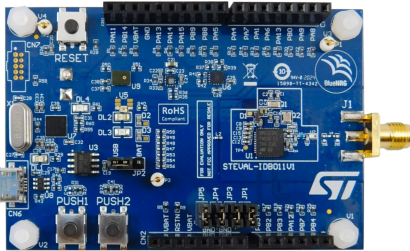


## Evaluation platform based on BlueNRG-355MC system-on-chip



### 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 I<sup>2</sup>C, 2x SPI/I<sup>2</sup>S, 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)

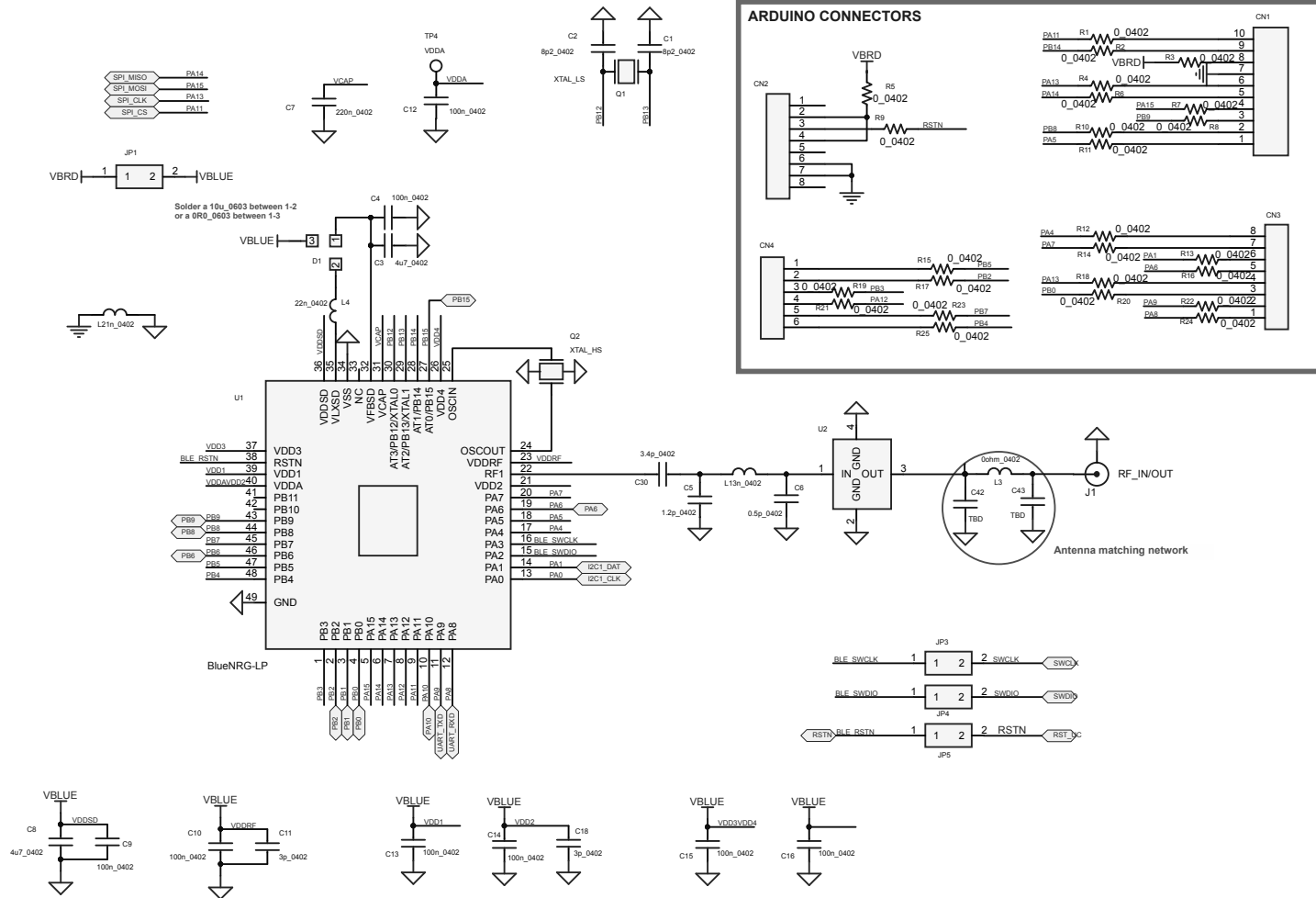
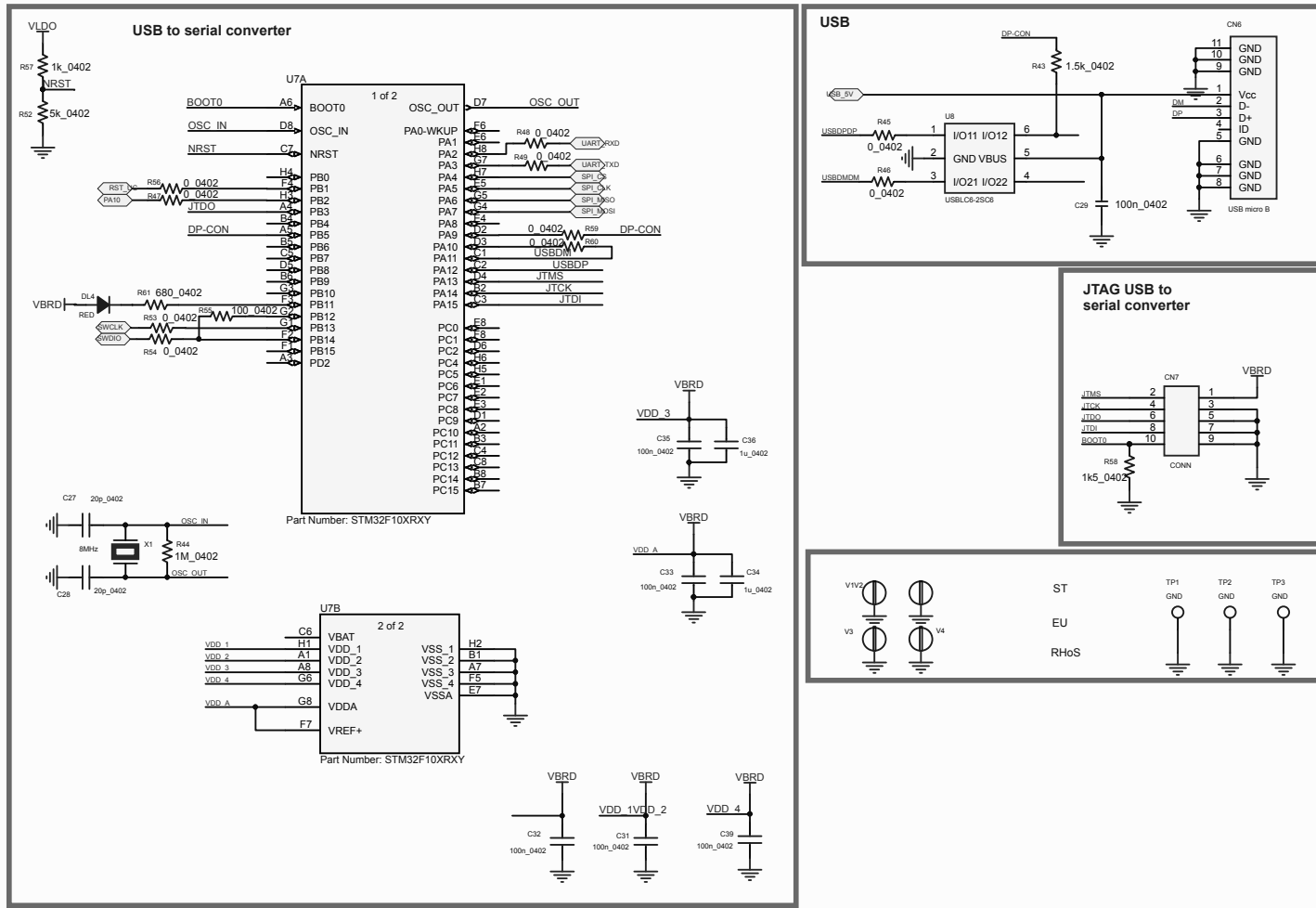




Figure 3. STEVAL-IDB011V1 circuit schematic (3 of 3)



## Revision history

**Table 1. Document revision history**

| Date        | Version | Changes   |
|-------------|---------|---|
| 16-Jul-2020 | 1       | Initial release.  |
| 29-Jul-2020 | 2       | Updated Figure 1. STEVAL-IDB011V1 circuit schematic (1 of 3). |

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