STEVAL-BLUEMIC-1
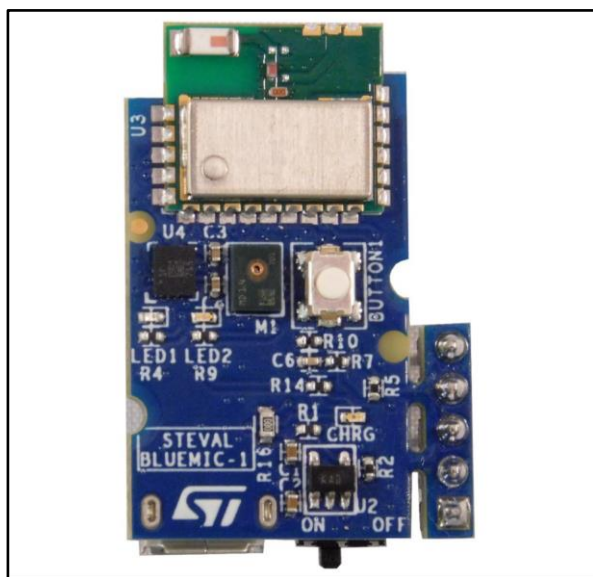
Ultra-low power Bluetooth® low energy microphone based on SPBTLE-1S certified module

Data brief

Features

- Bluetooth® SMART small form factor board based on the SPBTLE-1S module, Bluetooth v4.2 compliant
- On-board SPBTLE-1S module, based on BlueNRG-1, Bluetooth low energy application processor system on chip embedding:
  - an ultra-low power ARM® Cortex®-M0 32-bit core architecture
  - programmable embedded 160 KB Flash
  - 24 KB embedded RAM with data retention
- On-board MP34DT04-C1 digital MEMS microphone
- On-board LSM6DSL: MEMS 3D accelerometer (±2 / ±4 / ±8 / ±16 g) + 3D gyroscope (±125 / ±245 / ±500 / ±1000 / ±2000 dps)

- Voltage supply: 1V8 or 3V3
- Battery or USB powered
- On-board STBC08 linear Li-Ion battery charger
- SWD connector
- Included in the development kit package:
  - STEVAL-BLUEMIC-1
  - Plastic box for housing STEVAL-BLUEMIC-1
  - 100 mAh Li-Ion battery
  - SWD programming cable
- SW development kit for audio and inertial MEMS data streaming over BLE
- ST BlueMS: Android and iOS demo App available in the respective stores

Description

The STEVAL-BLUEMIC-1 evaluation board mounts the SPBTLE-1S Bluetooth® SMART application processor compliant with BT specification v4.2. It supports multiple simultaneous roles and can act as a Bluetooth Smart master and slave device at the same time.

This BLE wireless battery powered solution also embeds digital MEMS microphone MP34DT04-C1 and 3D accelerometer + 3D gyroscope, which render this evaluation board suitable for a wide range of advanced smart applications.

The evaluation board comes with a SW development kit that includes the Bluetooth low energy stack, all the drivers for audio and inertial data acquisition, and button and LED management. A ready-to-use BlueVoice library is included as middleware and a sample application is provided to get you started with voice streaming over BLE to an Android or iOS device, running the ST BlueMS apps.

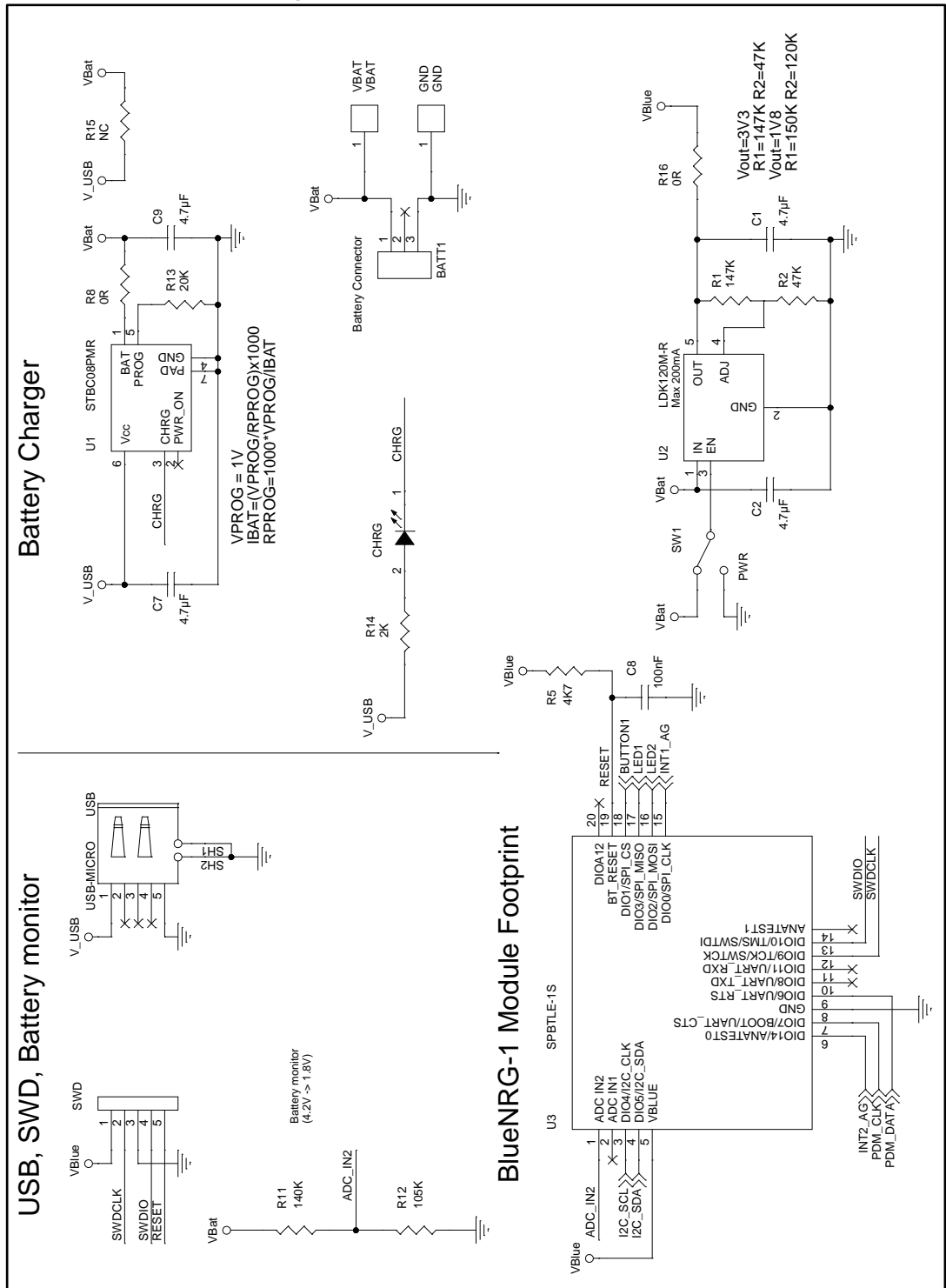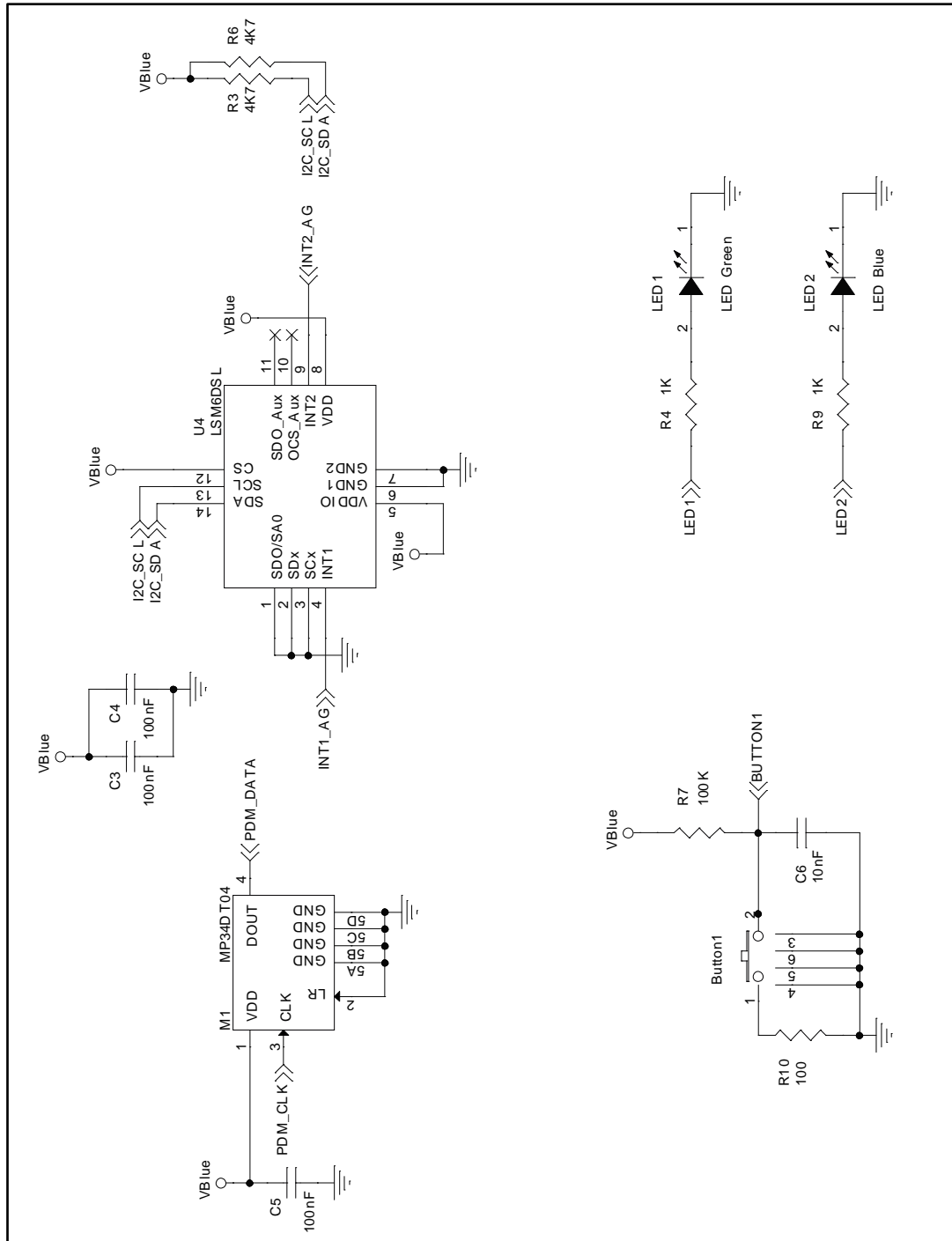*www.st.com*

1   Schematic diagrams

Figure 1: Power and SPBTLE-1S module

Figure 2: MEMS, button and LEDs

2 Revision history

Table 1: Document revision history

Date	Version	Changes
18-Jul-2017	1	Initial release.

IMPORTANT NOTICE – PLEASE READ CAREFULLY