

Title: IQRF® Basics

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Description

The IQRF is a wireless platform working in ISM bands 868, 916 and 433 MHz.

It is focused on low speed, low power and low data volume packet-oriented communication.

The main advantage of the IQRF® is the support of MESH networks up to 240 hops for one packet.

The RF range always depends on the HW design but in general, it is tens of meters in buildings and hundreds of meters in open space.

The platform is intended for packet-oriented communication.

There are no license fees.

The IQRF® is a complete ecosystem. It is not only TR modules but also development tools, accessories and ready to use devices like gateways, repeaters, sensors, actuators and so on.

The IQRF Alliance is a group of cooperating companies working with IQRF®. The result is a portfolio of compatible devices that meet the IQRF® standards.

Typical applications are lighting systems, sensor networks, building automation, or in general all application where there is a need to control something or collect something using short packets.

The IQMESH® is a protocol implementing a MESH routing.

There are two network types available. An STD network that is faster and works with Nodes in standard mode only and STD+LP network that is slower because of longer timeslots per hop.

The routing is based on an optimized directional flooding and TDMA.

For applications with battery-operated devices that sleep all the time, the IQMESH® offers so-called beaming. All communication is automatically encrypted by AES-128

The IQMESH® implements several communication types.

Watch the presentation for more details and information.

Learning outcomes

- Understanding IQRF® technology basic parameters
- Understanding DPA protocol
- Understanding IQMESH® protocol
- Understanding creating IQRF mesh network
- Understanding benefits of this low-power wireless technology, incl. beaming and FRC

Tutorial structure

- What is IQRF®
- Typical applications
- How to use IQRF®
- Development tools
- IQMESH® network
- DPA protocol
- Transceiver modules
- How to start with IQRF®

Duration: 32 minutes

Audience: People interested in IoT, companies looking for suitable wireless technology; manufacturers of lighting and sensors, city representatives and property managers, technicians and electrical engineers