Features

- Bluetooth® SMART board based on the BlueNRG-2 Bluetooth low energy system on chip
- Associated BlueNRG-2 development kit SW package including firmware and documentation
- Up to +8 dBm available output power (at antenna connector)
- Excellent receiver sensitivity (-88 dBm)
- Very low power consumption: 7.7 mA RX and 8.2 mA TX at +0 dBm
- Bluetooth® SMART v5.0 compliant, supports master, slave, simultaneous master-and-slave roles and Bluetooth low energy extended data length feature
- New integrated balun BALF-NRG-02D3 which integrates a matching network and harmonics filter
- SMA connector for antenna or measuring equipment
- 3 user LEDs
- 2 user buttons
- 3D digital accelerometer and 3D digital gyroscope
- MEMS pressure sensor with embedded temperature sensor
- RoHS compliant

Description

The STEVAL-IDB008V2 evaluation platform is based on the BlueNRG-2, low power Bluetooth® smart system on chip with 256 KB Flash, 24 KB RAM, compliant with the Bluetooth® SMART v5.0 specification, supporting master, slave and simultaneous master-and-slave roles and the Bluetooth low energy extended data length feature.

The STEVAL-IDB008V2 also provides a set of hardware resources for implementing a wide range of application scenarios: sensor data (accelerometer, pressure and temperature sensor), remote control (buttons and LEDs) and debug message management through USB virtual COM. Three power options are available (USB only, battery only, and external power supply plus USB) for high application development and testing flexibility.
1 Schematic diagrams for STEVAL-IDB008V2

Figure 1. STEVAL-IDB008V2 - JTAG

Male Connector
2x10 HDR straight

ST Link: 3.0-3.6V, 5V tolerant
IAR J-Link: 1.2-3.6V, 5V tolerant

Figure 2. STEVAL-IDB008V2 - Arduino connection
Figure 3. STEVAL-IDB008V2 circuit schematic

Solder a 10u_0805 between 1 - 2 or a 0R0_0805 between 1 - 3

Figure 4. STEVAL-IDB008V2 - power managements
Figure 5. STEVAL-IDB008V2 - SENSORs
Figure 6. STEVAL-IDB008V2 - buttons and leds
Figure 7. STEVAL-IDB008V2 - micro

Figure 8. STEVAL-IDB008V2 - USB
Figure 9. STEVAL-IDB008V2 - JTAG for micro

![JTAG Diagram]

Male Connector 2x5

Figure 10. STEVAL-IDB008V2 - level translator

![Level Translator Diagram]

1-2SEL=3-4SEL=H => SPI CONNECTED TO THE BLUENRG-2
1-2SEL=3-4SEL=L => SPI NOT CONNECTED TO THE BLUENRG-2

Figure 11. STEVAL-IDB008V2 - Switch

![Switch Diagram]
## Revision history

**Table 1. Document revision history**

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<tr>
<th>Date</th>
<th>Version</th>
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<tbody>
<tr>
<td>11-Jan-2018</td>
<td>1</td>
<td>Initial release.</td>
</tr>
<tr>
<td>23-Jan-2018</td>
<td>2</td>
<td>Updated: Section 1 Schematic diagrams for STEVAL-IDB008V2.</td>
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<td>13-Feb-2018</td>
<td>3</td>
<td>Fixed figure 7</td>
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