



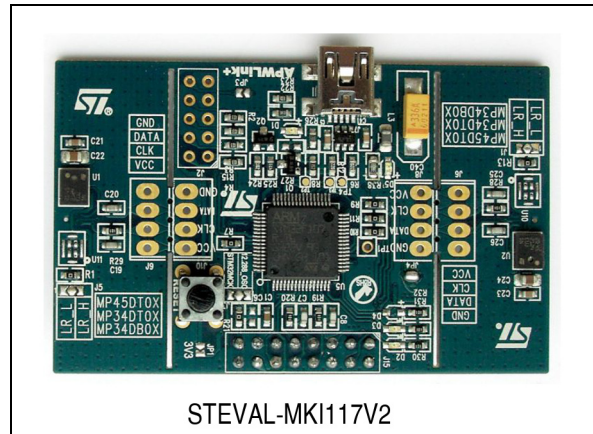
# STEVAL-MKI117V2

## MEMS microphone demonstration board based on the MP45DT02 and STM32

Data brief

### Features

- Powered and connected to PC through USB
- Sound card automatically recognized by the PC as an audio device
- The onboard microphones are digital MEMS devices
- MEMS microphones provide a high frequency data stream (1 to 3.25 MHz) of 1-bit digital samples (PDM technique)
- Audio collected from the microphones is sent to the PC through the USB
- LED status indicator
- RoHS compliant



### Description

The purpose of the STEVAL-MKI117V2 demonstration board is to provide an example of the decoding and streaming of digital MEMS microphone outputs.

The STEVAL-MKI117V2 demonstration board hosts the MP45DT02 (top-port digital microphone), working as a sensor, and the STM32F107RC microcontroller, working as an audio decoder.

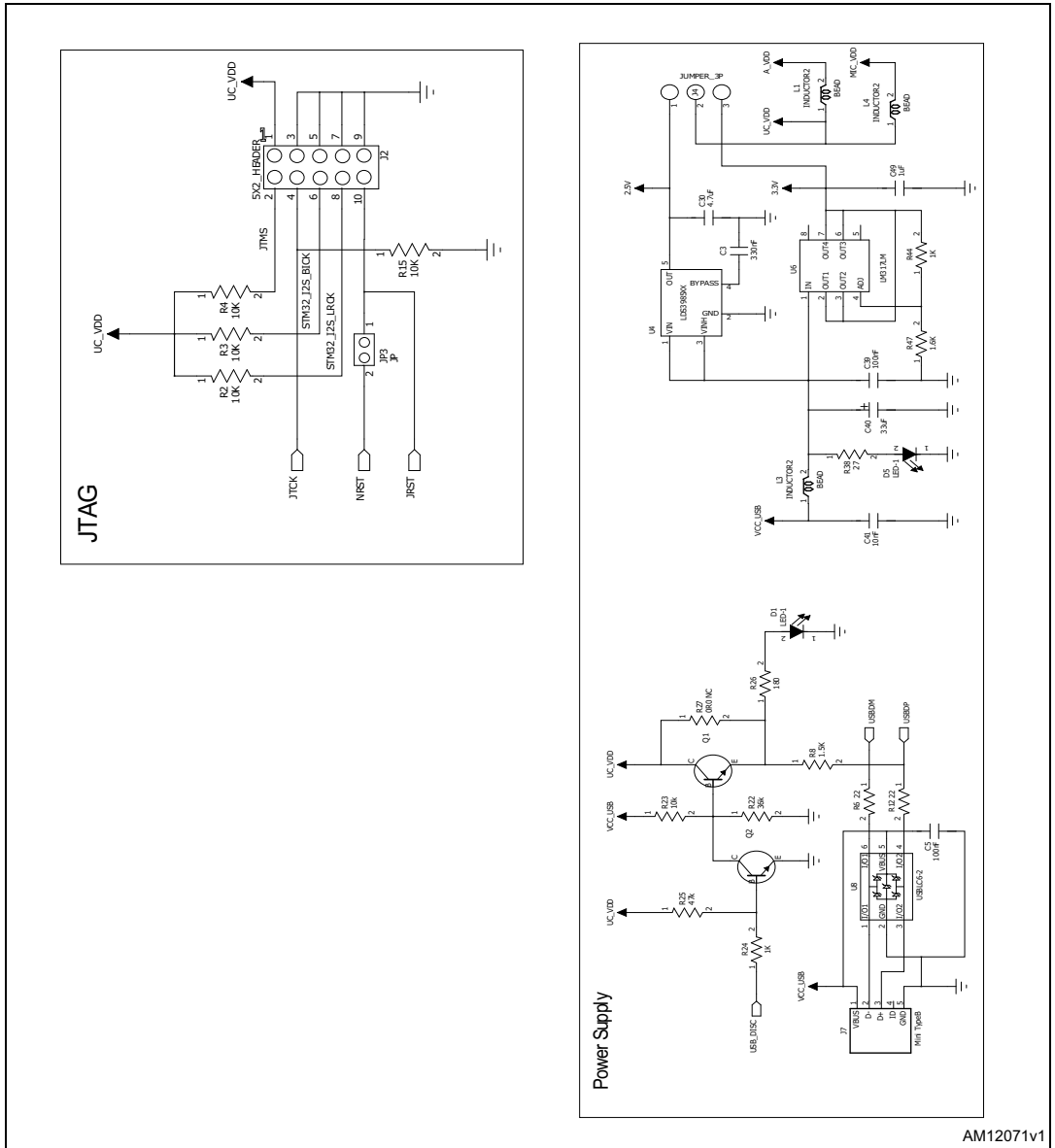
These microphones are analog-to-digital transducers, in other words, they are able to sense sound pressure and convert this signal into a digital signal using the PDM technique.

The STM32 microcontroller decodes the PDM signal coming from the microphones and streams the audio via the USB.

The STEVAL-MKI117V2 demonstration board is a sound card automatically recognized by the PC as an audio device. The connection is made through a USB cable which also supplies the board and then streams the collected audio.

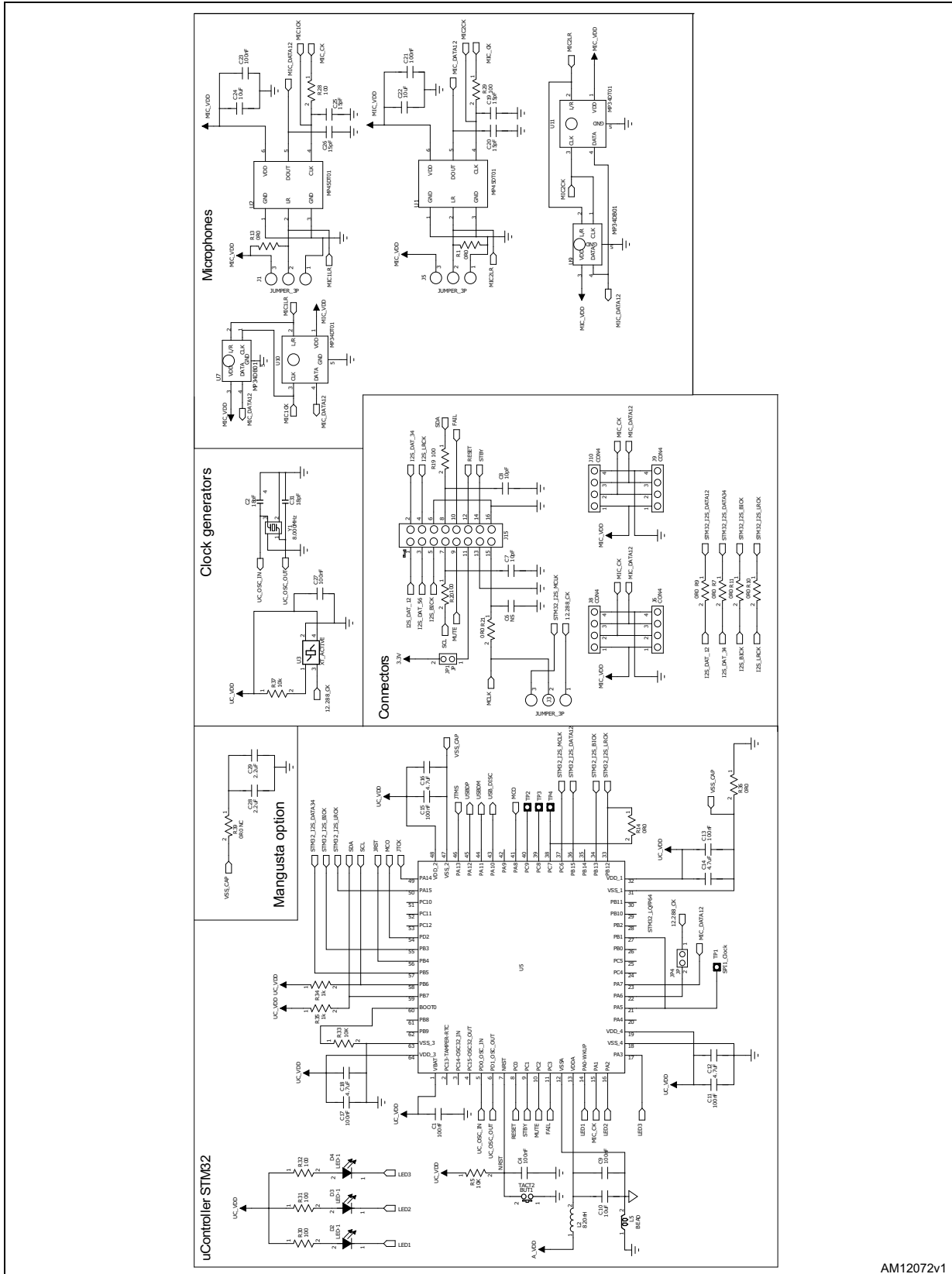
# 1 Schematics

Figure 1. Schematic diagram (1 of 2)



AM12071v1

Figure 2. Schematic diagram (2 of 2)



AM12072v1

## 2 Revision history

Table 1. Document revision history

| Date        | Revision | Changes          |
|-------------|----------|------------------|
| 27-Mar-2012 | 1        | Initial release. |

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