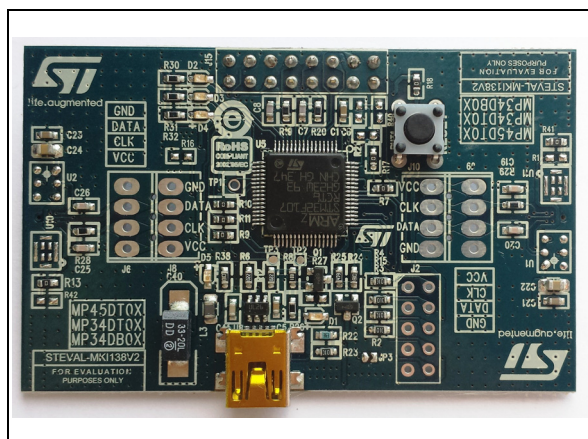


STAudioHub USB interface board based on the MP34DB01 and STM32

Data brief



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

The STEVAL-MKI138V2 evaluation board is a sound card that is automatically recognized by the PC as an audio device.

Connection is made through a USB cable, which also supplies the board and then streams the audio collected from the microphones to the PC.

It can also be used as an interface board for other microphone PCBs (STEVAL-MKI126Vx), in which case it is recommended to use the APWorkbench software tool.

Features

- 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 (powered and connected to PC through USB)
- LED status indicator
- RoHS compliant

Description

The purpose of STEVAL-MKI138V2 evaluation board is to provide an example of decoding and streaming of digital MEMS microphone outputs.

The STEVAL-MKI138V2 evaluation board hosts the MP34DB01 (top-port digital microphone), working as a sensor and the STM32F107RC microcontroller as an audio decoder.

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

1 Schematic diagrams

Figure 1. Power supply

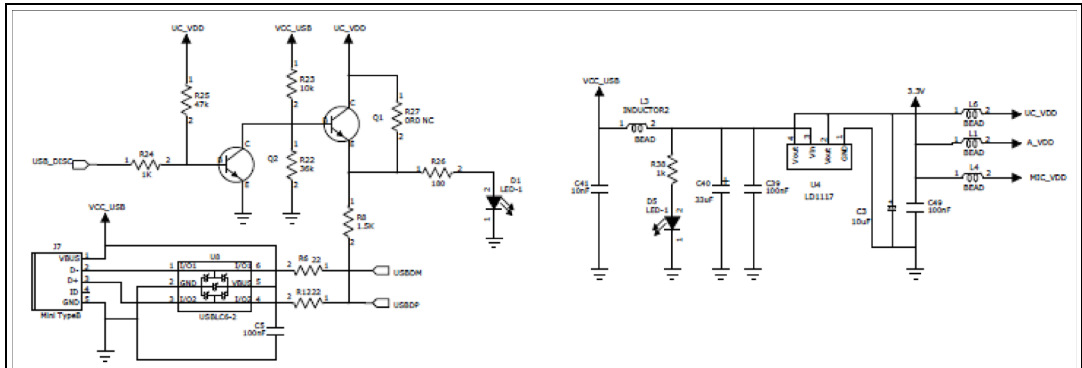


Figure 2. JTAG

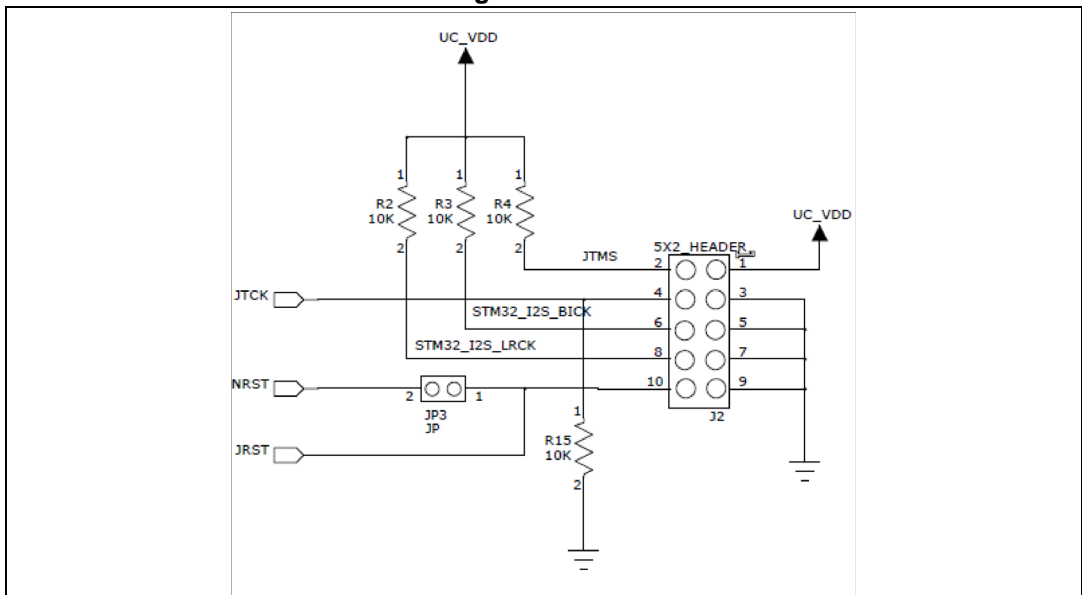


Figure 3. STM32 microcontroller

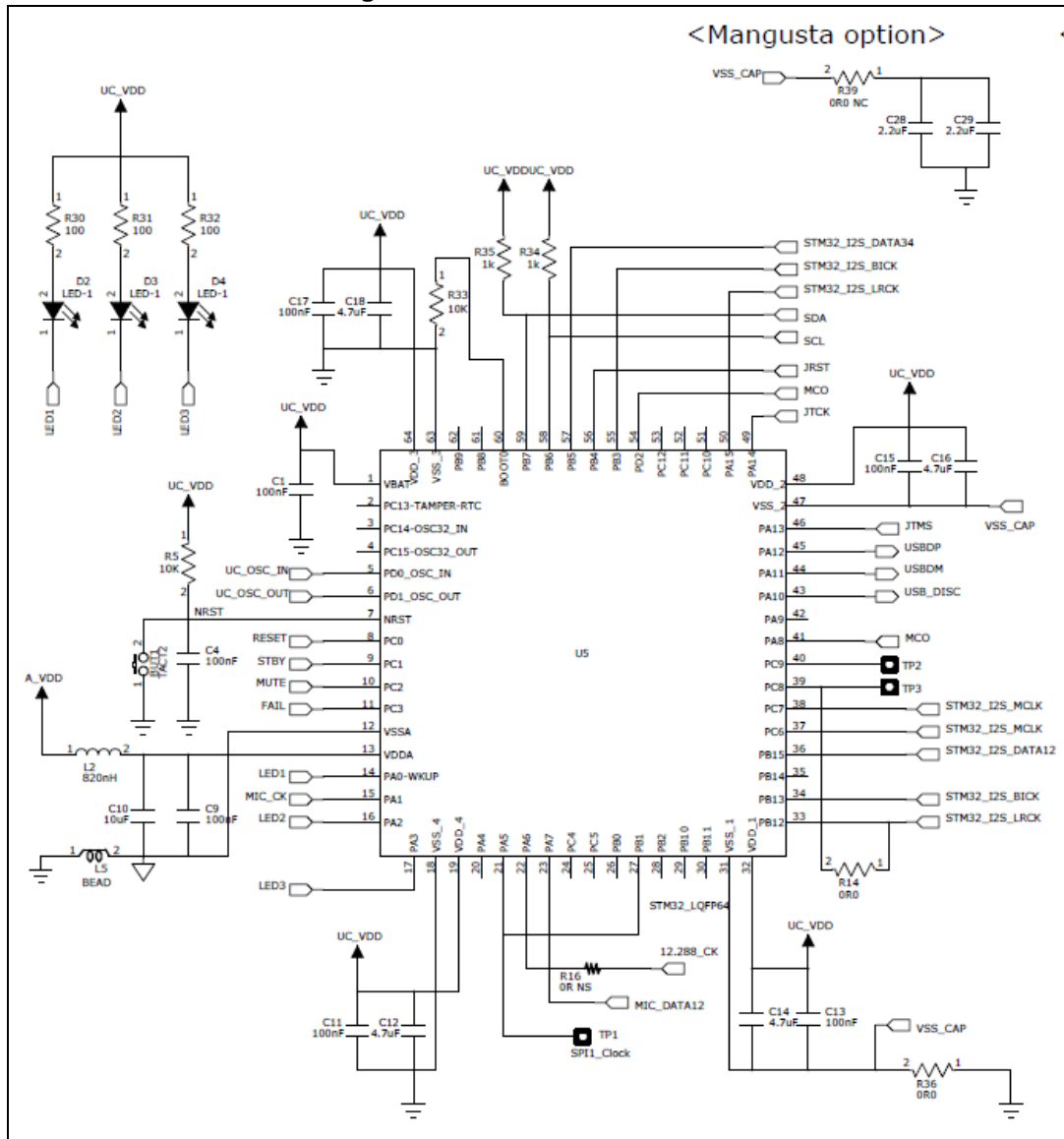


Figure 4. Clock generators

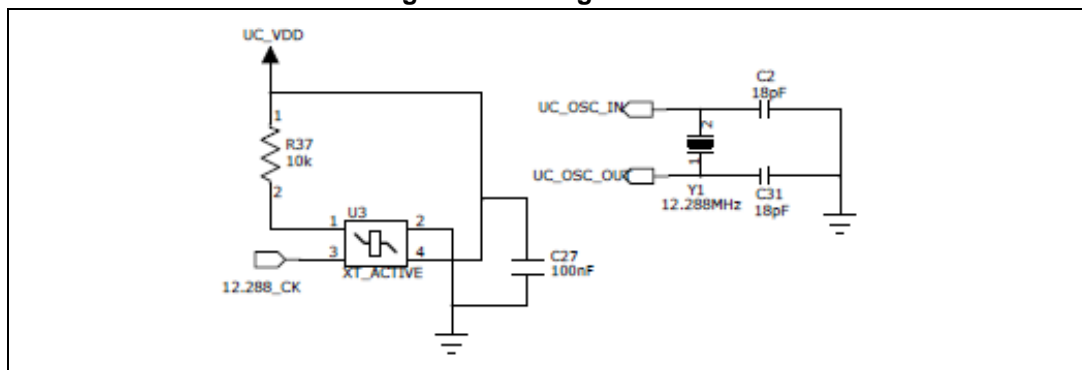


Figure 5. Connectors

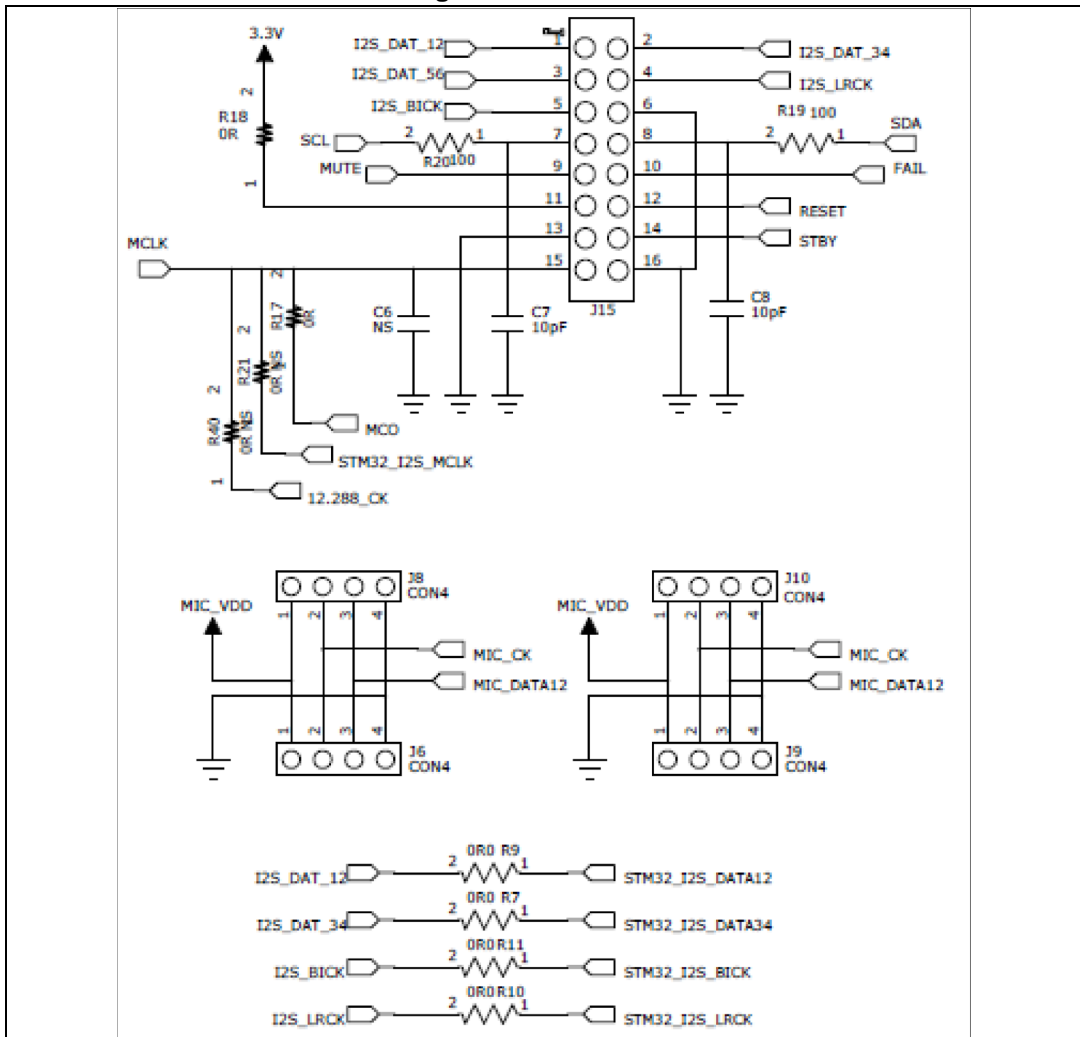
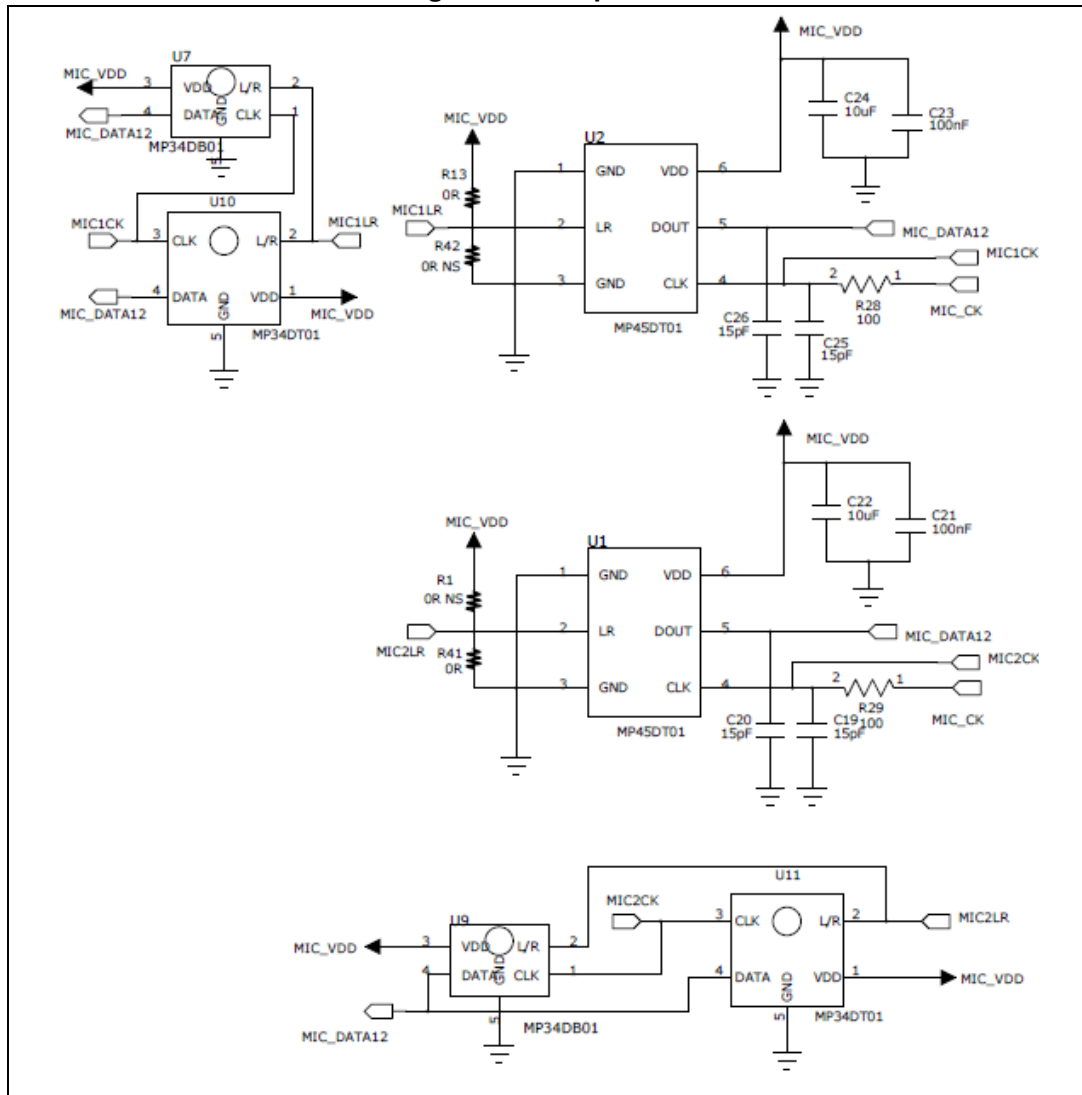


Figure 6. Microphones



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
29-Jul-2014	1	Initial release.

IMPORTANT NOTICE – PLEASE READ CAREFULLY

STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST's terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers' products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2014 STMicroelectronics – All rights reserved



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Audio IC Development Tools](#) category:

Click to view products by [STMicroelectronics](#) manufacturer:

Other Similar products are found below :

[1580/5171-DEMO](#) [LM4906MMBD](#) [LM4935RLEVAL](#) [LME49710NABD](#) [LME49740MABD](#) [LME49740NABD](#) [LME49860MABD](#)
[LME49870MABD](#) [EVAL-AD1940AZ](#) [EVAL-ADAU1401AEBZ](#) [SRC4382EVM-PDK](#) [TLV320AIC36EVM-K](#) [TPA5052EVM](#)
[TPA6136A2YFFEVM](#) [LM4562HABD](#) [LM4906LDBD](#) [LM4923LQBD](#) [LM4992SDBD](#) [LME49710MABD](#) [LME49713MABD](#)
[LME49860NABD](#) [MAX98300EVKIT+WLP](#) [MAX9738EVKIT+](#) [MAX98358EVSYS#WLP](#) [MAX9723DEVKIT+](#) [EVAL-ADAV803EBZ](#)
[MAX9890EVKIT+](#) [LM4809MBD](#) [LM4674TLBD](#) [CDBWM8725-M-1](#) [CDBWM8533-M-1](#) [EV_IC3-40740-FX](#) [SDCK3](#) [PIM524](#)
[MAX9723DEVCMODU+](#) [DEV-17737](#) [EVALAHNBIM69D130V01TOBO1](#) [1063](#) [TAS5756MDCAEVM](#) [TLV320ADC3101EVM-K](#)
[TLV320AIC3007EVM-K](#) [TLV320AIC3105EVM-K](#) [TLV320AIC3253EVM-K](#) [TPA2016D2EVM](#) [TPA2035D1EVM](#) [TPA2051D3YFFEVM](#)
[TPA3107D2EVM](#) [TPA6120A2EVM](#) [TPA6132A2EVM2](#) [MIKROE-2454](#)