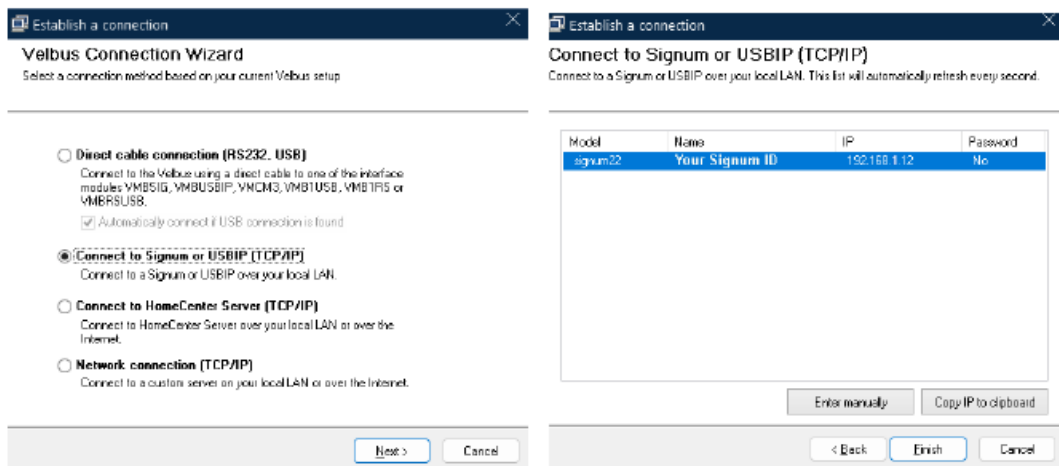
1. Download and install the latest Velbuslink software via

<https://www.velleman.eu/downloads/velbus/velbuslink/velbuslink-latest.exe>

2. Start with a new project and connect to your existing installation

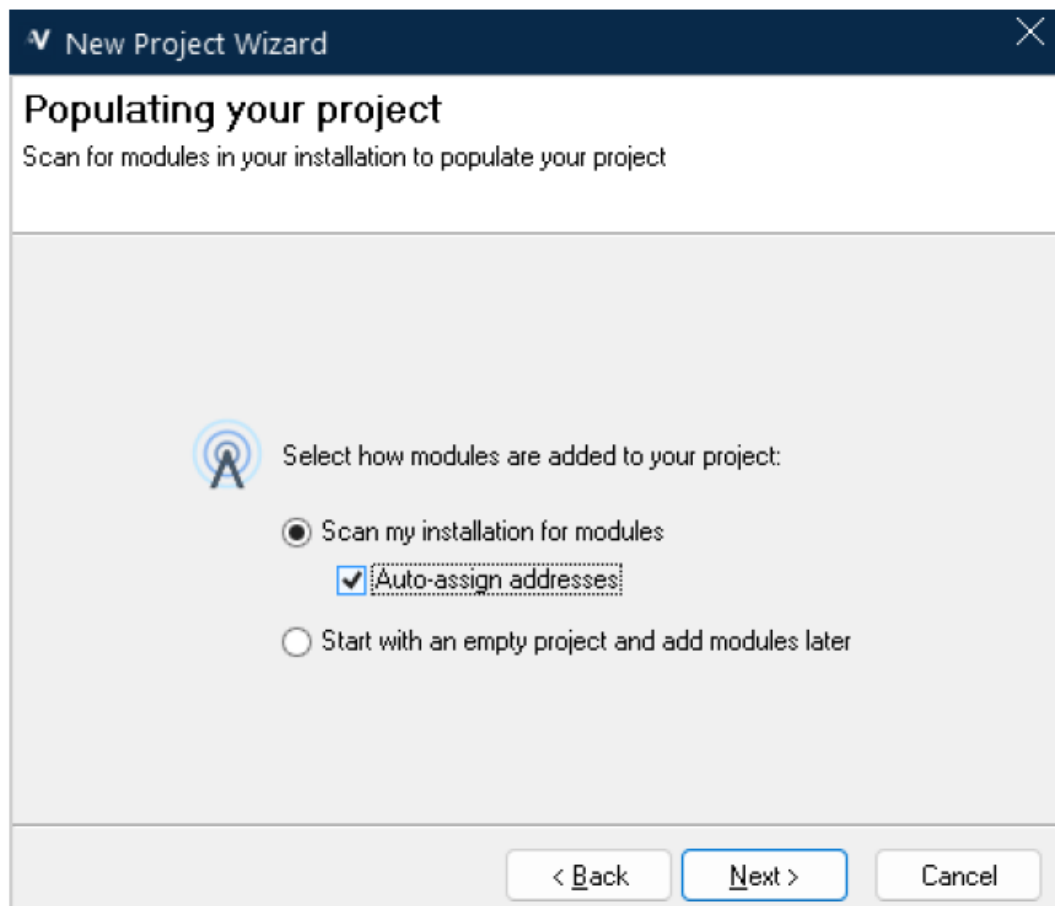


3. Select the option 'Connect to Signum' and select your Signum ID from the list.

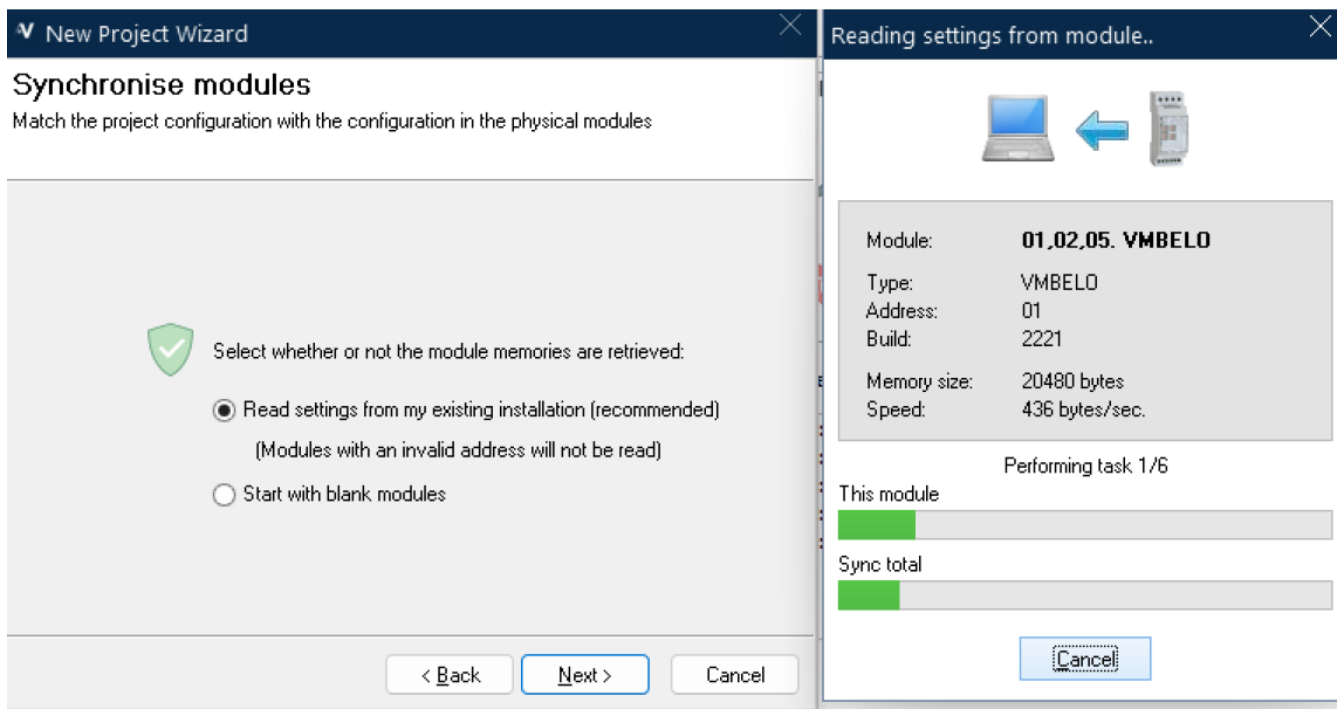


If you cannot find your Signum, check if you are connected to the same network as your Signum and if the RMT LED on the module is turned on

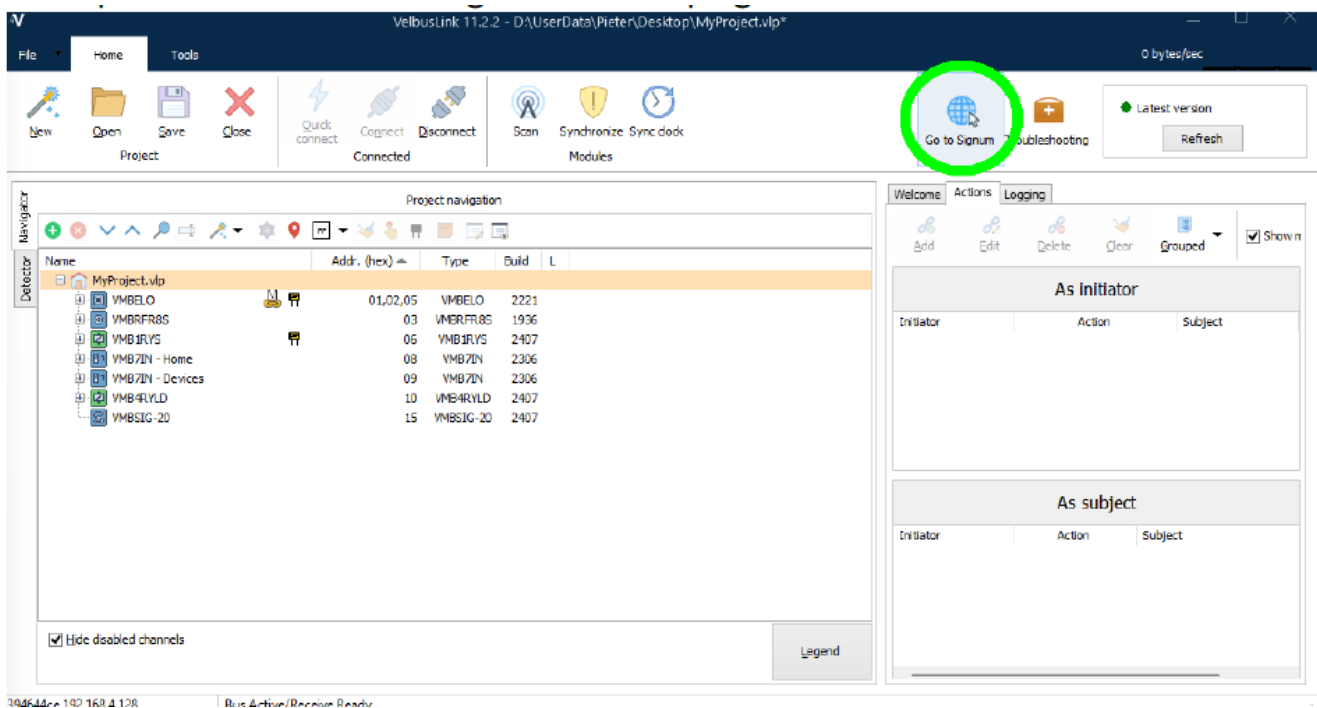
- To setup your Velbus installation, choose 'Scan my installation for modules' and 'Auto-assign addresses'. If the installation has already been configured before, uncheck the 'Auto-assign addresses' option.



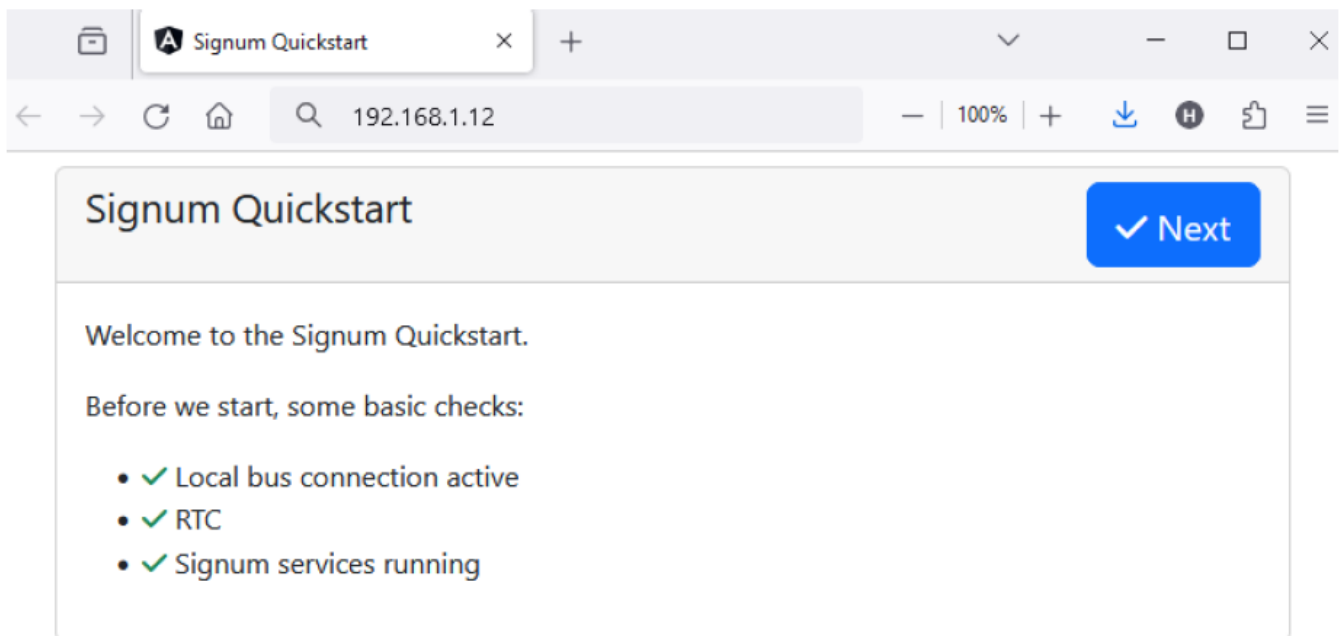
- For a first time installation, you can start with blank modules, otherwise you select 'Read settings from my existing installation'. Depending on the size of your Velbus installation, this might take a while



6. Save your project file, you will need it later in the process
7. In Velbuslink, push the button 'Go to Signum' in the top right corner



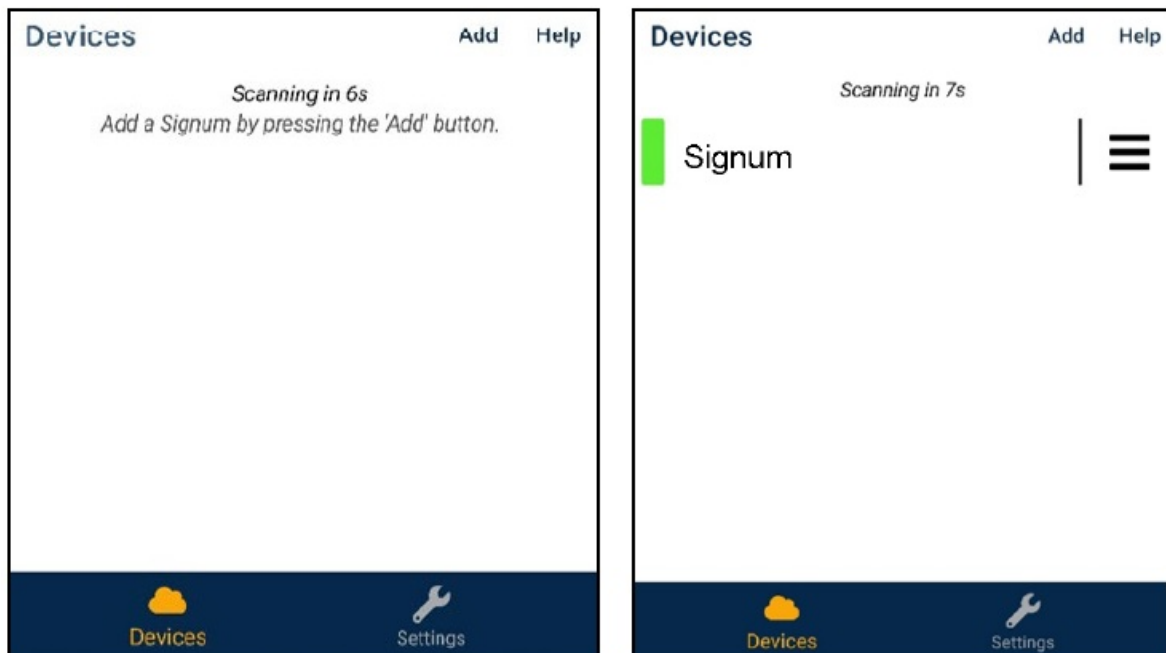
This will open your default web browser to the local IP address of your Signum with the Quickstart guide



Follow the instructions of the Quickstart guide.

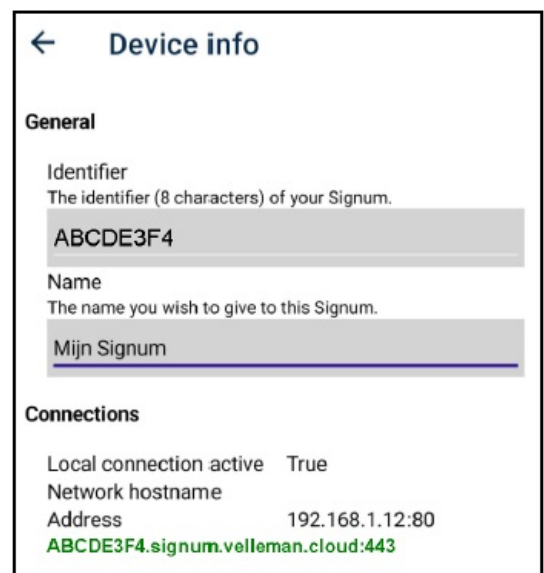
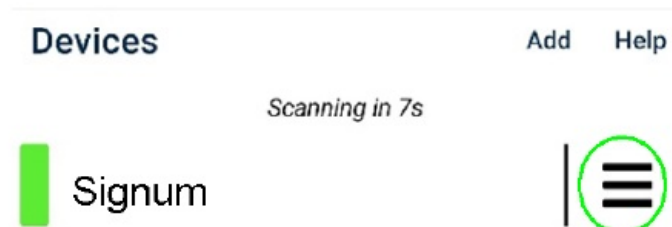
Via the Signum app on your smartphone or tablet

1. Download the Velbus Signum app for your device
 1. iPhone: <https://apps.apple.com/be/app/velbus-signum/id1444280978>
 2. Android: <https://play.google.com/store/apps/details?id=be.velbus.SignumApp>
2. Open the Velbus Signum app, let it scan and your Signum should be shown

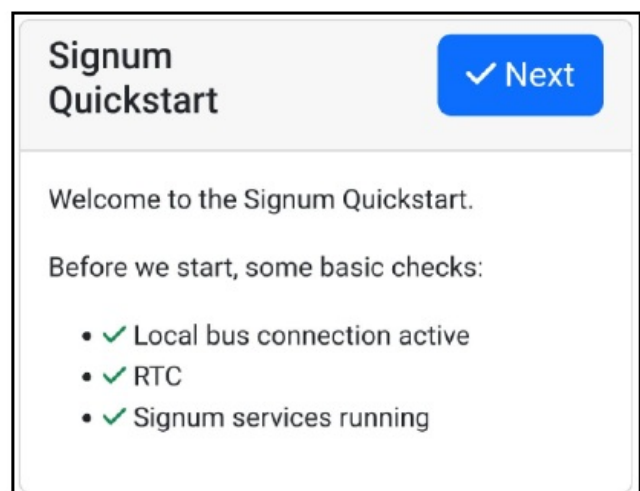
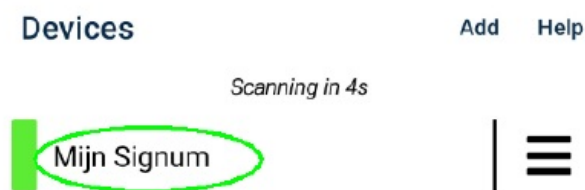


If you cannot find your Signum, check if you are connected to the same network as your Signum and if the RMT LED on the module is turned on.

3. Personalise your Signum by pressing the hamburger menu on the right of your Signum



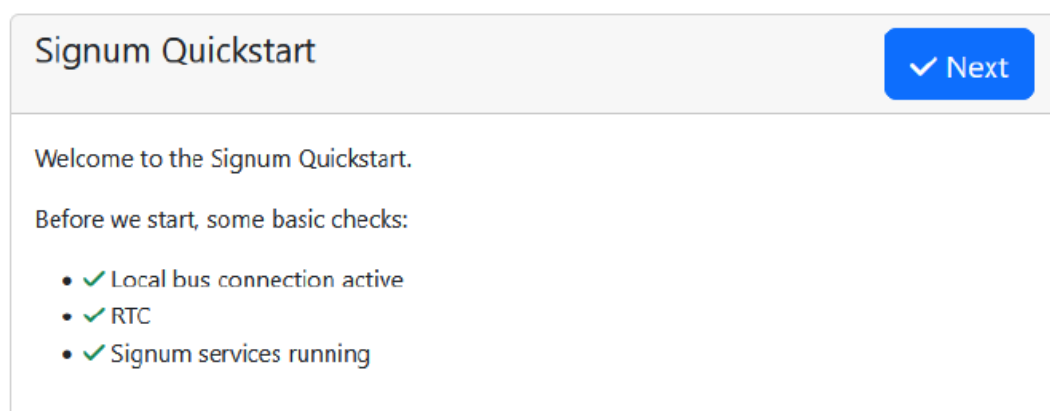
4. Now press the name of your Signum. You will see the Signum Quickstart



Quickstart guide

This guide will setup Home Assistant on your Signum.

1. Your Signum will do a quick health check before starting the Quickstart. Click Next




If any of the checks are not green, please wait a few more minutes (your Signum might be booting up (status LED on your module is white)). Also check your connections and reset the Signum if the problem persists



2. The Signum will check for updates. Click Next

Signum Update

✓ Next

 Checking for updates

We are checking for updates, please wait.

3. Subscribe to the Velbus newsletter to receive the latest updates and click Next

✓ Next

We strongly advise you to subscribe to the Velbus newsletter and updates so we can inform you about important issues concerning the Signum and Velbus. We won't misuse your data or send you spam. You can unsubscribe at any moment.

Velbus Updates

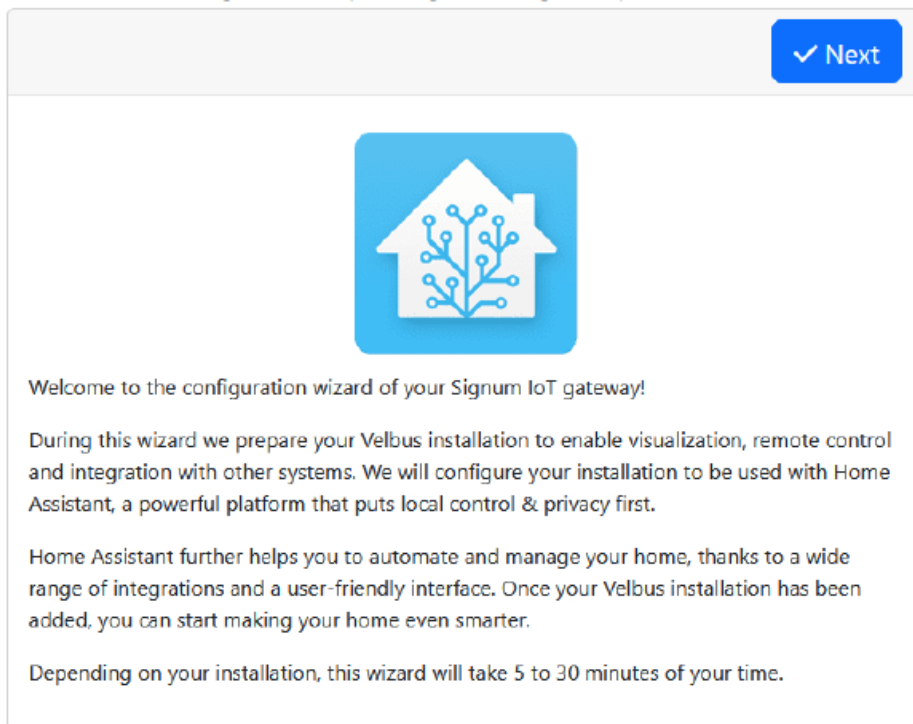
Email Address

First Name

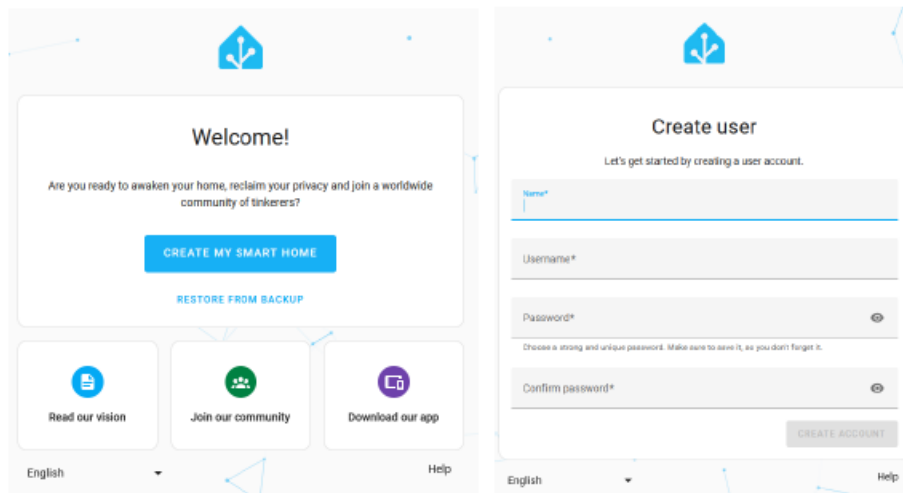
Last Name

Company

4. We will now start the configuration of your Signum IoT gateway. Click Next.



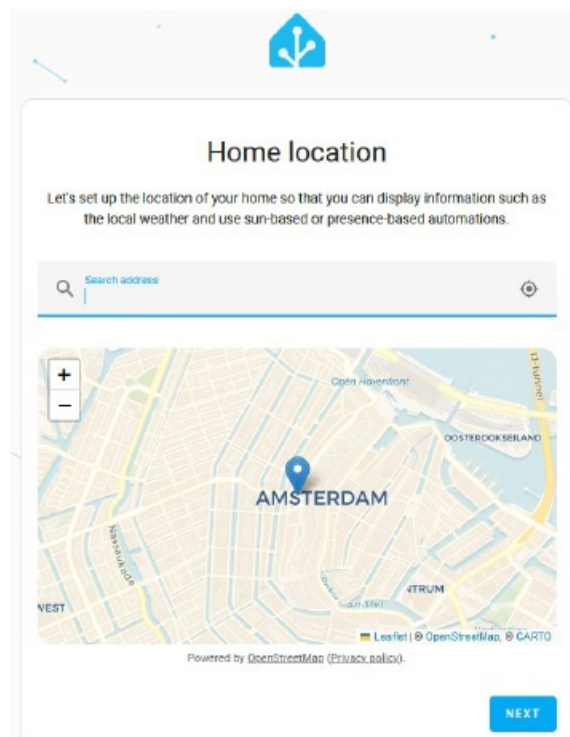
5. Select your preferred language at the bottom left and click 'Create my smart home'



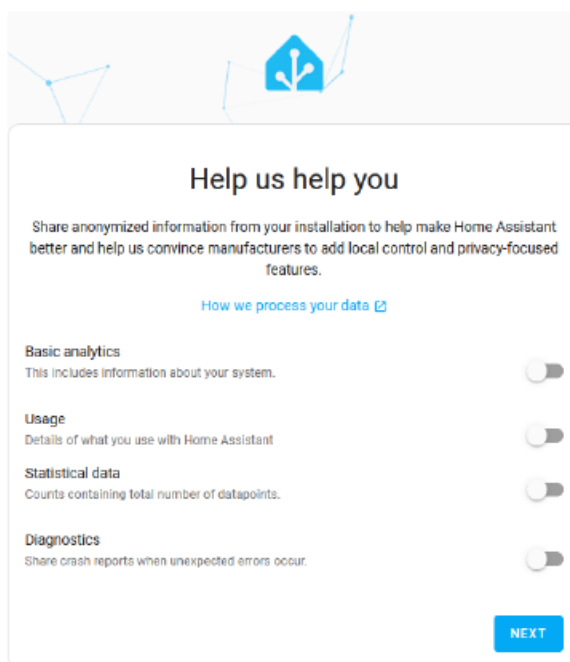
You will be prompted to create a profile for your Home Assistant. Fill in your name, pick a username and a strong and unique password. Do not lose this password since there is no way to recover it! Click 'create account'.

CREATE ACCOUNT

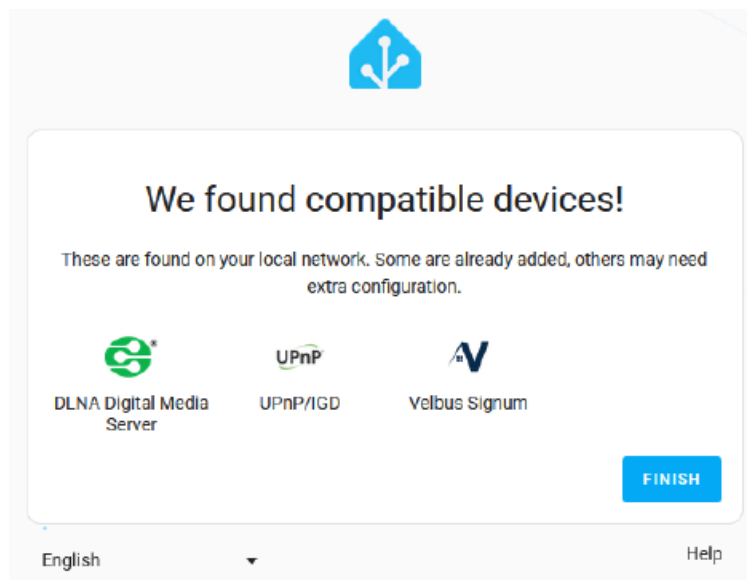
6. Enter your home location to receive local weather updates. Click the map icon on the right to search for your location. You can adjust your location by moving the pointer on the map until you are satisfied and click Next



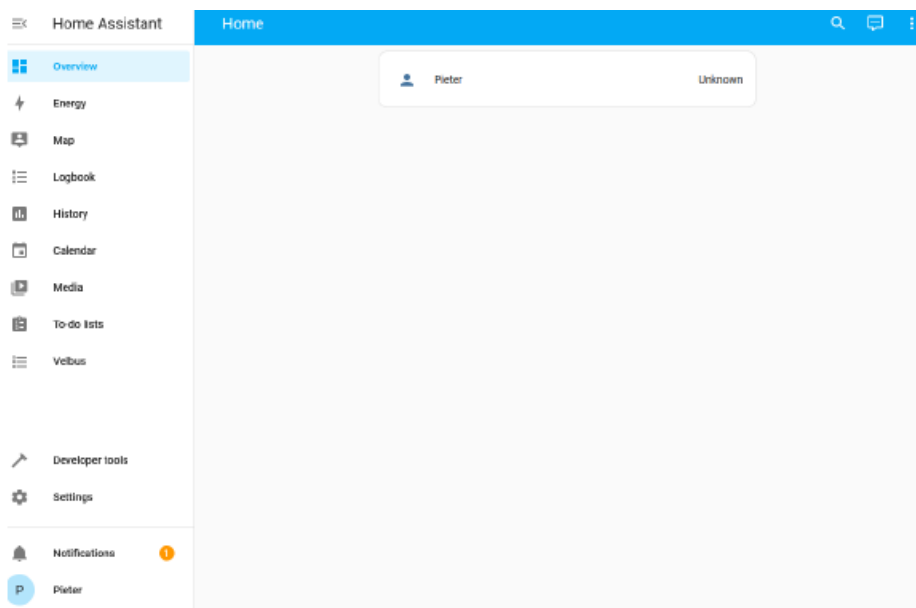
7. Sharing your (anonymized) information and analytic data is not required but helps to improve the Home Assistant software. Velbus does not receive your information. Click Next



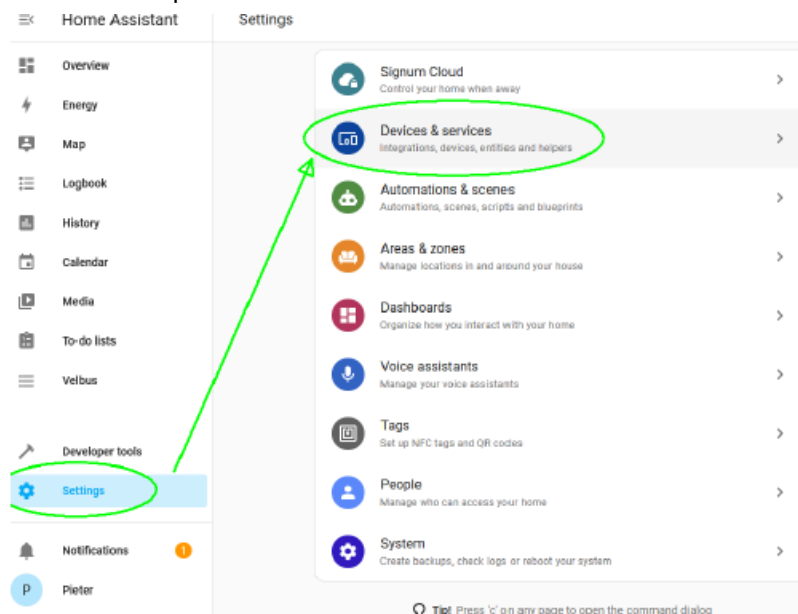
8. Home Assistant will scan your network for compatible devices and show them here. Mind the Velbus Signum icon in the list. You can click Finish and set these devices up later.



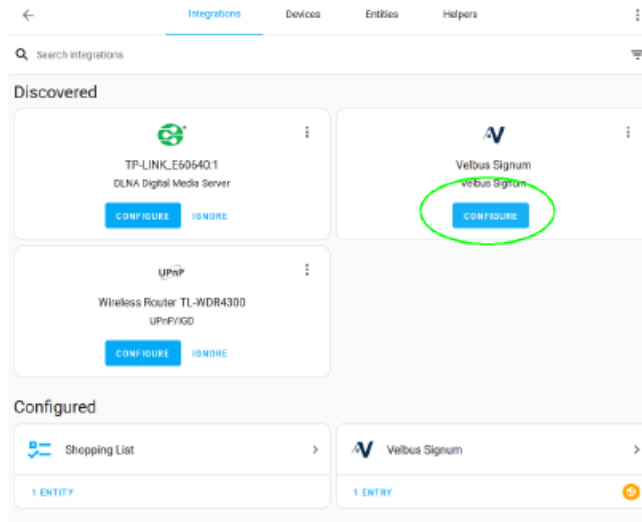
9. You will see your Home Assistant dashboard. Your dashboard will be empty or show no Velbus-related items. Mind the Velbus tab on the left



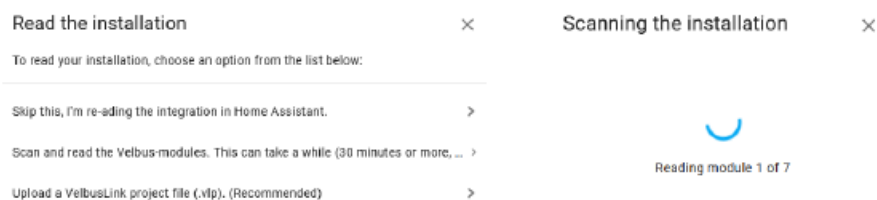
10. Now go to Settings / Devices to setup the Velbus installation in Home Assistant



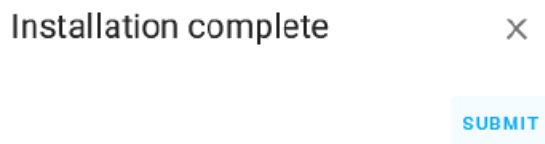
11. Click the Configure button on the Velbus Signum block



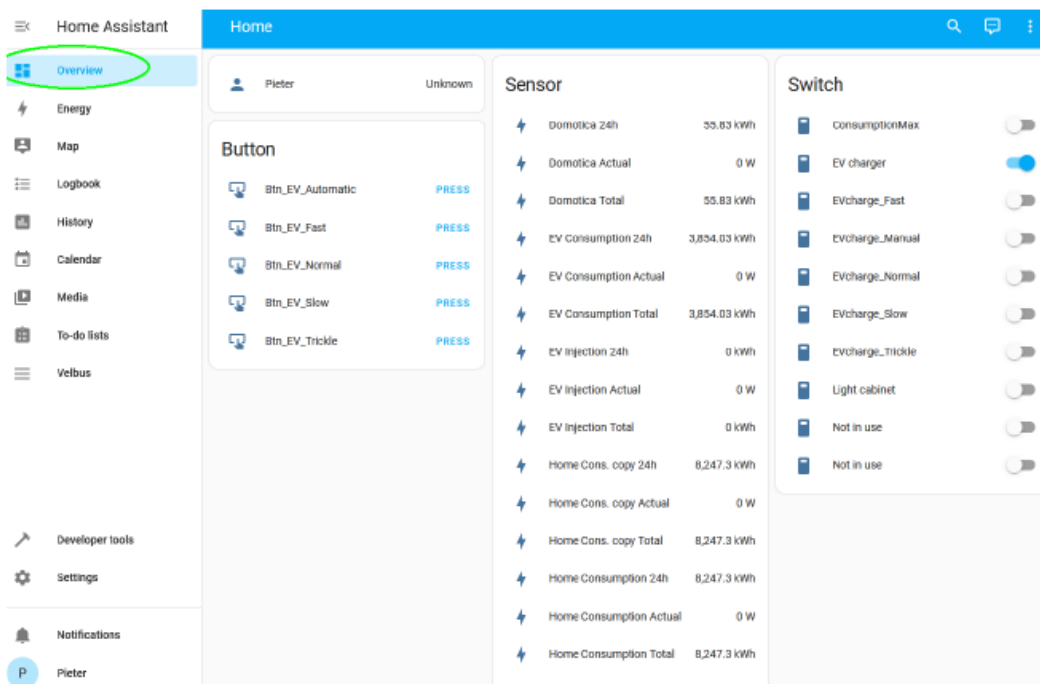
You will be asked to read your installation. You can either scan your installation or upload a VelbusLink project file. The latter is recommended if you have this available since it will be much faster than scanning your entire installation (this can take up to 30 minutes or more, depending on the size of your Velbus installation. If you don't have an up-to-date VelbusLink project file, choose scan and read the Velbus-modules



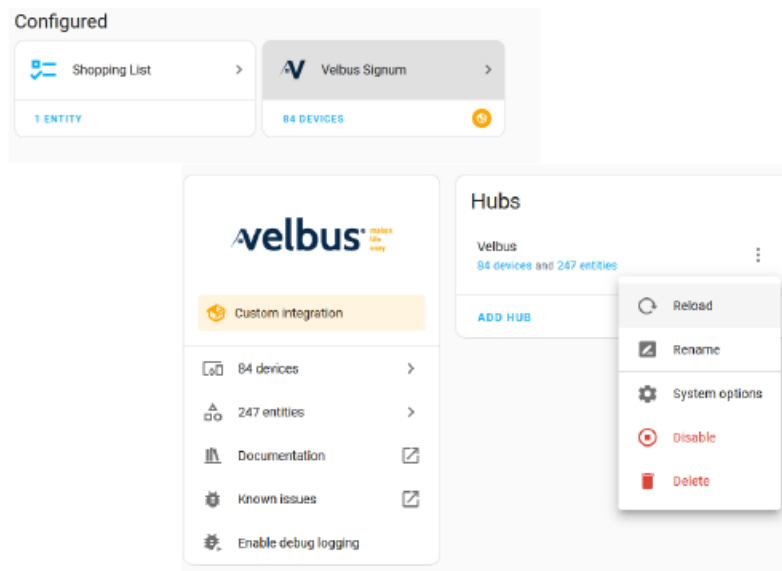
12. Once you see the message 'Installation complete', press 'Submit'



13. Now click the Overview tab and you will see your Velbus installation in Home Assistant.



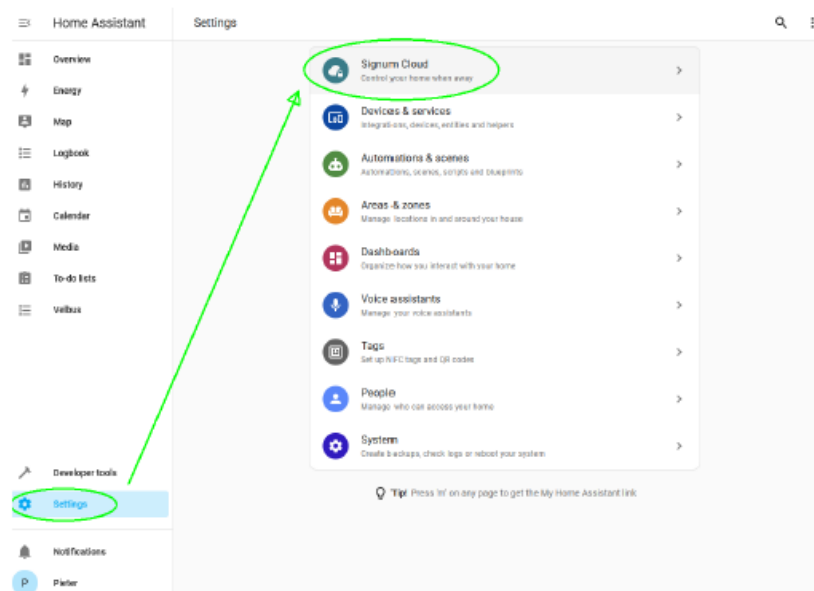
Nothing to see there? Please wait a few seconds as the integration might be loading. If your dashboard stays empty, go to Settings / Devices, choose 'Velbus Signum' and reload the integration. If no devices are shown on your dashboard, please set up your Velbus installation first, as unconfigured Velbus devices will not be shown.



Using Home Assistant

Using Home Assistant is an easy way to control your Velbus installation. Have a look at our Youtube channel to get to know your Home Assistant and how to use it. These functions might come in handy:

Setting up remote access in Home Assistant If you want to access your Velbus installation outside your home network, you can easily set this up by going to Settings / Signum Cloud.



Activate the cloud access functionality in the top right corner.

Activating cloud access

Activating cloud access will enable you to securely connect with your Signum without port forwarding or other network configuration on your part.

Activate cloud access ☒ Enabled

SAVE

Accessing your Signum with the Velbus Signum app

To add this Signum to your list of Signum devices in the Velbus Signum app, go "back" in Android or iOS, press "Add" and enter the ID listed below when prompted.

394644ce

Accessing your Signum with a browser

To access this Signum through your browser, browse to the URL listed below.

ABCDE3F4.signum.velleman.cloud

Accessing your Signum with VelbusLink

For a remote VelbusLink connection, configure port-forwarding as explained in Configuration > Network Settings > Set Up DNS.

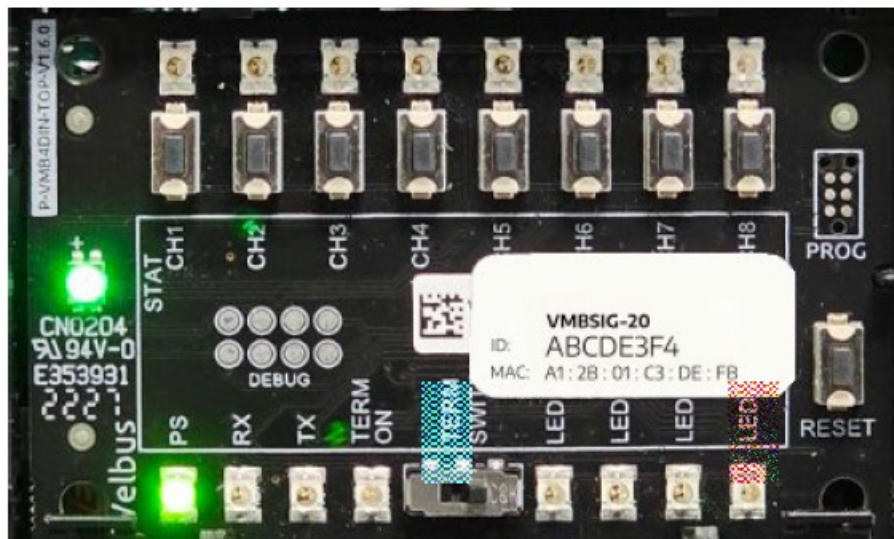
Once activated, you can browse to your Signum for anywhere in the world with an internet connection by using the Velbus Signum app or your favourite browser with the provided url:

<https://YOURSIGNUMID.signum.velleman.cloud>

Troubleshooting

LED behaviour of the Signum Module

Troubleshooting your Signum IoT Gateway starts by analysing the LED's on your module.



Please check if the PS LED is on. If not, please check your connections and the power to the Signum. The STAT LED on middle left provides general information about the status of your Signum

LED	Colour	Situation
	White flashing (1x)	Your Signum is booting up – please wait a moment
	Green flashing (1x)	Your Signum is operational and everything should work fine
	Yellow flashing (5x)	There is a warning, check the Signum web interface
	Red flashing (5x)	Your Signum has encountered an error, check the error code

There are also 4 LEDs on the bottom right of the module. If the Signum encounters an error, a specific combination

of LED's will be shown, helping you identify the problem

LED1	LED2	LED3	LED4	Situation
●				Your Signum did not get an IP-address
	●			Your Signum cannot be scanned on the local network
●	●			Your Signums web interface is not available
		●		Your Signums self-recovery service is not available
●	●	●	●	Your Signum can't communicate with the Compute Module 4

- If you should encounter one of these errors, please reset your Signum by pressing the RESET button and checking your connections. If the problem persists, please follow the steps to factory reset your Signum.
- If you still encounter problems after the factory reset, please create a support ticket via help.velbus.eu and prove us with your Signum ID and a brief description on what's going on

Factory Reset Your Signum

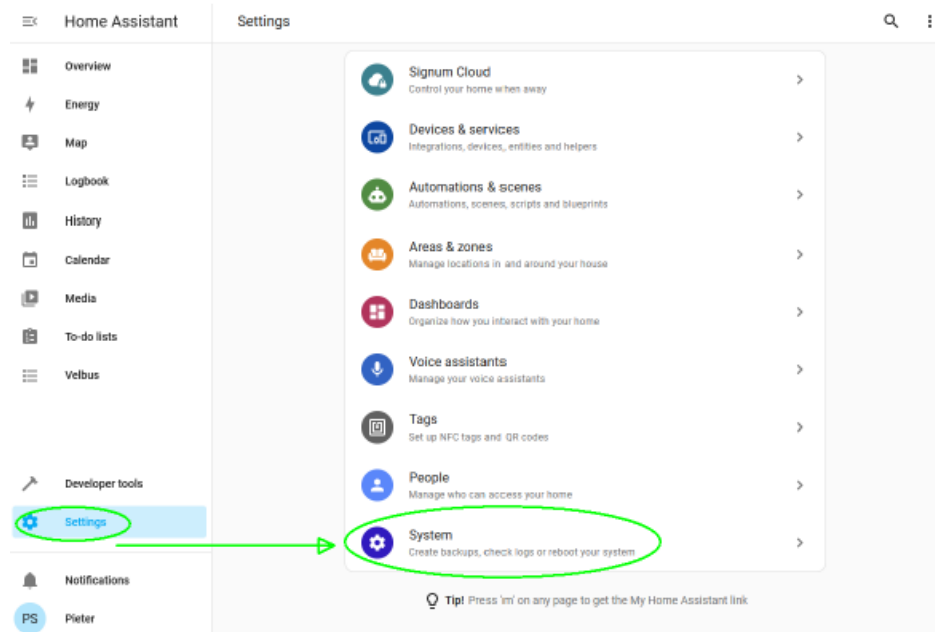
If your Signum is not functioning properly

the Signum to factory defaults. This will delete all user accounts, dashboards, widgets, settings and network settings without recovery option in the Signum. The configuration in other modules in the Velbus installation, usually configured with VelbusLink, will be unchanged.

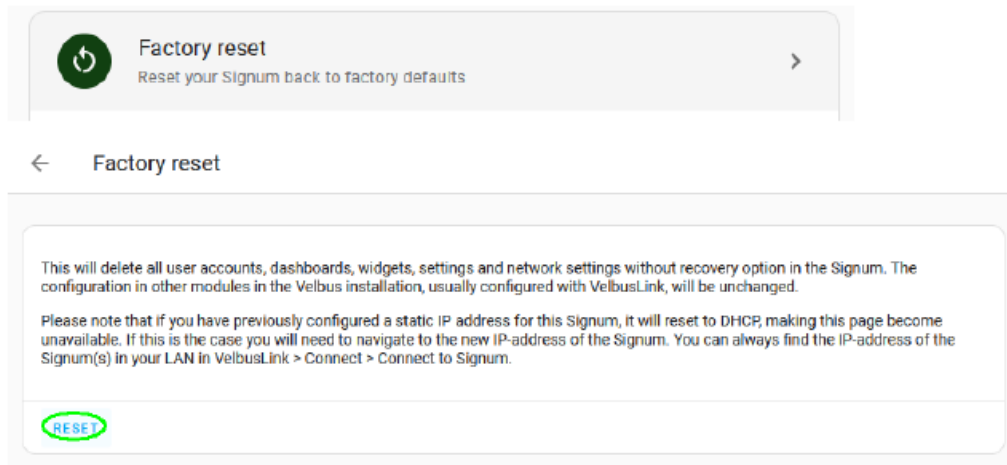
You will need physical access to your Signum to do a Factory reset.

Via Home Assistant:

Go to Settings / System



Chose Factory reset & press the reset button



Via the rescue URL in your browser (Cloud)

Navigate to <https://YOURSIGNUMID.signum.velleman.cloud/health/rescue> in your favourite browser. Change the YOURSIGNUMID to your personal Signum ID, printed on the module

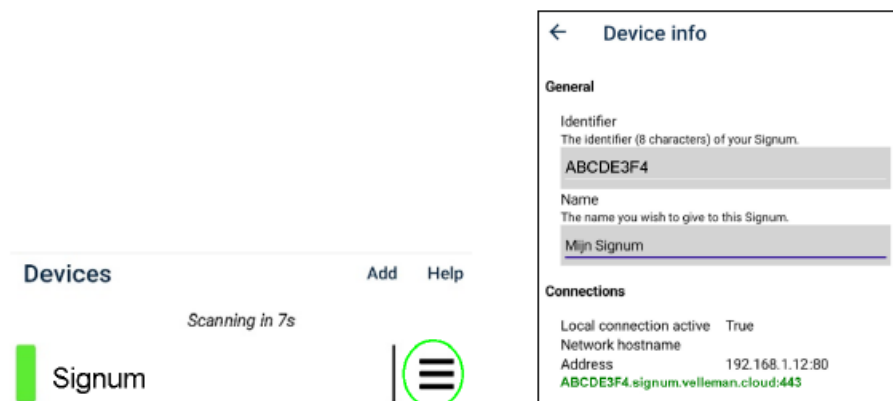


Attention: You must be connected to the same network of your Signum and cloud access will need to be enabled

Via the rescue URL in your browser (local)

Navigate to YOURSIGNUMIPADDRESS/health/rescue in your favourite browser. Change YOURSIGNUMIPADDRESS to the IP address of your Signum, for example 192.168.1.12. You can find the IP address of your Signum via the Velbus Signum app on your smartphone

1. Open the Velbus Signum app and press the hamburger menu on the right of your Signum. You can find the IP address on the bottom right in the Device info tab.



If you cannot find your Signum, check if you are connected to the same network.

2. Now enter that IP address in your favourite browser, followed by /health/rescue

Reset process

1. Press the RMT button on your Signum (the first button on the left). The green LED will light up, indicating the start of a 10 minute timer before the authentication service is suspended



If you are too late (the green LED is turned off again), you can simply press it again to start a new 10 minute window.

2. Refresh the Factory reset webpage in your browser

<https://YOURSIGNUMID.signum.velleman.cloud/health/rescue> OR

YOURSIGNUMIPADDRESS/health/rescue

Factory reset Signum

Step 2/2: Press OK to do a full reset of the Signum to factory defaults. This will delete all user accounts, dashboards, widgets, settings and network settings without recovery option in the Signum. The configuration in other modules in the Velbus installation, usually configured with VelbusLink, will be unchanged. After resetting, your Signum will be operational in 2 minutes. Please note that if you have previously configured a static IP address for this Signum, it will reset to DHCP, making this page become unavailable. If this is the case you will need to navigate to the new IP-address of the Signum. You can always find the IP-address of the Signums) in your LAN in VelbusLink > Connect > Connect to Signum. **oK)** Cancel
Press OK, you will see a countdown update every second.

Factory reset Signum

Please wait while the Signum is being reset. When the counter reaches zero you will be redirected to the application automatically. Time left: 1m 57s

When the countdown has reached zero, the page is automatically refreshed, bringing you back to the Signum Quickstart

Signum Quickstart

✓ Next

Welcome to the Signum Quickstart.

Before we start, some basic checks:

- ✓ Local bus connection active
- ✓ RTC
- ✓ Signum services running

If the refresh is not automatic, please manually browse to the following URL:
<https://YOURSIGNUMID.signum.velleman.cloud/> OR YOURSIGNUMIPADDRESS/health/rescue

Documents / Resources

velbus

Instructions for the installation of the Signum IoT Gateway

1. Introduction

2. Prerequisites

3. Installation

4. Configuration

5. Troubleshooting

6. Appendix

7. Glossary

8. Index

9. About this document

10. Contact

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VMBSIG-20 Signum IoT Gateway, VMBSIG-20, Signum IoT Gateway, IoT Gateway, Gateway

References

- [Helpdesk Team | Velleman Group nv](#)
- [velleman.eu/downloads/velbus/velbuslink/velbuslink-latest.exe](#)
- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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