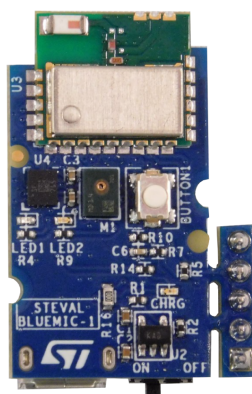


Ultra-low power Bluetooth® low energy microphone based on SPBTLE-1S certified module



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 MP34DT05-A (or MP34DT04-C1 in the first generation board) digital MEMS microphone
- On-board LSM6DSL: MEMS 3D accelerometer ($\pm 2 / \pm 4 / \pm 8 / \pm 16$ g) plus 3D gyroscope ($\pm 125 / \pm 245 / \pm 500 / \pm 1000 / \pm 2000$ dps)
- Voltage supply: 1V8 or 3V3
- Battery or USB powered
- 100 mAh Li-Ion battery
- 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
- CE certified
- RoHS and China RoHS compliant
- Contains Transmitter Module FCC (ID: S9NSPBTLE1S) certified
- Contains Transmitter Module IC (IC: 8976C-SPBTLE1S) certified

Summary table

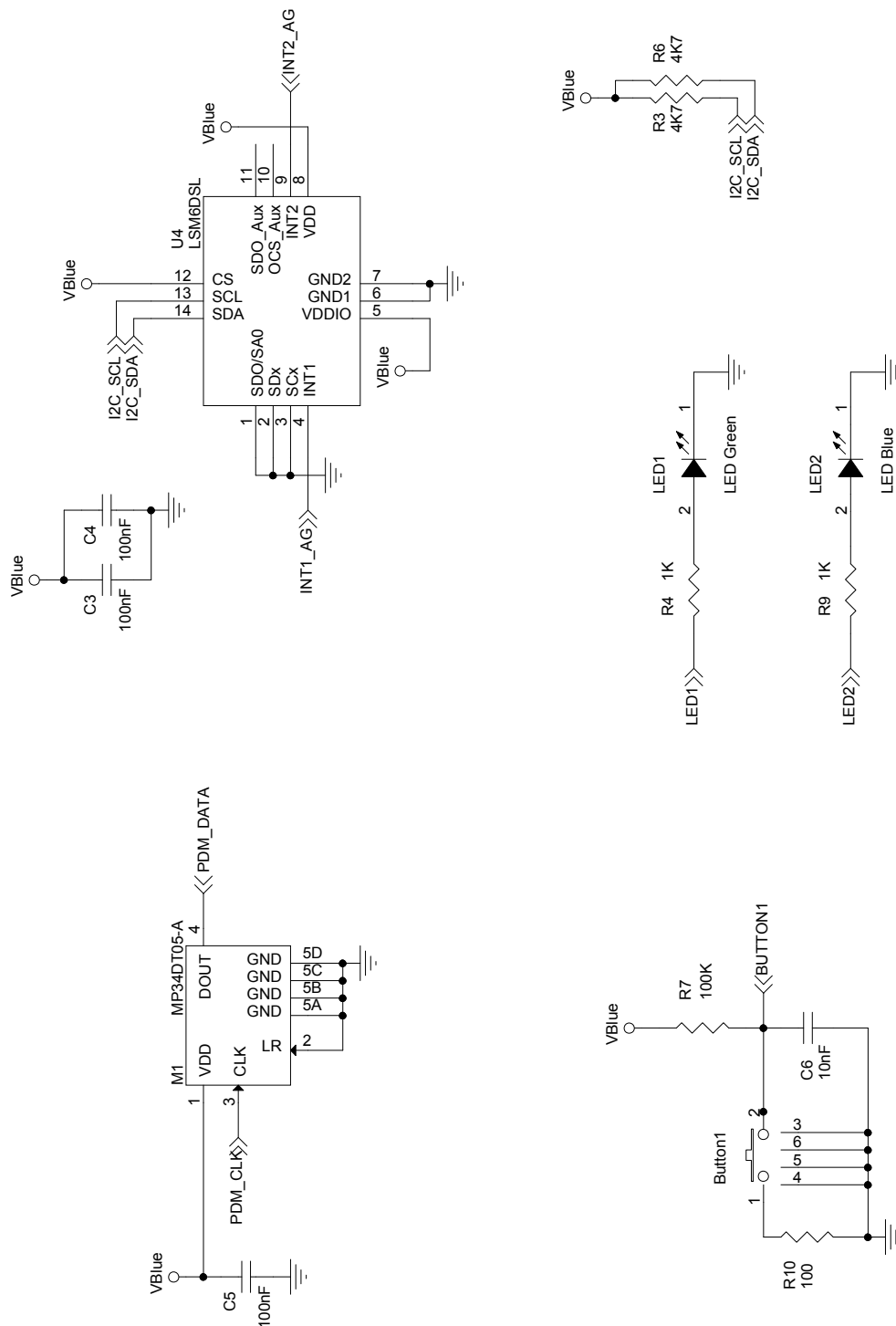
BlueNRG-1 very low power Bluetooth low energy single mode system-on-chip embedding a high performance	BlueNRG-1
STSW-BLUEMIC-1 evaluation software package	STSW-BLUEMIC-1
STSW-BLUENRG1-DK software package	STSW-BLUENRG1-DK
MP34DT05-A ultra-compact, low-power, omnidirectional, digital MEMS microphone	MP34DT05-A
LSM6DSL 3-axis accelerometer and gyroscope	LSM6DSL
STEVAL-BLUEMIC-1 evaluation board	STEVAL-BLUEMIC-1

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 **MP34DT05-A** (or MP34DT04-C1 in the first generation board) 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.

Figure 2. MEMS, button and LEDs


Revision history

Table 1. Document revision history

Date	Version	Changes
18-Jul-2017	1	Initial release.
20-Nov-2017	2	Updated cover page features.
06-Feb-2018	3	Added device summary table in cover page. Update schematic diagrams.

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