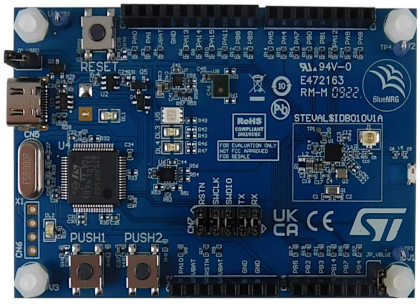
STEVAL-IDB010V1

Data brief

Evaluation platform based on the BlueNRG-LP system-on-chip



Product summary	
Evaluation platform based on BlueNRG-355VC system-on-chip	STEVAL-IDB010V1
BlueNRG-LP DK SW package	STSW-BNRGLP-DK
Evaluation platform based on BlueNRG-355VC system-on-chip	BLUENRG-355VC
Application	Wireless Connectivity

Features

- Bluetooth® Low Energy evaluation board based on the BlueNRG-LP SoC in a WLCSP49 package
- Associated BlueNRG-LP development kit software package (STSW-BNRGLP-DK) including firmware and documentation
- Chip antenna and UFL connector for measuring equipment
- Up to +8 dBm programmable output power (at 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 +0dBm
- Supports master, slave, and simultaneous master-and-slave roles
- Bluetooth® Low Energy data length extension, 2 Mbps, long range, extended advertising and scanning, channel selection algorithm #2, GATT caching, Bluetooth® Low Energy ping procedure, Bluetooth® Low Energy power control, and path loss monitoring
- 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

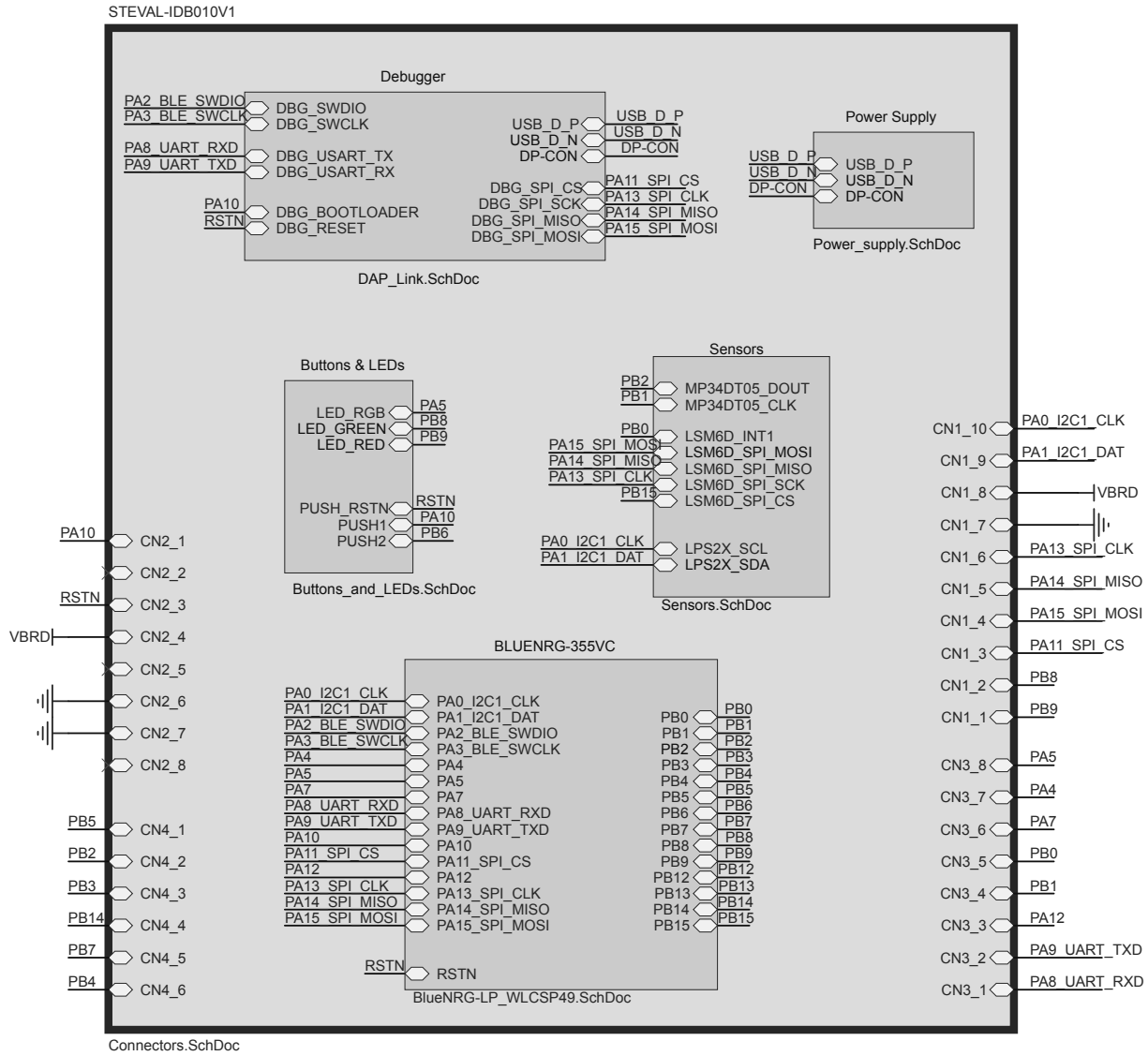
The STEVAL-IDB010V1 evaluation platform is designed to help you develop and test Bluetooth® Low Energy applications using the low power BlueNRG-LP system-on-chip, with inertial and environmental MEMS sensors, a digital MEMS microphone, various interface buttons, and LEDs.

The BlueNRG-LP features a 64 MHz, 32-bit Arm Cortex®-M0+ core, 256 kB programmable flash memory, 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® Low Energy specification. It supports master, slave, and simultaneous master-and-slave roles, data length extension, 2 Mbps, long range, extended advertising and scanning, channel selection algorithm #2, GATT caching, Bluetooth® Low Energy ping procedure, Bluetooth® Low Energy power control, and path loss monitoring.

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

1 Schematic diagrams

Figure 1. STEVAL-IDB010V1 circuit schematic (1 of 7)



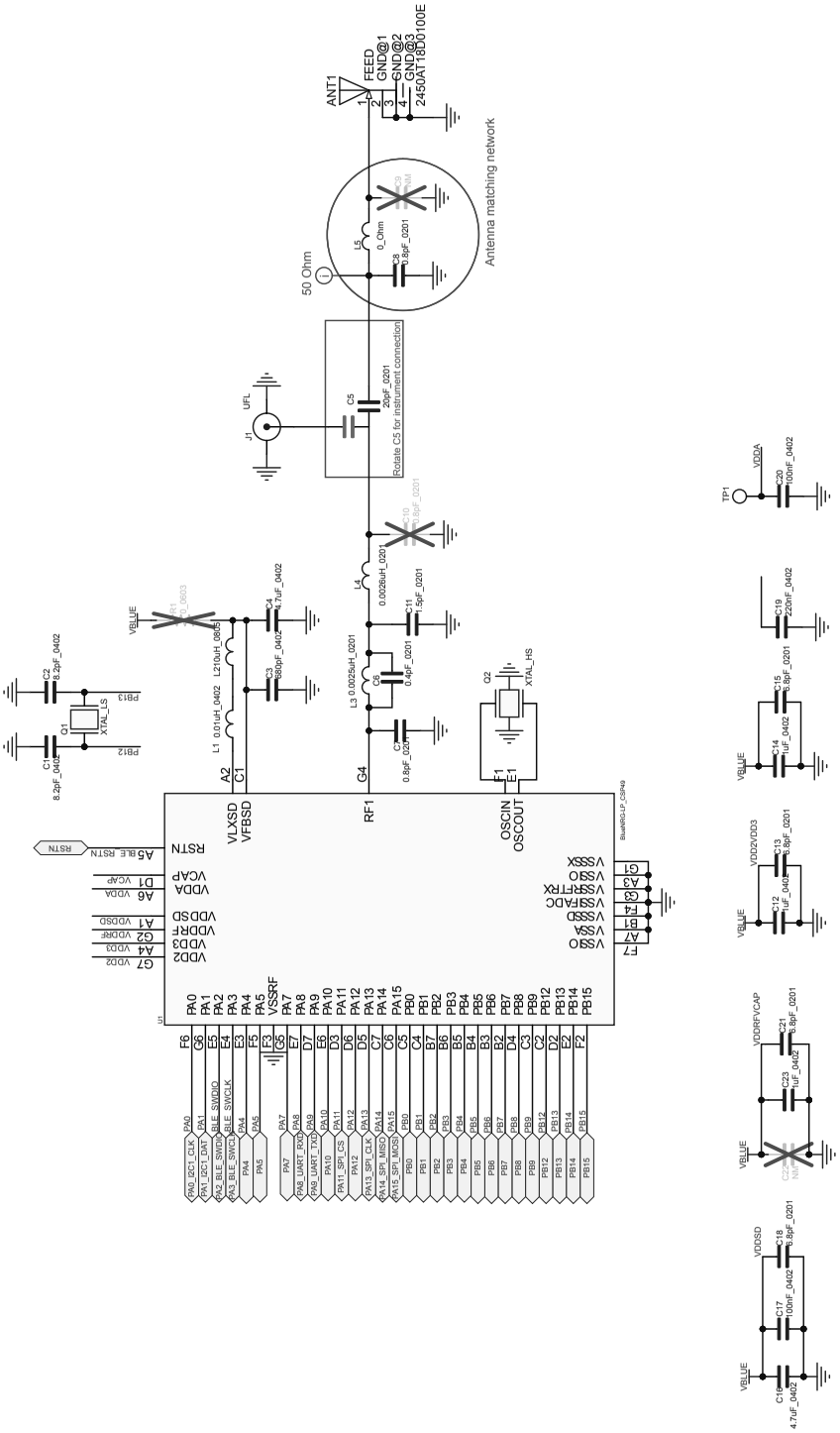


Figure 2. STEVAL-IDB010V1 circuit schematic (2 of 7)

Figure 3. **STEVAL-IDB010V1 circuit schematic (3 of 7)**

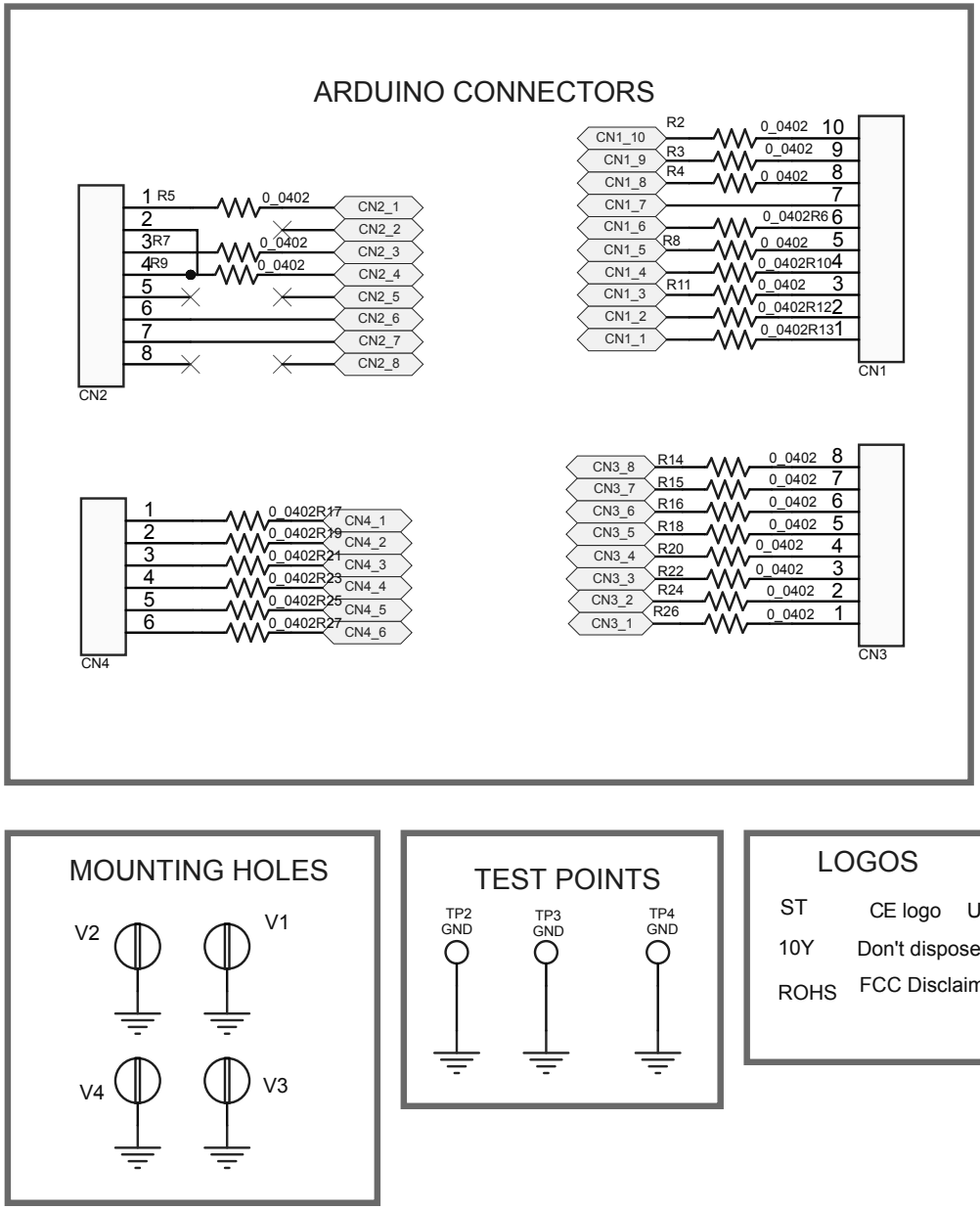


Figure 4. STEVAL-IDB010V1 circuit schematic (4 of 7)

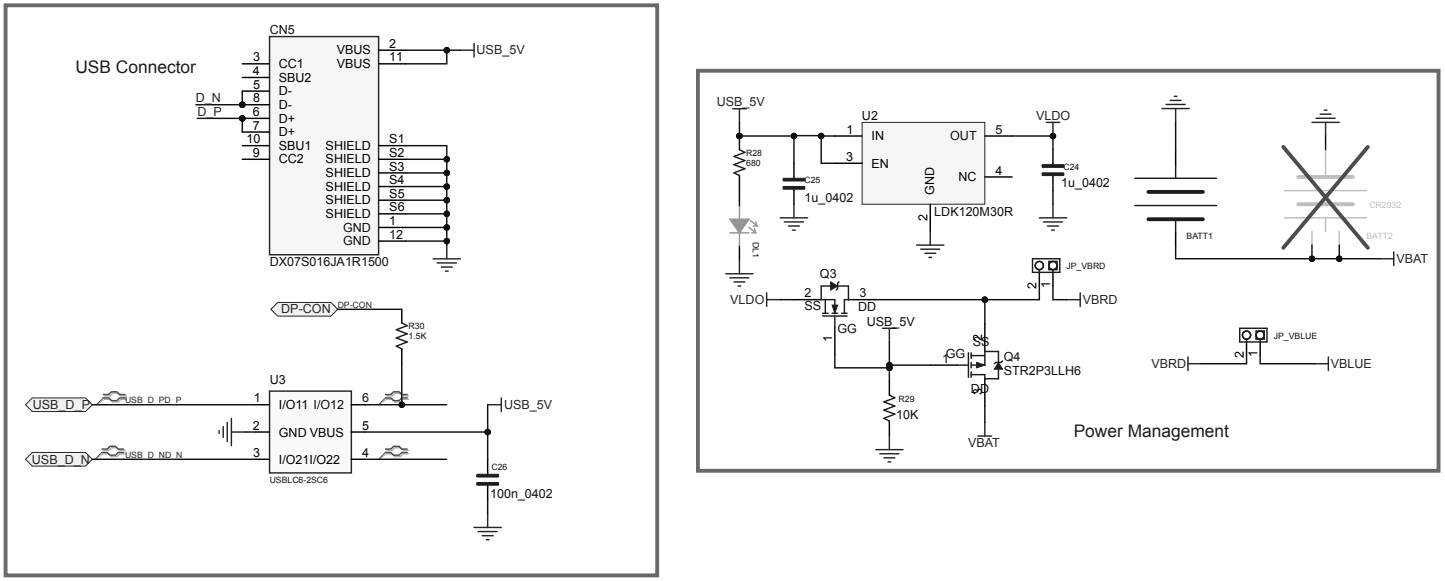
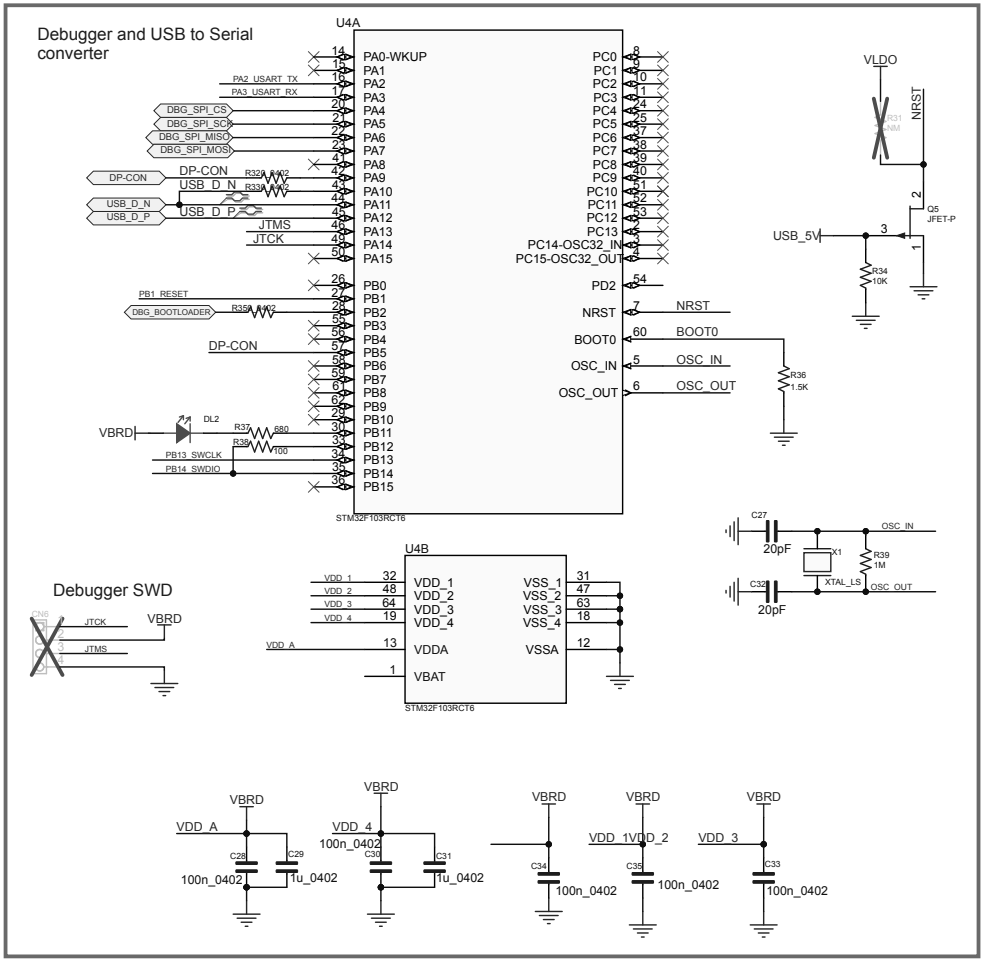


Figure 5. STEVAL-IDB010V1 circuit schematic (5 of 7)



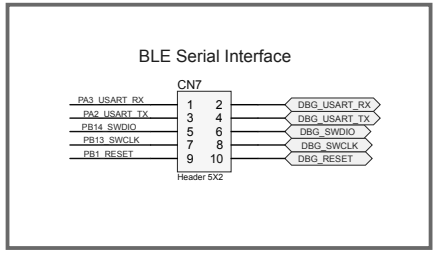


Figure 6. STEVAL-IDB010V1 circuit schematic (6 of 7)

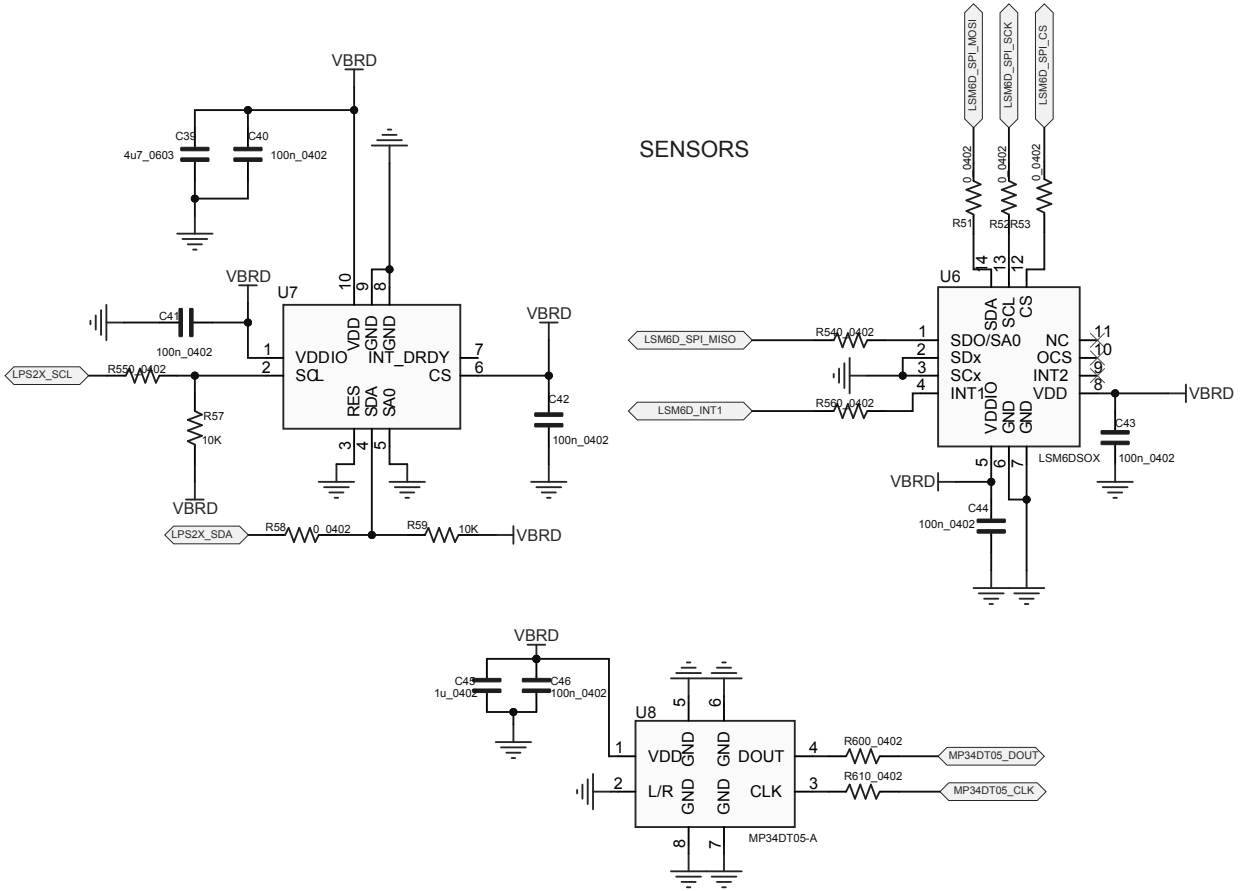
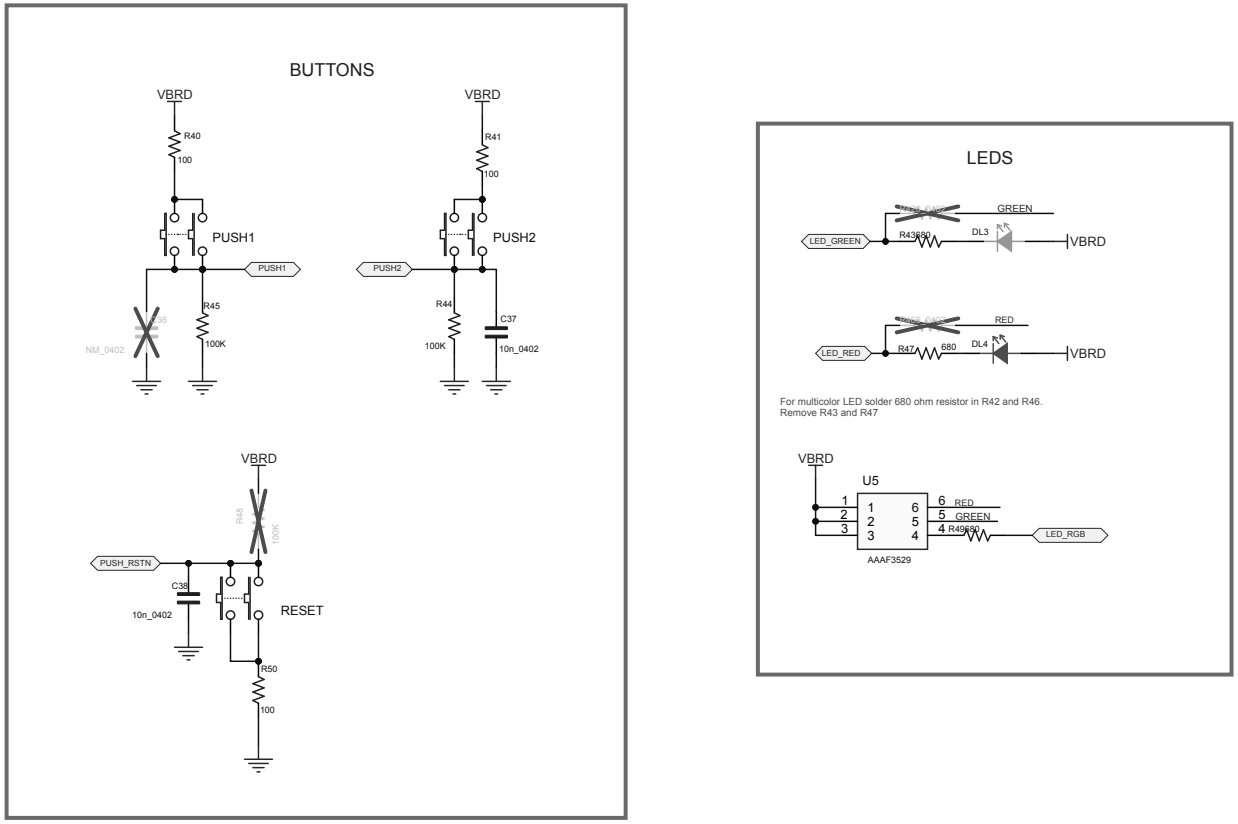


Figure 7. STEVAL-IDB010V1 circuit schematic (7 of 7)



2 Kit versions

Table 1. STEVAL-IDB010V1 versions

PCB version	Schematic diagrams	Bill of materials
STEVAL$IDB010V1A	STEVAL$IDB010V1A schematic diagrams	STEVAL$IDB010V1A bill of materials

1. *This code identifies the STEVAL-IDB010V1 evaluation kit first version. It is printed on the board PCB.*

Revision history

Table 2. **Document revision history**

Date	Revision	Changes
17-May-2022	1	Initial release.