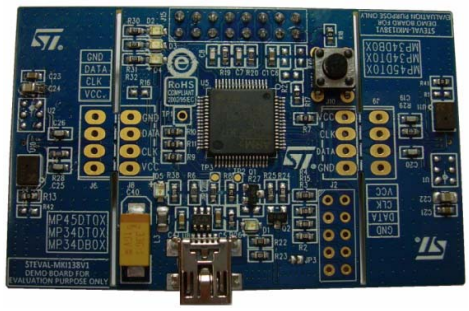
STEVAL-MKI138V1

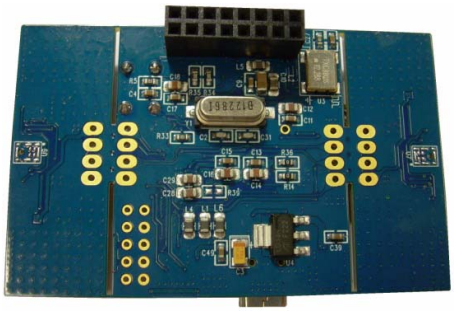
MEMS microphone demonstration board based on the MP34DT01 and STM32

Data brief

Top view



Bottom view



Features

- Powered and connected to PC through USB
- Sound card automatically recognized by the PC as an audio device.
- 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 USB
- LED status indicator
- RoHS compliant

Description

The purpose of STEVAL-MKI138V1 is to provide a demonstration of decoding and streaming of digital MEMS microphone outputs.

The STEVAL-MKI138V1 demonstration board hosts the MP34DT01 (top-port digital microphone), working as a sensor and the STM32F107RC microcontroller, which functions as an audio decoder.

These microphones are analog-to-digital transducers. They are capable of sensing sound pressure and converting it to a digital signal using the PDM technique.

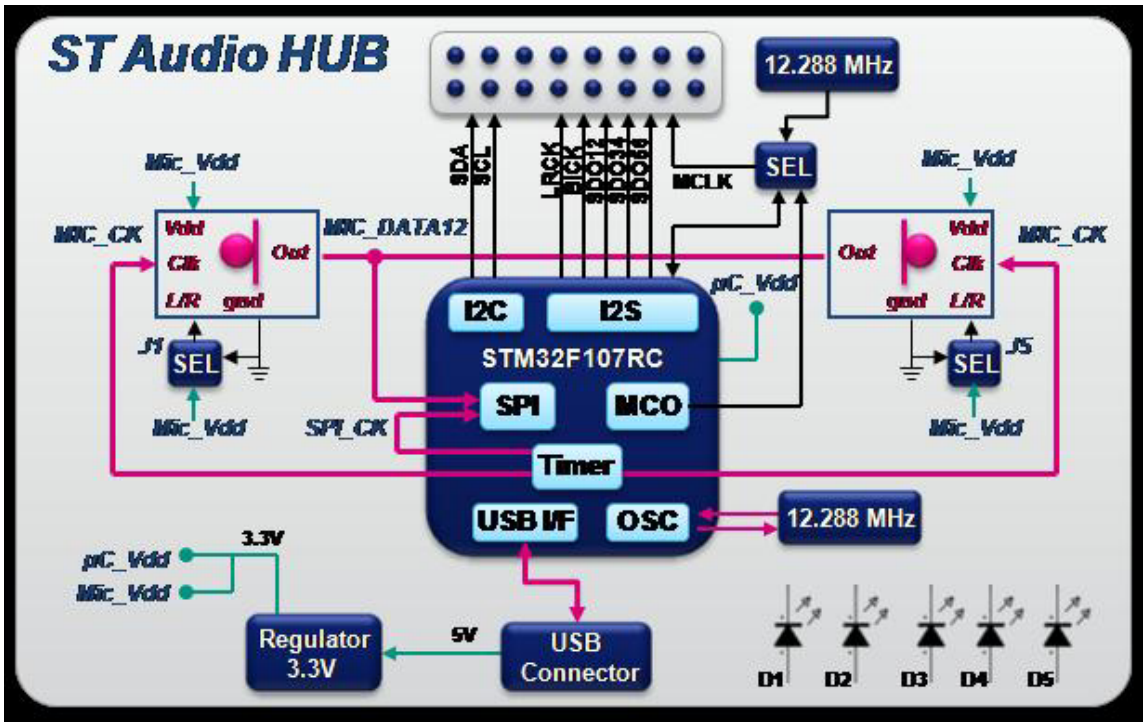
The STM32 microcontroller decodes the PDM signals from the microphones and streams the audio via USB.

The STEVAL-MKI138V1 is a sound card automatically recognized by the PC as an audio device. Connection is made through a USB cable, which both powers the board and streams the audio collected from the microphones to the PC.

It is also possible to use the STEVAL-MKI138V1 as an interface board for other microphone boards (STEVAL-MKI126Vx), in which case use of the APWorkbench software tool is recommended.

1 Application block diagram

Figure 1. Microphone USB demonstration board block diagram



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
01-Mar-2013	1	Initial release.