# INTRODUCTION

The WM8524-6228-DT16-EV1 Customer Standalone Board provides a complete hardware platform for evaluation of the WM8524. The WM8524 Customer Standalone Board can also be connected directly to a processor board using flying wires or appropriate headers.

Configurations covered are listed below:

- DAC Playback to Line Out

This document should be used as a starting point for evaluation of WM8524 but it will not cover every possible configuration.

Assumptions:

1. The user is familiar with the WM8524-6228-DT16-EV1 board and that the board is configured correctly for the path of interest (see related documents below).

Related documents:

1. WM8524-6228-DT16-EV1_Schematic_Layout.pdf
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BOARD CONFIGURATION STAND-ALONE

The WM8524 Customer Standalone Board can be used as a stand-alone module for direct connection to a processor board via flying leads or dedicated headers. This section will detail important considerations and provide all information required to do this without risking damage to the device.

CONNECTION DIAGRAM

Figure 1 below shows the connections required to power-up and control the WM8524 Customer Standalone Board.

Please refer to Table 1 for further detail on external I/O connections.

Figure 1  Stand-Alone Board Configuration
### I/O TABLE

<table>
<thead>
<tr>
<th>SIGNAL</th>
<th>BOARD REFERENCE</th>
<th>PART TO REMOVE</th>
<th>IMPORTANT NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Voltage Supplies</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVDD</td>
<td>J2.2</td>
<td>R2</td>
<td>LINEVDD and AVDD must always be within 0.3V of each other and at 3.3V ± 10%</td>
</tr>
<tr>
<td>LINEVDD</td>
<td>J5.2</td>
<td>R10</td>
<td></td>
</tr>
<tr>
<td><strong>Ground</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGND</td>
<td>TP3</td>
<td></td>
<td>Analogue grounds must always be within 0.3V of each other</td>
</tr>
<tr>
<td>LINEGND</td>
<td>TP3</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Master Clock</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MCLK</td>
<td>H1.2</td>
<td>Jumper H1.1</td>
<td>Master clock</td>
</tr>
<tr>
<td><strong>Audio Interface</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LRLCLK</td>
<td>H1.6</td>
<td>Jumper H1.5</td>
<td>Digital audio interface left/right clock</td>
</tr>
<tr>
<td>BCLK</td>
<td>H1.10</td>
<td>Jumper H1.9</td>
<td>Digital audio interface bit clock</td>
</tr>
<tr>
<td>DACDAT</td>
<td>H1.14</td>
<td>Jumper H1.13</td>
<td>Digital audio interface data input</td>
</tr>
<tr>
<td>MUTE</td>
<td>J7.2</td>
<td>Jumper J7.1</td>
<td>0 = Mute enabled</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 = Mute disabled</td>
</tr>
<tr>
<td>AIFMODE</td>
<td>J8.2</td>
<td>Jumper J8.1</td>
<td>0 = 24-bit Left Justified</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 = 24-bit I²S</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Z = 24-bit Right Justified</td>
</tr>
<tr>
<td><strong>Analogue Outputs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LINEVOUTL</td>
<td>J3</td>
<td></td>
<td>Left line output</td>
</tr>
<tr>
<td>LINEVOUTR</td>
<td>J6</td>
<td></td>
<td>Right line output</td>
</tr>
</tbody>
</table>

Table 1 I/O Configuration

Table 1 above shows the points on the board where external stimuli can be connected, and the description of each pins function.

It also details the components that must be removed before external stimuli are connected to avoid bus contention.

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**Wolfson Microelectronics**

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SYSTEM BOARD CONFIGURATION

This section focuses on evaluation of the WM8524-6228-DT16-EV1 Customer Standalone Board. This system is the reference platform for measurement data contained in this document. Please note that only a limited number of usage modes will be covered.

DAC PLAYBACK TO LINE OUT

The following section details board configuration for DAC playback to line out.

BLOCK DIAGRAM

![Figure 2  DAC Playback to Line Out](image)
BOARD CONFIGURATION

Figure 3  Board Configuration
APPLICATION SUPPORT

If you require more information or require technical support, please contact the Wolfson Microelectronics Applications group through the following channels:

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Mail: Applications Engineering at the address on the last page

or contact your local Wolfson representative.

Additional information may be made available on our web site at:

http://www.wolfsonmicro.com
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