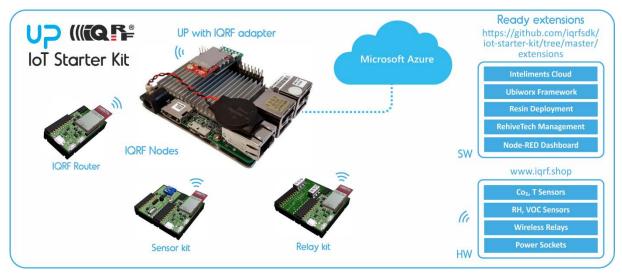
# IoT Starter Kit





# Build your first wireless IoT solution

Meet the unique development tool <u>IoT Starter Kit</u> with which the development of your wireless Internet applications will be a matter of play. The necessary software and services are ready for you, there are lots of tutorials for installation and configuration. Additional HW extensions can be attached to the kit as a variety of sensors and actuators.



#### IQRF wireless mesh network

For wireless connectivity, <u>IQRF</u> has been chosen as the world's number one in reliable wireless mesh network technologies for more than 14 years. In this basic development kit, you will find an <u>IQRF part</u> that includes a **sensory** and **relay** kit that allows you to collect basic sensor data (temperature, light intensity, voltage) or control connected devices.

Communication with these devices is accomplished using DPA commands implemented in custom programs – Custom DPA Handlers.

Watch videos showing work with the IQRF network

- Creating an IQRF network with the secure IQRF OS 4.0
- Using Custom DPA Handlers for easy communication with IQRF network elements
- Using macros to simplify creating IQRF messages

#### Gateway

At the borderline between the IQRF network and the computer network, there is a popular UP developer board from AAEON. This gateway boasts excellent equipment (2GB + 32GB eMMC memory, Intel<sup>®</sup> Atom <sup>™</sup> x5 Z8350 Processor 64 bit-up to 1.92GHz) and high resilience.

The IQRF Daemon has been developed for this gateway. It provides communication with the IQRF network and sends the data in the required format via selected communication channels to local and

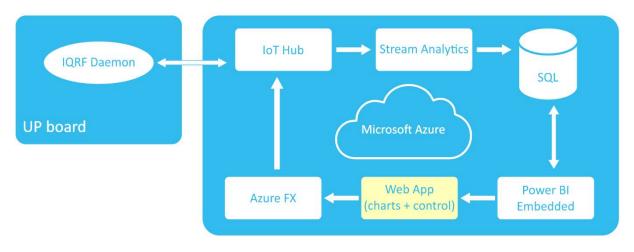


remote services. In particular, the MQTT protocol and the JSON message format are used. Regular reading of values from the IQRF network provides a prepared scheduler.

For installation and configuration of the operating system and services, see <u>https://github.com/iqrfsdk/iot-starter-kit.</u>

#### Microsoft Azure

Data are sent from the IQRF network via the MQTT Channel into the Microsoft Azure IoT Hub, from where it can be further processed. You can take advantage of a simple Power BI visualization or a more sophisticated solution with other robust tools offered by Microsoft Azure.



Check out a short <u>video</u> on how to set up the Microsoft Azure Gateway and IoT Hub to get a basic dashboard with visualization of the data you are getting.

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## Where can I get the IoT Starter Kit?

The participants of the <u>IQRF Summit 2017</u>, which is held in Prague from 7th to 8th June, receive a significant discount on the <u>eshop</u>. In addition, they can attend a free workshop for this product and other extensions. The workshop will be held during the summit.

The IoT Starter Kit can be also purchased at **Texim Europe**, visit www.texim-europe.com, the ordering code is: IOT-STARTERKIT-01-IQRF

### IQRF

**IQRF® technology** is a wireless technology for data transmission in mesh networks with extremely low power consumption and high reliability. The transmission is bi-directional and fast enough for both data collection and control of electronic devices. It has been developed by the Czech company MICRORISC and in 2014 it was awarded a scientific award the Czech Head.

The latest operating system IQRF OS 4.0 ensures uncompromised **security**, whether in the secure addition of new devices to the network, in network data transmission or in additional user encryption of the transmitted data, all based on the AES-128 standard.

For complete IQRF documentation, visit <u>http://www.iqrf.org</u>.

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