

Introducing the **WiSeNode-XL** Gateway: Your Ultimate Bridge to Seamless Data Integration

Unlock the full potential of your sensor networks with the **WiSeNode-XL**, a modular solution designed to effortlessly connect your sensor nodes to cloud data storage.

Whether you're managing industrial IoT applications, or environmental monitoring systems, the **WiSeNode-XL** ensures reliable and efficient data transmission. Unlock the power of precise data collection with **WiSeNode-XL** and elevate your projects to new heights.



Main Features

- Modular setup
- User-friendly web interface
- Simple configuration
- Local data storage
- Radio technology LoRa / LoRaWAN / FR
- LTE-m, 5G public connectivity
- Programmable edge computing
- I/O module extions



LTE-m and 5G connectivity



Private LoRa, LoRaWAN, RF



EDGE computing, Customized App



Configuration via Webserver



CANBus to connect I/O modules



VPN connection



ModBus TCP/IP slave



Connection up to 4 temperature sensors, PT100, PT1000



Connection up to 4 0-10V sensors
Configurable sensor supply 5-22VDC



Connection up to 4 digital inputs and
4 digital outputs



Connection up to 4 0/4-20mA sensors
Configurable sensor supply 5-22VDC



Connection up to 2 Strain Gauge
based sensors

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MainBoard

Housing	ABS housing, IP65, Dimensions: 150 x 200 x 80 mm Aluminium housing, IP67, Dimensions 120x120x40 mm Din-Rail, Dimensions 105x105x30 mm OEM PCB, Dimensions 100x100x20 mm
Power supply	9-30VDC
Controller Core	Linux based 2 core
Lora or 2.4GHZ radio	Lora radio 868mhz, LoRaWAN Radio 868mHz lora or LoRaWAN protocols 2.5GHZ FR, proprietary protocols
Micro-SD	Used for data storage
CANbus	Can
Ethernet RJ45	Webserver configuration/ Internet connection
I/O	2 Digital outputs max400mA
Configuration	Web browser
Edge Computing	Integrated Wren scripting environment

Modulair DinRail Optional Sensor Input Sister Boards

Volt-input	4 channel analogue inputs 0-10V 2 channel analogue inputs +/-10V Resolution 16bit Configurable sensor supply 5-22VDC 100mA per sensor
Current-input	4 channel analogue inputs 4-20mA Resolution 16bit Configurable sensor supply 5-22VDC 100mA per sensor
Temperature	4 channel resistance inputs PT100, PT1000
Strain gauges	2 channels strain gauge input full bridge Input 2....10 mV/V Resolution 10000 Divisions Type 4 wire, 3.6VDC excitation 1 channel high resolution strain gauge input. Input ± 10 mV/V, Resolution 100000 Divisions 6 and 4 wire, 3.6VDC excitation
I/O	4 Digital inputs HTTL Low,6V, High >10V 4 Digital outputs Relay 5-20V

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Ordering information

Mainboard

WSN2-XL	Gateway Microcontroller board
	USB-C port
	Ethernet Port
	CANbus
	Embedded memory
	Antenna connection plug

Housing

WSN2-XL-DIN	
DIN	DIN-rail backplane
ABS	ABS housing IP65
ALU	Aluminium housing IP67
OEM	PCB only

GSM connection (max 1 option)

WSN2-XL-xxx-5G	
LTE-M	GSM LTE-m
5G	GSM 5G

Radio (1 max option)

WSN2-XL-xxx-LWEU	
LWEU	LoRAWan (868)
LWUS	LoRaWan (915) Q4-2026
HRF	WSN radio

Optional additional I/O DinRail

ICB-AIV-DIN	0-10V input
ICB-AIA-DIN	0-20mA input
ICB-AIT-DIN	Temperature sensor input PT100
ICB-2DMS-DIN	2 channel strain gauge 10000d
ICB-I/O-DIN	4 Digital inputs and 4 Digital outputs
XMV	1 channel strain gauge 100000d



WiSeNode-XL and WiSeNode-S

Modular Wireless IoT Gateway and Sensor Node

Datasheet

Example system overview

Example with multiple Fieldnodes, integrated LoRa radio's communicating over a LoRa private network, sending data to the Gateway WiSeNode-XL. The WiSeNode-XL is transferring data via a Public LTE network to the WiSeNode Cloud. Third party Clouds can also work with WiSeNode-XL.



WSN2-S Nodes

WSN2-XL-Gateway

Public network

WSN Cloud or Third Party Clouds

Example with multiple WiSeNode-S (fieldnodes), integrated LoRa radio's communicating over a Public LoRaWAN network. The public LoRaWAN provider is sending the data to the WiSeNode Cloud.



WSN2-S Nodes

Public network

WSN cloud & others

Example with third party LoRaWAN Fieldnodes sending data to the Gateway WiSeNode-XL. The WiSeNode-XL is transferring data via a Public LTE-network to the WiSeNode Cloud. Third party Clouds can also work with WiSeNode-XL.



Third party Nodes

WSN2-XL-Gateway

Public network

WSN cloud & Third Party Clouds

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WiSeNode-Cloud is a scalable, secure Industrial IoT platform designed for real-time monitoring and data management. It supports a wide range of sensors and integrates with WiSeNode-XL gateways using MQTT over Ethernet or LTE-M or 5G.

Key features include advanced visualization, predictive analytics, customizable widgets, remote access, multi-tenancy, and automated alerts.

Its powerful rule engine, flexible data retention, and robust security make it ideal for optimizing industrial operations and minimizing downtime. Suitable for large infrastructures, WiSeNode Cloud empowers smarter decision-making and efficient system oversight across industries.



Main Features

- Scalability and Flexibility
- Real-Time Data Management
- Advanced Visualization Tools
- Remote Monitoring
- Multi-Tenancy Support
- Robust Data Security
- Rule Engine and Notifications

