# STEVAL-MKI032V1

## Interconnection board for connecting STM32xxx and MEMS demonstration boards

**Data brief**

## Features

■ Integrates standard STM32 evaluation boards and MEMS adapter boards

■ Compatible with the following demonstration boards:
  – STM3210B-EVAL - ST demonstration board implementing the complete range of peripherals and features for the STM32F10xxB (128 Kbytes) medium-density devices
  – STM3210E-EVAL - ST demonstration board implementing the complete range of peripherals and features for the STM32F10xxE (512 Kbytes) high-density devices
  – IAR KickStart Kit™ for STM32 (STM3210B-SK/IAR) - full-featured demonstration board with STM32F103B microcontroller, standalone J-Link debugger/programmer, IAR Embedded Workbench® for ARM (EWARM) development environment, IAR C/C++ compiler

■ Compatible with all STEVAL-MKI0xxVx MEMS accelerometer demonstration boards suitable for DIL24 sockets. Recommended boards are:
  – digital MEMS accelerometers: STEVAL-MKI013V1 (LIS302DL), STEVAL-MKI009V1 (LIS3LV02DL)
  – analog MEMS accelerometers: STEVAL-MKI015V1 (LIS344ALH), STEVAL-MKI018V1 (LIS244AL), STEVAL-MKI020V1 (LIS302SG)

■ STM32-MEMS development kit firmware package for STM32 included:
  – MEMS library: set of functions, data structures and constants used to manage a MEMS sensor with examples of usage of the MEMS library
  – Demonstration applications that utilize the MEMS library showing how to acquire data from a sensor and send them to a PC over USB or how to display the data using an



**STEVAL-MKI032V1**

LCD; several demonstration applications show utilization of interrupts generated by digital MEMS
  – Application hints on inclination measurements

■ Remote connection option

■ RoHS compliant

## Description

The purpose of the STEVAL-MKI032V1 interconnection board is to connect the data and control signals of a MEMS sensor to pins of a STM32xxx microcontroller.

The interconnection board has a DIL24 socket to connect any STEVAL-MKI0xxVx MEMS demonstration board compatible with the socket.

The system is designed to offer full control over the MEMS sensor. For analog sensors, all axes, power-down and full-scale signals are available. For digital sensors, both SPI and $I^2C$ interfaces are usable, as well as the interrupt lines.

To run the system, the board must be connected on one side to an STM32xxx demonstration board, and on the other side to a MEMS demonstration board.

# 1 Schematic diagram

**Figure 1. Circuit schematic**
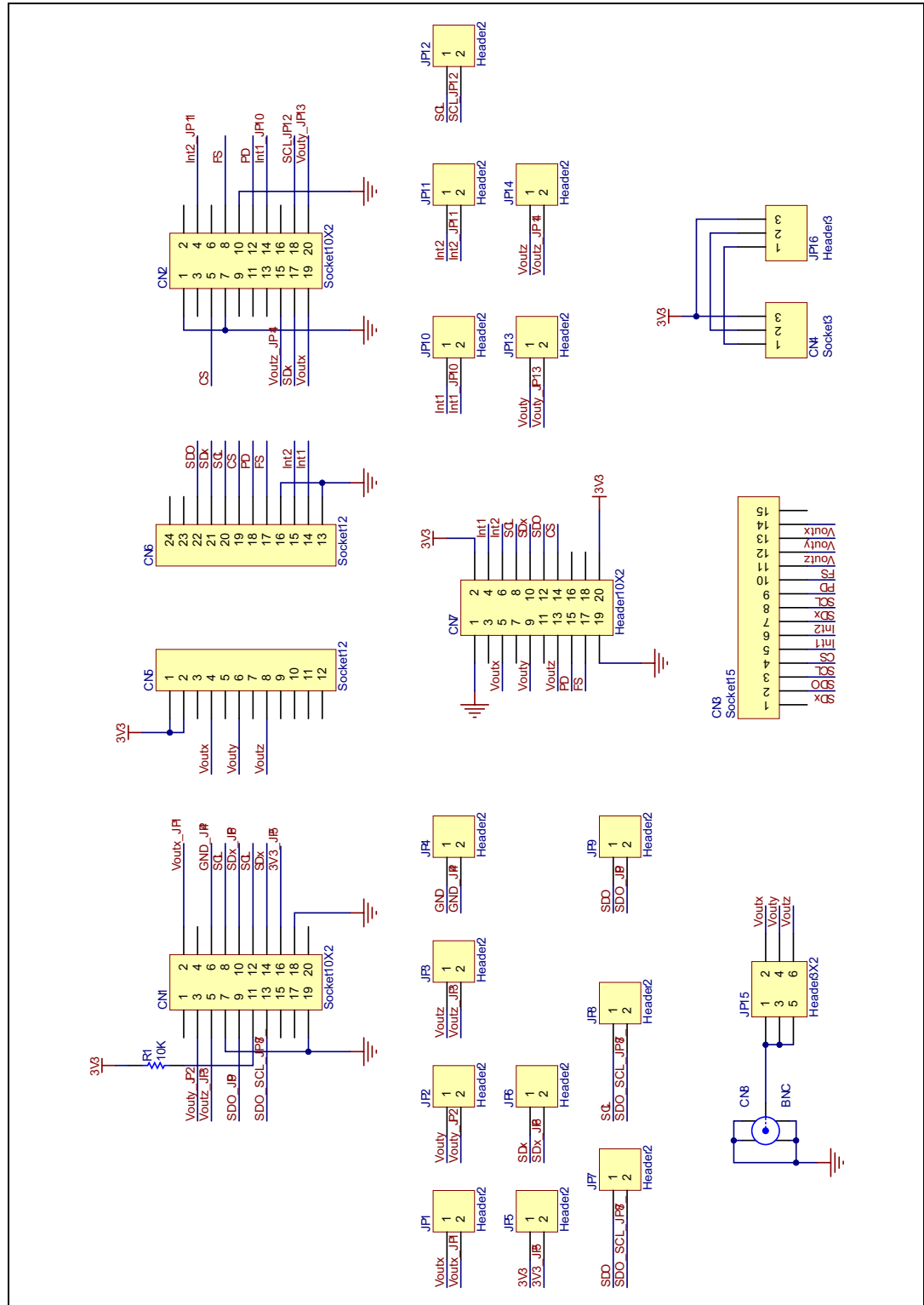
# 2      Revision history

**Table 1.      Document revision history**

| Date | Revision | Changes |
|------|----------|---------|
| 29-Oct-2009 | 1 | Initial release. |

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