

Smart Gateways 20200030 Smart Meter Gateway



# Smart Gateways 20200030 Smart Meter Gateway User Manual

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# Smart Gateways

Smart Gateways 20200030 Smart Meter Gateway



## Product Information

### Specifications:

- Brand: SmartGateways.nl
- Model: Smart Meter Gateway
- Connection: Wi-Fi
- Power Supply: External required in some cases
- Default SSID: Smart Gateways P1 READER
- Default Password: 12345678
- Default Username: admin
- Default Password: smart-gateways

## Product Usage Instructions

### Step 1: Connecting the Gateway

Connect the gateway to the smart meter following the instructions provided in the manual to determine if an external power supply is required.

### Step 2: Set Up via the Wi-Fi Portal

1. Connect to the Wi-Fi network broadcasted by the gateway using the default SSID and password.
2. Access the control panel by browsing to <http://192.168.4.1> and configure your Wi-Fi network settings.
3. Wait for at least 2 minutes for the gateway to start up before logging in.

### Step 3a: Static IP Address or DHCP

Configure the IP address assignment based on your preference -DHCP or static IP. Make sure to re-enter SSID and password when changing from DHCP to static IP.

### Step 3b: Finding the IP Address

Use the MAC address on the gateway sticker to find the IP address assigned by the DHCP server within your network.

Alternatively, use Advanced IP Scanner program to locate the gateway's IP address.

### **MQTT – Checking Data from Smart Meter**

Utilize Advanced IP Scanner to check for data transmission from the smart meter. Use Telnet to view live data from the meter.

### **Restore to Factory Settings**

If needed, follow the instructions in the manual to restore the gateway to factory settings.

### **FAQ:**

**Q:** What should I do if the gateway does not start up properly?

**A:** If the gateway does not start up, ensure that it is connected correctly to the smart meter and consider checking if an external power supply is required based on the LED indicators.

**Q:** How can I access the gateway's control panel if it does not appear automatically?

**A:** If the control panel does not appear automatically, you can manually access it by browsing to <http://192.168.4.1> after connecting to the gateway's Wi-Fi network.

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](http://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.

### **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](http://connectix_smartmeter.local:82) or <https://ipadres.gateway:82> if the first link does not work. Replace "ip\_address\_gateway" with the address found in step 3b.

**Username:** admin


**Password:** smart gateways

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

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

SSID
<input type="text" value="SSID"/>
Password
<input type="text" value="password"/>
SSID1
<input type="text" value="SSID1"/>
Password
<input type="text" value="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](#)

## 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

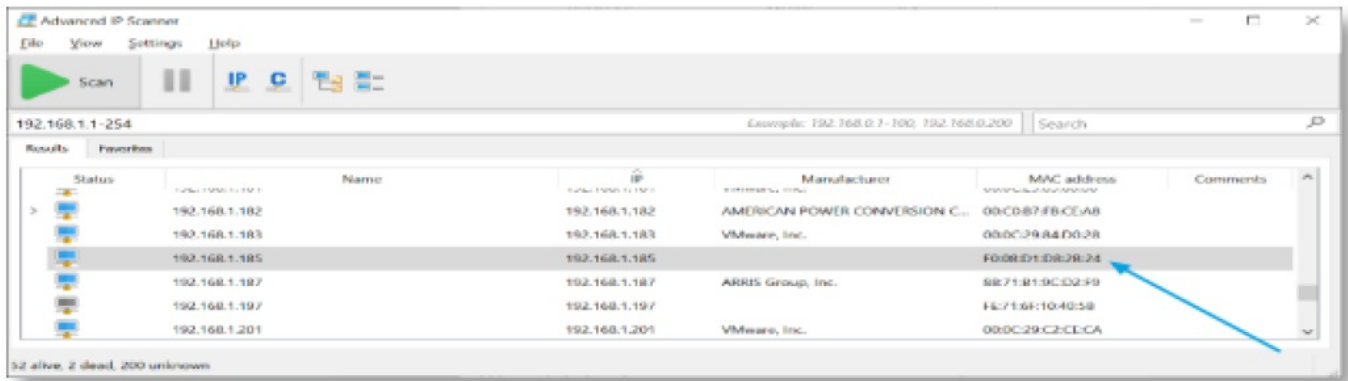
To use matt, enter the mqtt parameters of your broker on the configuration portal. The port number is by default 1883. You can find the mqtt installation guide on <https://smartgateways.nl/en/support>. MQTT is the preferred method above telnet. Home Assistant and Domotic can use telnet but the integrations are not ready for smart meters from countries other than Netherlands, Belgium, and Sweden. Home Assistant will Autodiscover the gateway when using matt. Don't fill in the mqtt parameters If you don't use matt! – TLS is supported. To initiate tis, start the hostname with matts.

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.

### 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.
3. Don't press the reset button yet but wait for the blue led to begin flashing.
4. The blue LED will flash 4 times.
5. 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."



### 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.

```
192.168.1.125 - PuTTY
/XMK5LGBBFG1012478418

1-S:0.2.0(42)
0-O:1.0.0(220626132733S)
0-O:96.1.1(45303033313030333235313236363136)
1-O:1.8.1(016679.202*kWh)
1-O:1.8.2(011740.139*kWh)
1-O:2.8.1(000000.000*kWh)
1-O:2.8.2(000000.000*kWh)
0-O:96.14.0(0001)
1-O:1.7.0(02.491*kW)
1-O:2.7.0(00.000*kW)
0-O:96.7.21(00001)
0-O:96.7.9(00000)
1-O:99.97.0(0) (0-O:96.7.19)
1-O:32.32.0(00000)
1-O:32.36.0(00000)
0-O:96.13.1(0)
0-O:96.13.0(0)
1-O:31.7.0(012*A)
1-O:21.7.0(02.491*kW)
1-O:22.7.0(00.000*kW)
0-O:24.1.0(003)
0-O:96.1.0(4730303139333430323930303538323136)
0-O:24.2.1(220626130000S) (10735.576*m3)
A3FE
```

## 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 tutorials 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.

## 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 the 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:





SMART GATEWAYS

## SMART METER GATEWAY

[Logout](#)
[Change Password](#)
[Refresh](#)

Gateway type	NL - DSMR4+5
Mac address	84_CC_A8_5F_52_EC
Ip address	192.168.2.104
Startup time	2022-12-13T21:04:17Z
Firmware running	2022121201
Firmware available	2022121201
License activated	YES
Number of reboots	217

WiFi SSID	Bali
WiFi channel	1
WiFi signal strength	-39
WiFi reconnects	4
WiFi last connection error	2022-12-15T04:06:10Z
Internet connection	OK

MQTT server	192.168.2.7
MQTT status	Error, check connection
MQTT (re)connects	4724
MQTT (re)connect time	2022-12-24T23:55:40Z

Telegrams received	97656
Telegrams with errors	7

[Change network settings](#)  
[MQTT menu](#)  
[Firmware menu](#) ←  
[Reboot gateway](#)  
[Reset to factory default](#)

[REST-API](#)

**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.

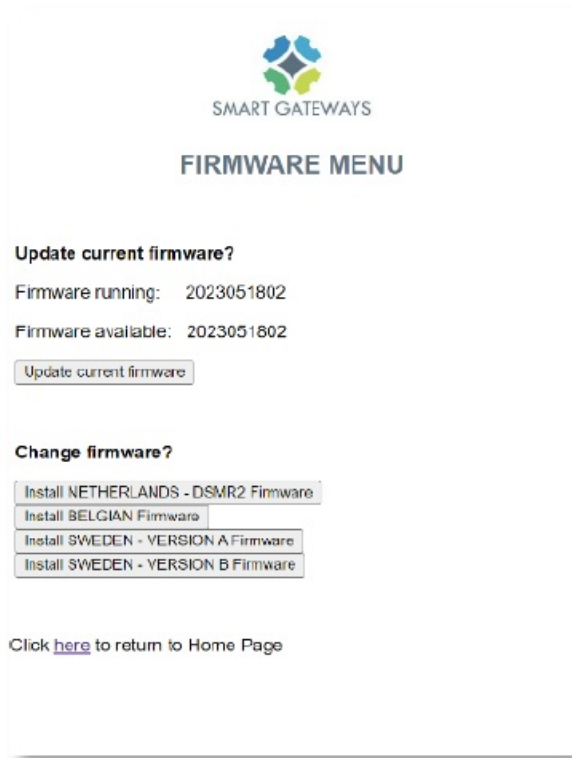
If Telegrams with errors equals Telegrams received or both numbers remain 0, the gateway's firmware needs to be changed.

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 Firmware 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 not http!
- tcp/443 -> (update.smartgateways.nl)
- udp/123 -> [nl.pool.ntp.org](https://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, 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.

## 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.

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## Documents / Resources



[Smart Gateways 20200030 Smart Meter Gateway](#) [pdf] User Manual  
20200030 Smart Meter Gateway, 20200030, Smart Meter Gateway, Meter Gateway, Gateway

## References

- [Smart Gateways - Besparen door inzicht - SmartGateways.nl](#)
- [Smart meter overview - SmartGateways.nl](#)
- [Advanced IP Scanner - Download Free Network Scanner](#)
- [User Manual](#)

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