

Quick Start Guide

DOC TYPE:	EXAMPLE CONFIGURATIONS
BOARD REFERENCE:	1171-EV2-REV2
BOARD TYPE:	Customer Main Board
WOLFSON DEVICE(S):	WM8903
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INTRODUCTION

The 1171-EV2-REV2 customer evaluation board provides a complete hardware platform for evaluation of all the mini boards with analogue WM71x0 and digital WM72x0. Configurations covered are listed below:

- Analogue microphone bypass to headphones output (full analogue path)
- Analogue microphone recording with ADC.
- Analogue microphone loopback via the ADC and DAC with headphone output
- Digital Microphone recording with ADC.
- Digital microphone loopback via the ADC and DAC with headphone output.
- Supports mono or stereo microphones (digital or analogue microphone and not together)
- Differential and single ended PGA circuit configuration, volume, boost and mute controls.

This document should be used as a starting point for evaluation of WM7xx0 but it will not cover every possible configuration.

Assumptions:

1. The user is familiar with the WM7xx0 boards (see relevant documents below).
2. The user has set up WISCE as per instructions and is controlling the WM8903.

Related documents:

1. WM8903_Rev3.1.pdf
2. WISCE Quick Start Guide.pdf
3. WM7xx0 example configurations and schematic.
4. 1171-EV2-REV2 Schematic Layout.pdf

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BLOCK DIAGRAM

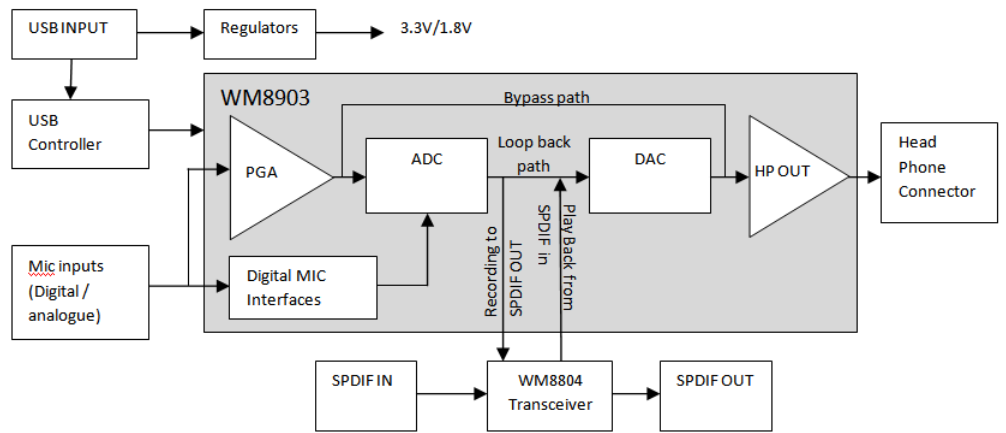


Figure 1 1171-EV2 Block Diagram

STARTUP

The analogue or digital microphones are inserted into the microphone left (J6) and right (J7) slots with acoustic port hole facing to the edge of the board. The 1171_EV2 Customer Board is powered and controlled via USB (J2) by a laptop with WISCE Quick Start Panel shown in Figure 2 Quick Start Panel on WISCE.

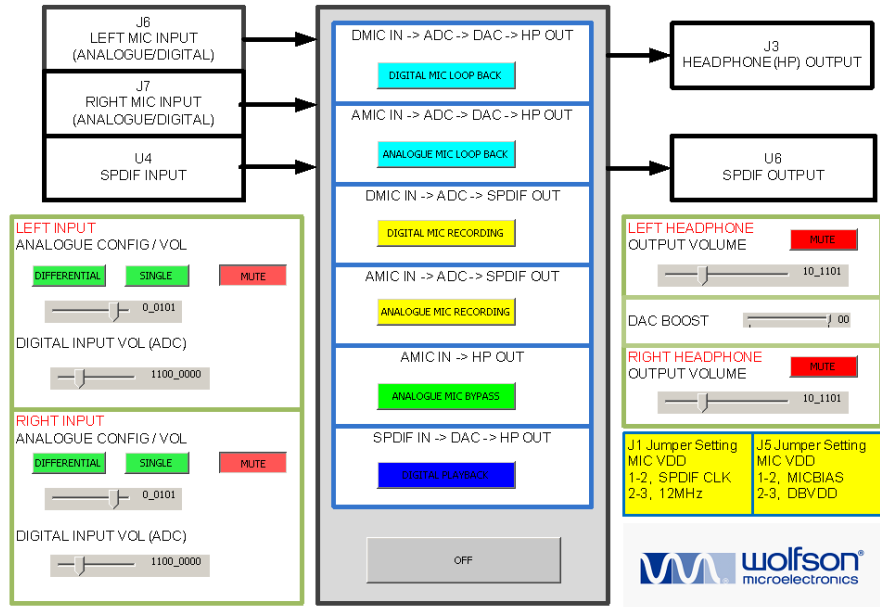


Figure 2 Quick Start Panel on WISCE

CONNECTION DIAGRAM

Figure 3 below shows the external connections on the 1171-EV2-REV2. Further details can be found on the schematic layout referenced at the start of the document.

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

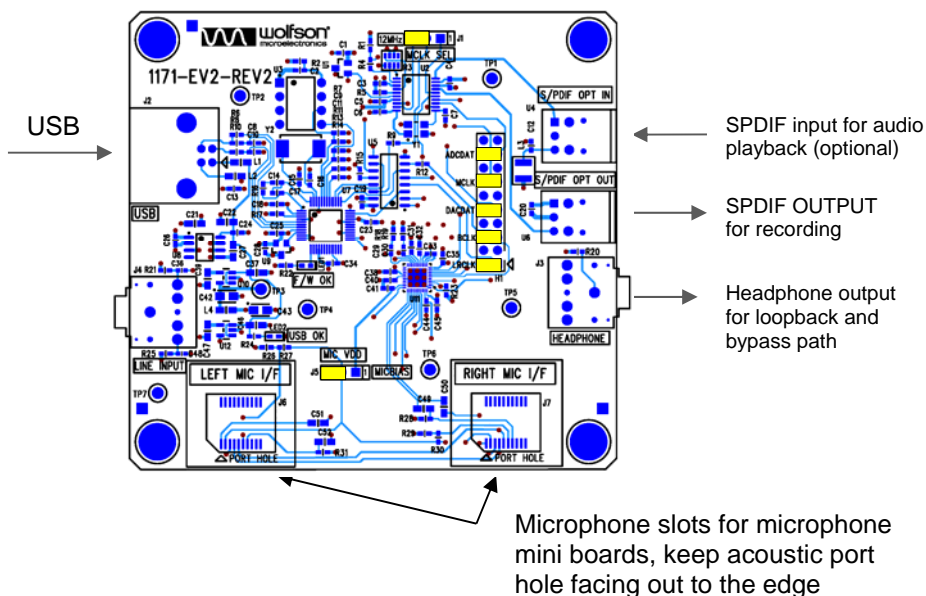


Figure 3 Board Setup

I/O TABLE

SIGNAL	BOARD REFERENCE	IMPORTANT NOTES
Microphone Input slot		
LINPUT1	J6 : PIN1	Analogue microphone input
LINPUT2	J6 : PIN7	Analogue microphone input
DMIC_DAT	J6 : PIN4 J7 : PIN4	Digital Microphone Data, the signal should swing between DGND and DBVDD.
DMIC_CLK	J6 : PIN5 J7 : PIN4	Digital Microphone CLK. The signals should swing between DGND and DBVDD.
RINPUT1	J7 : PIN1	Analogue microphone input
RINPUT2	J7 : PIN7	Analogue microphone input
Ground		
GND	Common ground, TP1, TP2, TP6	Common ground plane.
Audio Interface		
ADCDAT	H1: PIN 18	All audio interface signals should swing between DGND and DBVDD.
MCLK	H1: PIN 14	
DACDAT	H1: PIN 10	
BCLK	H1: PIN 6	
LRCLK	H1 : PIN 2	
Control and Power		
USB	J2	+5V Power and control interface to setup the path

SIGNAL	BOARD REFERENCE	IMPORTANT NOTES
Digital Audio		
SPDIF IN	U4	Digital Audio for DAC playback and SPDIF MCLK source. The input format is standard TOSLINK digital interface commonly available on many sound card or consumer product. This
SPDIF OUT	U6	Digital Audio for ADC recording of digital or analogue microphone. The output format is SPDIF and can be connected to any PC sound card or test equipment which supports the standard TOSLINK digital interface. This interface is common on many sound card interfaces.
Line Inputs		
LINEL	J4 : PIN 2	Optional analogue line input.
LINER	J4 : PIN 3	
Analogue Outputs		
HPOUTR	J3 : PIN3	Ground referenced headphone output supports the connection of standard 16 or 32 ohms via the 3.5mm jack socket, line level loads or test equipment may also be connected to this output.
HPOUTL	J3 : PIN2	
HPGND	Common ground	

Table 1 I/O Configurations

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