



SensGuard TCP LR X2

Wireless Gateway & Data Collector

Description

The **SensGuard TCP LR X2** is an industrial-grade wireless gateway and data collector designed to receive measurements from wireless SensGuard sensors and transmit them to the SensGuard cloud monitoring platform.

Equipped with a standard RJ-45 Ethernet port, the gateway integrates seamlessly into existing network infrastructures. It supports multiple power options, including a 5V DC external power adapter or micro-USB connection, eliminating the need for internal batteries.

The device features built-in non-volatile buffer memory to store sensor readings locally during network outages, automatically uploading all buffered data to the server once internet connectivity is restored.

Key Features

- **Multi-Sensor Support:** Collects data from up to 250 wireless sensors.
- **Flexible Power Options:** Powered via micro-USB or an external 5V DC power adapter.
- **Battery-Free Operation:** Designed for maintenance-free continuous operation without internal batteries.
- **Local Buffer Memory:** Prevents data loss by saving measurements locally during internet outages.
- **Range Extension:** Can be configured to operate in Repeater Mode to extend sensor wireless coverage.
- **Secure Transmission:** Fully encrypted data exchange using the AES-128 standard.

Typical Applications



Commercial Refrigeration:
Centralized gateway for tracking temperatures in supermarkets and retail stores.



Data Centers & Server Rooms:
Reliable data collection from server rack climate sensors.



HVAC Systems:
Integrating duct and room sensor measurements into facility monitoring networks.



Museums & Historical Archives:
Centralized gateway for localized environmental microclimate tracking.



Cold Storage & Warehouses:
Aggregating data from remote temperature and humidity sensors in large logistics facilities.

Operating Instructions

Device Installation & Setup

The gateway is pre-configured to communicate out-of-the-box with the SensGuard monitoring portal (my.sensguard.lv). By default, DHCP client mode is enabled to automatically retrieve network settings.

1. Connect the gateway's RJ-45 Ethernet port to an active network switch or router using a standard patch cable.
2. Power on the device using a 5V DC power adapter or micro-USB connection.
3. Log into the SensGuard cloud portal (my.sensguard.lv), navigate to the **Connection** section, and follow the step-by-step **Connection Wizard** to register your hardware.

Note: If a static IP address or custom network configuration is required, connect the gateway to a PC via USB and use the **SensMax USB Configurator** utility.

Download the configurator tool here: <http://soft.sensmax.eu/downloads/usbconfig.zip>

Repeater Mode Configuration

The gateway can function as a wireless repeater to extend the radio range between remote sensors and a primary gateway:

1. Disconnect the Ethernet (RJ-45) cable.
2. Power on the device using a 5V DC adapter or USB.
3. Press and hold the diagnostic button on the enclosure for more than 10 seconds.
4. During this process, two yellow LEDs will illuminate first. Keep holding the button until they turn off and a single red LED turns on, indicating that Repeater Mode is active.

Note: Repeater Mode configuration is saved in non-volatile memory and persists after rebooting or power cycling the device.

Deactivating Repeater Mode:

Press and hold the diagnostic button for 1 second to return the device to standard Gateway Mode.

Mounting Options

The gateway is designed for quick, non-destructive installation:

- **Double-Sided Adhesive Tape:** The gateway is mounted exclusively using high-bond industrial double-sided tape. This allows for rapid and secure placement on smooth surfaces (such as plastic, metal, glass, or painted walls) without the need for drilling or additional hardware.

Technical Specifications

Parameter	Specification
Network Interface	RJ-45 Ethernet port (10/100 Base-T)
Power Supply	5V DC (500 mA) via power adapter or micro-USB
Battery	None (externally powered)
Sensor Capacity	1 to 250 wireless sensors per gateway
Wireless Frequency	868 MHz (ISM Band)
Communication Range	Up to 150 m (clear line-of-sight)
Data Encryption	AES-128
Enclosure Protection Rating	IP54
Dimensions	90 × 66 × 28 mm

Local Buffer Memory Capacity

When internet connectivity is unavailable, the gateway caches sensor readings based on the number of registered devices:

Number of Connected Sensors	Buffer Retention Duration
1 to 5 sensors	~18 hours
100 sensors	~55 minutes
250 sensors	~20 minutes

Compliance & Certifications

The SensGuard TCP LR X2 is designed and manufactured in accordance with major regulatory standards:

- **CE Mark:** Fully compliant with relevant European Union directives.
- **RoHS:** Built with environmentally friendly, lead-free components.

Ordering Information

Model / Part Number	Description
SensGuard TCP LR X2	Wireless Gateway / Data Collector
SensGuard PT100	Compatible Wireless Temperature Sensor (Standard Accuracy, 1m probe)
SensGuard PT100HA	Compatible Wireless Extreme Temperature Sensor (High Accuracy, 1m probe)
SensGuard DS1820	Compatible Wireless Temperature Sensor with External Probe (1m probe)
SensGuard ENS210	Compatible Wireless Temperature and Humidity Sensor (Built-in battery)
SensGuard MCP9808	Compatible Wireless Temperature Sensor (Built-in battery)



SensGuard

SENSE OF SECURITY



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