

# Wireless LON<sup>®</sup> through w2lon



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**W**2lon is an RF module for the LonTalk<sup>®</sup> communication protocol that wirelessly connects wired LON networks on one side and any kind of LON-based actuators and sensors in the automation environment on the other side. The performant transceiver integrates seamlessly and completely into the LON protocol according to ISO/IEC 14908. Thus, an established high-tech infrastructure is immediately available – from interoperable network management tools to the connection of a wide range of SCADA systems. As all existing LON-based products can be integrated as well, all the systems being employed so far continue to be usable. The system management and administration can be performed using existing software management systems. All this provides a perfect basis for hassle-free system designs and retrofits.

## Meshed network solution

The RF communication is based on an extremely performant, highly scalable and very robust meshed network. The benefit of the meshed-network solution is plain to see: the system works regardless of the functioning of the individual nodes and is

thus constantly available and highly reliable. As an illustration, in a single street-lighting network up to 1000 street lights can be operated. If a light or another network point fails, the data packet takes an alternate route via another network point to its destination. The broadcast addressing possibility allows for very fast response times. Turning on up to 1000 street lights belonging to the same network, for example, would take less than 5 minutes, response included. The RF range between the network points is currently 50 m to 150 m. The transportation channel is located in the 868 MHz frequency band. The extension to the 2.4 MHz band is already in the planning stages.

Through w2lon, actuators and sensors can be decidedly programmed so that e.g. the street lights will brighten when a person or a vehicle approaches and dim as soon as no activity is detected anymore. Consequently, the full luminance and hence energy is used only when really needed. And there are multitudes of further conceivable conditions that could be applied in the future such as weatherspe-

cific conditions, dependencies on daytimes or seasons, or traffic management factors.

**Interfaces to IoT integrated**  
Since all required interfaces to the Internet of Things are already integrated, w2lon not only allows for a new generation of street lighting systems but affords a virtually unlimited potential for individual solutions in designing Smart Cities. Possible future use cases for the RF module are, for instance, parking space management systems, traffic-flow surveillance, or level monitoring of e.g. garbage containers.

However, Smart City is only one of the numerous application fields for w2lon. With the development of this innovative RF channel that expands the LON technology by a robust and flexible element the who Ingenieurgesellschaft mbH delivers a future-proof wireless solution that facilitates to optimally cope with innovative development tasks throughout the entire LON-based building and industrial automation markets. System developers are now provided with the option of connecting LON networks wirelessly through a performant interface so that they can set about automation projects in industrial

environments or building retrofits which, so far, could not have been tackled due to a lack of available cable systems. As a development partner, who Ingenieurgesellschaft mbH is ready to take over the design-in.



Currently, plans are under way to open 2 test projects for demonstration purposes in Lübeck and Frankfurt am Main, Germany, where street lights with integrated w2lon modules will be operated. The appropriate negotiations with the operators are in progress.

## Test projects


w2lon is expected to be launched to the market in the 1st quarter of 2018.

Visit the who Ingenieurgesellschaft mbH stand at the Light+Building fair from 18 to

23 March 2018 at Hall 5, Booth D29, and get detailed information about w2lon. The company will officially present the LON RF transceiver and will be pleased to answer any questions about the product. Additional information about the who Ingenieurgesellschaft mbH you will find under [who-ing.de](http://who-ing.de).




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