

QUICK START GUIDE

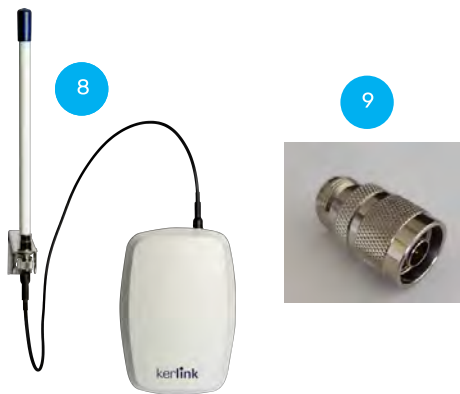
# 4G Rugged Gateway - Edge

## Gateway Components

This gateway is compatible with CMT Edge and all Loadsensing edge devices.

It features the following parts:

- 1 M25 cable gland
- 2 Cable gland
- 3 Seal
- 4 Plastic support
- 5 External nut
- 6 SIM Card slot
- 7 PoE injector
- 8 Optional vertical omni-directional antenna
- 9 Antenna N adapter
- 10 Power over Ethernet (PoE) adapter
- 11 USB-Ethernet adapter



## Gateway Information Sheet

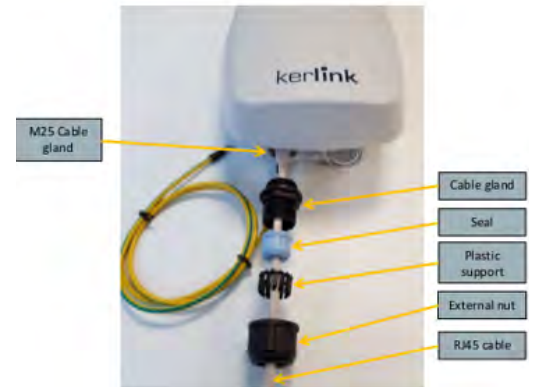
Gateway Information Sheet	Gateway Login fields
Remote access user	Username
Default remote and local access password	Password
Gateway Information Sheet (SAMPLE) <span style="color: #00AEEF; font-weight: bold;">SAMPLE ONLY</span> Serial Number: 123456789 Gateway ID: 1234 Remote access url: <a href="https://loadsensing.wocs.com/1234">https://loadsensing.wocs.com/1234</a> Local access url: <a href="https://169.254.01">https://169.254.01</a> Remote access user: admin Default remote and local access password: sample password Default network ID: 1234 Default network key: sample password IMEI: 00000000	

## Step 1 - Set up the power supply

Select the appropriate Ethernet cable to connect the gateway to the PoE and add RJ-45 connectors on both sides. We recommend STP or SSTP which are designed to be installed outdoors if required. The cables should 6.6-8.8mm in diameter and at most 100 meters in length.

Install the cable gland as shown on the photo and tighten it on the gateway side.

Connect the ethernet cable to the RJ-45 Port of the PoE injector labelled "DATA & POWER OUT"



## Step 2 - Select the Internet interface

The gateway can be connected to the Internet through the following:

### Ethernet

Connect one end of the Ethernet cable to the network and the other end to the RJ-45 port of the Poe Injector labelled "DATA IN"



### Cellular (SIM Card up to 4G)

Unscrew the lateral cover with a M25 wrench  
Insert the SIM Card  
Close and tighten the cover again.



## Step 3 - Power up the gateway

Plug the PoE injector to the mains (AC).

Check the LED display at the bottom  
Green LED steady: Gateway is powered  
Red LED blinking: Gateway is booting  
Red LED off: Gateway is already booted.



## Step 4 - Configure the internet connection

Connect the gateway locally to the computer using the USB-C to Ethernet adapter provided in order to configure the Internet settings from the gateway interface. Once the gateway has been connected to the computer, it will provide a dynamic IP address to the computer to create an IP level connection. Open a browser and type in the address bar <http://169.254.0.1>. Note that the browser settings might consider the site as not secure. Just accept and proceed. Accept the web certificate and fill in the default username and password provided on the Gateway Information Sheet.



**IMPORTANT:** The Network connection will be initially set to **Automatic**. We recommend to switch to **Manual Configuration** to ensure optimum performance of the gateway. Using the Automatic settings mean that the gateway will try to connect the device to the Internet first through Ethernet by getting a dynamic IP address (DHCP). In case the Ethernet interface is down or no IP address is received, it will switch and try to access via SIM card by using one of the APN settings set in the gateway database, assuming there is no PIN number set on the SIM card. **When using cellular connection**, the described process causes inefficiencies and reduces the performance of the gateway so we strongly recommend to switch to manual configuration.

### Step 4.1 - Ethernet connection option

Upon logging in to the gateway,

- For 4G edge gateways, go to the **Configuration** tab and click on **Internet**.
- For 4G cloud gateways, go to the **Internet Configuration** tab.

Select **Manual Configuration** for the **Network connection** and then select either **Ethernet with DHCP** (dynamic IP) or **Ethernet with static IP**. Add the IP settings if an Ethernet connection with static IP address will be used. Save the configuration and reboot the gateway. In addition, it is important to know which ports are used by the gateway in order to allow their use, if necessary. This information is available in the 4G rugged gateway and CMT Edge user guides.

### Step 4.2 - Cellular connection option

If you prefer, you may disable the PIN number on a mobile phone before installing the SIM card on the gateway. If you are not particular with the SIM security, this may be the easiest way to provide connectivity to the gateway.

After selecting **Cellular Modem** in the **Internet Configuration** section,

- For 4G edge gateways, go to the **Configuration** tab and click on **Cellular modem**.
- For 4G cloud gateways, go to the **Cellular Configuration** tab.

Select the PIN settings. No need to disable the PIN using a mobile phone at the beginning if the PIN On setting is preferred. Select the preferred APN settings and add the APN details if the manual configuration is preferred. Save the configuration and reboot the gateway.

## Step 5 - Check the connection

Upon rebooting, check whether the connection has been established correctly.

Go to the **Gateway Status** section and check if the Internet connection (ping), Status reporting and Remote access are marked OK.

### Internet

/Internet

Activate network Watchdog

**Disable the Network Watchdog if this gateway does not have an internet connection**  
The network watchdog is a mechanism to reboot the gateway in case of a network failure, modem freeze or other network error condition. It will reboot the gateway after 40 minutes of consecutive unsuccessful Internet connection attempts.

**Network connection:**

Automatic (Ethernet if connected, Cellular modem otherwise)

Manual Configuration

Cellular modem

Ethernet with DHCP

Ethernet with static IP

IP Address:

Netmask:

Default gateway:

Primary DNS server:

Secondary DNS server:

**NTP server (to synchronize the gateway's clock):**

Default (pool.ntp.org)

Custom

**SMTP server:**

Default (Internet service)

Custom

Changes will not be applied until next device reboot.

PIN Off (Sim card is unlocked)

PIN On (Sim card needs PIN code)

APN Auto selection (will select based on the SIM card operator)

Manual APN Configuration

APN:

Username:

Password:

Status checked 4 minutes ago

### General

Gateway serial number	22448
Gateway model	LS-G6-KIO-GW-868
Firmware version	2.5
Date	Fri May 28 12:41:46 UTC 2021
Uptime (minutes)	10205
Input voltage	12.025 V
Voltage history	<a href="#">gwVoltages_1.csv</a> <a href="#">gwVoltages_2.csv</a>

### Application

Network ID	21781
Internet connection (ping)	Ping OK
Status reporting	Connection OK
Remote access	Connection OK

### Network

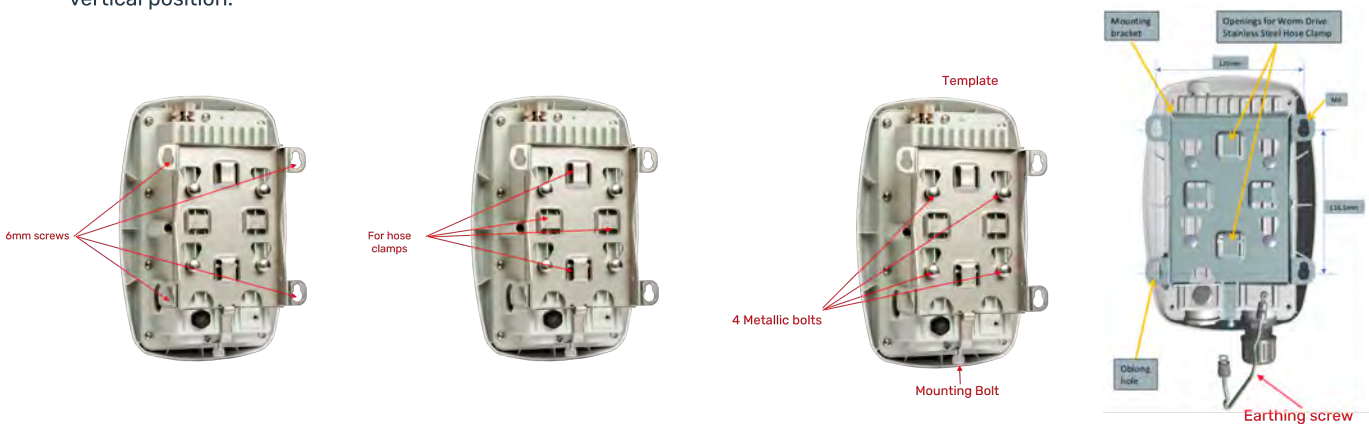
Selected interface	Ethernet - DHCP
Ethernet Status	Up
Ethernet IP	192.168.1.36
Ethernet netmask	255.255.255.0
Cellular modem Status	Not connected
Cellular modem IP	none
Default Gateway	192.168.1.1
Primary DNS	80.58.61.250
Secondary DNS	80.58.61.254

### Cellular Modem

Modem is down

## Step 6 - Install the gateway

The gateway may be mounted on a horizontal or vertical pole, or on a wall. Avoid installing it on a metallic wall to avoid radio signal reduction. The gateway should be mounted at least 2 meters high, preferably with direct view of the nodes. It should be installed in a vertical position.



### WALL FIXING:

Use four 6mm screws to fix the gateway using the holes at the 4 corners of the bracket.

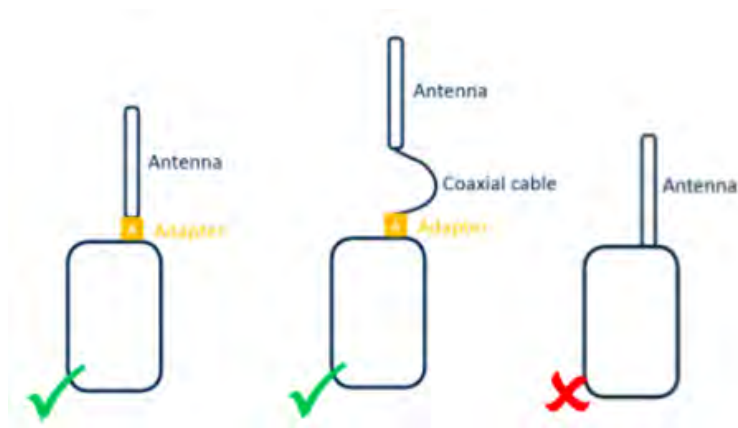
### POLE FIXING:

Use two hose clamps to fix the gateway to a pole. Two openings are reserved for horizontal or vertical pole fixing. The width of the hose clamps should not exceed 14mm.

To mount the gateway, push it down to fix it to the 4 metallic bolts on the template and screw the mounting bolt at the bottom to lock it in place. To unmount the gateway, unscrew the mounting bolt and move the gateway up. The template will remain installed and ready for a new gateway to be mounted.

Finally, install the earthing in the earthing screw to protect the gateway against lightning and ensure electrical security.

In case you require an external antenna, the antenna N adapter should be connected to the gateway to ensure correct connection and avoid signal loss. This adapter can be connected to the antenna cable or to the external antenna directly, and protected with vulcanized tape, provided with the adapter, as displayed on the image below.



Note: Make sure to screw the N adapter provided by Worldsensing into each gateway before installing the antenna. This adapter ensures a controlled pin length of the N connector and prevents any damage to the product. The use of this N adapter is mandatory to ensure the proper radio coverage.

### GENERAL DISCLAIMER:

Specifications are subject to change without notice and should not be construed as a commitment by Worldsensing. Worldsensing assumes no responsibility for any errors that may appear in this document. In no event shall Worldsensing be liable for incidental or consequential damages arising from the use of this document or the systems described in this document.