LoRaWAN

Flexible and fast scaling infrastructure for sensors, if desired completely without external infrastructure

LoRaWAN allows the wireless data transmission of measured values, control commands, etc., over long distances of up to 15 km theoretical in line of sight. The small data packets are end-to-end encrypted and ideally meet the requirements of the IoT. Transmission of information over obstacles is possible, so that even very inaccessible places can be connected with low effort.

LoRaWAN Outdoor Antenna with up to 15 km range

LoRaWAN public or private

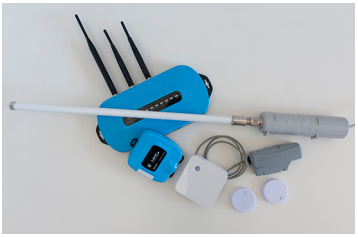
Public infrastructure: due to end-to-end encryption, measurement data is secure; however, the availability of continuous data communication is subject to system maintenance by unknown actors.

Private infrastructure: deZem provides antennas independent of the public infrastructure for field operation. In this way, your system can be directly connected to your own deZem IoT platform, without any further dependencies.

Why LoRaWAN with deZem?

deZem IoT platform: professional, safe, high-performance and scalable services; 17 years of experience, currently in 38 countries. All required technical elements are thoroughly tested by deZem in advance and, if desired, configured ready for use from the factory. Our experienced team will be happy to solve with you any problems that may occur in your project: We are happy to be an all-round technology partner for your small and large IoT projects!

IoT components for every application



Subject to technical changes

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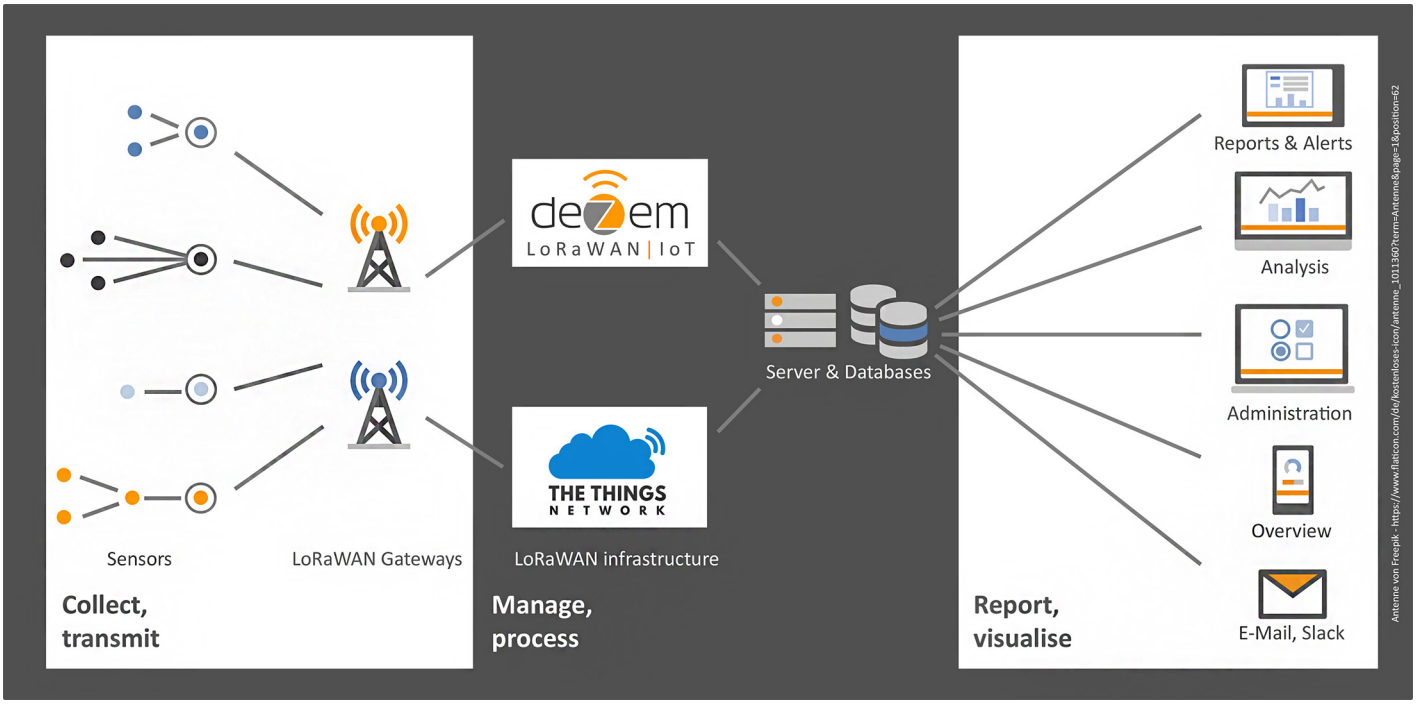
Typical areas of application:

- Building management
- Object monitoring (e.g. parking lots)
- Tracker
- Remote meter reading, e.g. in an industrial plant
- Transport monitoring
- Wood storage in the forest
- Weather sensors
- Monitoring of widely scattered wells and shafts
- And much more

Advantages:

- Wireless data acquisition (fast and cost efficient)
- Projects are easily scalable.
- LoRaWAN for outdoor or indoor applications.
- Power supply for the antenna e.g. via PoE (Power over Ethernet)
- Sensors powered by button cell that work sending data up to 5-20 years.
- The operating range is up to 15 km outdoors and approx. 4 km in cities.

Structure of the deZem LoRaWAN system



Typical sensors for:

- Temperature
- Relative humidity of the air
- Atmospheric pressure
- CO2 or CO in ppm
- Luminosity
- Wind direction/speed, precipitation, etc.
- Wells (e.g. level)
- RMS current up to 150 A
- Modern meter readings according to DIN EN 62056-21 by means of an attachment head
- Analog signals: 0-10 V, 4-20 mA
- Pulse counting and status monitoring (Digital ON/OFF)
- Photoelectric sensor
- The GPS location coordinates
- Modbus/RTU data
- And much more...

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