

Other Information

To obtain the most recent and complete documentation for this demonstration board, including:

- User's Guide
- Board Description
- Board Schematics
- Source Code
- Application Examples
- Links to Web Seminars

please refer to the Microchip web site: www.microchip.com/tcpiip

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Internet Radio Demonstration Board

Overview

The Internet Radio Demonstration Board uses the PIC18F67J60 8-bit microcontroller with integrated 10Base-T MAC and PHY to connect to SHOUTcast servers and stream MP3 data to an audio decoder. This demonstration board implements the basic features of an Internet radio, such as changing volume and station.

Features

- PIC18F67J60 8-bit microcontroller with integrated 10Base-T MAC and PHY
- Integrated magnetic RJ-45 connector with status LEDs
- VLSI VS1011E MPEG Audio Codec to decode MP3 data streams and drive headphones
- Two 256 Kbit Serial SRAMs for buffering of TCP packets and MP3 audio data
- Brilliant OLED display showing song title and author, station name and IP address of the demonstration board
- Push button switches to control station, volume and bass
- Connector for MPLAB[®] ICD 2 In-Circuit Debugger or MPLAB REAL ICE[™] In-Circuit Emulator

Please see reverse side for block diagram.

Getting Started

Please refer to the connection diagram included with the Internet Radio Demonstration Board. This diagram will show the connections to begin listening to streaming audio from a SHOUTcast server. Details of the Internet Radio Demonstration Board can be found in the Application Note *AN1128, "TCP/IP Networking: Internet Radio Using OLED Display and MP3 Audio Decoder"*.

TCP/IP Stack and Firmware

The Microchip TCP/IP Stack, including the Internet Radio specific firmware, can be downloaded from <http://www.microchip.com/tcpiip>. After installing the Microchip TCP/IP Stack library, open the "Internet Radio App" project.

Media Access Control (MAC) Address

Each Internet Radio Demonstration Board comes preprogrammed with a unique Ethernet MAC address saved in internal PIC18F67J60 Flash program memory and printed on a label affixed to the board. If the firmware is erased and reprogrammed, the MAC address will also need to be reprogrammed. To restore the MAC address from the printed label, direct a web browser to <http://xxx.xxx.xxx.xxx/> where xxx.xxx.xxx.xxx is the IP address displayed on the OLED display shortly after power-up. The Internet Radio's web interface will allow configuration of the MAC address and any other settings available to the programmed firmware.



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Block Diagram

