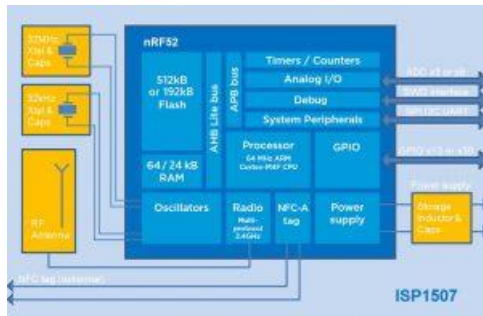


By: Steve Bush 19 September 2018

## Tiny slim Bluetooth LE module is 5.0-ready and adds ANT protocol

Insight SiP has launched an RF module that can add Bluetooth low-energy and ANT protocols to existing or new products. It is Bluetooth 5.0-ready.



Dubbed ISP1507-AL, it is based on Nordic Semiconductor's nRF52 series of chips and “offers a complete wireless connectivity solution, with an embedded antenna, integrated DC-DC converter, and includes both radio and synchronisation crystals,” said Insight. “It is perfect for mesh relay nodes and is suitable for IoT, wearable, industrial sensor and home network applications.”

Including its antenna, the module is 8 x 8mm and 0.95mm tall.

The Nordic chip is a WLCSP nRF52810-CAAA, that has a 32bit ARM Cortex M4 CPU with floating point processor, 192kbyte of flash memory and 24kbyte of RAM, with 13 IOs and interfaces for SPI and I2C.

Added to this on the module are 32MHz and 32kHz crystals, the antenna, its matching circuit, and the DC-DC converter.

Consumption is typically 5.8mA for transmission and reception, 0.8µA in stand-by mode and 0.3µA in deep sleep. “Advanced power management enables battery lifetimes up to several years on a coin cell battery,” claimed Insight.

Transmission power reaches +4dBm, and reception sensitivity is -96dBm.

The module runs the Nordic Bluetooth soft device which now supports a Bluetooth V4.2 stack and is Bluetooth 5.0 ready.

According to Insight, module certification for global market is pending.

There is a complete development kit with sample software.

For more memory, the similar ISP 1507-AX module covers Bluetooth LE and ANT, and has 512kbyte flash and 64kbyte RAM. Further modules are slated for the [ISP1507 range](#) in 2019.”

Insight is attending Bluetooth World this week at the Santa Clara Convention Center.