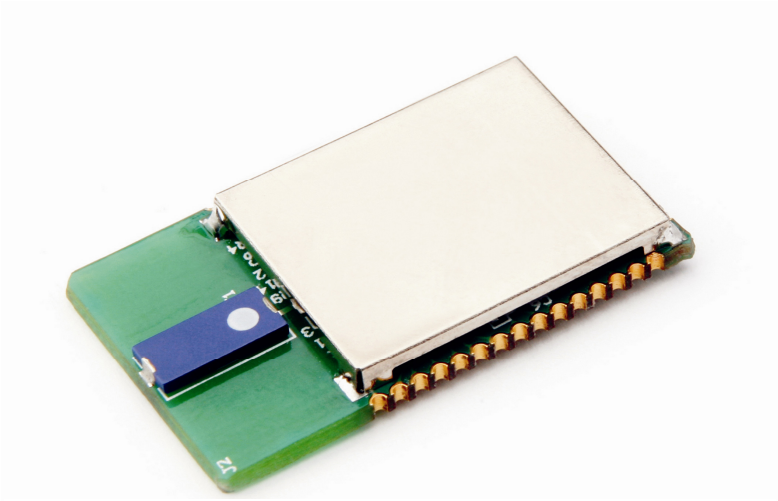
These modules are based on Jennic's JN5139 low power, low cost IEEE802.15.4 compliant wireless microcontroller. This device combines an on chip 32-bit RISC core, a high performance 2.4GHz IEEE802.15.4 transceiver, 192kB of ROM and 96kB of RAM and provides a versatile low cost solution for wireless sensor networking applications. The high level of integration helps to reduce the overall system cost. In particular, the ROM enables integration of point-to-point and mesh network stack protocols, and the RAM allows support of router and controller functions, as well as the application, without the need for additional external memory. The JN5139 uses hardware MAC and highly secure AES encryption accelerators for low power and minimum processor overhead. Integrated sleep oscillator and power saving facilities are provided, giving low system power consumption. The device also incorporates a wide range of digital and analogue peripherals for the user to connect to their application.



JN5139-001-M00

Evaluation Kits

Jennic provides a full evaluation kit to enable the user to quickly, easily and effectively develop applications for wireless sensor networks. The evaluation kit allows development of applications using mesh network stacks and includes a controller board, four sensor boards and a USB interface cable to the PC-based development tools. Applications developed using these kits can be directly downloaded onto the modules, providing a simple two step route to volume production.

A Software Developer Kit (SDK), free from Jennic's website, provides a comprehensive Integrated Development Environment (IDE) to facilitate the development of application code. The kit includes a C compiler, graphical and command-line debuggers, assembler/linker and flash programmer.

Libraries are included with the SDK that drive the peripherals of the JN5139 wireless microcontroller. They enable applications to call library functions via a simple Application Programming Interface (API). Applications developed on this kit can be directly loaded onto the module memory to implement production solutions.

Wireless Protocol Stacks

A library is provided as standard for an IEEE802.15.4 compliant protocol stack suitable for point-to-point, star or tree networks. Libraries are also available for mesh network stacks such as JenNet, IPV6 and ZigBee.

Radio Standards Compliance

Jennic modules are designed and manufactured to ISO9001 quality standards. The modules are also tested and qualified to worldwide government agency radio standards, which allows products using them to inherit the same approvals.

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