



Example Configurations

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BOARD REFERENCE:	WM8523-6228-DT20-EV1
BOARD TYPE:	Customer Standalone Board
WOLFSON DEVICE(S):	WM8523
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INTRODUCTION

The WM8523-6228-DT20-EV1 Customer Standalone Board provides a complete hardware platform for evaluation of the WM8523. The WM8523 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 WM8523 but it will not cover every possible configuration.

Assumptions:

1. The user is familiar with the WM8523-6228-DT20-EV1 board and that the board is configured correctly for the path of interest (see related documents below).

Related documents:

1. WM8523-6228-DT20-EV1_Schematic_Layout.pdf

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BOARD CONFIGURATION STAND-ALONE

The WM8523 Customer Standalone Board can be used 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 WM8523 Customer Standalone Board.

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

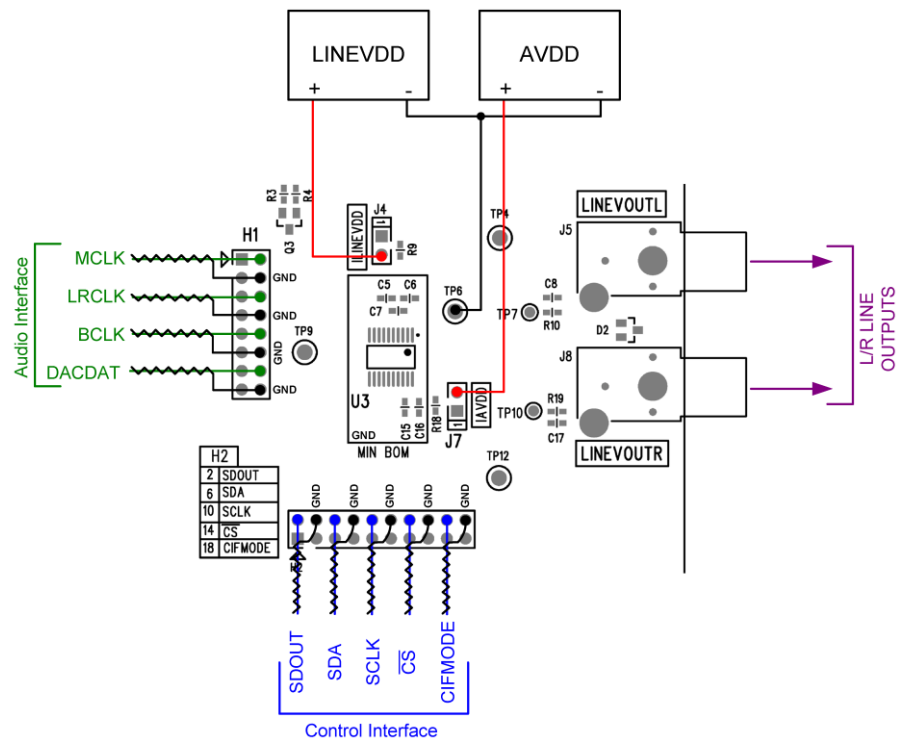


Figure 1 Stand-Alone Board Configuration

I/O TABLE

SIGNAL	BOARD REFERENCE	PART TO REMOVE	IMPORTANT NOTES	
Voltage Supplies				
AVDD	J7.2	R18	LINEVDD and AVDD must always be within 0.3V of each other and at 3.3V ± 10%	
LINEVDD	J4.2	R9		
Ground				
AGND	TP6		Analogue grounds must always be within 0.3V of each other	
LINEGND	TP6			
Master Clock				
MCLK	H1.2	Jumper H1.1	Master clock	
Audio Interface				
LRCLK	H1.6	Jumper H1.5	Digital audio interface left/right clock	
BCLK	H1.10	Jumper H1.9	Digital audio interface bit clock	
DACDAT	H1.14	Jumper H1.13	Digital audio interface data input	
Control Interface			HW MODE	SW MODE
SDOUT	H2.2	Jumper H2.1	0 = No de-emphasis 1 = De-emphasis	I ² C Address bit [1] SDOUT pin (SPI Mode)
SDA	H2.6	Jumper H2.5	AIFMODE[1 :0] 00 = LJ 24-bit	Serial Control Interface data Input Pin
SCLK	H2.10	Jumper H2.9	01 = I ² S 24-bit 10 = RJ 16-bit 11 = RJ 24-bit	Serial Control Interface clock input Pin
CS	H2.14	Jumper H2.13	0 = Mute enabled 1 = Mute disabled	I ² C Address bit [0] CS (SPI Mode)
CIFMODE	H2.18	Jumper H2.17	Z = Hardware Mode	0 = I ² C Mode 1 = SPI mode
Analogue Outputs				
LINEVOUTL	J5		Left line output	
LINEVOUTR	J8		Right line output	

Referenced to LINEVDD level

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.

SYSTEM BOARD CONFIGURATION

This section focuses on evaluation of the WM8523-6228-DT20-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

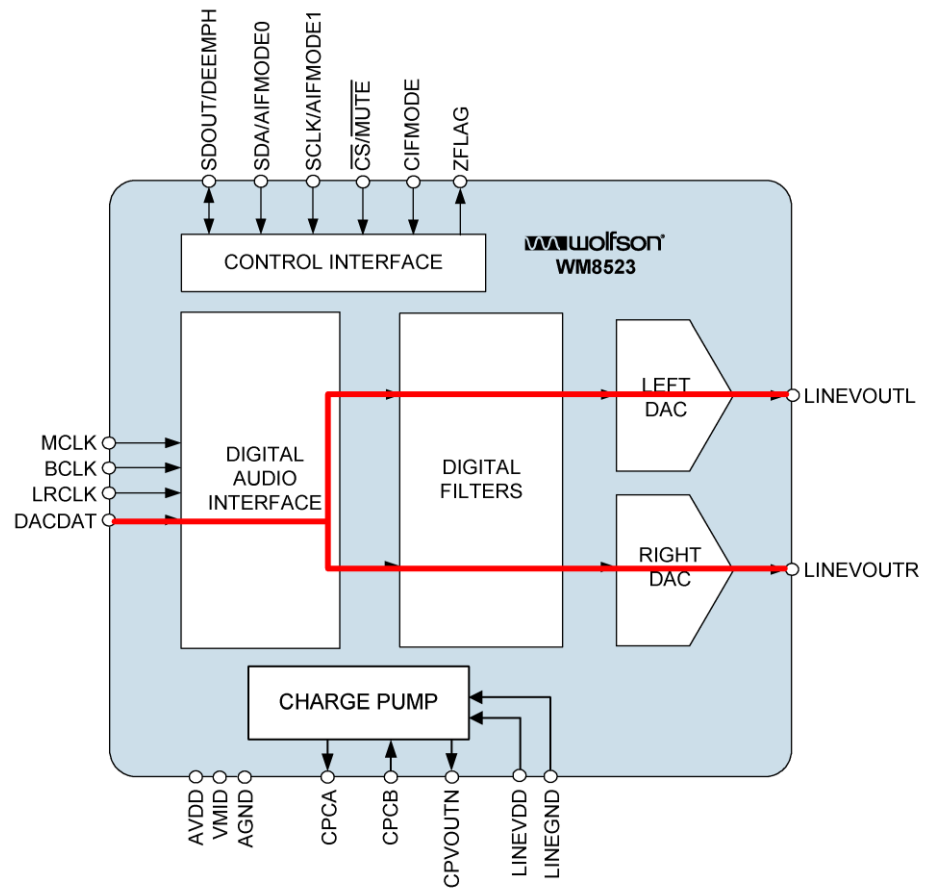


Figure 2 WM8523 Block Diagram

BOARD CONFIGURATION

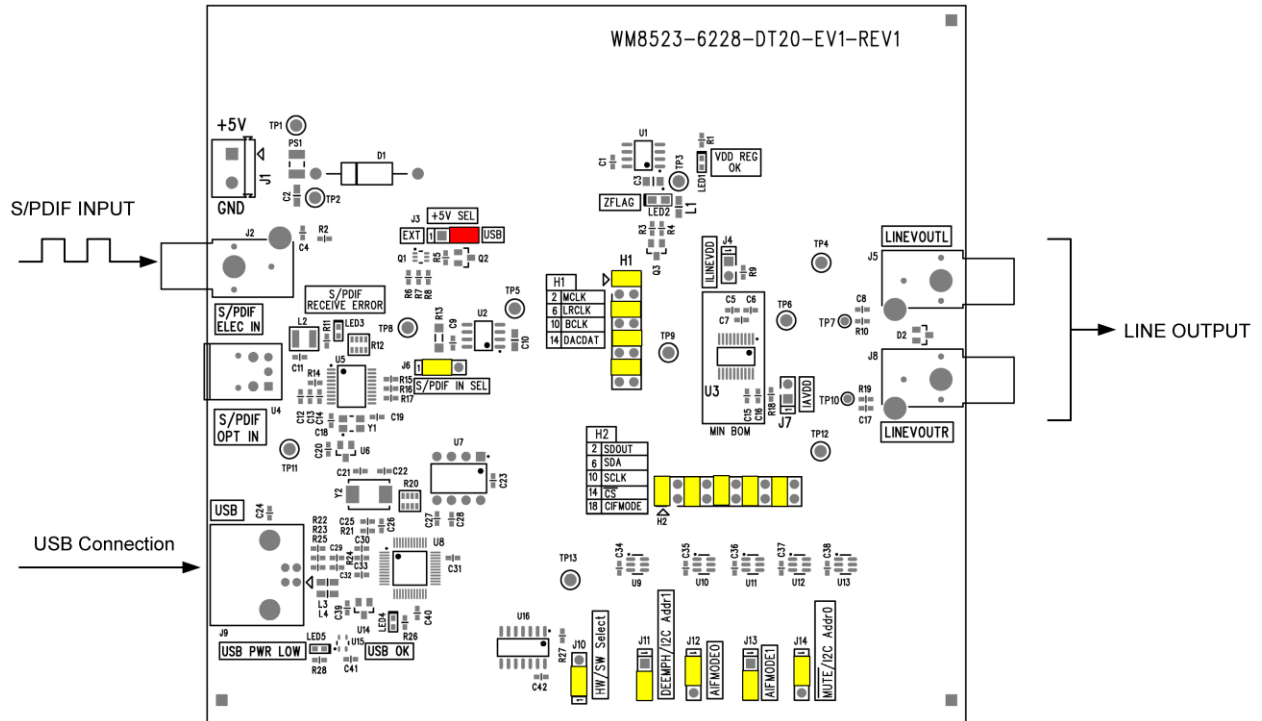


Figure 3 Board Configuration

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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or contact your local Wolfson representative.

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

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