

PRODUCT INFORMATION

K-RTLS Real-Time Location System

Process Automation with Precise Real-Time Location



CrossTalk IoT Suite

KATHREIN



Picture: Smart Production
Process automation due to precise localisation. It is possible to use RTLS in complex environments for different applications.

Tracking and Digitising Production and Logistics Processes

The new real-time location system „K-RTLS“ combines high localisation accuracy in an industrial environment with unique technical features which allow a broad use of the system in different applications. In production, for example, it enables precise monitoring of the

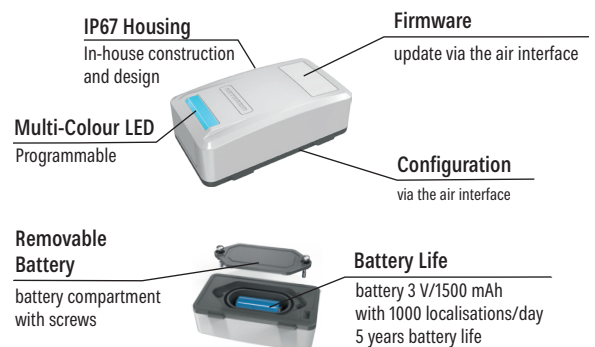
manufacturing progress and a transparent material flow. The real-time data about the location and status of the objects available with the RTLS form the basis for networking the parties involved and the logistics processes in their value-added chain.

> Real-Time Location System (K-RTLS) | Components

The system consists of mobile transponders, permanently installed nodes and the CrossTalk IoT suite.

Transponder

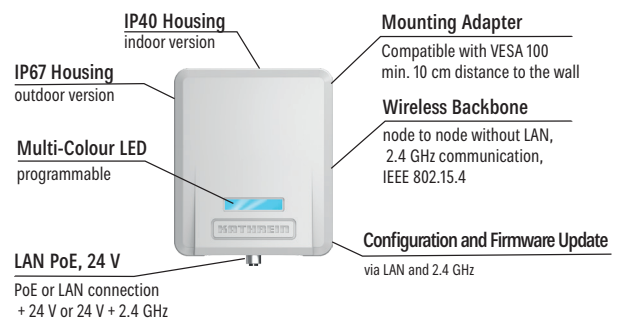
The UWB¹⁾ localisation precision of down to 10 cm, even in difficult, reflective environments, as well as the robust, compact housing design of the transponder allow a broad use in the real-time tracking of objects in manufacturing and logistics. The transponder has an innovative, flexible adapter mounting system that can be dynamically changed for fixed or temporary mounting, for example on vehicles or material container trolleys, depending on the application. A UHF RFID tag and an NFC RFID tag, which are connected to the microcontroller, have been integrated into the transponder. This allows for a seamless combination of applications for localisation and contactless identification in long-range and near-field applications.



K-RTLS Transponder | Features

Node

The compact nodes can be easily supplied with power and network via PoE. To keep the installation costs for the network as low as possible, the nodes also have their own optional 2.4 GHz radio network for data transfer. This means that only about 25% of the installed nodes require a cable connection to the network. The distance between the individual nodes can be up to 80 meters.



K-RTLS Node | Features

CrossTalk IoT Suite

With the CrossTalk IoT suite, which has been successfully used in the market for many years, a very comprehensive software for the configuration and operation of the hardware is readily available for the new K-RTLS. On the basis of pre-configured tracking scenarios, it is possible to easily and effectively implement extensive business apps.



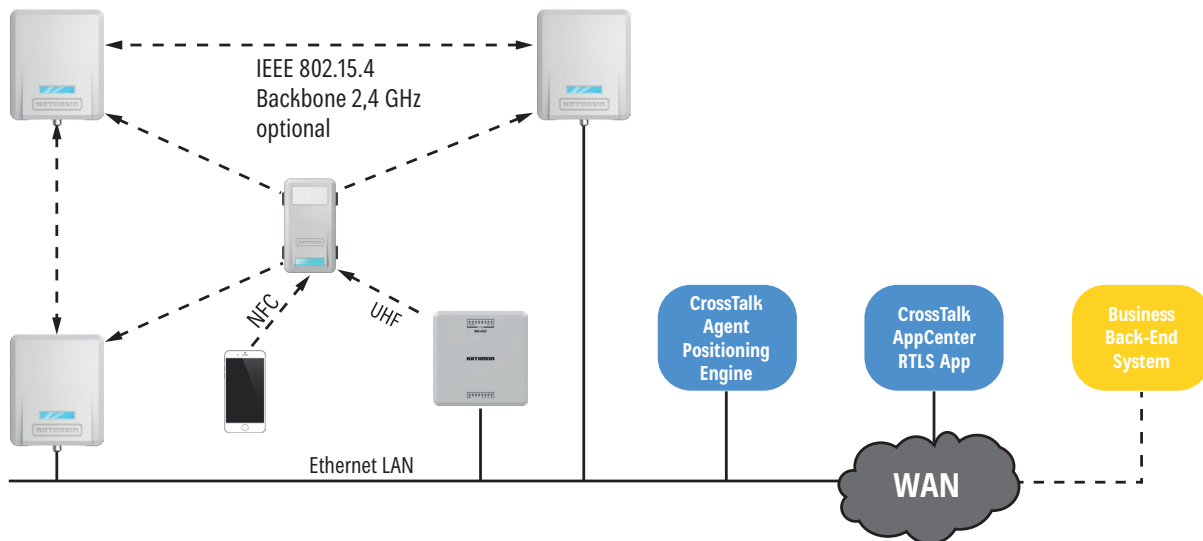
Detail 1: Production facility

Detail 2: Production facility incl. CrossTalk IoT suite

¹⁾ UWB – ultra wideband

> Real-Time Location System (K-RTLS) | Architecture

Kathrein provides the complete solution which consists of a new and of the already operating hardware infrastructure as well as the well-established IoT software suite.



Structure of a real-time location system solution

> Applications

- Smart Production and Process Automation by means of precise localisation
- Controlling, documenting & coordinating objects and material flows
- High-precision location of load carriers, goods tracking and production control
- Vehicle tracking and precise determination of parking spaces
- Forklift localisation in combination with RFID-tagged goods on the fork

> Features

- RTLS/RFID/NFC-integrated
- Intelligent Cloud-capable software architecture
- Scalable hardware concept for high investment security
- Robust IP67 industrial design
- Modular mounting adapter concept