

Product Brief – JN5121-EK010

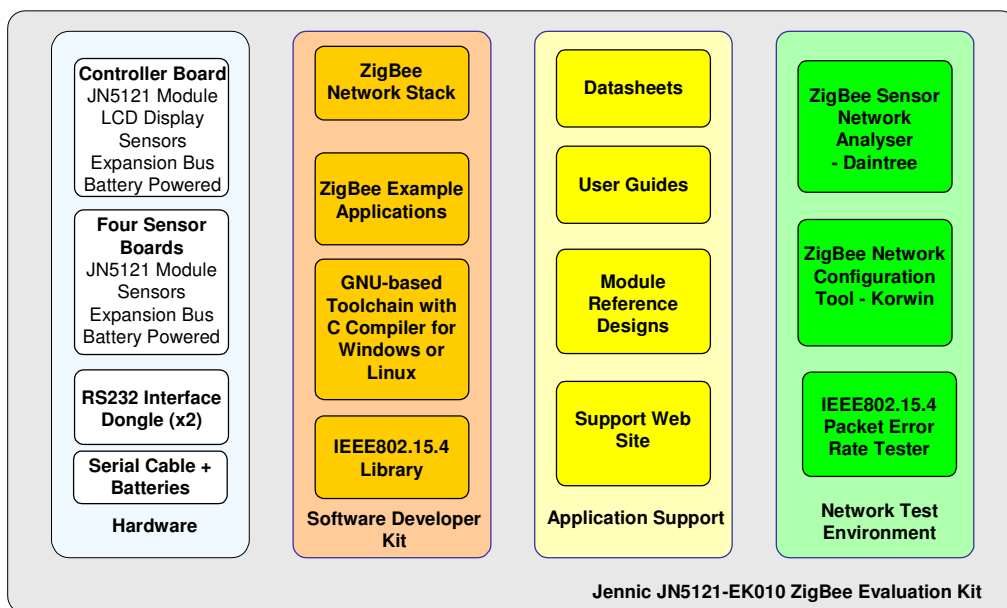
ZigBee Evaluation Kit

Overview

Jennic's ZigBee evaluation kit provides all the software tools and hardware required to develop and monitor wireless sensor network products. Complex tree or mesh network topologies are supported providing reliable coverage over large areas, greater distances and up to 65,536 nodes, larger than a simple network protocol will allow. Jennic's ZigBee stack API enables rapid application development by providing a simple programming interface to the standard ZigBee network layer.

The kit contains one controller board with display, and four sensor boards. Each board features temperature, humidity and light level sensors and the JN5121 device implemented on a compact reference module. Expansion kits and ZigBee enabled modules allow networks of any size to be easily constructed.

Block Diagram



Features:

ZigBee network stack

- Tree, mesh network options
- ZigBee v1.0 specification
 - ZigBee device object (ZDO)
 - Application support sub-layer (APS)
 - Network layer (NWK)
 - Security service sub-layer (SSL)
- Simplified programming interface
- Library builds for coordinator, router and end-device

Embedded operating system

- Simple task scheduler
- Round robin scheme

Hardware

- 1 controller board with LCD display
- 4 sensor boards
- Each board contains wireless enabled temperature, humidity and light sensors and switches
- Controller and sensor boards include JN5121 module

Software development kit

- GNU-based toolchain
- ANSI C, C++ compiler, Debugger, Flash programmer
- Wireless network libraries
- Microcontroller and peripheral libraries
- Application examples
- Home control demonstration

Network test tools

- Daintree Networks Sensor Network
- Korwin Network configuration application (NC-Tool)

Benefits

- Rapid prototyping and development of wireless applications
- Create applications by simply customising the example
- Allows development of ZigBee Network 1.0 compliant applications
- Standard 'C' development environment
- Simple API

Applications

- Wireless sensor networks
- Home automation
- Consumer products
- Commercial building automation
- Industrial control
- Medical control and monitoring
- Toys and gaming peripherals

