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Oki ZigBee Developers Kit

Oki introduces complete development tool hardware plus evaluation software to deliver a comprehensive low cost single box ZigBee Developers Kit, featuring the Industries first ARM based ZigBee solution

At a suggested resale price of \$499, Oki's ZigBee Developers Kit allows designers to quickly evaluate and then seamlessly move to develop wireless communications for their embedded products with hardware and software solutions available through Oki and partners.



The ZDK enables product designers to easily integrate Oki's radio and 4060 Series MCU - The World's Smallest ARM - and 4050 Series MCUs into their designs. Oki's ZDK provides designers with a complete and flexible 'plug and play' development environment that is easy to use. This development kit offers designers large on chip memories and fast processors speeds which make it uniquely positioned as an outstanding proof of concept, prototyping and development platform to shorten the time to market for their products.

The key hardware element of the ZDK is the ZigBee Network Evaluation/Demo (zNED) board, which features Oki's ML7065 radio and ML67Q4061 ARM7 MCU. Also included in the kit is an Integration Associates USB radio dongle that combined with zNED enables developers to quickly show a working wireless demo, with any missing elements of the ZigBee network emulated by a Windows based PC. This combination provides a simple and stable starting point for the development of any ZigBee embedded networking application, and the fastest route to proof of concept demos to get management buyoff on the project.

The ZDK can be easily configured as a coordinator, router or end device with the provided demonstration software. After initial experiments are complete, a more thorough evaluation is possible using the provided evaluation software which includes the evaluation run time libraries of the Oki ZigBee Stack for ARM and Segger embOS real time operating system as well as an evaluation copy of IAR development tools which is also included in the kit. A second USB dongle is also included, so that simultaneous monitoring of the network activity via an evaluation copy of the Daintree network analyzer can be done while the PC continues to emulate missing elements of the ZigBee network.

Additional zNED boards may be purchased separately, to replace the PC emulation and permit development of other elements of the target application. When evaluation and proof of concept work is completed, any or all of the demo version software products can be upgraded to full use versions without the need to modify application code developed during the evaluation phase, minimizing overall development cycle time.

Kit Features

- 1 Oki ZigBee Network Evaluation/Demo (zNED) board
- 2 IEEE802.15.4 USB radio dongles (Integration Associates: IA DAUB-DK1 2400)
- 1 IAR JLINK JTAG debugger
- Evaluation versions of:
 - Integration's CompXs ZigBee stack for Oki's ARM7 based 4050/4060 series MCUs
 - Daintree's Network Analyzer software
 - IARs Embedded Workbench for ARM
 - Segger's embOS RTOS

Board Features

- Small size (a little taller than a business card)
- Flexible power supply –
 - Batteries, USB (via JLINK) or user supplied power adapter
- Multiple sensor/user inputs
 - Three momentary switches
 - Tri-axis MEMs accelerometer
 - Temperature sensor
 - Photo sensor
- Multiple user output options
 - Three LEDs
 - RS-232 support
 - 2 line x 16 character display (user supplied)
- System Power management mode support
- Designed for reuse
 - Radio board is removable with standard 2mm headers to allow easy reuse in customer prototype projects
- 32-bit ARM7-TDMI based processor with 128KB flash and 16KB RAM

Applications

- Industrial sensor and control networks
- Commercial security and access control systems
- Equipment diagnostics and asset tracking
- Medical patient monitoring equipment wireless upgrades

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