

thermokon®

HOME OF SENSOR TECHNOLOGY



LoRaWAN®

LONG RANGE WIDE AREA NETWORK

 **LoRa Alliance®** Member





GENERAL INFORMATION

Long Range Wide Area Network – short LoRaWAN®* – is a radio technology that is capable of transmitting data over a long distance and even from remote and hard-to-reach locations in an energy-efficient, cost-effective and secure manner. Due to the low energy consumption, the batteries of the sensors are extremely durable and can last for several years.

LoRaWAN® uses the so-called ISM frequency band around 868 MHz in Europe, for which no licence fees and no cellular costs are incurred. LoRaWAN® is heavily involved in the development of so-called „smart cities“. In Germany for example, cities and municipalities in particular are building a sustainable and process-optimised infrastructure for building security and monitoring or controlling street lighting.

In Switzerland, France and the Netherlands, telecommunications providers operate a nationwide network of gateways. In addition to the public networks, companies can also set up their own networks (private networks).

ADVANTAGES AND HIGHLIGHTS

- » Defined standard of the LoRa Alliance® with a broad ecosystem of members, products and world-wide references of active networks
- » Location-independent access to all measured values through the Cloud
- » Interference-resistant radio frequency range sub 1 GHz
- » Configuring the device from virtually everywhere (Remote Configuration)
- » Wide range of applications indoors and outdoors

*LoRaWAN® is a registered trademark of the LoRa Alliance®



lora-alliance.org



LONG DISTANCES

LoRa® provides long radio transmission ranges and a thorough signal penetration.



OPEN STANDARD

Guaranteed high security and interoperability due to LoRaWAN® network protocol.



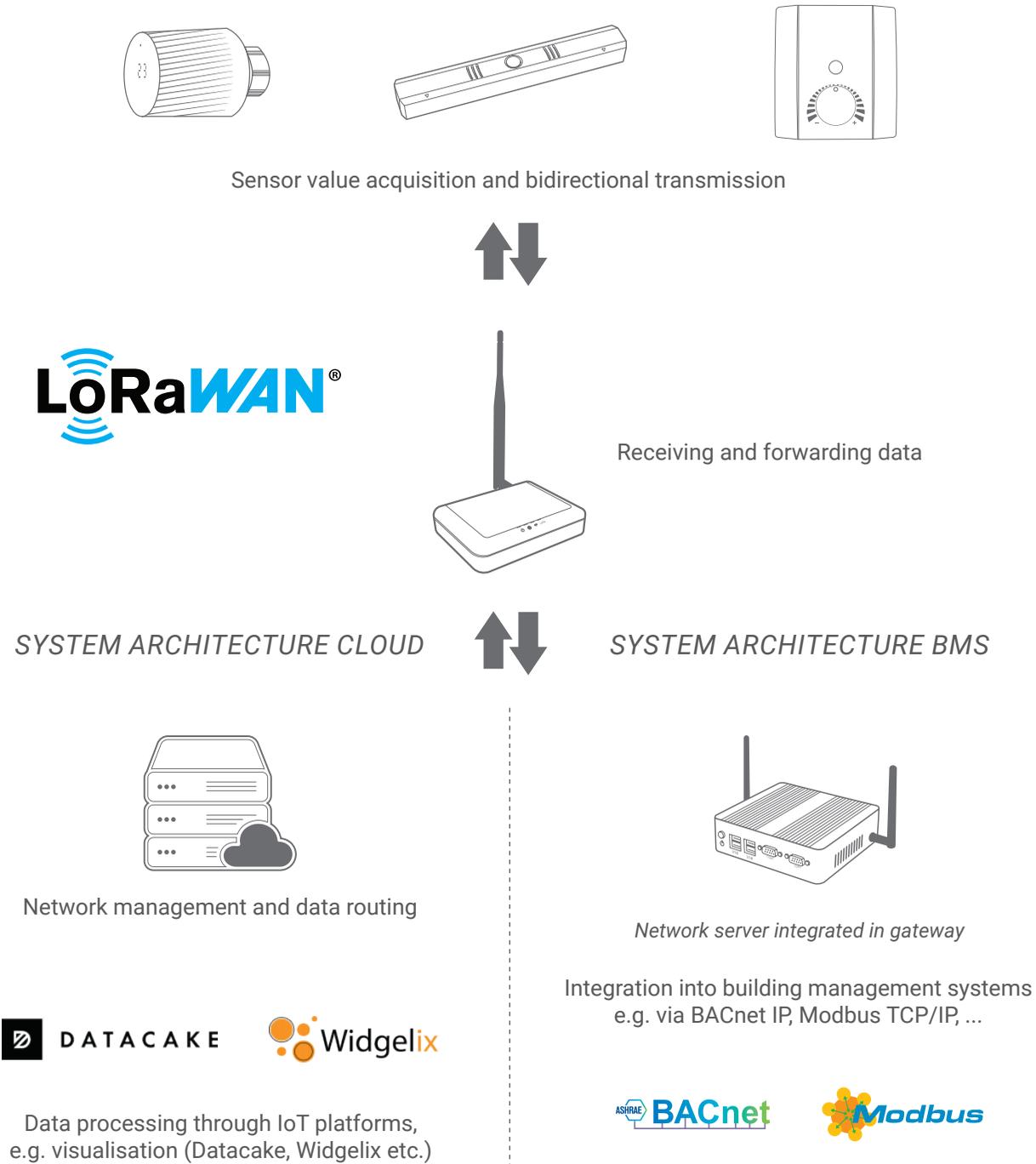
HIGH ENERGY EFFICIENCY

Intelligent LoRaWAN® sensors reach up to 10 years lifetime in battery operation.



BI-DIRECTIONAL COMMUNICATION

LoRaWAN® enables bidirectional communication between sensors and network servers.





MONITORING OF BUILDINGS

- » Monitoring of various parameters *CO2, VOC, temperature, humidity, brightness etc.*
- » Event- and time-based sensor value loggings
- » Monitoring of indoor air quality for prevention of building damages and health impacts
- » Fundamental for determining saving potentials



PLANT MONITORING

- » Retrofit remote monitoring of ventilation systems
- » No modification of the existing control system necessary
- » A wide range of sensor applications, e.g. for measuring differential pressure, air quality, supply and return temperatures
- » Enabler of predictive service/maintenance





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