X-NUCLEO-CCA02M1

Digital MEMS microphones expansion board based on MP34DT01-M for STM32 Nucleo

Data brief

Description

The X-NUCLEO-CCA02M1 is an evaluation board based on digital MEMS microphones. It is compatible with the ST morpho connector layout, and is designed around STMicroelectronics MP34DT01-M digital microphones. It has two microphones soldered onto the board and is compatible with digital microphone coupon boards such as STEVAL-MKI129Vx and STEVAL-MKI155Vx.

The X-NUCLEO-CCA02M1 allows synchronized acquisition and streaming of up to 4 microphones through I²S, SPI or DFSDM peripherals. It represents a quick and easy solution for the development of microphone-based applications as well as a starting point for audio algorithm implementation.

Features

- 2 on-board MP34DT01-M digital MEMS microphones
- 6 slots to plug in digital microphone coupon boards such as STEVAL-MKI129Vx and STEVAL-MKI155Vx
- Synchronized acquisition and streaming of up to 4 microphones
- Free comprehensive development firmware library and audio capture plus USB streaming sample application which is compatible with STM32Cube firmware
- Compatible with STM32 Nucleo boards
- Equipped with ST morpho connector (upwards and downwards)
- Equipped with Arduino UNO R3 connector (upwards) to allow multiple boards
- RoHS compliant

1 Schematic diagrams

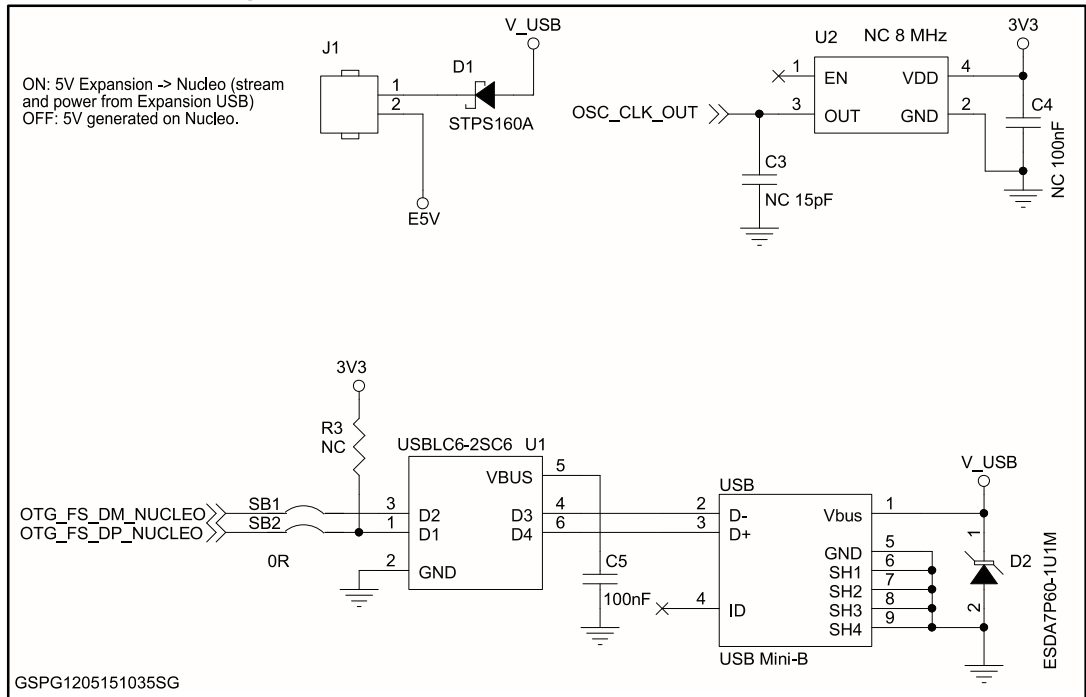**Figure 1: X-NUCLEO-CCA02M1 circuit schematic (Part 1)**

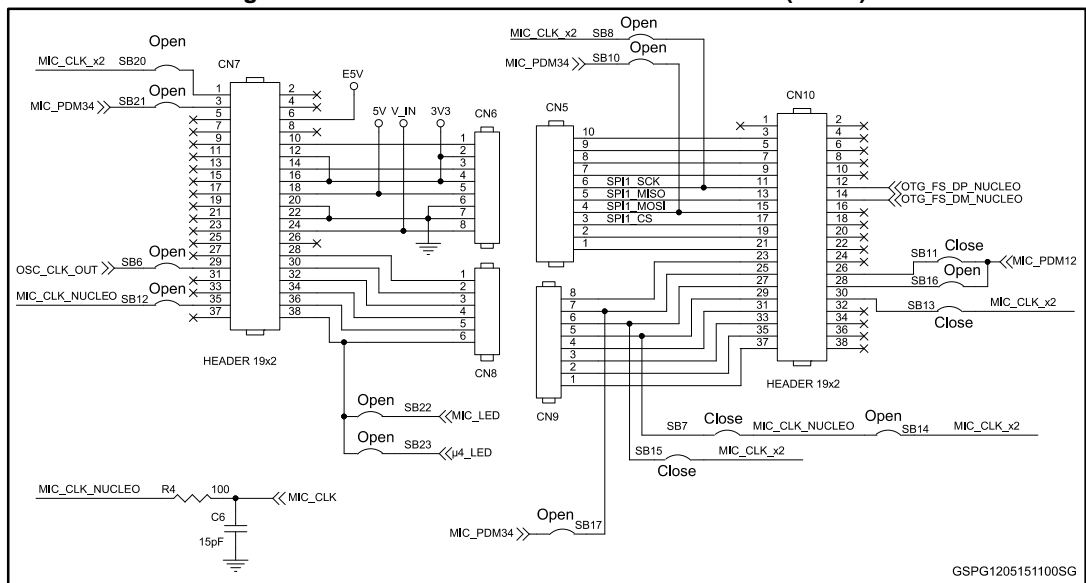**Figure 2: X-NUCLEO-CCA02M1 circuit schematic (Part 2)**

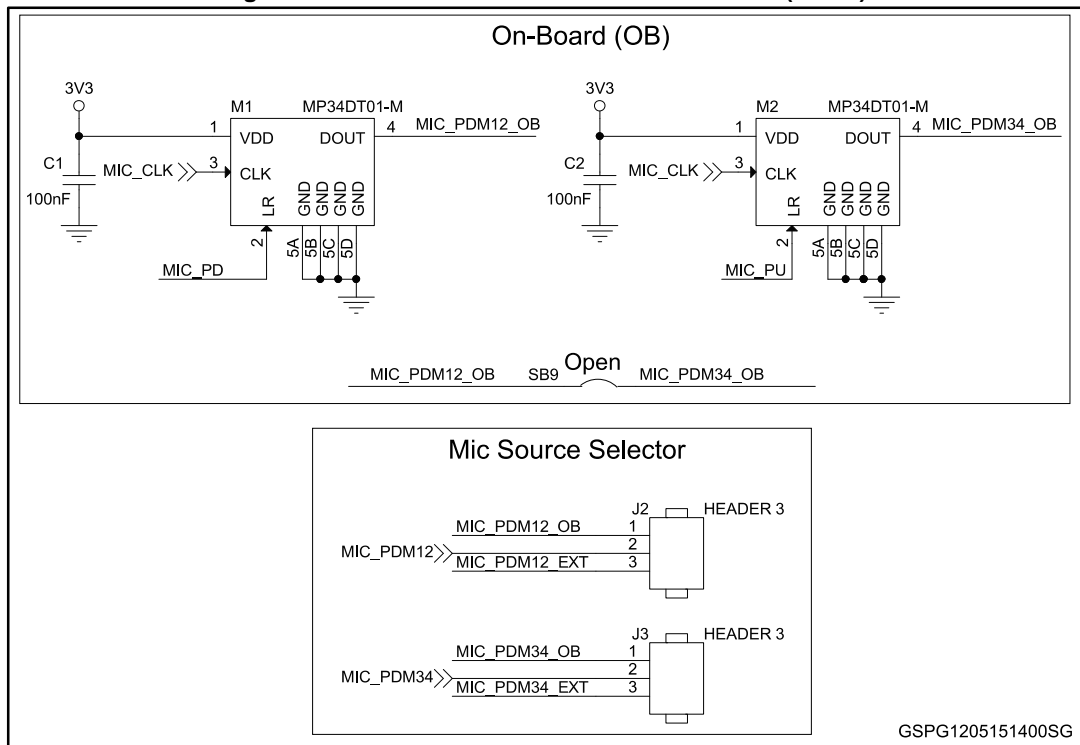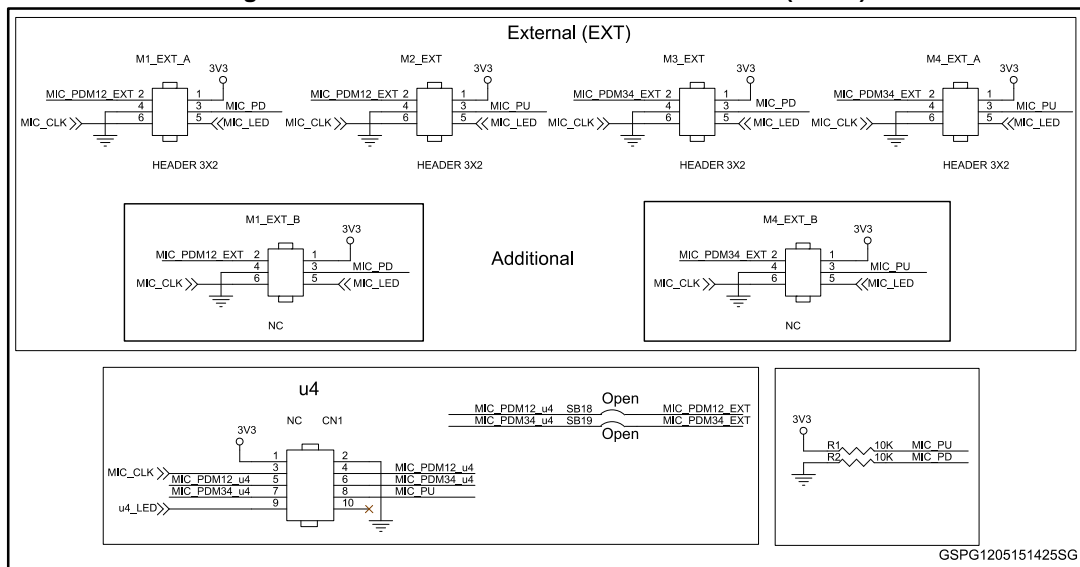**Figure 3: X-NUCLEO-CCA02M1 circuit schematic (Part 3)**

Figure 4: X-NUCLEO-CCA02M1 circuit schematic (Part 4)

2 Revision history

Table 1: Document revision history

Date	Version	Changes
13-May-2015	1	Initial release.
28-Jan-2016	2	Updated cover page *Section "Description"*

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