## ZG2100 Wi-Fi PICtail®: Built for Microchip Microcontrollers

The ZeroG ZG2100 Wi-Fi PICtail® is an "add-on" hardware module designed for Microchip Explorer 16 and PICDEM.net2 development boards. Designers can quickly add Wi-Fi to applications using the Microchip PIC18, PIC24, PIC32, or dsPIC® DSC. It contains the ZG2100 class of Wi-Fi modules:

ZG2100P PICtail® contains the ZG2100M module with an on-board PCB antenna.
ZG2101P PICtail® contains the ZG2101M module with an external antenna for enhanced range.

The PICtail® connects seamlessly to standard 802.11b/g access points. In managing the connection, the ZG2100M/ZG2101M module controls the MAC and baseband layers and is connected to the host MCU via an SPI interface. The 8/16/32-bit Microchip MCU that resides on the Microchip development board controls the TCP/IP networking stack and runs the system application.

Build a Wi-Fi application with the ZG2100 Wi-Fi PICtail® using:

ZeroG Easy-Fi® software suite
ZeroG example Wi-Fi applications
Microchip PIC18, PIC24, PIC32, dsPIC® DSC
Microchip Explorer OR PICDEM.net2
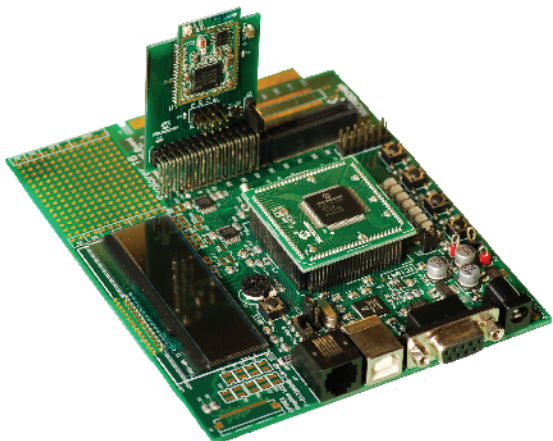Microchip MPLAB IDE
Microchip C Compiler
Microchip ICD 2

- Simplified Wireless Development
- Small Memory Footprint
- Low Power Consumption
- On-Chip Hardware Encryption
- Modular Certified for Regulatory and Industry Compliance

### Pro System Dev Kit

#### Enhanced System Dev Kit

##### Basic System Dev Kit

| ZeroG Wi-Fi PICtail® | Software drivers® | Example Applications | Pre-configured access point |

Explorer 16 Starter Kit **OR** PICDEM.net2 Starter Kit

http://www.zerogwireless.com/

**CONNECTING THE INTERNET OF THINGS**

## Simplified Wireless Development

The Wi-Fi PICtail® contains a ZG2100M or ZG2101M module that works with any 8/16/32-bit Microchip host microcontroller. The Wi-Fi PICtail™ can be used to develop simple applications without using an operating system or adding external memory. For complex applications, the ZG2100M/ZG2101M module supports any operating system and any size memory.

The ZeroG SDK supports the existing standard libraries for Microchip MPLAB® IDE and contains example applications. For designers who are familiar with MPLAB® IDE, design configuration and implementation using the ZeroG SDK becomes very simple. For increased flexibility, designers have the ability to use a built-in PCB antenna or an external antenna through an on-board connector.

## On-Chip Encryption Hardware Accelerator

The on-chip encryption engine from ZeroG performs secure networking over the wireless link. It supports WEP, as well as advanced security keying for WPA and WPA2 encryption standards.

## Low Power Consumption

The ZG2100M/ZG2101M Wi-Fi module contains power management modes (Active, Sleep, Hibernate and Off) controlling power consumption based on data transfer rate. During low data-rate intervals, the transceiver automatically reduces power and assumes low-power modes without intervention by the host.

## Small Memory Footprint

The Wi-Fi radio contains on-chip SRAM and ROM used in the operations of wireless networking tasks. The combined a ZG2100M/ZG2101M module and Microchip MCU work efficiently together in allocating memory resources. For most systems, designs using the PICtail® do not require external memory to perform wireless networking functions thus reducing system cost.

## Modular Certified for Regulatory and Industry Compliance

To reduce time for product development and integration, ZG2100M/ZG2101M production module is certified for regulatory compliance and Wi-Fi compatibility for 802.11. The built-in antenna facilitates integration of Wi-Fi radio functionality by allowing designers to plug the module into an existing design. The external antenna can be used to enhance performance for specific applications. A list of 14 antennas certified for production modules is available.

## Ordering

Part Numbers
ZG2100P: PICtail with an on-board PCB antenna
ZG2101P: PICtail configured for an external antenna
ZG2100MC: Module with an on-board PCB antenna
ZG2101MC: Module configured for an ext. antenna

Microchip Direct
http://www.microchipdirect.com/productsearch.aspx?Keywords=zg2100

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