Product catalogue

LANSEN

A FIDELIX COMPANY

Lansen provides innovation-driven wireless solutions for measuring, monitoring and control of buildings.

Our DNA - our four pillars

In 2004 Lansen was founded on the idea that impactful, value-creating innovation needs to be relevant to the customers, differentiating versus competition and make a measurable impact on people and society. Our approach is to be innovation driven, creative, iterative and dynamic.

Swedish innovation

All products are developed, designed and tested by engineers in Halmstad, Sweden. The Innovation platform approach makes it easy to adapt and add functions according to the customer's specific needs.

Battery life

All products are built on Lansen's ultra-low power platform, meaning less battery changes thus reducing cost, effort and environmental impact.

Wireless & Open

Smart sustainable communities are built on openness and standards. Open Metering System (OMS) is the open, vendor independent standard for meter communication based on the Wireless M-Bus and mioty protocol - for high encrypted safety and operability with different manufacturers.

Security heritage

Our experience and knowledge from developing high-quality security systems is the backbone of Lansen's Innovation Platform. Secure and reliable high-quality components are still at the heart of the development for all products.

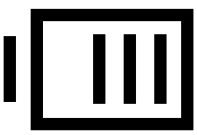
Swedish innovation

Open standards

Wireless & Open

Security heritage

Battery life



Lansen is part of a bigger family

About Assemblin Caverion Group

Assemblin Caverion Group is a leading northern European technical service and installation company. We deliver sustainable installations, technical services and solutions along the lifecycle to support our customers achieve their goals. We have combined net sales of 3.7 bn € and 21 500 dedicated employees in the Nordic region, Baltics, Austria and Germany (2024). Read more at assemblincaverion.com.

About the Fidelix Group

A group of solution-focused units that were all born to find solutions for the challenges that the harsh Nordic climate poses to buildings.

Joined together, these agile and action-oriented units have also turned their attention to solving larger global challenges.

By developing technologies and services to optimise the buildings' use of resources, Fidelix Group is helping to reduce the carbon footprint while making buildings more enjoyable and healthier for the end-users.

Driven by entrepreneurial attitude, each individual in the Fidelix Group is making it possible to find new ways to create smarter buildings for a healthier future. For all of us.

Lansen has been part of the Fidelix group since 2019

Lansen provides innovation-driven wireless open functions for measuring, monitoring and control of buildings. Developed, designed, and manufactured by engineers in Sweden. As of 2019, we are part of the Fidelix Company Group.

Products and functions for different needs

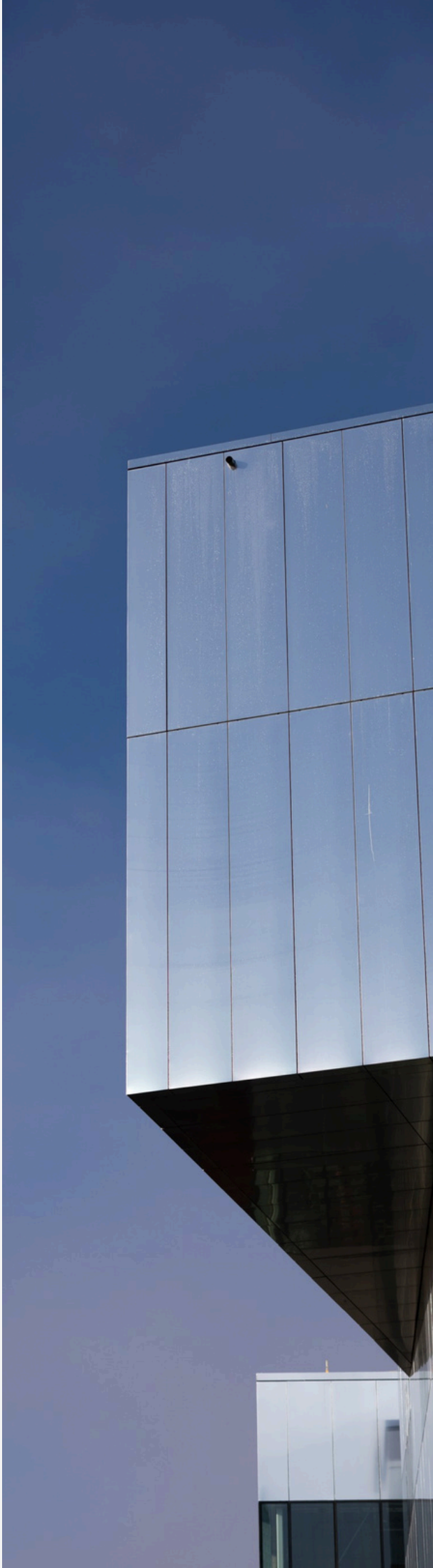
Utilities/Metering
Our complete range of OMS compatible Wireless M-Bus devices is specifically designed to extend the range between meters and gateways. Collect the data from your buildings for a more efficient and sustainable property management.

Building Control
Get control over the energy consumption patterns in your properties. Get real time insight about the indoor and outdoor environment. Invaluable plug and play products for automatization and steering.

Sub-metering
Decrease energy use and increase living quality, measure and take control over the indoor climate. Increase ventilation and optimize the level of carbon dioxide - for better air quality, comfort and safety.

Infrastructure
Repeaters / Gateways / Converters / Bridges / RF amplifiers

Sensors
CO2 / Temperature / Humidity / Leakage / Pulse / Dry contact / Radon / Sound / Pressure / Light Brightness



Communication protocols

OMS Wireless M-Bus

Lansen supports the OMS specification for both Wireless M-Bus and Wired M-Bus to deliver products with long lifetime, long transmission range and verified interoperability. The Wireless M-Bus standard is defined in EN 13757 and the interoperability is guaranteed in the OMS specification. Furthermore, the OMS/Wireless M-Bus stack is developed inhouse for best performance, battery life and reliability.

mioty

Lansen has been a member of mioty alliance since 2020. mioty is a software based low-power, wide-area network (LPWAN) protocol that was developed to overcome todays and future wireless connectivity limitations. With its best-in-class reliability and scalability, mioty is designed for massive industrial and commercial IoT deployments. Furthermore, the mioty stack is developed inhouse for best performance, battery life and reliability.

Wireless M-Bus & mioty
Sensors, gateways and repeaters

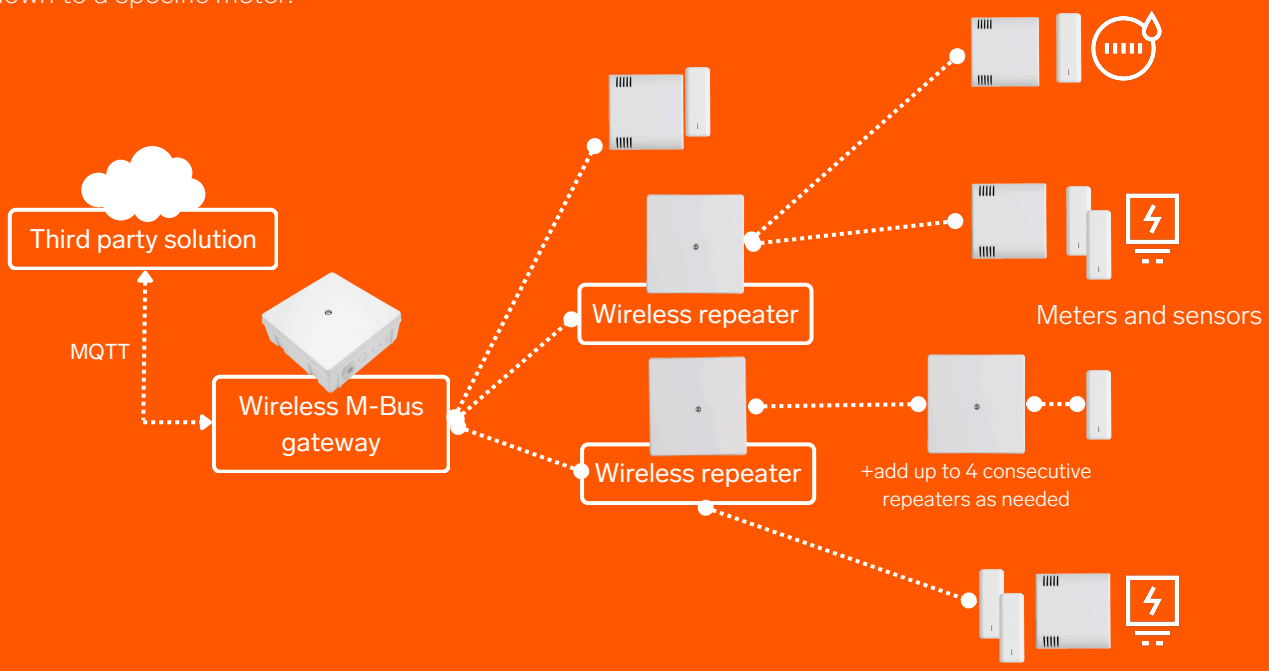
Wireless sensors are the perfect solution for renovation projects or any situation requiring extensive measurements. Our sensors (temperature, CO2, VOC, relative humidity, radon, PIR, etc.) are easy to install and connect to the receiver. All sensors boast a battery life of over 10 years.

wM-Bus and mioty sensors

- IP-class up to 66
- Up to 4 temperature probes
- Different combined sensors (TE, RH, VOC, CO2, ...)
- 10-14 years battery life
- ...

Generation 5 Wireless M-Bus gateway

- Seamless integration with Lansen's repeaters.
- Absolute security with TLS certificates.
- Secure remote configuration or on site configuration.
- Handles up to 2000 meters/sensors.
- Fully configurable suppression timers = Configure how often you want data from the devices at system level, meter type or even down to a specific meter.



A complete data acquisition process

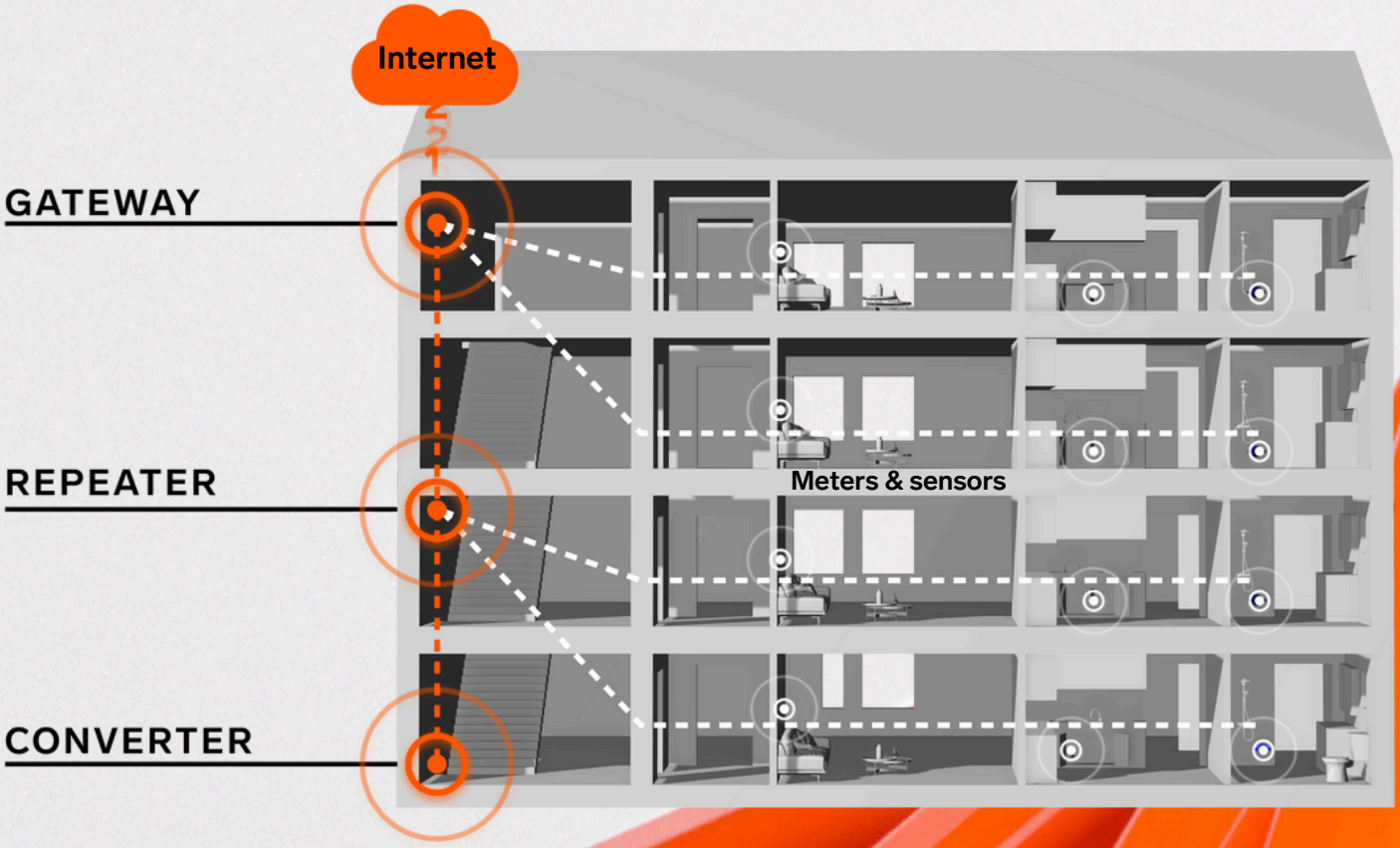
Dive into the world of seamless data collection with Lansen! Whether you're seeking to enhance data collection or extend it to external services, we've got you covered with our diverse range of communication products and solutions. Here's a quick summary of what we offer:

Gateway: The Wireless M-Bus gateway is a highly configurable device used for collecting data from Wireless M-Bus meters and transmitting the data using cellular LTE-M1, 4G, or Ethernet. The gateway is the connection between your local wireless network like 868MHz and IP networks. Battery-powered or mains-powered (230VAC).

Converter: Convert between wireless and wired data from meters and sensors to other building automation systems.

Repeater: Our Wireless M-Bus repeaters are specifically designed to extend the range between meters and any wM-Bus compatible gateway. The repeaters are battery-powered or mains-powered (230VAC). Experience enhanced reliability, resilience against disruptions, and a reduction in overall installation costs.

Bridge: We also offer a bridge used to convert between different wireless technologies like Wireless M-Bus and mioty.



CO2/VOC sensors

True CO2, VOC, temperature & humidity

This is a collection of CO2 and VOC sensors that ensures great air quality every day. Both variants also measure temperature and humidity for best indoor climate.

- Wireless M-Bus or mioty
- Estimated lifespan of 10-16 years* depending on variant
- For public buildings such as schools and offices
- CO2 version available with indication (visual and acoustic warning)

Temperature & humidity sensors

Temperature & humidity, Indoor and outdoor

A collection of temperature & humidity sensors with high security and performance. Measurement of only temperature is also available.

- Wireless M-Bus or mioty
- Estimated lifespan of 14 years*
- IP64 for outdoor use
- Outdoor versions are also available in variants specially developed for harsh temperatures

Radon sensors

Radon, Temperature, Humidity, CO2, pressure

Measures radon, CO2, temperature, humidity, and pressure with high accuracy. It is plug-and-play and can be mounted in any room where there is a need to frequently measure important indoor parameters.

- Wireless M-Bus or mioty
- Send interval 60s - 1h (Radon every 10 min)
- Can be used in HVAC systems
- The radon values, 10-minute and hourly, are updated every ten minutes

*The lifespan depends on which communication standard that is used. Other parameters such as send interval, measurement interval and operating temperature also affects the battery life. See productsheet for details.

Water leakage transmitters

Water leakage kit

A water leakage transmitter used to detect water leakages in any area where a leakage may occur, such as under a dishwasher or in a basement.

- ✓ Wireless M-Bus or mioty
- ✓ Estimated lifespan of 14 years*
- ✓ Seamless integration into any home environment
- ✓ Will alert just five seconds after cable has come in contact with water

Door and window detectors

Door and window detection

With a discrete design and easy installation this detector alerts as soon as a door or window is opened or closed.

- ✓ Wireless M-Bus or mioty
- ✓ Estimated lifespan of 14 years*
- ✓ Comes with an included magnet kit
- ✓ Perfect for offices and public buildings

Smoke detectors

Smoke detection

An OMS compliant smoke detector. The device uses photoelectric technology and has an aesthetically appealing, professional design and function.

- ✓ Wireless M-Bus or mioty
- ✓ Estimated lifespan of 10* years
- ✓ Sends status packet every 3 minutes
- ✓ Can perform a self-test to check internal functions if 28 days has passed since the last manual or automatic test

*The lifespan depends on which communication standard that is used. Other parameters such as send interval, measurement interval and operating temperature also affects the battery life. See productsheet for details.

Occupancy detectors

Movement sensor

The occupancy detector can, if connected to the building's automation system, be used as an indicator for deactivating/reactivating light and ventilation in a space depending on if there's people in the room or not.

- Wireless M-Bus or mioty
- Estimated lifespan of 14 years*
- Uses PIR technology
- Detection range up to 12 meters with 110°

AC power detectors

Powerloss detection

This device is used for detecting powerloss to equipment by simply mounting the AC-finder attachment on an AC-cable.

- Wireless M-Bus
- Estimated lifespan of 14 years*
- Real-time status updates for immediate action
- Configurable send interval

Octocoupler signal detector

Power on/off

Some machines that lack the dry contact output can use a high voltage signal instead to alert when an alarm goes off or if an error occurs. Here G2-OPC is the perfect solution.

- Wireless M-Bus
- 3-24 V input
- Will instantly detect and alert if any status signals change
- Can sense status from machines that does not support digital interface, such as MODBUS

*The lifespan depends on which communication standard that is used. Other parameters such as send interval, measurement interval and operating temperature also affects the battery life. See productsheet for details.

Pulse counters

Pulse counter, indoor and outdoor

Pulse counters for indoor or outdoor use. Can count pulses from up to two devices simultaneously, depending on variant. Also available in drive-by version.

- Wireless M-Bus or mioty
- Estimated lifespan of 14 years*
- Highly configurable
- Outdoor version also available in variants specially developed for harsh temperatures

Temperature probe transmitters

Temperature, Indoor and outdoor

A plug-and-play OMS transmitter used for measuring the temperature on, for example, pipes. Needs to be equipped with an external probe.

- Wireless M-Bus
- Estimated lifespan of 14 years*
- IP66 casing for outdoor use
- Indoor version supports up to four external temperature probes connected to the device

Dry contacts

Normally open or normally closed

G2-DC-NO/NC can be used for monitoring indoor dry contacts, such as relays to a motor or reed switches to a valve. If, for example, a motor starts or stops, the device will immediately send a telegram.

- Wireless M-Bus or mioty
- Estimated lifespan of 14 years*
- Easy installation since the signal is supplied by the dry contact
- High degree of security since the device instantly detects and alerts if any status signal change

*The lifespan depends on which communication standard that is used. Other parameters such as send interval, measurement interval and operating temperature also affects the battery life. See productsheet for details.

Wireless M-Bus gateways

Gateway generation 5, Indoor and outdoor

Lansen's Wireless M-Bus gateway is a highly configurable device used for collecting data from Wireless M-Bus meters and transmitting the data using 4G or LTE-M1. Comes with multiple options for antennas.

- Handles up to 2000 units
- Battery (10 years*) or 230VAC
- Absolute security with TLS certificates
- Fully configurable suppression timers

Wireless M-Bus to Ethernet gateways

Indoor and outdoor

With Power over Ethernet (PoE) support as an option, enjoy an easy installation and operation, eliminating the need for a separate power cable.

- Ethernet connectivity using MQTT protocol to cloud
- Enhanced RF sensitivity
- Seamless integration with Lansen's repeaters
- Mains powered or Power-over-Ethernet

Wireless M-Bus repeaters

Indoor and outdoor

Explore our complete range of OMS compatible Wireless M-Bus repeaters, specifically designed to extend the range between meters and any wM-Bus compatible gateway.

- Reads 932 meters or sensors
- Covers 1-3 floors up and down
- Battery (10 years*) or 230VAC
- Cost-efficient way of solving range issues

*The lifespan depends on which communication standard that is used. Other parameters such as send interval, measurement interval and operating temperature also affects the battery life. See productsheet for details.

Wired M-Bus to Wireless M-Bus converters

M-Bus to Wireless M-Bus

A wired 230V AC/DC M-Bus master to wireless converter. This is the ideal product for reading out big volumes of information from multiple devices while still having wired meters installed.

- 4 meters/16 loads to 500 meters/32 loads
- Existing wired infrastructure can live on
- Two internal antennas, can be equipped with external antennas
- Plug-and-play

Modbus to Wireless M-Bus converter

Wired Modbus to Wireless M-Bus

A wired 230V AC/DC converter for transparent Modbus-RTU (RS485) to Wireless M-Bus.

- The device can store up to 64 Modbus questions
- T1 mode
- Two internal antennas
- Can be configured via a Lansen USB dongle

Micro M-Bus to Wireless M-Bus converter

M-Bus to Wireless M-Bus

The micro M-Bus master is a plug-and-play Wired M-Bus to Wireless M-Bus converter used to read out wired M-Bus meters and transmit the data wirelessly using the Wireless M-Bus protocol.

- Two high performance internal antennas
- Maximum three M-Bus loads
- T1 mode
- Encrypts all payloads by default

OMS4mioty bridge

Indoor and outdoor

In an approach to bridge the gap between OMS Wireless M-Bus devices and the mioty (OMS5) technology, Lansen can now present the OMS4mioty bridge!

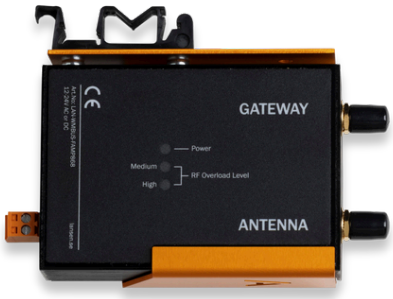
- Ultra-high accuracy TCXO for accurate time stamping
- Receives T-, C- or S-mode according to EN 13757-3/4
- Time stamping of all incoming packets
- Configuration using Lansen's USB dongle

Filtered Amplifiers

Amplifier for gateway

The Filtered Amplifier 868 MHz / 434 MHz drastically increases the receiver performance of the gateway by removing distrubances from 4G, LTE, TV, WLAN, etc. while amplifying the wanted signal.

- Increases the performance of the gateway up to 2x or even higher
- C1-, T1-, and S1-mode
- Easy installation
- The device has a DIN-adapter on the back to give it a low profile when installed on a DIN-rail.



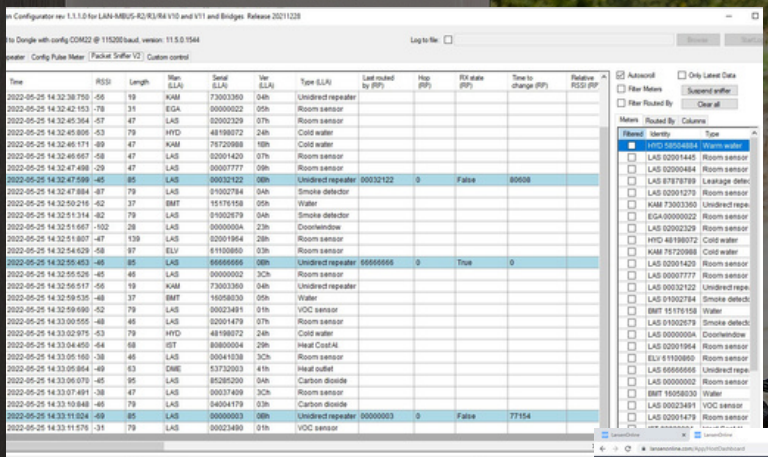
Lansen Online

A secure, plug-and-play encryption management platform for fast, automated installation and pairing. Centralizes all encryption keys in one account with multiple user profiles.

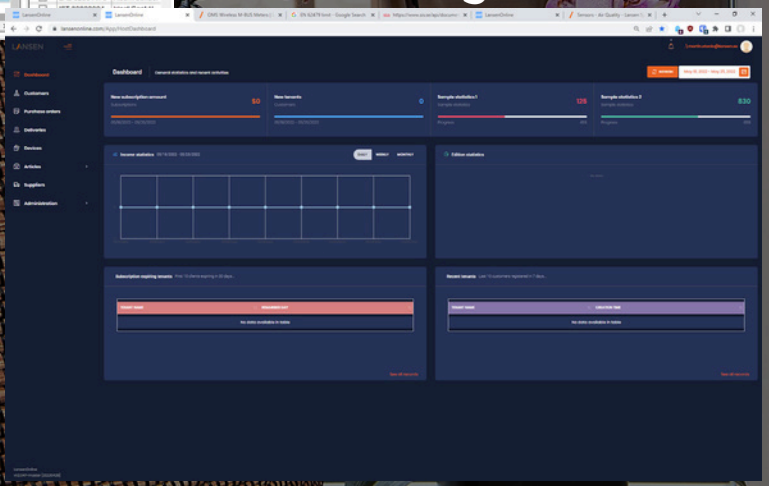
Key features:

1. Search and retrieve encryption keys for devices.
2. Export data as a CSV file.
3. Automate key collection via API.
4. Manually add devices, including third-party meters/sensors.
5. Manage encryption keys by assigning devices to customers.

Lansen wM-Bus & MQTT configuration and sniffer tool



Lansen Companion online AES key managment



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