UM0861
User manual

Adapter board for single and double axis gyroscopes in a 5x5 mm package

Introduction

This document applies to all adapter boards related to ST MEMS single and double axis gyroscopes in 5 x 5 mm packages, hereafter referred to as “STEVAL-MKI0xxV1”.

The STEVAL-MKI0xxV1 is an adapter board designed to facilitate the evaluation of the LPR5xxxAL, LPY5xxxAL, LY5xxxALH product families. The board offers an effective solution for fast system prototyping and device evaluation directly within the user’s own application.

The STEVAL-MKI0xxV1 can be plugged into a standard DIL 24 socket. The adapter provides the complete LPR5xxxAL, LPY5xxxAL, LY5xxxALH pinout and comes ready-to-use with the required decoupling capacitors on the Vdd power supply line.

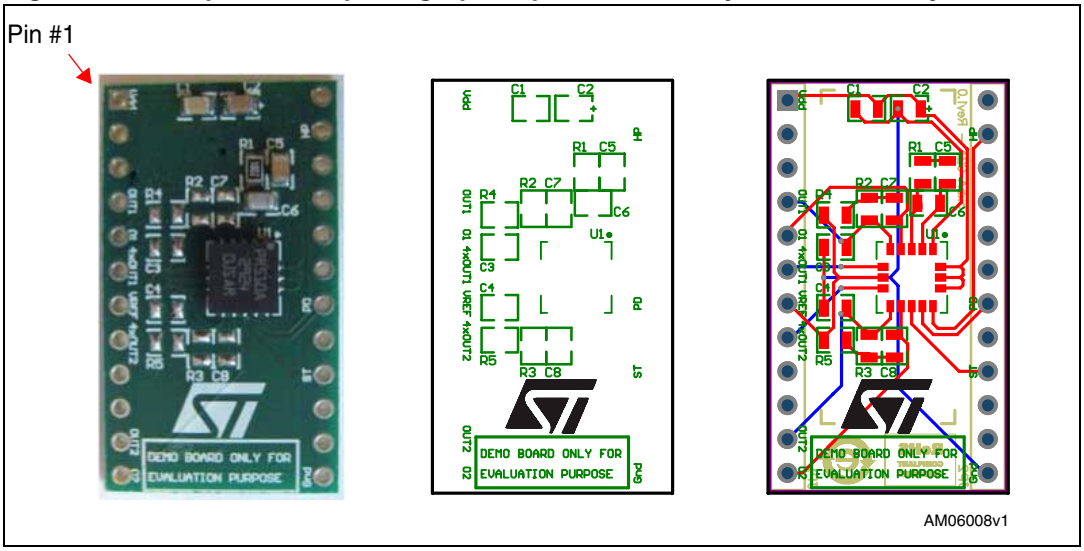
The pinout of the adapter is fully compatible with all other available adapter boards, making it possible to switch from one sensor to another easily during device evaluation without the need for board redesign.

This user manual provides information on the STEVAL-MKI0xxV1 only. For details regarding the LPR5xxxAL, LPY5xxxAL, LY5xxxALH products specifications, please refer to the datasheet for the devices.

1 Adapter board layout and pin description

A photograph of the adapter board is shown in *Figure 1*, together with an illustration of the top silk-screen layer and the board layout.

Figure 1. Adapter board photograph, top silk-screen layer and board layout



In addition to the MEMS sensor, the adapter board includes two filtering capacitors (10 µF and 100 nF, respectively) on the analog Vdd power supply line.

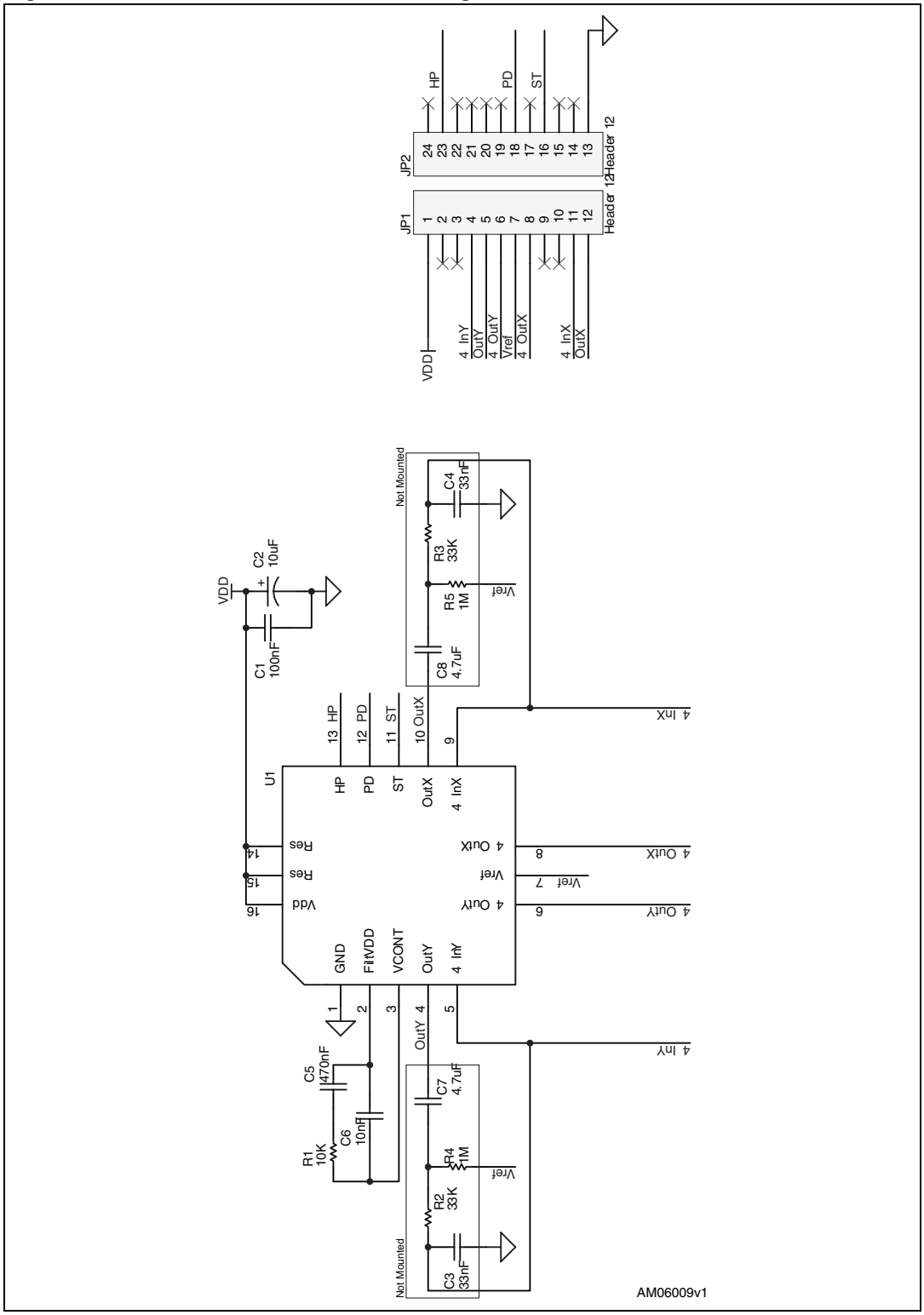
The pin description of the STEVAL-MKI0xxV1 is provided in *Table 1*.

Table 1. STEVAL-MKI0xxV1 pin description

Adapter board pin #	Pin name	Function
1	Vdd	Power supply
2-3, 9-10, 14-15, 17, 19-22, 24	NC	Not connected
4	OUT1	Input of 4x amplifier
5	O1	Y rate signal output voltage (not amplified)
6	4x_OUT1	Y rate signal output voltage (amplified)
7	Vref	Reference voltage
8	4x_Out2	X rate signal output voltage (amplified)
11	OUT2	Input of 4x amplifier
12	O2	X rate signal output voltage (not amplified)
13	GND	0V supply voltage
16	ST	Self-test
18	PD	Power-down
23	HP	High pass filter reset

2 Schematic and connection diagram

Figure 2. Schematic and connection diagram for the STEVAL-MKI0xxV1



3 Revision history

Table 2. Document revision history

Date	Revision	Changes
17-Nov-2009	1	Initial release.

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