
PIC32 Audio Codec Daughter Board WM8904 Information Sheet

Introduction

Thank you for purchasing a PIC32 Audio Codec daughter board, [AC328904](#). This information sheet provides important information that will help you successfully use the daughter board as quickly as possible.

This daughter board is designed specifically to be used with the PIC32 Bluetooth® Audio Development Kit (DV320032); however, it can also be used with other Microchip development hardware.

For additional information about this daughter board, please visit: <http://www.microchip.com>.

Features

The PIC32 Audio Codec daughter board, AC328904, is a high-performance stereo codec board for selected PIC32 hardware development platforms. This board features the Wolfson WM8904 ([AC328904](#)) Stereo Codec, which includes built-in microphone and headphone amplifiers. This board is suitable for adding audio input and output capabilities to the PIC32 Bluetooth starter kit, and as previously mentioned, it is compatible with the PIC32 Bluetooth Audio development kit.

The PIC32 Audio Codec daughter board, WM8904, features are as follows:

- WM8904 Codec
- MCP1801 power regulator
- 3.5 mm inputs and outputs:
 - Line in
 - External Mic in
 - Headphone out

Additional Information

For additional information on drivers and examples, visit the following Microchip web sites:

- <http://www.microchip.com/DevelopmentTools/ProductDetails/ac328904>
- www.microchip.com/harmony

The schematic diagram illustrates the internal circuitry of a portable audio player. It is organized into three main sections:

- MB CONNECTORS:** This section shows the connections for the MB connectors. It includes UART1 (Rx, Tx, SCL1, SDA1, MISO, MOSI), I2S1 (BCLK, LCLK, MCLK, MISO, MOSI), and I2S2 (BCLK, LCLK, MCLK, MISO, MOSI). It also shows the CARD_ID pin and the +3.3V and -5V_VD pins.
- Main Circuit:** This section shows the main audio circuit. It includes a WM8904CGEFLV audio IC, two BLM15BA050SN1D filters, and various passive components like resistors, capacitors, and inductors. The circuit is powered by a +3.3V supply and a -5V_VD supply. It also shows the connections for the MIC IN, LINE IN, and HP OUT.
- PCB LAYOUT:** This section shows the PCB layout with component footprints and labels. It includes the locations for the MB connectors, the audio IC, the filters, and the various passive components. The layout is divided into three main areas: MB connectors, the main audio circuit, and the PCB layout.

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