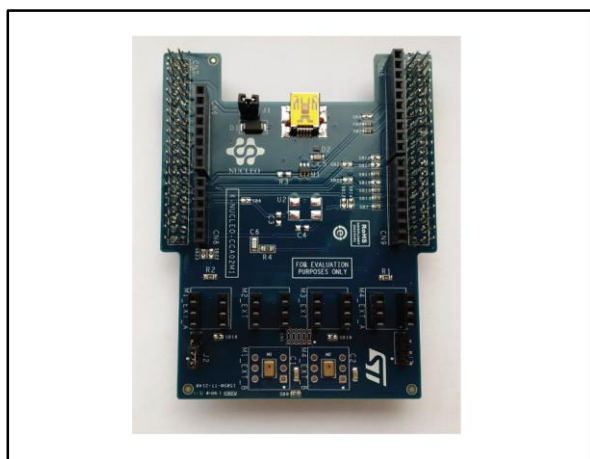


## Digital MEMS microphones expansion board based on MP34DT01-M for STM32 Nucleo

Data brief



### Description

The X-NUCLEO-CCA02M1 is an evaluation board based on digital MEMS microphones. It is compatible with the Morpho connector layout, and it's designed around STMicroelectronics MP34DT01-M digital microphones. It has two microphones soldered on board and it is compatible with digital microphone coupon boards such as STEVAL-MKI129Vx and STEVAL-MKI155Vx. The X-NUCLEO-CCA02M1 allows the acquisition and streaming of up to 2 microphones using the I<sup>2</sup>S peripheral and up to 4 coupon microphones using both I<sup>2</sup>S and SPI. It represents an easy to use and fast solution for the development of microphone based application as well as a starting point for audio algorithm implementation.

### Features

- 2x MP34DT01-M Digital MEMS microphones on board
- 6 slots to plug digital microphone coupon boards such as STEVAL-MKI129Vx and STEVAL-MKI155Vx
- Up to 4 microphone synchronized acquisition and streaming
- Free comprehensive development firmware library and audio capture and USB streaming example application compatible with STM32Cube firmware
- Compatible with STM32 Nucleo boards
- Equipped with Morpho connector (upward and downward)
- Equipped with Arduino UNO R3 connector (upward) to allow multiple board application
- RoHS compliant

# 1 Schematic diagram

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

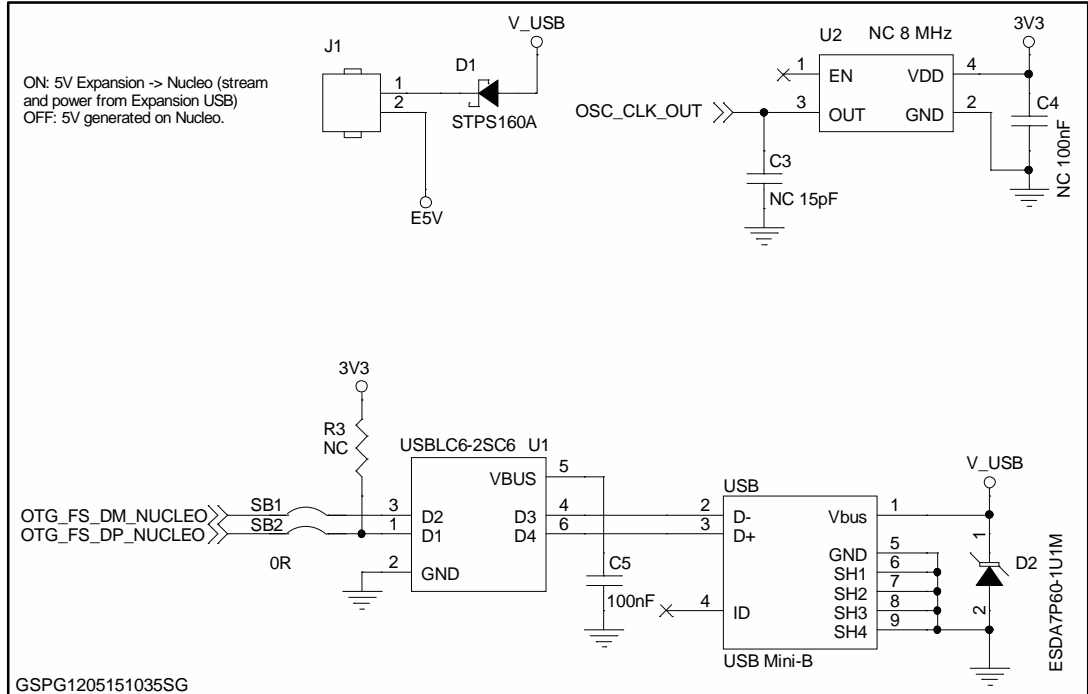


Figure 2: X-NUCLEO-CCA02M1 circuit schematic (Part 2)

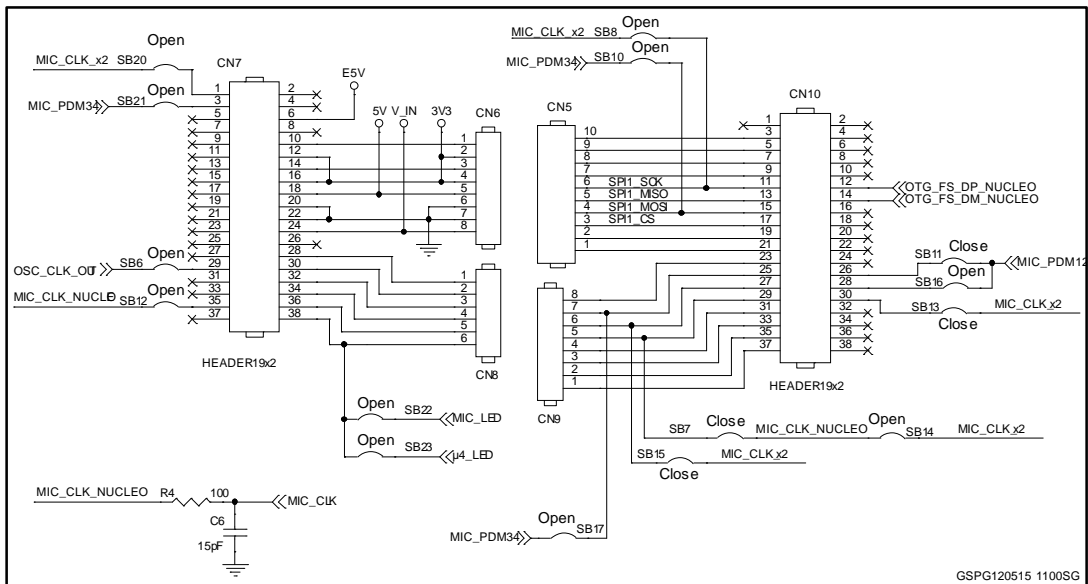


Figure 3: X-NUCLEO-CCA02M1 circuit schematic (Part 3)

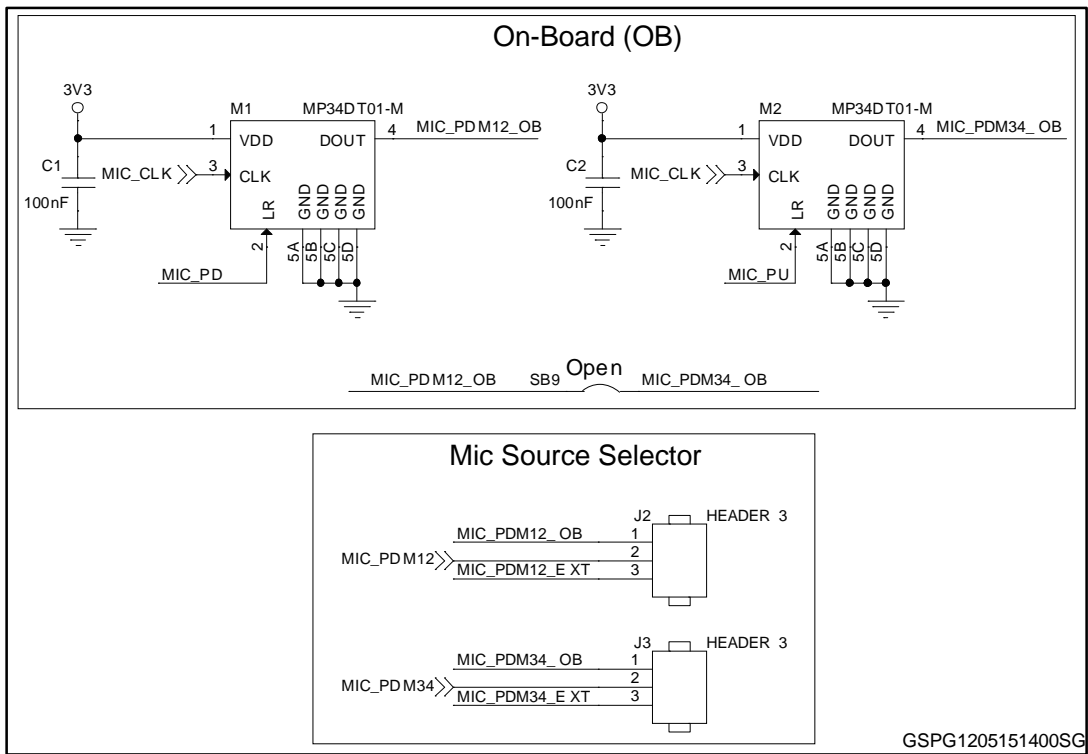
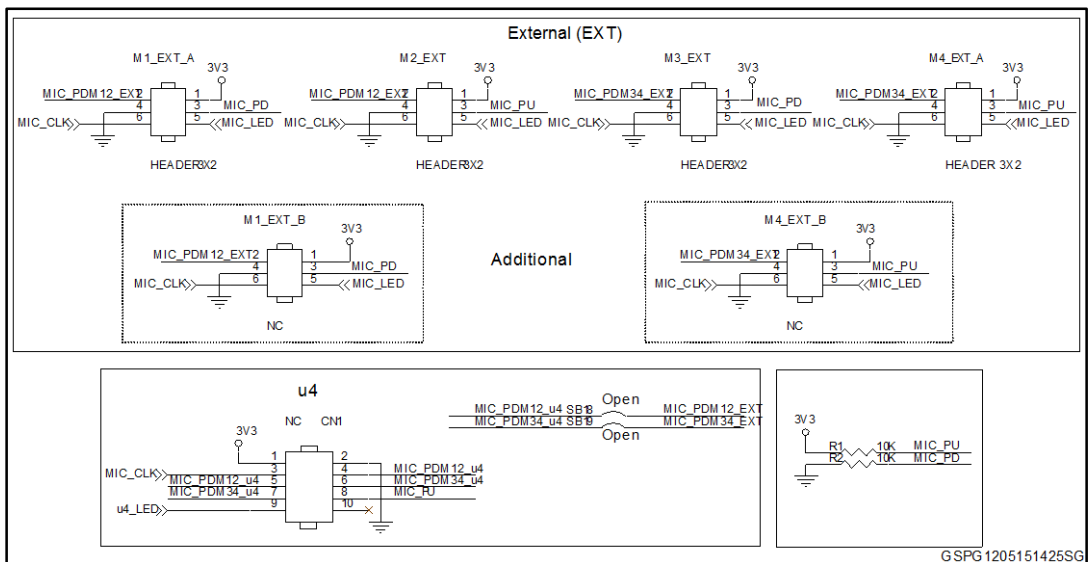


Figure 4: X-NUCLEO-CCA02M1 circuit schematic (Part 4)



## 2 Revision history

Table 1: Document revision history

Date	Version	Changes
13-May-2015	1	Initial release.

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