

## Evaluation platform based on the 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 software package (STSW-BNRGLP-DK) including firmware and documentation
- Up to +8 dBm programmable output power (at the antenna connector)
- Excellent receiver sensitivity (-96 dBm at 1 Mbps, -103 dBm at 125 bps long range)
- Very low power consumption: 3.4 mA RX at sensitivity level, and 4.3 mA TX at +0 dBm
- Supports master, slave, and simultaneous master-and-slave roles
- Bluetooth low energy data length extension
- 2 Mbps, long range, extended advertising, and scanning
- Periodic advertising and periodic advertising sync transfer
- LE L2CAP connection-oriented channel and LE power control and path loss monitoring
- SMA connector for antenna or measuring equipment
- Arduino R3 connectors
- Three user LEDs and two user buttons
- MEMS digital accelerometer/gyroscope
- MEMS digital pressure/temperature sensor
- MEMS digital microphone
- Embedded CMSIS-DAP debugger and drag and drop programming support
- RoHS compliant

### Description

The STEVAL-IDB011V2 evaluation platform is designed to help you to develop and test Bluetooth® low energy applications using the BlueNRG-LP low-power system-on-chip in combination with inertial and environmental MEMS sensors, a digital MEMS microphone, various interface buttons, and LEDs.

The BlueNRG-LP features a 64 MHz, 32-bit Arm®Cortex®-M0+core, a 256 KB programmable flash memory, a 64 KB SRAM, an MPU, and an extensive peripheral set (6x PWM, 2x I<sup>2</sup>C, 2x SPI/I<sup>2</sup>S, SPI, USART, UART, PDM, and 12-bit ADC SAR). It is compliant with the Bluetooth® LE specification and supports master, slave, and simultaneous master-and-slave roles. It features data length extension, 2 Mbps, long range, extended advertising and scanning, as well as periodic advertising, periodic advertising sync transfer, LE L2CAP connection-oriented channel, and LE power control and path loss monitoring.

Serial communication with a PC and three power options (USB only, battery only, external power supply) allow complex application development and testing flexibility.

Product summary	
Evaluation platform based on the BLUENRG-355MC system-on-chip	STEVAL-IDB011V2
BlueNRG-LP DK SW package	STSW-BNRGLP-DK
Programmable Bluetooth® LE 5.2 Wireless SoC	BlueNRG-LP
Applications	Wireless connectivity

# 1 Schematic diagrams

Figure 1. STEVAL-IDB011V2 circuit schematic (1 of 3)

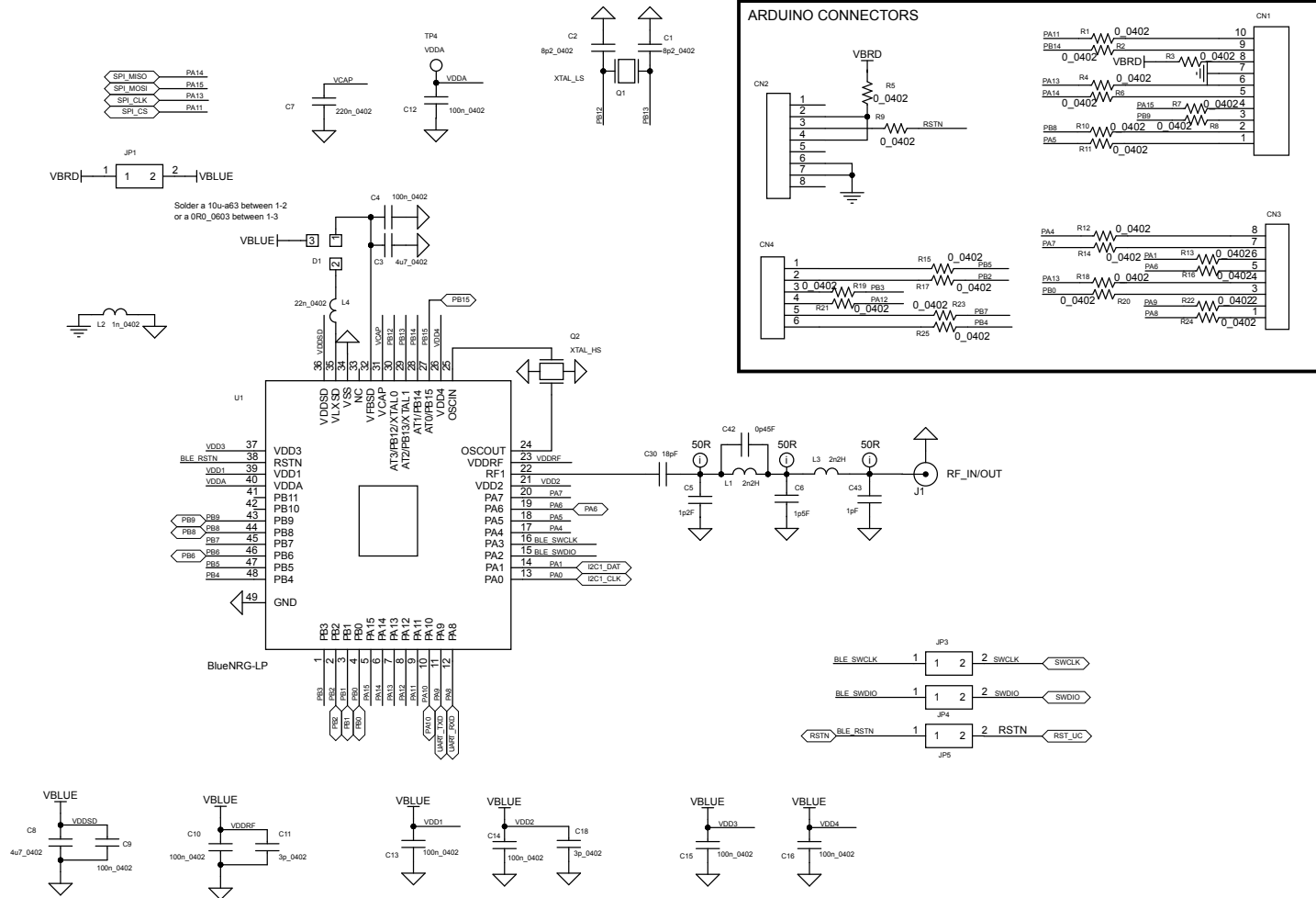


Figure 2. STEVAL-IDB011V2 circuit schematic (2 of 3)

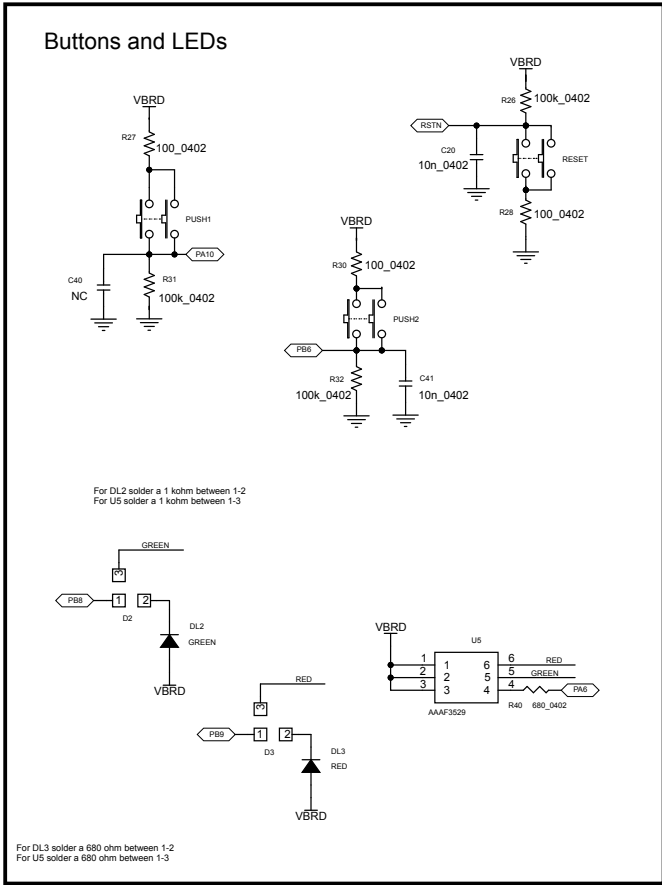
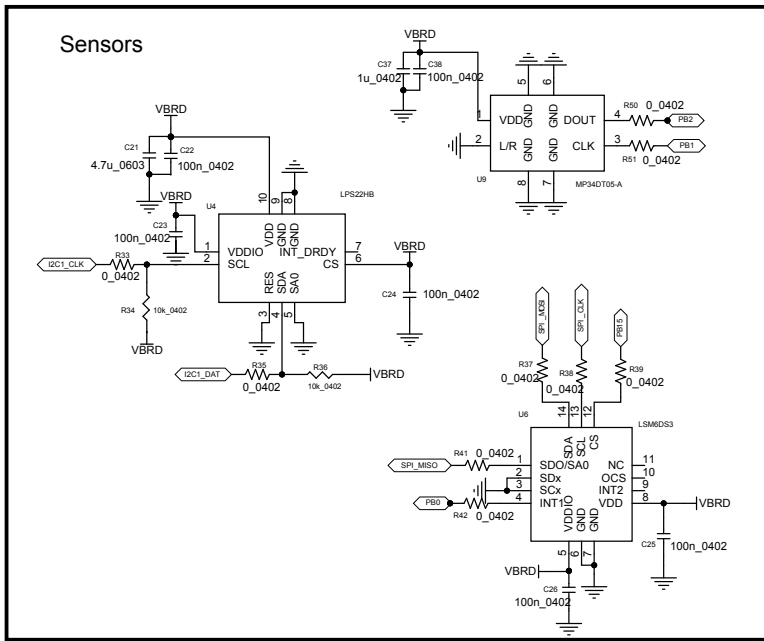
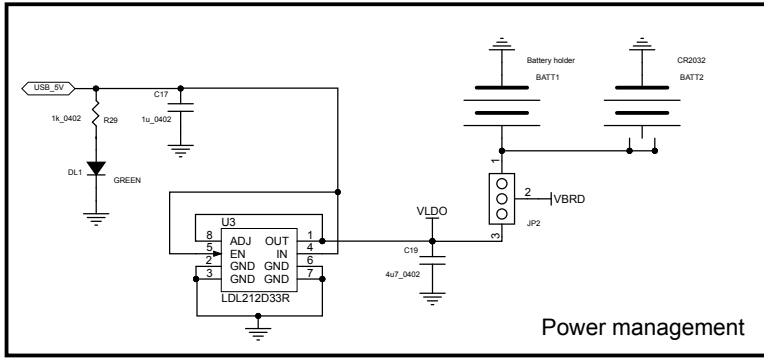
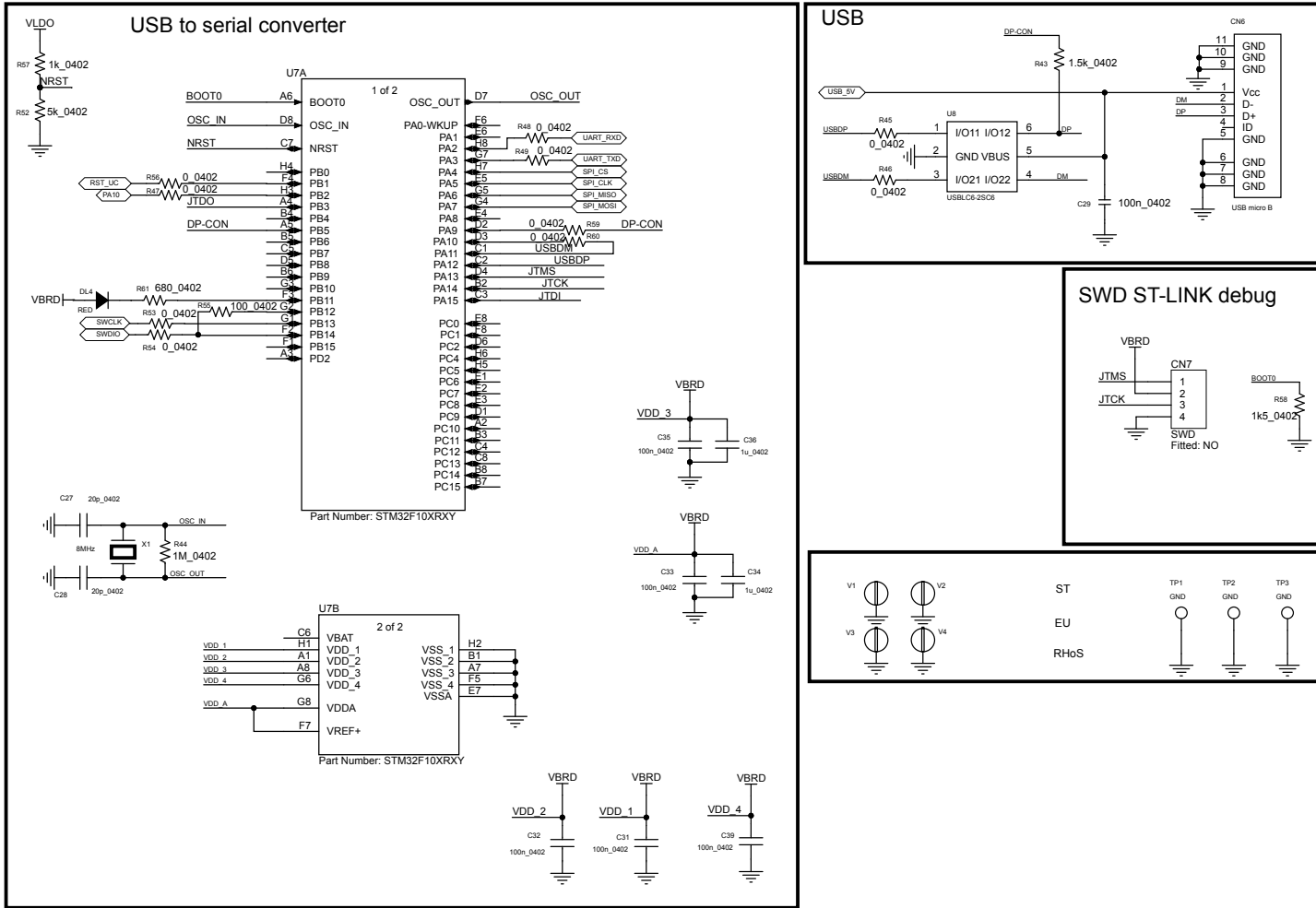


Figure 3. STEVAL-IDB011V2 circuit schematic (3 of 3)



## 2 Kit versions

Table 1. STEVAL-IDB011V2 versions

Finished good	Schematic diagrams	Bill of materials
STEVAL-IDB011V2A <sup>(1)</sup>	STEVAL-IDB011V2A schematic diagrams	STEVAL-IDB011V2A bill of materials

1. This code identifies the STEVAL-IDB011V2 evaluation kit first version.

## Revision history

**Table 2. Document revision history**

Date	Revision	Changes
01-Feb-2022	1	Initial release.

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