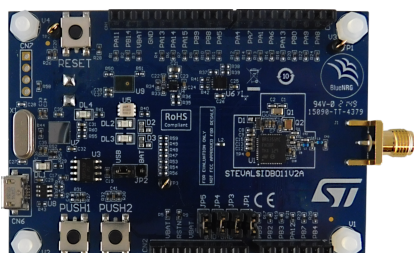


Evaluation platform based on the BLUENRG-355MC system-on-chip



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 I²C, 2x SPI/I2S, 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



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

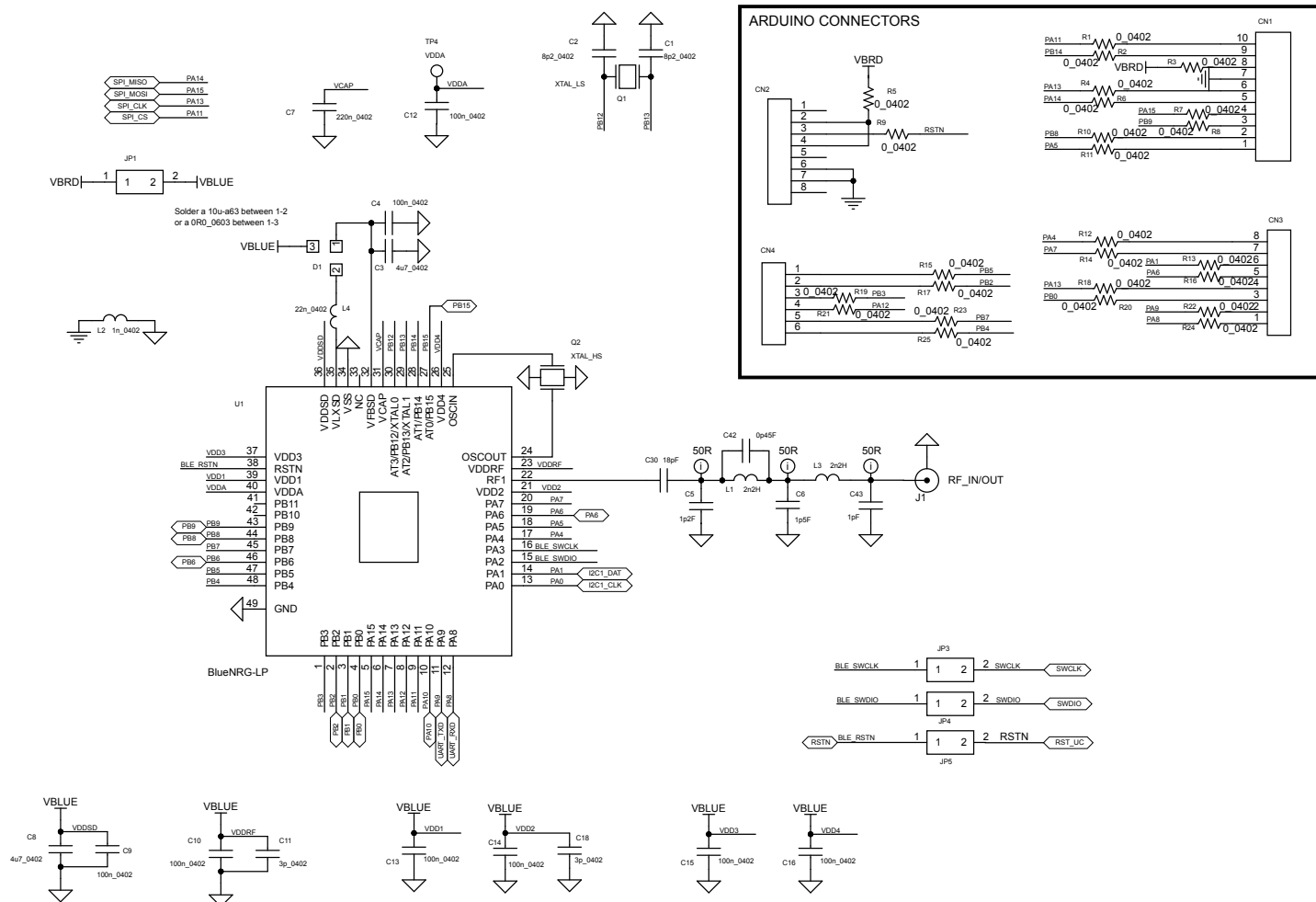
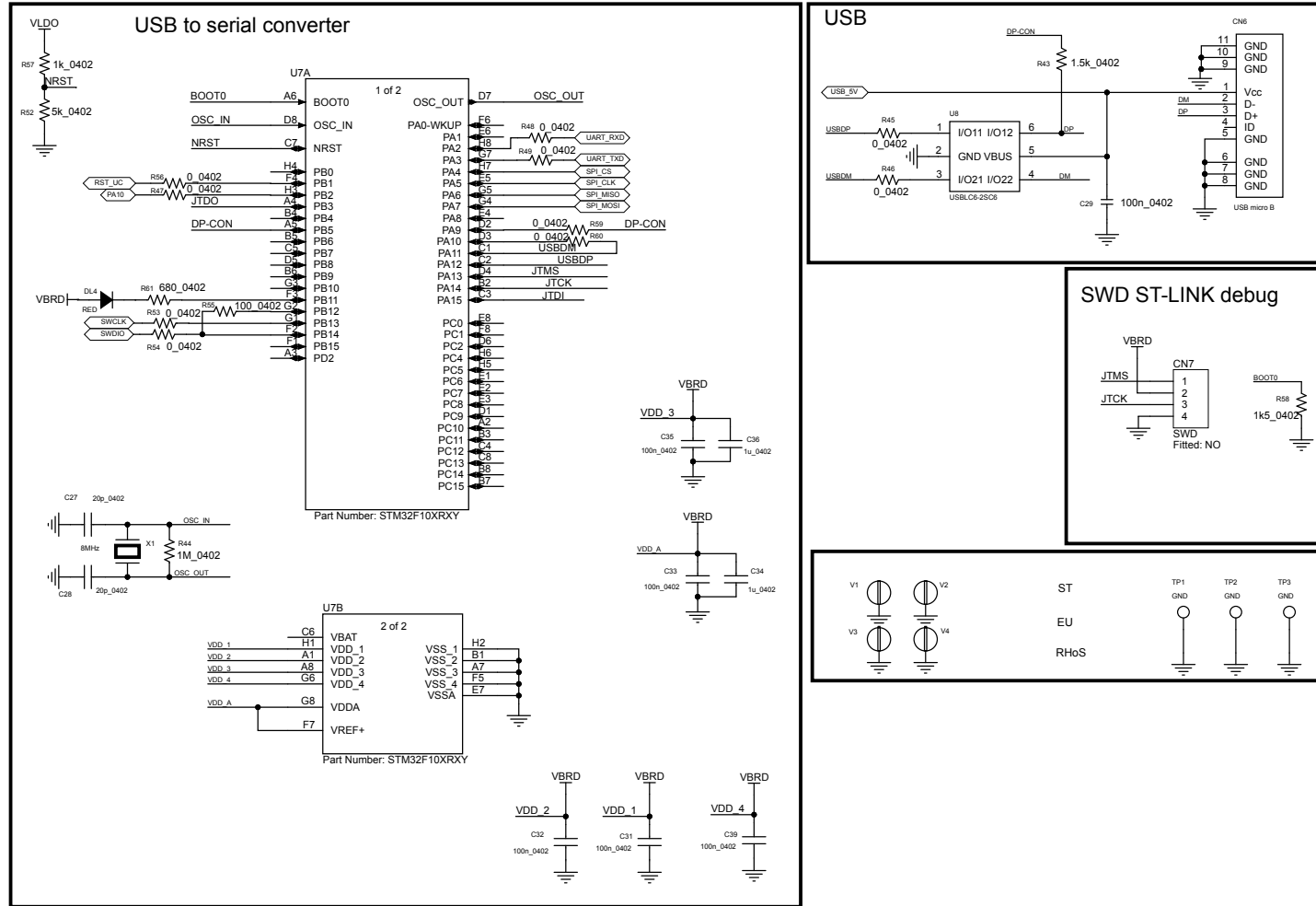




Figure 3. STEVAL-IDB011V2 circuit schematic (3 of 3)



2 Kit versions

Table 1. STEVAL-IDB011V2 versions

Finished good	Schematic diagrams	Bill of materials
STEVAL\$IDB011V2A ⁽¹⁾	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.

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.

© 2022 STMicroelectronics – All rights reserved