EMB-Z2538PA-EVK
Evaluation Kit — Short Datasheet

The EMB-Z2538PA-EVK Evaluation Kits contain all the components necessary to start evaluation of the Embit's EMB-Z2538PA modules. Thanks to these development kits customers can learn very quickly how to establish a wireless connection between two EMB-Z2538PA radio modules.

The Evaluation Kit EMB-Z2538PA-EVK allows the user to exploit all the capabilities of Embit's modules, simplifying the implementation of a prototype of a complete wireless communication system. Every board can be quickly and easily connected to a computer or to an external processor via USB or RS-232 interface. For testing purposes, several pin headers are available to probe all Embit radio modules' signals and to exploit Embit radio modules' capabilities.

Embit radio modules can be used in two different modes:

1. as wireless modems working with AT-like UART commands
2. as programmable embedded systems

The modules of the EMB-Z2538PA-EVK kits come pre-programmed with EBI (Embit Binary Interface), which allows to setup and operate the modules as wireless modems with simple binary AT-like commands over the modules' UART interfaces. This is the fastest way to obtain wireless connectivity in systems that already have a host device (another microcontroller or a PC); in particular the two evaluation boards included in the EMB-Z2538PA-EVK can be used with EBI, sending the binary AT-like commands from a host computer, through the "EBI Serial Tester" application (compatible with all versions of Microsoft® Windows OS).

If more features, efficiency and cost effectiveness is needed, or if no host device is present, a full embedded application can be developed on the MCU installed on the Embit modules themselves, exploiting all the capabilities of the embedded microcontroller (either a Texas Instruments® CC2538). In this case, the CD-ROM shipping with EMB-Z2538PA-EVK contains all required libraries to start developing your 802.15.4-based or ZigBee-based application (IAR Embedded Workbench for ARM are the IDEs that must be used*). Your custom firmware can then be downloaded using the Segger J-Link/J-Trace debug probes or any Texas Instruments® XDS100v3-compatible debugger (e.g., Olimex TMS320-XDS100-V3) and the EMB-MULTIPROG programmer adapter. The kit includes both the Olimex TMS320-XDS100-V3 and the EMB-MULTIPROG adapter. Moreover, for easier development, the EMB-Z2538PA-EVK comes with an USB dongle by Embit () which can be readily used with Texas Instruments® SmartRF Protocol Packet Sniffer (http://www.ti.com/tool/packet-sniffer) to snif over-the-air IEEE 802.15.4 / ZigBee traffic.

Detailed content list:

EMB-Z253x-EVK Evaluation Kit Content		
Part No.	Description	Quantity
EMB-Z253x-EVB	Evaluation Board carrying EMB-Z253x module	2
USB CABLE	USB supply / connection with a PC	2
BATTERIES	1.5V AA batteries for use on evaluation boards	4
EMB-AN24-20 ANTENNA	Compact antenna (2.4 GHz)	2
PROGRAMMER	Olimex TMS320-XDS100-V3 programmer/debugger via USB interface	1
EMB-MULTIPROG	Programmer adapter	1
EMB-Z2531PA-USB	USB dongle programmed with Texas Instruments® packet sniffer firmware	1
CD DOCS	CD-ROM with documentation and binaries	1

Ordering Information:

Part No.	MCU	Description
EMB-Z2538PA-EVK	CC2538	EMB-Z2538PA Evaluation Kit

IAR Embedded Workbench for ARM (required for development with EMB-Z2538PA) is not included in the kit. Please refer to http://www.iar.com/ for more informations about IAR software and about IAR licensing.