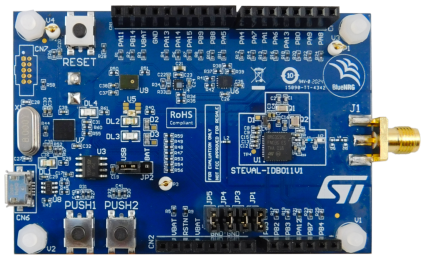
STEVAL-IDB011V1

Data brief

Evaluation platform based on BlueNRG-355MC system-on-chip



Features

- Bluetooth® low energy evaluation board based on the BlueNRG-LP Bluetooth low energy system-on-chip (QFN48 package)
- Associated BlueNRG-LP development kit SW package (STSW-BNRGLP-DK) including firmware and documentation
- Up to +8 dBm programmable output power (at antenna connector)
- Excellent receiver sensitivity (-96 dBm @1 Mbps, -103 dBm @125 bps long range)
- Very low power consumption: 3.4 mA RX @ sensitivity level, and 4.3 mA TX @ +0 dBm
- Supports master, slave, and simultaneous master-and-slave roles
- Bluetooth low energy data length extension, 2 Mbps, long range and extended advertising and scanning
- SMA connector for antenna or measuring equipment
- Arduino R3 connectors
- 3 user LEDs and 2 user buttons
- MEMS digital accelerometer/gyroscope
- MEMS digital pressure/temperature sensor
- MEMS digital microphone
- Embedded CMSIS-DAP debugger and drag&drop programming support
- RoHS compliant

Product summary	
Evaluation platform based on BlueNRG-LP	STEVAL-IDB011V1
Low power Bluetooth® smart system on chip	BlueNRG-LP
Software package for BlueNRG-LP BLE stack v3.x family	STSW-BNRGLP-DK
Applications	Wireless Connectivity

Description

The STEVAL-IDB011V1 evaluation platform is designed to help you develop and test Bluetooth® low energy applications using the low power BlueNRG-LP system-on-chip in combination with inertial and environmental MEMS sensors and digital MEMS microphone, and various interface buttons and LEDs.

The BlueNRG-LP features a 64 MHz, 32-bit ARM® Cortex®-M0+ core, 256 KB programmable Flash, 64 KB SRAM, MPU, and an extensive peripheral set (6x PWM, 2x I²C, 2x SPI/I2S, SPI, USART, UART, PDM, 12-bit ADC SAR). It is compliant with the Bluetooth® LE specification, supporting master, slave, and simultaneous master-and-slave roles, data length extension, 2 Mbps, long range and extended advertising and scanning features.
Serial communication with a PC and three power options (USB only, battery only, external power supply) allow complex application development and testing flexibility.

1 Schematic diagrams

Figure 1. **STEVAL-IDB011V1 circuit schematic (1 of 3)**

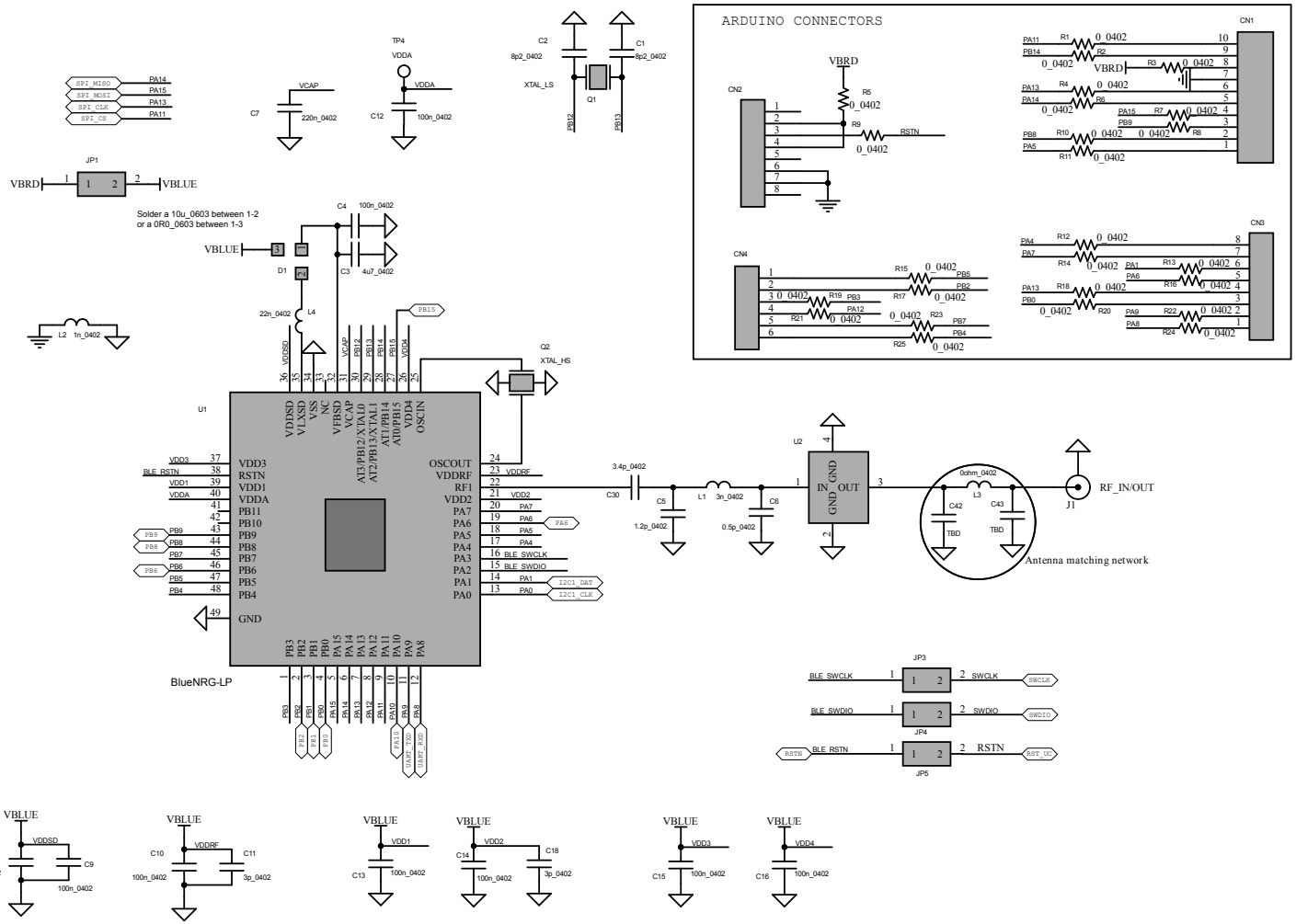


Figure 2. STEVAL-IDB011V1 circuit schematic (2 of 3)

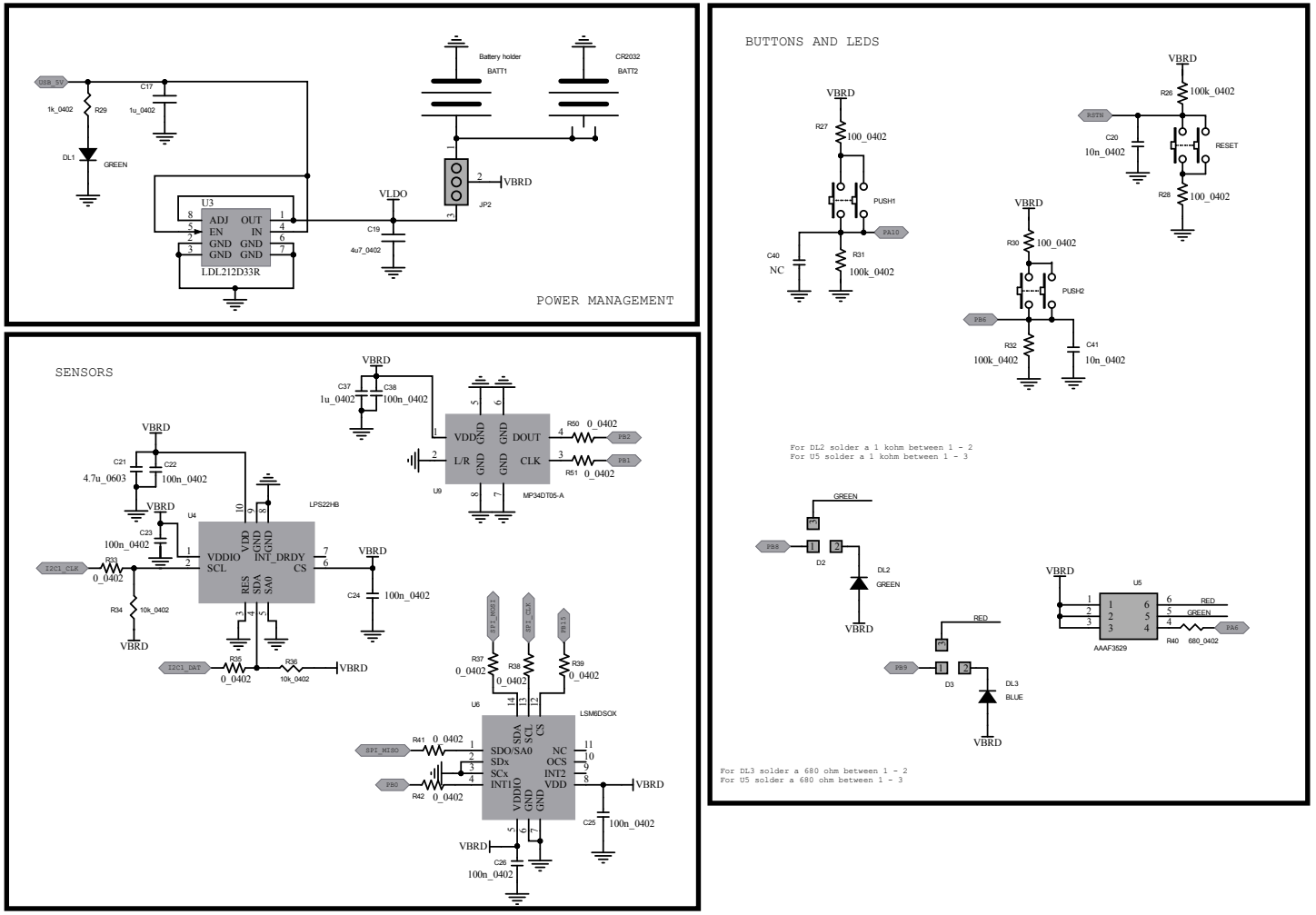
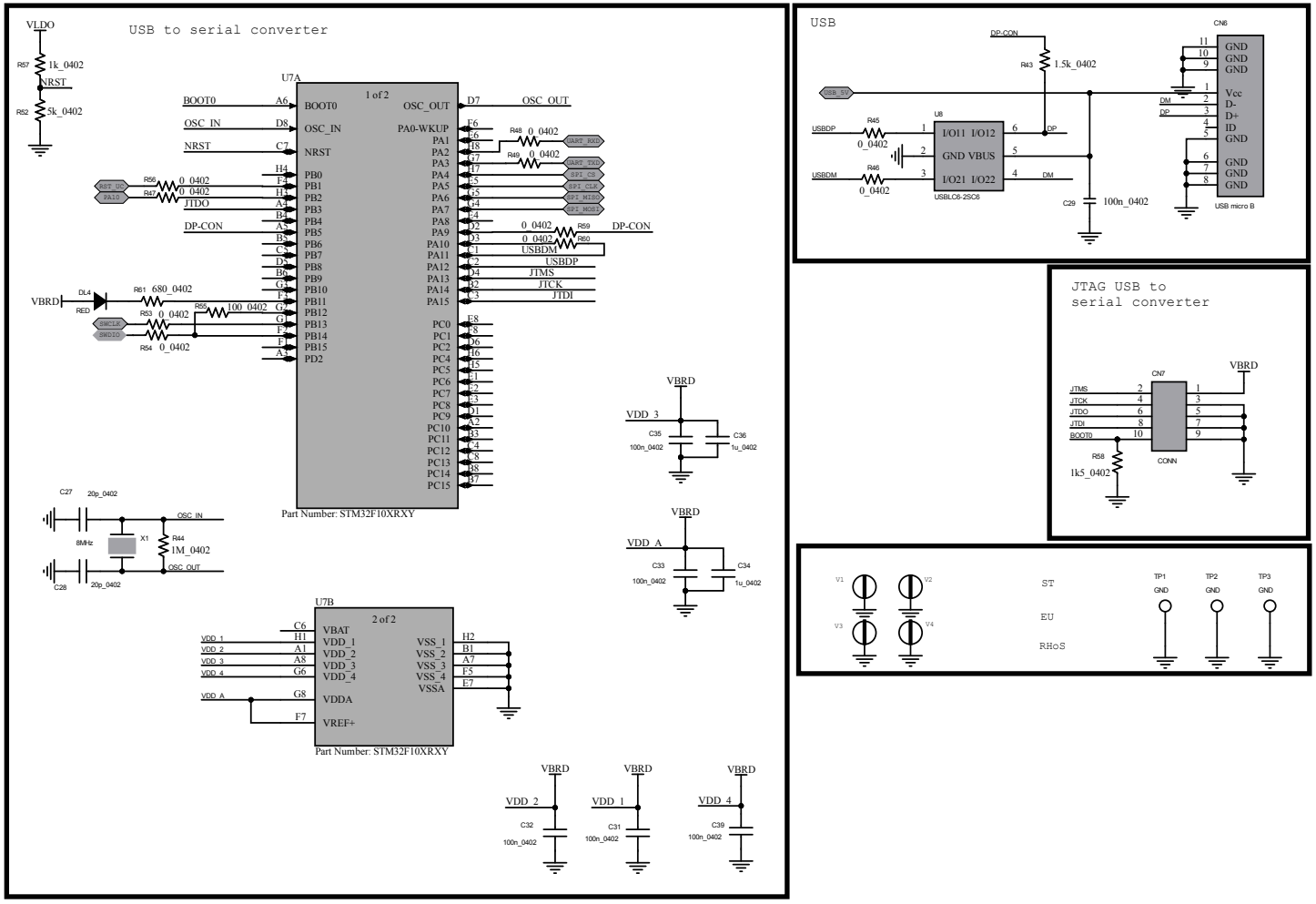


Figure 3. STEVAL-IDB011V1 circuit schematic (3 of 3)



Revision history

Table 1. **Document revision history**

Date	Version	Changes
16-Jul-2020	1	Initial release.
29-Jul-2020	2	Updated Figure 1.
30-Nov-2020	3	Updated Section 1 Schematic diagrams.

IMPORTANT NOTICE – PLEASE READ CAREFULLY

STMicroelectronics NV and its subsidiaries (“ST”) reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST’s terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers’ products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. For additional information about ST trademarks, please refer to www.st.com/trademarks. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2020 STMicroelectronics – All rights reserved