



Low Power Network (LoRaWAN)

A highly efficient and dedicated network for the Internet of Things based on the open LoRaWAN specification.

We live in a connected world: Machines, vehicles, elevators, oil tanks and many other things already communicate automatically. And it goes without saying that everyday things such as letterboxes and newspaper dispensers are already connected today. This brings efficiency and opens up new business possibilities.

Objects that rely on long battery life and only offer space for small and lightweight batteries benefit from the Low Power Network (LPN). The transmission of small data packets ensures low power consumption and still ensures a long range.

What is Low Power Network (LPN)?

The LPN is a self-contained radio data network and specially designed for IoT applications that send small amounts of data. The resulting advantages enable a gigantic wealth of new IoT applications for private and business customers.

Your benefit with Low Power Network (LoRaWAN)

- Sales increase thanks to new business models that save costs and time
- Flexible pricing models for different use cases
- You benefit from Switzerland's only nationwide LoRaWAN network
- Availability of LoRaWAN roaming for international applications
- Quick and easy networking of your products
- Competitive advantage thanks to information gain
- Extended battery life of your smart devices due to low power consumption
- Easily manage connections in the LPN Connectivity Management Platform. And automated processes via existing API (programming interface)
- Huge developer community at home and abroad

New Boost for your Business

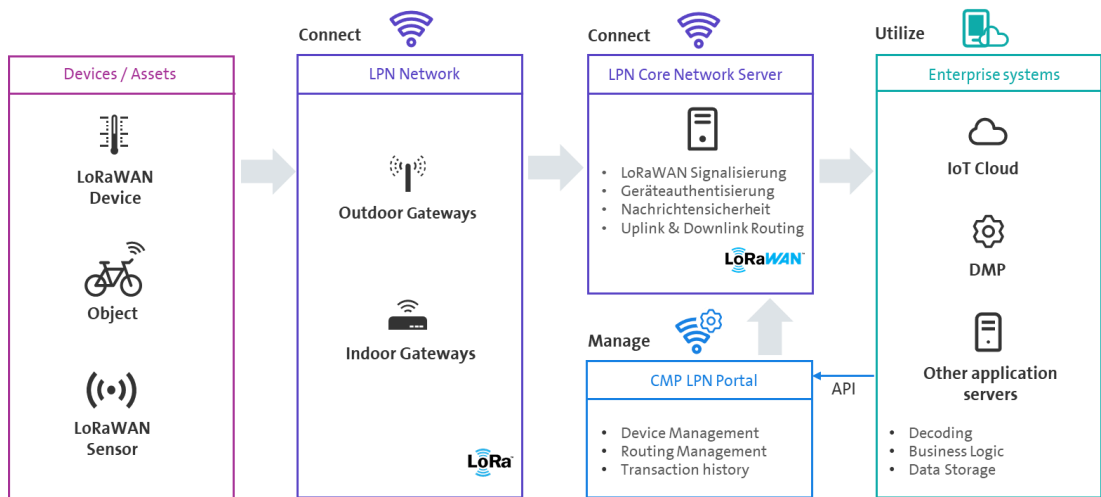
With LPN, innovative companies can not only work more efficiently, but also open up interesting new sources of income.



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Facts & Figures



LPN Connectivity

The only nation-wide LoRaWAN network in Switzerland with an area coverage of 97% of the population outdoors

IoT Qualified for LPN – the Europe-wide coordinated qualification process ensures that the LoRaWAN devices used are optimally matched to the Swisscom network and the network server

Swisscom LPN is compliant with all current versions of the LoRaWAN specification

Indoor coverage – Simple and affordable options for indoor coverage using easy-to-install plug and play gateways with 3G/4G mobile backhauling for locations not covered by the outdoor network

Outdoor coverage – Customized network densification or network expansion for locations that require greater coverage

Highest network availability throughout Switzerland with 7x24 network monitoring

Roaming - Ongoing expansion of international roaming. Currently available roaming countries: see www.swisscom.ch/lpn



Connectivity Management Platform (CMP) LPN

Functions in the Connectivity Management Platform LPN - Self-service portal, automation through API's, diagnostics, reporting, alarming, management of connectivity profiles, configuration of endpoints, security

Georedundant network server in Switzerland that processes data in Switzerland

Technology supplier security - established and reliable platform that scales with its applications

Connectivity to the DMP-Platform from the Enterprise IoT Stack – direct mapping of LPN-based sensors and devices into the cloud and the acquisition and processing of user data

Extensive connectivity profiles - support for LoRaWAN Class A, B and C devices, direct connection to various IoT clouds (e.g. AWS IoT Core, Azure IoT Hub, MQTT), multicast, geolocation via TDOA and RSSI



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Flexible Pricing Models:

- For Indoor Use Cases
- For Use Cases with the outdoor network
- For cities and municipalities



Fields of Application (Massive IoT)

Smart City: Smart waste management, smart lighting, smart parking, reporting of environmental data (air, CO², fine dust, water level)

Smart Utilities: Gas-, water- and remote electricity meter reader

Smart Buildings: Meeting room management, connected fire extinguishers and defibrillators, temperature and air quality measurement

Smart Farming: Monitoring of weather and plant growth, grazing livestock tracking, soil quality measurement

Asset Tracking: Localization of objects, logistics

Your Benefits in Detail

- **Simple**
Fast onboarding through uncomplicated and fast sensor integration and monitoring via the management platform
- **Energy efficient**
Long battery life with minimal maintenance due to energy-efficient technology
- **High range**
Narrow bandwidth and therefore high range as well as energy-efficient transmission suitable for small data volumes
- **Cost-effective**
The public network enables low investment and network costs, large coverage and energy-efficient transmission, high scalability, as well as efficiency in local expansion
- **Equipment Qualification**
Large partner network of device manufacturers and qualification methods help you to realize your IoT project
- **Reliable**
Professional network in the LoRa ecosystem with maximum network availability for the whole of Switzerland. Secure data transmission with AES-128 encryption / geo-redundancy / 24/7 monitoring