Thanks for choosing the SmartGateways.nl Smart Meter Gateway!

The gateway can be connected to your smart meter in a few easy steps. Detailed manuals can be found on smartgateways.nl/en/support

Step 1. Connecting the gateway to the meter and determining firmware

On the following webpage, you can find out whether your gateway requires an external power supply or not. You will also find information on which firmware needs to be installed if no or incorrect data is being received from the smart meter.

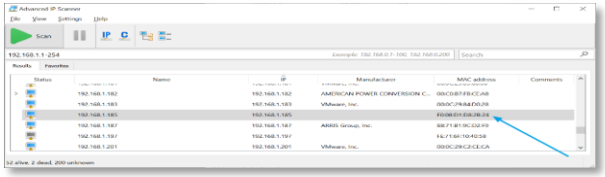
https://smartgateways.nl/en/smart-meter-overview/

Please note: If the gateway is connected to a DSMR2 or DSMR4 meter without a separate power supply, the red light will turn on, but the gateway will not start up. If the blue LED never lights up, even though the Wi-Fi is properly configured, it is an indication that the gateway requires an external power supply.

Having issues? See the link In the lower right corner on how to view the logging.

Step 3b. Find the ip address assigned by DHCP

The gateway will get an ip address from the DHCP server within your network. The mac address is important for this. The MAC address is on the sticker on the gateway. If you do not know how to find the ip address of the gateway at your internet router, you can use the Advanced IP Scanner program. You can download the program from the following link: https://www.advanced-ip-scanner.com/



Note the IP address of the gateway. You need this to install the gateway. link it to your home automation package.

Restore to factory settings

1. Make sure the gateway is not connected via the meter or USB cable.
2. Now connect the gateway to an external USB power supply.
Don't press the reset button yet but wait for the blue led to begin flashing.
3. The blue LED will flash 4 times. While flashing, press the reset button until the blue LED flashes 5 times quickly.
6. Release the button.
7. The gateway will now reset and will broadcast the SSID again after twenty seconds.
8. The gateway can be reconfigured by re-connecting to the SSID "Smart Gateways P1 READER".

Step 2. Set up via the wifi portal

When the gateway is connected for the first time, it will broadcast the WiFi SSID "Smart Gateways P1 READER". Connect to this network, the password is "12345678" without quotes. Once connected, a control panel will automatically appear in your browser. If the control panel does not appear automatically, surf to http://192.168.4.1

Now select "Configuration". A page will now appear with all available WiFi networks. This page is shown on the side.

Select your WiFi network. This is then automatically filled in at SSID and SSID1. Enter the password. Entries with the & sign are not supported.

SSID1 and password1 are not being used. These settings will be ignored by the gateway.

When the gateway is connected you can browse to: http://connectix_smartmeter.local:82 or http://ip_adres_gateway:82 if the first link does not work. Replace "ip_address_gateway" with the address found in step 3b.
Username: **admin**
Password: **smartgateways**

Please wait a minimum of 2 minutes for the gateway to start up before logging in. The gateway needs time to start.
Logging in earlier can make the internal website unresponsive!

Configuration

OUDE-MARKT	82%
XP-420B	68%
Alde Mert gast	42%
JKS	38%
privat8613vri	34%
Motown Steaks 'n Sushi Venlo	34%
PLEIN 7 Gasten	34%
PLEIN 7 Personeel	34%
PLEIN 7 Kassa	34%
MaaspoortEvents	24%
Catering	24%
De Maaspoort	24%
TheBurrow	24%
Ziggo	22%
Ziggo8675924	18%
Kolenstraat36sterk	12%
Vero&Sonny	10%

SSID
SSID
Password
password
SSID1
SSID1
Password
password1

SMART GATEWAYS

SMART METER GATEWAY

Logout | Change Password | Refresh

Gateway type	NL - DSMR4+5
Mac address	9C_9C_1F_C7_BB_68
Ip address	192.168.1.125
Startup time	2022-06-26T12:50:04Z
Firmware running	2022062601
Firmware available	2022062601
License activated	YES
Number of reboots	50
WiFi SSID	OUDE-MARKT
WiFi channel	11
WiFi signal strength	-41
WiFi reconnects	0
WiFi last connection error	
MQTT server	192.168.1.20
MQTT status	Connected
MQTT (re)connects	1
MQTT (re)connect time	2022-06-26T12:50:24Z
Telegrams received	192
Telegrams with errors	1

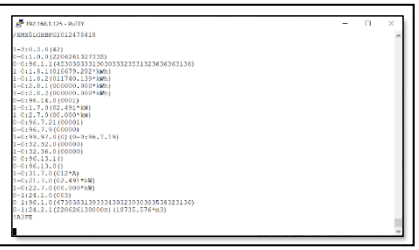
Change network and mqtt settings
Firmware menu
Reboot gateway
Reset to factory default

REST-API

Check for data from the smart meter:

You can use Advanced IP Scanner to check if the gateway receives data From the smart meter.

Within Advanced IP Scanner:
Right click on the gateway and select Tools and then Telnet. A new window will open and live data will be shown from the meter. It will look like the example illustrated on the right.



Step 4. Using the gateway with Home Assistant, Domoticz, Homey and other systems:

This Smart Meter Gateway can be connected to many different home automation system.
See https://smartgateways.nl/en/support/ for the newest tutorals and howto's.

You can also scan this QR code:

Led notifications (only gateway without display, gateway with display shows everything on the display)

The red LED lights up when the gateway is supplied with power.
The blue LED can light up or flash in different ways.
BLUE LED – OFF: No WiFi connection. Connect to the SSID "Smart Gateways P1 READER" and configure the gateway or reset the gateway to factory settings and re-enter the wifi configuration.
BLUE LED – ALWAYS ON: the gateway is connected to the WiFi network but has not yet received any data from the smart meter.
BLUE LED – FLASHING SLOWLY: the gateway is receiving data from the meter (normal situation)
BLUE LED – FLASHING FAST: A firmware update is available. Briefly press the button on the gateway and wait for the gateway to install the update. This may take 2 minutes. The gateway will reboot and start flashing slowly again. If the blue LED does not turn on, reconfigure the gateway. If the immediately starts flashing again, the update has not been downloaded completely, try again until the gateway has started up normally again. Note: certain firewalls block the download, if this is the case, try installing the firmware update via a different WiFi network. If there is an update the mqtt topic changes to dsmr/smart_gateways/update_available = true. If desired, a notification can be made about this.

Step 3a. Static ip adres or DHCP

At the bottom of the configuration portal you will find the IP address assignment. If you use DHCP, leave 0.0.0.0 everywhere. If you want to give the gateway a static IP address, enter the correct IP details. Re-enter SSID and Password when changing from DHCP to static ip address assignment.

MQTT

To use mqtt, enter the mqtt parameters of your broker on the configuration portal. The port number is by default 1883. You can find the mqtt installation guide on https://smartgateways.nl/en/support. MQTT is the preferred method above telnet. **Home Assistant and Domoticz can use telnet but the integrations are not ready for smart meters from countries other than Netherlands, Belgium, and Sweden. Home Assistant will Autodiscover the gateway when using mqtt. Don't fill in the mqtt parameters If you don't use mqtt! -** TLS is supported. To initiate tls, start the hostname with mqtts.
By default, an update is sent to the MQTT broker every 10 seconds, even if your meter sends a telegram every second (DSMR version 5). If you want to adjust this, fill in the **INTERVAL** value in seconds. The **PREFIX** (max 10 characters) is for advanced users. Do not enter anything here if you are not using a prefix. By entering a prefix, Home Assistant (autodiscovery) will no longer work. The max length for all the mqtt fields is 40 characters.

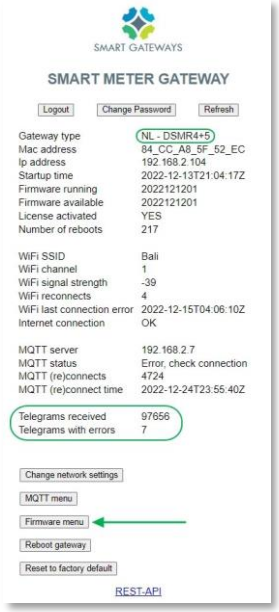
Logging and troubleshooting
The gateway logs everything to it's local usb port. You can use the logging to investigate what's wrong.

Scan this QR code for instructions - https://smartgateways.nl/en/view-the-log-of-a-gateway/

If the gateway is connected to a meter with an unsupported firmware, all values will be "0". Use this instruction how to change the fhe firmware of your gateway: *https://smartgateways.nl/en/smart-meter-overview/*

How do I know which firmware to use?

When logged into the gateway you will see the following screen:



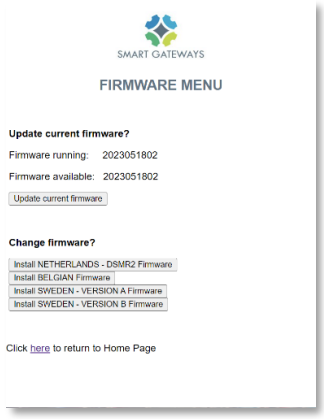
Gateway Type displays the active firmware.

If the number of Telegrams with errors is less than Telegrams received you do not need to do anything. The gateway successfully receives data from the meter.

If Telegrams with errors equals Telegrams received or both numbers remain 0, the gateway's firmware needs to be changed.

Using the gateway's firmware menu, install the firmware appropriate for your meter. The tables below show all smart meters with the required firmware. Click on the Frimware menu and choose the required firmware.

You can check this page to see which firmware to use:
https://smartgateways.nl/en/smart-meter-overview/



Firewall configuration

The gateway is capable of functioning seamlessly even in the absence of an internet connection. Nevertheless, it should be noted that without an internet connection, the gateway is unable to verify the availability of firmware updates. It is highly advisable to grant access to the following IP address to keep the gateway at the latest firmware level:

- dns queries: fill in a reachable dns server
- tcp/80 -> (update.smartgateways.nl) please note that this is nog http!
- tcp/443 -> (update.smartgateways.nl)
- udp/123 -> nl.pool.ntp.org

Some firewalls may block the download (midway through the process). This issue can occur with Unifi, pfSense, and OPNsense, as they likely utilize the same firewall engine. Additionally, PiHole can also obstruct firmware downloads.

If the update still fails after opening these ports, the gateway can be temporarily connected to another internet connection. For instance, you can temporarily link the gateway to your phone's hotspot.

With use of the logging the logging, you can observe the update check taking place. If a new firmware version is available, it can be installed by briefly pressing the reset button. After approximately 2 minutes, the firmware will be installed and the gateway will reboot.

https://smartgateways.nl/en/view-the-log-of-a-gateway/

Once the firmware of the gateway has been updated, you can relocate it back to your own network.

Gateway with Active Splitter

The gateway with active splitter has two P1 connections. The IN port can be connected to the smart meter. The OUT port can be connected to another P1 device, for example, the load balancer of an electric vehicle.

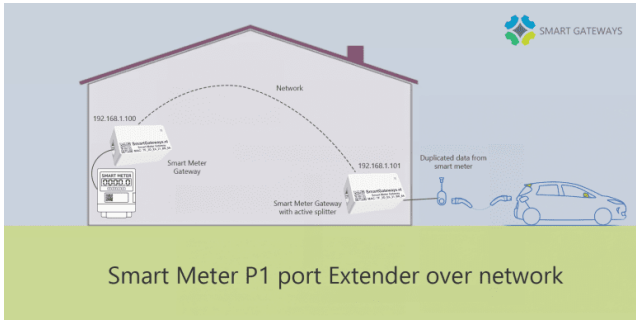
Power Supply
If something is connected to the OUT port, the gateway must always be externally powered via the built-in USB connection. This is because a P1 port of a smart meter typically only provides power for one connected device.

The secondary OUT port has two modes:

Active Splitter Mode
This is the default mode. The data received by the primary port, connected to a smart meter, is forwarded to the OUT port. Another P1 device can be connected to the OUT port.

Remote Gateway Mode
This mode can be used to connect this gateway to another smart meter gateway via the network. It forwards data from the remote gateway to the OUT port of this gateway. This can be useful if your smart meter is not located at the desired location, such as at your electric vehicle charging station.

Use the link below for detailed instructions



https://smartgateways.nl/en/smart-meter-extender-bridge-active-splitter/

My gateway is not connecting to Wi-Fi, what should I do now?

In case a gateway is unable to connect to the Wi-Fi network, please try the following steps:

- Try again. During the initial configuration, the gateway randomly selects a channel for its own network. If your Wi-Fi network is using the same channel, the gateway won't be able to connect. Disconnect the gateway from the USB power and P1 port to perform a full restart. The gateway will choose a different random channel.
- Connect a USB power supply for assurance. The gateway has a micro-USB port where an optional USB cable and power supply can be connected. If you haven't ordered one, a phone charger can be used (5V - 1A).
- Attempt the configuration near an access point to ensure that the gateway has sufficient range. Connect a USB power supply.
- You can check the logging to see if the gateway can establish a connection. You'll also see the signal strength (RSSI) of your own Wi-Fi network. Aim for a signal strength between 0 and -70dB. A value lower than -70dB is often insufficient, but in some cases, it may still work.
- Try setting your access point to a different channel. The current channel might be interfered with by other Wi-Fi networks nearby. If ZigBee is used in proximity to the gateway, it can also cause interference. Choosing a different channel can help avoid such disturbances.
- Move the gateway further away from 230V cables, as they can also cause interference.
- If the gateway is inside a metal cabinet, try placing it outside the cabinet. Metal blocks Wi-Fi signals.