

LoRaWAN[®] Network at Oiken

Project Requirements →

Research, test and deploy field devices necessary to measure environment, low voltages and currents as well as transmitting them from the various substations to the control centre.

Develop, configure, and commission the LoRaWAN[®] drivers, as well as the virtual appliances that make up the infrastructure for transmitting data to the control centre.

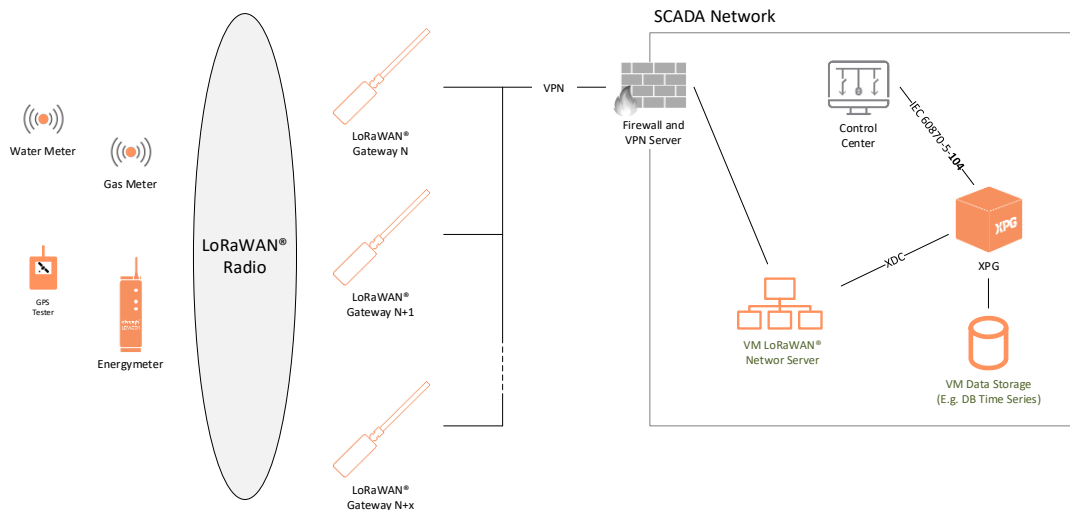
→ Elvexys' Solutions

Setting up the LoRaWAN[®] network on the territory

Supplying the diverse LoRaWAN[®] elements/nodes according to the needed measurements

Information managing and dispatching from LoRaWAN[®] up to the control centre through Virtual XPG Gateway

Schematics



Why choose Elvexys?

- ✓ Client support for communication management
- ✓ Easy set-up
- ✓ High range transmission with LoRa
- ✓ Installation flexibility
- ✓ Low-cost measuring point

Hardware & Software

ERS Eye

The environmental measurements: temperature, humidity, and luminosity. Said measurements will be acquired and transmitted via LoRaWAN[®] network. These can be acquired with this device: LoRaWAN[®] ERS Eye.

ELT-2-HP

Short-circuit information is received with the Sigma RS4648 sensor and will be relayed via a type Elsys ELT-2-HP module. The Sigma sensor emits a dry contact type of signal.

LEM-302

The LEM-302 allows up to 17 measurements as well as system data and alerting signals. These measures are comprised of LV voltages and currents via Rogowski Coils in addition to temperature and humidity. LEM-302 is part of Oiken's instant fault localisation system developed by Elvexys. This device has its own acquisition system and a LoRaWAN node.

XPG

XPG is a product line based on StreamBridge, a modular multi-protocol communication gateway and ISOS (Industrial Secure Operating System) which is used for all communication applications, data processing and protocol conversion. Distributed here in virtual machine version including a module to connect the LoRa server and convert the data to the control centre.

LoRaWAN[®] Server

Web tool allowing management of the clients LoRaWAN[®] network.

Water Metering – GWF

Clients water volume measurements are acquired through the LoRaWAN network using a combination of GWF radio module RCM[®] and GWFcoder[®] water meter.

This data will then be processed in Elvexys DataBase before being sent to the clients billing appliance.

Gas Meter metering

Clients gas volume measurements are acquired through the LoRaWAN network using a combination of Wohlgröt MBus reader and Tetraedre TRP-11-LoRa.

This data will then be processed in Elvexys DataBase before being sent to the clients billing appliance.

Protocols & Standards

- LoRaWAN[®]
- IEC 60870-5-104