TREON

Gateway

Quickstart Guide, Safety, and Warranty

v 1.2

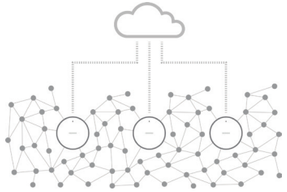
System description

Overview

When there is a need for high density of connected devices, a mesh network is the perfect solution for connectivity. Treon Gateway connects a mesh of a few to hundreds of wireless sensor devices to a cloud. It exchanges data with the mesh network and can process, store and send data to cloud backends.

Treon Gateway can be connected to the internet over a wired Ethernet connection or wirelessly over a WLAN or Cellular (NB-IoT, CatM1 or 2G) connection.

Advanced users can extend the Gateway platform by adding new supported data formats, cloud platforms or deploy edge computing applications.



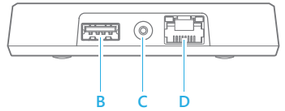
What's in the box

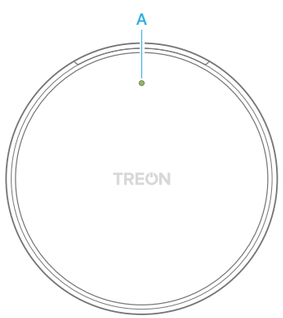
When you open the sales box, check that it contains the following:

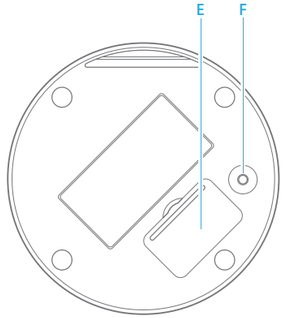
1. Gateway
2. AC power adapter
3. Documentation

Keys and parts

A. Status light
B. USB A host port
C. Power cable connector
D. Ethernet cable connector
E. Micro SIM card slot
F. Configuration button







1

Power up the gateway

Attach the power cable to the gateway (**C**) and plug it in a wall outlet. The gateway switches on automatically. Use only the power supply unit provided together with the product.

Status light (**A**) colours:

Green light
The gateway is connected to the internet

Blue light
The gateway is trying to establish a connection to the internet.

Blinking blue
The gateway is in the configuration mode

Red light
There's an error with the gateway. Open the configuration mode to see what's wrong

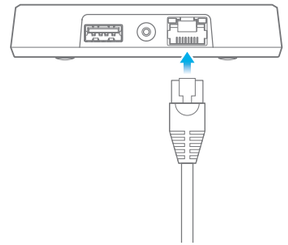
2

Connect to the internet

You can connect the gateway to the internet with an Ethernet cable connection, a cellular connection, or a WLAN connection. Note that the Ethernet and cellular connections automatically override the WLAN connection.

Use a cable connection

Attach an Ethernet cable to the gateway (**D**).

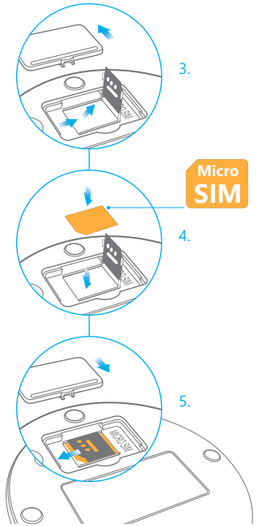


Use a cellular connection

1. Unplug the gateway's power cable from the wall outlet.
2. Put your fingernail in the seam between the lid of the SIM card slot (E) and the back cover and remove the lid.
3. Slide the SIM card holder to the right until it unlocks, and lift the holder up.
4. Place the the micro SIM card in the holder with the contact area face down, and close down the holder.
5. Slide the holder to the left until it locks into place, and put back the lid.

Use a WLAN connection

Open the configuration mode and set up a WLAN connection as instructed in step 3.



3

Configure the gateway

1. Press the configuration button (F) until the status light (A) starts blinking. The gateway becomes a WLAN access point
2. Using your phone, computer, or tablet, connect to the access point: select treongw1-serialnumber, where *serialnumber* is the serial number of your gateway.
3. Enter your password. It has been provided separately with the gateway. Windows 10 may ask for a pin code as a primary access point password. Please use the "password" option instead. Remember to change the password later.
4. Open the browser on your phone or computer and go to address **192.168.0.1:3001**

In case you have a conflicting device in your network, the default IP-address may not work. Treon Gateway automatically assigns a new address by changing the subnetwork address. Try to replace the subnetwork identifier marked with X (192.168.X.1:3001) with number 1 or 2.

If there are multiple conflicts you can check the correct number by using a command prompt tool and typing "ipconfig" while connected to the Treon Gateway.

5. Make the needed configurations. You can, for example, change the gateway access point password, check the error log, and set up a WLAN connection.
6. To exit the configuration mode, select Quit, or press and hold the configuration button (F) until the status light stops blinking.

Advanced configuration

If you need to make more advanced configurations, such as setting up your own cloud platform, go to:

https://www.treon.fi/documentation

and read the *Configuration and Development Guide.*

Product info

Power supply and cables
Use only the power supply unit provided together with the product. Do not use a USB cable longer than 2 meters with the product.

Operating environment
Use the gateway indoors only. Do not use in humid environments. The operating temperature range of the gateway is from 0 to +50 °C.

Maximum transmit power

Supported radio networks	Operating frequency bands	Maximum transmitted radio-frequency power
LTE Cat M1	B2, B3, B4, B5, B8, B20	+23 dBm
LTE NB-IOT	B2, B3, B4, B5, B8, B20	+23 dBm
2G GPRS/EGPRS	B3	+30 dBm
2G GPRS/EGPRS	B8	+33 dBm
WLAN	ISM 2.4 GHz	+17.3 dBm
Wirepas Mesh	ISM 2.4 GHz	+4 dBm

NORWAY. This device is not allowed to be used within a 20 km radius of the centre of Ny-Ålesund at Svalbard, Norway.

CERTIFICATION INFORMATION

Manufacturer
Treon Oy, Visiokatu 3, 33720 Tampere, Finland.

Canada

IC: 24716-GW11
This device complies with Industry Canada license-exempt RSS standard(s).
Operation is subject to the following two conditions:
1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device.
This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

Cet appareil est conforme à la(aux) norme(s) RSS sans licence d'Industry Canada.
Son utilisation est soumise aux deux conditions suivantes:
1. Cet appareil ne doit pas causer d'interférences et
2. il doit accepter toutes interférences reçues, y compris celles susceptibles d'avoir des effets indésirables sur son fonctionnement.
Cet équipement respecte les limites d'exposition aux rayonnements IC RSS-102 définies pour un environnement non contrôlé. Il doit être installé et utilisé en maintenant une distance minimum de 20 cm entre le radiateur et votre corps.

EU DECLARATION OF CONFORMITY

Hereby, Treon Oy declares that the radio equipment Treon node is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address:

https://www.treon.fi/documentation

FCC NOTICE

FCC ID: 2AR86GW11

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio com munications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consultant the dealer or an experienced radio/TV technician for help

Radiofrequency radiation exposure information: this device complies with the radiation exposure limits prescribed for an uncontrolled environment for fixed and mobile use conditions. This device should be installed and operated with a minimum distance of 20 cm between the device and the body of the user or nearby persons.

Safety guide and Warranty

Introduction

Read these simple guidelines. Not following them may be dangerous or against local laws and regulations. For further information, read the user guide and visit https://www.treon.fi

Usage

Do not cover the device as it prevents the device from operating properly.

Safety distance

Due to radio frequency exposure limits the gateway should be installed and operated with a minimum distance of 20 cm between the device and the body of the user or nearby persons.

Care and maintenance

Handle your device with care. The following suggestions help you keep your device operational.

- Do not open the device other than as instructed in the user guide.
- Unauthorized modifications may damage the device and violate regulations governing radio devices.
- Do not drop, knock, or shake the device. Rough handling can break it.
- Only use a soft, clean, dry cloth to clean the surface of the device. Do not clean the device with solvents, toxic chemicals or strong detergents as they may damage your device and void the warranty.
- Do not paint the device. Paint can prevent proper operation.

Damage

If the device is damaged contact **support@treon.fi**. Only qualified personnel may repair this device.

Small children

Your device is not a toy. It may contain small parts. Keep them out of the reach of small children.

Interference with medical devices

The device may emit radio waves, which could affect the operation of nearby electronics, including cardiac pacemakers, hearing aids and defibrillators. If you have a pacemaker or other implanted medical device, do not use the device without first consulting your doctor or the manufacturer of your medical device. Maintain a safe distance between the device and your medical devices and stop using the device if you observe a persistent interference with your medical device.

Storage

Always store and use the device with any covers attached.

Recycle

Check the local regulations for proper disposal of electronic products.

The Directive on Waste Electrical and Electronic Equipment (WEEE), which entered into force as European law on 13th February 2003, resulted in a major change in the treatment of electrical equipment at end-of-life. The purpose of this Directive is, as a first priority, the prevention of WEEE, and in addition, to promote the reuse, recycling and other forms of recovery of such wastes so as to reduce disposal.

The crossed-out wheelie-bin symbol on your product, battery, literature, or packaging reminds you that all electrical and electronic products and batteries must be taken to separate collection at the end of their working life. Do not dispose of these products as unsorted municipal waste: take them for recycling. For info on your nearest recycling point, check with your local waste authority.

WARRANTY AND SOFTWARE LICENSE AGREEMENT

"By using the Treon Gateway", you are agreeing to be bound by the terms of *Treon Gateway Software License Agreement*, unless you return Treon Gateway as part of the return policy"

Treon Limited Warranty, and *Treon Software License Agreement* (SLA) documents are available at the following internet address:

https://www.treon.fi/documentation

QUICKSTART GUIDE UPDATE v1.1 (June, 2019)