

# TEK Z-Radio System

## 2.4 GHz OEM RF Modules by TEK Industries, Inc.



TEK P/N 750190

### Z-TAG Data Sheet

The TEK Z-TAG is a self-contained radio tag for tracking or ID applications. Built on a 1.4" diameter printed circuit board, the PCB contains a transceiver, PIC microprocessor and coin cell battery. The Z-TAG is pre-programmed with Active Tag Firmware. Using the source code files supplied with every order, modification to the firmware to suit custom applications is encouraged. Applications range from industrial monitoring and animal tagging to educational projects.

<u>Specifications</u>		<u>Z-TAG</u>
<b>RF Output</b>	<b>Receive Sensitivity</b>	Typically -95dBm
	<b>Spurious Emissions</b>	Typically less than -44dBm 1-12.75GHz
	<b>Data Rate</b>	250K bps
	<b>Antenna</b>	On-board 50 Ohm Ceramic Chip antenna w/ matching balun
	<b>Antenna Output</b>	1mW (0dBm) maximum, programmable
	<b>Output Transmit Frequency</b>	2405MHz (Chan 11), 5MHz steps to 2480MHz (Chan 15)
<b>General</b>	<b>Battery Type</b>	3 Volts Lithium Coin Cell CR2450 Energizer or Renata, 24mm, 540mA
	<b>Battery Consumption</b>	Standby: 4uA at 3V, Active: 29mA at 3V
	<b>Chipset</b>	Microchip Microcontroller PIC18F2520, Chipcon/TI Radio CC2420 pre-assembled & tested on FR4 2-layer
	<b>Dimensions</b>	Diameter: 1.40", Overall thickness: 0.4"
	<b>Serial Port (Logic Level UART)</b>	115200 Bd N-8-1 Serial Port on miniature Molex Pin Header, IO ports may be configured for tamper loop or switch input w/ programmable pull-up

#### Radio Protocols Supported:

- Microchip ZigBee stack 1.0-3.6 - Supplied with Stack 1.0-3.6 support files, complete stack software may be downloaded free of charge from Microchip website
- TEK Active Tag Protocol using IEEE 802.15.4 - Tag is pre-programmed with Active Tag Firmware which transmits a unique ID serial number beacon at four (4) second intervals. Supplied with MPLAB project file and complete source code in Microchip C18

#### Application Note including:

- Setup instructions, schematics, PC Demo application including source code
- Microchip Stack support files, MPLAB project and source code

**Pre-installed firmware supports commands to output CW test on 2410MHz, 2440MHz or 2480MHz  
Additional parts and modules available to order. Please contact the Sales Department for more information.**



48 Hockanum Blvd. Vernon, CT 06066

Phone: 860-870-0001

Fax: 860-870-0003

[www.tekind.com](http://www.tekind.com)

[www.tekrfidshop.com](http://www.tekrfidshop.com)

