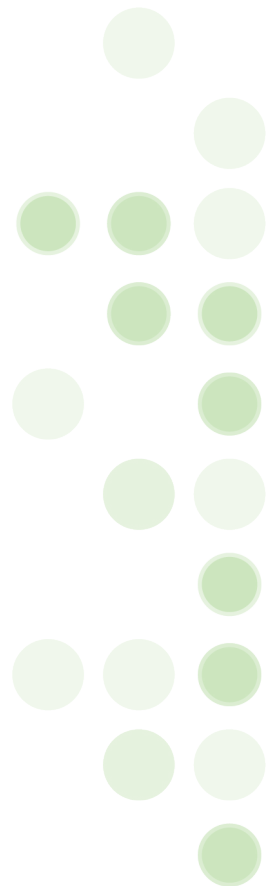




LoRaWAN technology

Intelligent. Connected. Efficient.



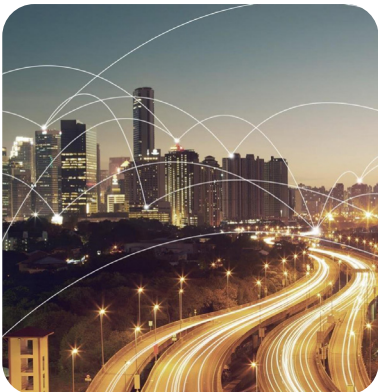
What does LoRaWAN mean and how does it work?

The abbreviation LoRaWAN stands for Long Range Wide Area Network. It is a network specification that was specially developed for wireless battery-powered systems in the Internet of Things (IoT) for communication over long distances. LoRaWAN enables secure, bidirectional communication, localization and mobility of services as well as end-to-end encryption. As a result, it fulfills the most important requirements of the IoT to enable seamless collaboration between different systems and technologies.

The network architecture of LoRaWAN is typically arranged in a star topology in which the gateways establish the connection between the end devices and the central network server. Communication is usually bidirectional. The data transmission is distributed over different data rates, which ensure maximum capacity of the respective gateways.

LoRaWAN technology is particularly energy-efficient and enables the end devices to switch the LoRa module completely to energy-saving mode in order to extend battery life. In summary, LoRaWAN is a cost-effective and efficient solution for networking many devices in a large area to create a smart and connected world.

Typical fields of application



Smart Cities

e.g. for traffic monitoring, intelligent street lighting and waste management.



Industry

e.g. for monitoring soil moisture, weather stations and animal tracking.



Agriculture

e.g. for monitoring the condition of machines and measuring energy consumption.

What connection options are available with econ4?

Option 1: Local setup



The first option for using LoRaWAN technology in conjunction with the econ4 energy management software is a local setup. For this, the data from the sensors is sent to the LoRa gateway, where it is processed with the integrated LoRa network server. A LoRa network is able to contain several LoRa gateways, which in turn can communicate with each other to ensure the widest possible area coverage. The data is then transferred to the econ4 software via an API interface, without the need for an internet connection.

Option 2: Cloud solution



In another option, the LoRa gateways forward the received sensor data to our econ live. In this case, the network server does not run on one of the gateways itself as in the local setup (option 1, see above), but is integrated into the econ live cloud. This makes the processed data available to the econ4 software via an API interface. With this variant, several gateways can be used for the same project, but they do not need to be connected to each other.



Our experts are happy to assist!



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