



# 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



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.

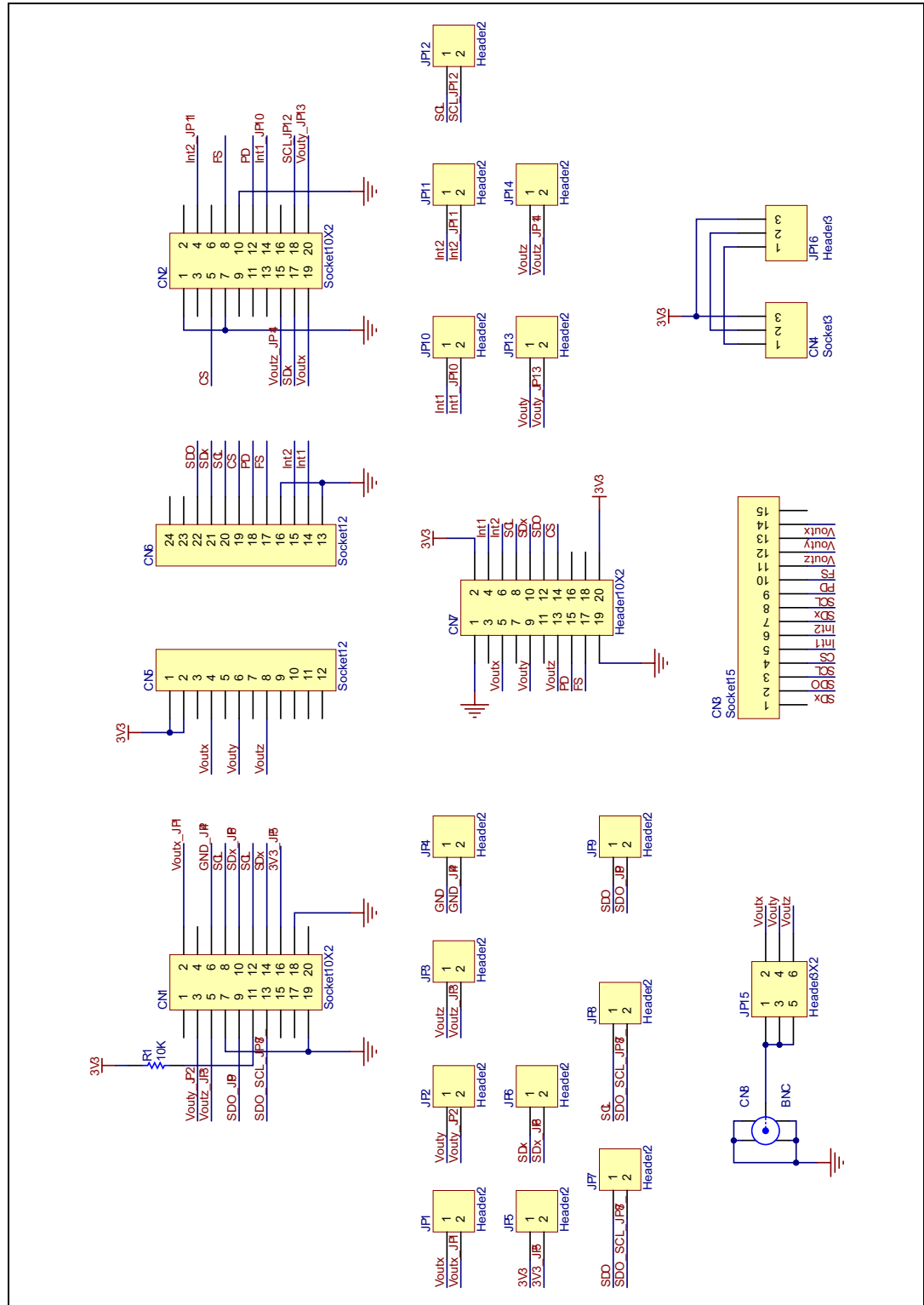
The interconnection board has a DIL24 socket to connect any STEVAL-MKI0xxVx MEMS demonstration board compatible with the socket.

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<sup>2</sup>C 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.

**Please Read Carefully:**

Information in this document is provided solely in connection with ST products. STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, modifications or improvements, to this document, and the products and services described herein at any time, without notice.

All ST products are sold pursuant to ST's terms and conditions of sale.

Purchasers are solely responsible for the choice, selection and use of the ST products and services described herein, and ST assumes no liability whatsoever relating to the choice, selection or use of the ST products and services described herein.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted under this document. If any part of this document refers to any third party products or services it shall not be deemed a license grant by ST for the use of such third party products or services, or any intellectual property contained therein or considered as a warranty covering the use in any manner whatsoever of such third party products or services or any intellectual property contained therein.

**UNLESS OTHERWISE SET FORTH IN ST'S TERMS AND CONDITIONS OF SALE ST DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY WITH RESPECT TO THE USE AND/OR SALE OF ST PRODUCTS INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE (AND THEIR EQUIVALENTS UNDER THE LAWS OF ANY JURISDICTION), OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.**

**UNLESS EXPRESSLY APPROVED IN WRITING BY AN AUTHORIZED ST REPRESENTATIVE, ST PRODUCTS ARE NOT RECOMMENDED, AUTHORIZED OR WARRANTED FOR USE IN MILITARY, AIR CRAFT, SPACE, LIFE SAVING, OR LIFE SUSTAINING APPLICATIONS, NOR IN PRODUCTS OR SYSTEMS WHERE FAILURE OR MALFUNCTION MAY RESULT IN PERSONAL INJURY, DEATH, OR SEVERE PROPERTY OR ENVIRONMENTAL DAMAGE. ST PRODUCTS WHICH ARE NOT SPECIFIED AS "AUTOMOTIVE GRADE" MAY ONLY BE USED IN AUTOMOTIVE APPLICATIONS AT USER'S OWN RISK.**

Resale of ST products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by ST for the ST product or service described herein and shall not create or extend in any manner whatsoever, any liability of ST.

ST and the ST logo are trademarks or registered trademarks of ST in various countries.

Information in this document supersedes and replaces all information previously supplied.

The ST logo is a registered trademark of STMicroelectronics. All other names are the property of their respective owners.

© 2009 STMicroelectronics - All rights reserved

STMicroelectronics group of companies

Australia - Belgium - Brazil - Canada - China - Czech Republic - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Philippines - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States of America

[www.st.com](http://www.st.com)