

# ZG2100M Wi-Fi® PICtail™ Module

**Built for Microchip microcontrollers.**



The ZG2100 Wi-Fi PICtail (AC164136-2) is a plug in hardware module designed for Microchip Explorer 16 and PICDEM.net™ 2 development boards. Designers can quickly add Wi-Fi to applications using Microchip's PIC18, PIC24 or PIC32 microcontrollers or dsPIC® digital signal controllers.

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

- Example Wi-Fi applications
- Microchip PIC18, PIC24 or PIC32 MCUs or dsPIC DSCs
- Microchip Explorer 16 or PICDEM.net 2 development board
- Microchip MPLAB® IDE
- Microchip C Compiler
- Microchip MPLAB ICD 3 In-Circuit Debugger

## Simplified Wireless Development

The Wi-Fi PICtail contains a ZG2100M module that interfaces with PIC18, PIC24 or PIC32 MCUs or dsPIC® DSCs. The Wi-Fi PICtail is used with the Microchip TCP/IP stack to develop simple WiFi applications without using an operating system or adding external memory.

The 802.11 Development Kit for Explorer 16 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 development kit becomes very simple.

## On-Chip Encryption Hardware Accelerator

The on-chip encryption engine on the ZG2100 performs secure networking over the wireless link. It supports WEP, as well as advanced security keying for WPA-PSK and WPA2-PSK encryption standards.

## TCP/IP Protocol Support

Microchip's ZG2100 Wi-Fi modules are compatible with a majority of the PIC family of microcontrollers via our free TCP/IP stack. The TCP/IP stack version 5.x comes complete with the ZG2100 driver code and is universal for both Ethernet and Wi-Fi implementations.

Customers may download the latest TCP/IP stack at: [www.microchip.com/tcpip](http://www.microchip.com/tcpip) and leverage this TCP/IP stack for their wired or wireless Smart Grid development projects.



Wi-Fi Development Kit for Explorer 16 (AC164136)

## Low Power Consumption

The ZG2100M and ZG2101M Wi-Fi module contains power management modes 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 combined 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 the time for product development and integration, the ZG2100M and ZG2101M production modules are 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.



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## Support

Microchip is committed to supporting its customers in developing products faster and more efficiently. We maintain a worldwide network of field applications engineers and technical support ready to provide product and system assistance. In addition, the following service areas are available at [www.microchip.com](http://www.microchip.com):

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## Additional Resources

Visit [www.microchip.com/wifi](http://www.microchip.com/wifi) for additional information on products, software and development tools.

- ZG2100M/ZG2101M Wi-Fi Module Data Sheet, DS70624
- First Half 2010 Focus Product Selector Guide, DS01308
- Connectivity Brochure, DS01181

### Development Tools from Microchip

Part Number	Development Tool
AC164136-2	ZG2100 Wi-Fi PICtail with on-board PCB antenna
AC164136	Wi-Fi Development Kit for Explorer 16
ZG2100MC	Module with an on-board PCB antenna
ZG2101MC	Module configured for an external antenna



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