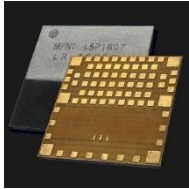


World's First Bluetooth 5.0 Compliant Long Range RF Module

November 15, 2018



[Insight SiP](#) has launched the [ISP1807-LR](#) module, which it believes to be the first fully compliant [Bluetooth 5.0](#) Long Range RF module in a miniature SIP package.

This miniature BLE module (measuring only 8 x 8 x 1 mm) is based on the [nRF52840](#) chip from Nordic Semiconductor and represents the latest in Bluetooth 5 Long Range module technology. It offers a Bluetooth 5 stack including long range, high throughput, advertising extensions and improved coexistence along with IPv6 connectivity and Mesh capabilities. With these characteristics, the ISP1807-LR module is well-equipped to form the hub of IoT solutions.

The [ISP1807-LR](#) module is the ideal choice for IoT solutions requiring complex applications, fast processing and/or best in class power consumption. These include advanced wearables, smart home and industrial sensors, advanced remote controls, gaming controllers and beacons.

The BLE part of the ISP1807-LR integrates the nRF52840 chip from Nordic Semiconductor and employs the proven design of Insight SiP's existing BLE product range. Like all of Insight's products, it is a fully featured BLE device with integrated 32 MHz / 32 Khz crystals, RF antenna and matching circuit and DC-DC convertor, thus having maximum power saving efficiency.

With an M4 floating point processor, the ISP1807-LR Bluetooth Smart Module can run fast and advanced calculations and support sophisticated applications with its huge memory capacity (1 MB Flash and 256 kB RAM). The embedded ARM Cryptocell-310 on-chip processor provides security and cryptographic functions, saves CPU processing time and reduces energy consumption. A USB interface is also available, meaning this device offers a unique range of capabilities.

The Nordic Semiconductor chip's BT5 Long Range feature is perfectly complemented by Insight SiP's proven advanced "Antenna in Package" technology, which allows customers to get the most out of the

long-range capability. Bluetooth long range offers up to 4x the range of a standard BLE solution, enabling a new whole new set of use cases for BLE technology, in domains such as smart buildings, lighting, agriculture, infrastructure management and many others.

The [ISP1807-LR](#) supports protocols including BLE, THREAD, [ANT/ANT+](#) and a range of proprietary 2.4 GHz protocols. An NFC Tag is available for OOB pairing. Free qualified BLE stacks for nRF52840 are implemented in the S140 SoftDevices and enable ISP1807-LR to be used in Central, Peripheral, Observer or Broadcaster with up to 20 connections. A full set of interfaces is integrated into the device for analog or digital peripherals including a configurable 46 GPIOs with 8 ADC and USB, SPI, I2C and UART buses. Thanks to pin to pin compatibility with the ISP1507, it also provides an easy upgrade to already designed applications.

To support product developers, Insight SIP offers a complete development kit together with sample software that provides everything required out of the box to start developing a solution on day one.

[Click here to learn more about this Bluetooth 5.0 SiP.](#)