www.onsemi.com

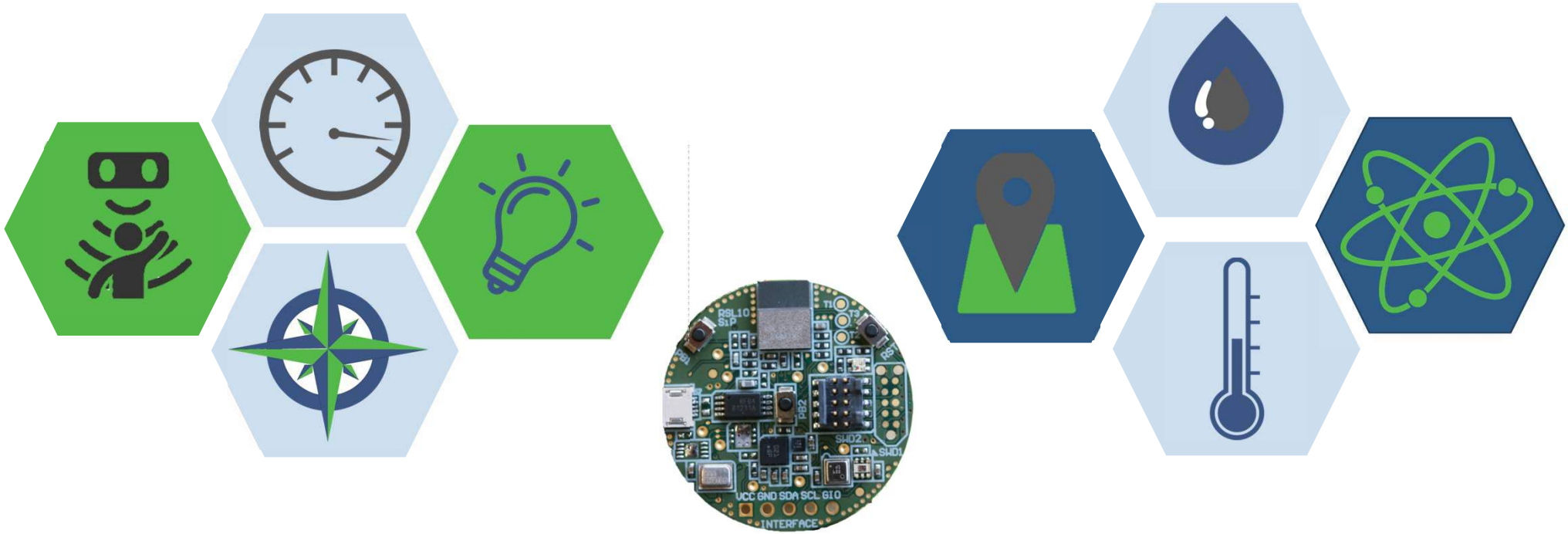
RSL10 Sensor Development Kit

ON Semiconductor®

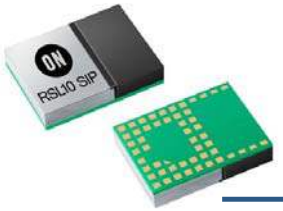
Public Information

RSL10 Sensor Development Kit

Cutting-Edge Sensor Technology
Industry's Lowest Power Bluetooth® Low Energy



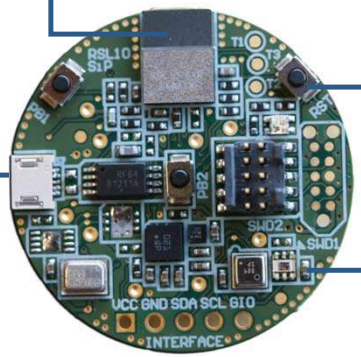
Overview



RSL10
Industry's Lowest Power Bluetooth® Low Energy

NOA1305
Ambient Light Sensor
Provides response similar to human eye

Low-Power Smart Hub
For Motion Sensing and Data Processing
- **3 axis accelerator**
- **3 axis gyroscope**
- **Programmable microcontroller**



BME680
Integrated Environmental Sensor
For Wearables, Mobile Applications

Programmable RGB LED
3 Programmable Push-Buttons
Ultra-low Noise Digital Microphone
64 kb EEPROM Memory

BMM150
Digital geomagnetic sensor
Ideal for augmented reality and location-based services

Summary

- The RSL10 Sensor Development Kit is a multi-sensor development kit, combining industry's lowest power BLE with cutting-edge sensor technology.
  - Based on the RSL10 SIP
  - Industry's lowest power

What are We Providing?

Hardware

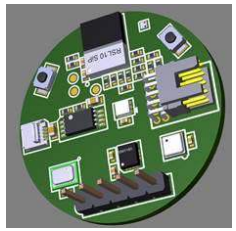
- Multi-sensor development kit based on the RSL10 SIP (industry's lowest power Bluetooth 5)
  - 3 programmable buttons
  - Programmable RGB LED
  - Microphone (functionality not supported at time of launch)
  - Multiple sensors (see overview on Slide 3)

Design Tools

- Ready to use custom service protocol
- Use-cases (provided as part of the B-IDK, IDK)
- Can be customized using the B-IDK CMSIS Pack
- Mobile app providing support for cloud connectivity (AWS, Azure, Watson)
  - Configurable
- Documentation
  - User manual

Other

- Supports multiple public clouds (provide examples)



Key Features and benefits

- Based on RSL10 SIP
  - Industry's lowest power Bluetooth 5
  - Certification : http://www.onsemi.com/pub/Collateral/TND6220-D.PDF
  - 2 Mbps max data rate
  - Features integrated antenna, removing need for additional RF considerations (wiring, routing, etc.)
- Pre-programmed with custom service protocol
  - ioS, Android
- Customize firmware using the B-IDK CMSIS pack
- Compact Hardware
  - Features sensors, programmable push-buttons, built-in microphone and speakers to support audio features on one miniature board
- Complete range of cutting-edge environmental sensors
  - Ambient lighting, temperature, humidity, gas pressure, geomagnetic sensor)
- Supports cloud connectivity platforms

Target Applications

Wearables/ Fitness Tracking
Gaming/PC
Building/Home Automation
Consumer Electronics

Key Terminology

- Bluetooth® 5
- IoT
- Bluetooth Low Energy
- Smart Sensor
- Cloud Connectivity