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WM8788-6253-DT16-EV2

Example Configurations

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BOARD TYPE:	Customer Standalone Board
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INTRODUCTION

The WM8788-6253-DT16-EV2 Customer Standalone Board provides a complete hardware platform for evaluation of the WM8788. The WM8788 Customer Standalone Board can also be connected directly to a processor board using flying wires or appropriate headers.

Configurations covered are listed below:

- INL/R ADC Record to S/PDIF Output

This document should be used as a starting point for evaluation of WM8788 but it will not cover every possible configuration.

Assumptions:

1. The user is familiar with the WM8788-6253-DT16-EV2 board and that the board is configured correctly for the path of interest (see related documents below).

Related documents:

1. WM8788-6253-DT16-EV2_Schematic_Layout.pdf

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BOARD CONFIGURATION STAND-ALONE

The WM8788 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 WM8788 Customer Standalone Board.

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

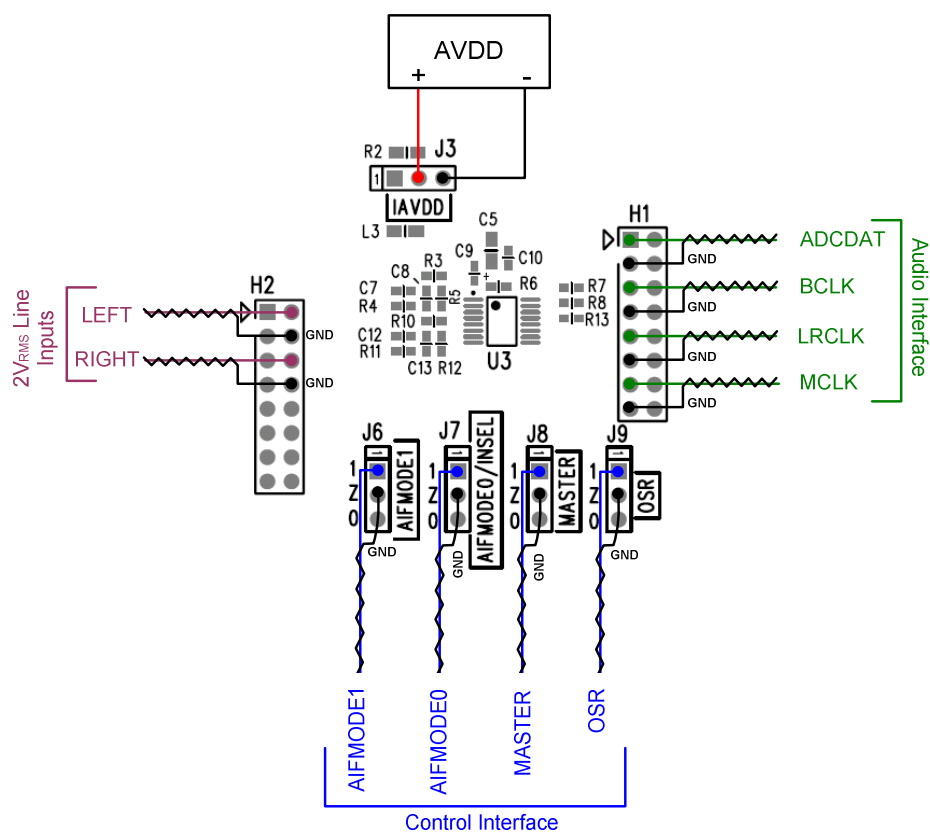


Figure 1 Stand-Alone Board Configuration

I/O TABLE

SIGNAL	BOARD REFERENCE	PART TO REMOVE	IMPORTANT NOTES
Voltage Supplies			
AVDD	J4.2	R2	3.3V ± 10%
Ground			
AGND	J4.3		
Master Clock			
MCLK	H1.14	Jumper H1.13	Master clock
Audio Interface			
LRCLK	H1.10	Jumper H1.9	Digital audio interface left/right clock
BCLK	H1.6	Jumper H1.5	Digital audio interface bit clock
ADCDAT	H1.2	Jumper H1.1	Digital audio interface data output
Control Interface			
AIFMODE1	J6.2	Jumper J9	0 = Right Justified 1 = Left Justified Z = I2S
AIFMODE0	J7.2	Jumper J10	0 = 16bit 1 = 20bit Z = 24bit
MASTER	J8.2	Jumper J11	0 = Slave 1 = Master (384fs, 192fs) Z = Master (256fs, 128fs)
OSR	J9.2	Jumper J13	0 = 8kHz – 48kHz 1 = 88.2kHz – 96kHz Z = 176.4kHz – 192kHz
Analogue Inputs			
INL	H2.2	Jumper H2.1	Left line input
INR	H2.6	Jumper H2.5	Right line input

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 WM8788-6253-DT16-EV2 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.

INL/R ADC RECORD TO S/PDIF OUTPUT

The following section details board configuration for INL/R ADC record to S/PDIF output.

BLOCK DIAGRAM

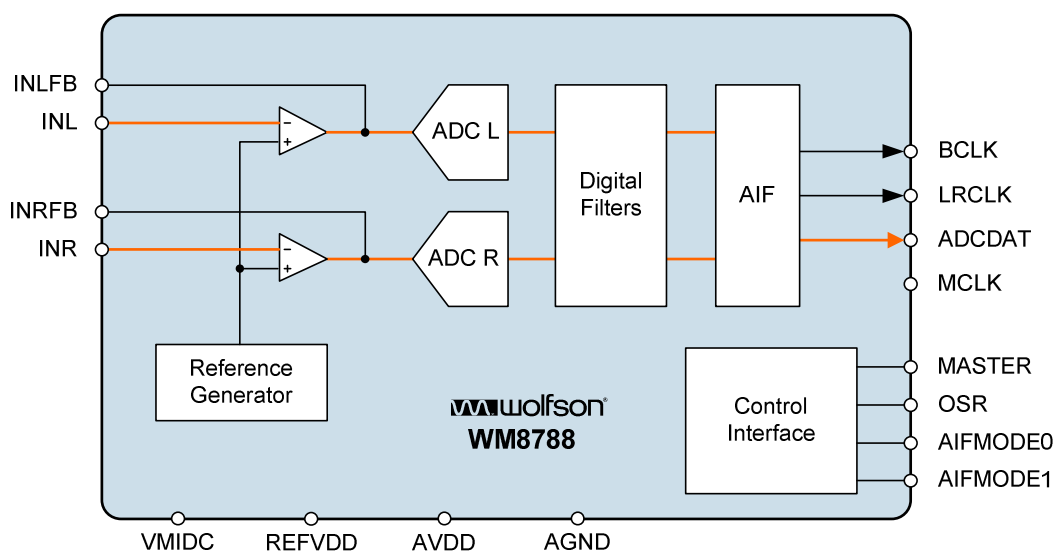


Figure 2 WM8788 Block Diagram

Figure 3 Board Configuration

AP2

Sweep	Trace	Color	Line Style	Thick	Data	Axis	Comment
1	1	Red	Solid	1	DSP Anlr.THD+N Ampl A	Left	Left Channel
1	2	Blue	Solid	1	DSP Anlr.THD+N Ampl B	Left	Right Channel

AP2 Bandwidth: 20Hz to Fs/2
AP2 Filter: A-Weighting

Figure 4 WM8788 THD+N v Amplitude

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