Features

- Two power supply options:
  - power connector
  - USB connector
- Battery monitoring via LBO signal
- STM32F103RE: high-density performance line ARM-based 32-bit MCU with 256 to 512 KB Flash, USB, CAN, 11 timers, 3 ADCs and 13 communication interfaces
- Boot from user Flash, system memory or SRAM
- LPR530AL: 2-axis gyro (roll, pitch) 300°/s full scale with analog output and optional additional filters
- LPY530AL: 2-axis gyro (pitch, yaw) 300°/s full scale with analog output and optional additional filters
- LIS331DLH: 3-axis accelerometer ±2 g/±4 g/±8 g full scale with SPI digital output
- HMC5843: 3-axis magnetometer with configurable full scale ±4 gauss (max) and I2C digital output
- LPS001DL: pressure sensor 300-1100 mbar absolute full scale with I2C digital output and barometer
- STLM75: temperature sensor with –55 to +125 °C range and I2C digital interface
- Wireless capability, ZigBee® module plug-in with InSight™ Port
- MicroSD™ card slot
- COM connector with RTS and CTS signals
- USB 2.0 full speed connection
- Reset button
- User LED and button
- RoHS compliant

Description

The STEVAL-MKI062V1 is a unique platform designed to demonstrate the performance of ST’s most advanced inertial, temperature and pressure sensors. It provides a complete set of inertial measurements from an accelerometer, magnetometer and gyroscopes, as well as data from pressure and temperature sensors to measure environmental conditions.

This 10-DOF (degrees of freedom) inertial system represents a complete hardware platform for a variety of applications including virtual reality, augmented reality, platform stabilization, human machine interfaces and robotics.

To aid in user development and analysis, the STEVAL-MKI062V1 demonstration kit includes a PC GUI for sensor output display and a firmware library to facilitate the use of the demonstration board features.

A complete set of communication interfaces (USB, wireless, COM), small 4.5x5 cm size, and several power supply options make iNEMO a flexible, open evaluation platform.
1 Schematic diagrams

Figure 1. Schematic diagrams of the STEVAL-MKI062V1 stages
2 Revision history

Table 1. Document revision history

<table>
<thead>
<tr>
<th>Date</th>
<th>Revision</th>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-Oct-2009</td>
<td>1</td>
<td>Initial release.</td>
</tr>
<tr>
<td>10-Feb-2010</td>
<td>2</td>
<td>Updated description on cover page.</td>
</tr>
</tbody>
</table>
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.

© 2010 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

4/4 Doc ID 16306 Rev 2