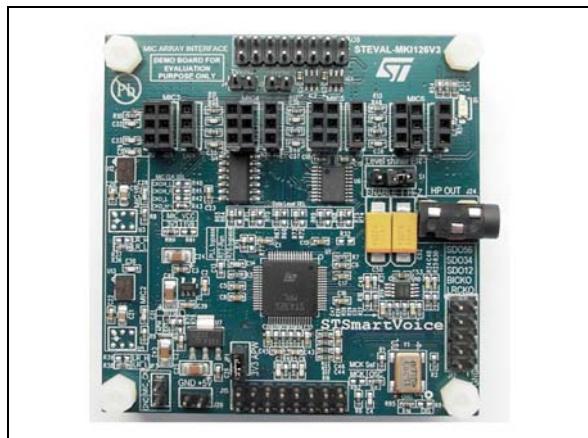


STSmartVoice demonstration board based on MP34DT01

Data brief



Features

- 2 on-board MEMS MP34DT01 microphones on board
- Capable of driving up to 6 digital MEMS microphones
- 3 independent I²S outputs
- Up to 10 independent 32-bit user programmable biquads per channel
- The demonstration board is fully configurable with:
 - STEVAL-MKI129V1/V2/V3
 - STEVAL-MKI131V1/V2/V3
 - STEVAL-MKI116V1
 - STEVAL-MKI117V1/V2
 - STEVAL-CCA035V1
- Controllable via APWorkbench software suite
- RoHS compliant

Description

The STEVAL-MKI126V3 demonstration board allows the connection of up to six microphones using the sockets provided, or through the connection of a dedicated six-microphone array.

The digital interface of the board allows the interfacing of the MIC output to the most widely used audio receivers and digital amplifiers, or permits evaluation of the MIC with generic audio measurement equipment. The filtered PWM signals allow the connection of a headset to listen to audio received through the microphones.

The fully digital path ensures a high level of processing with sound preconditioning, filtering and voice enhancement.

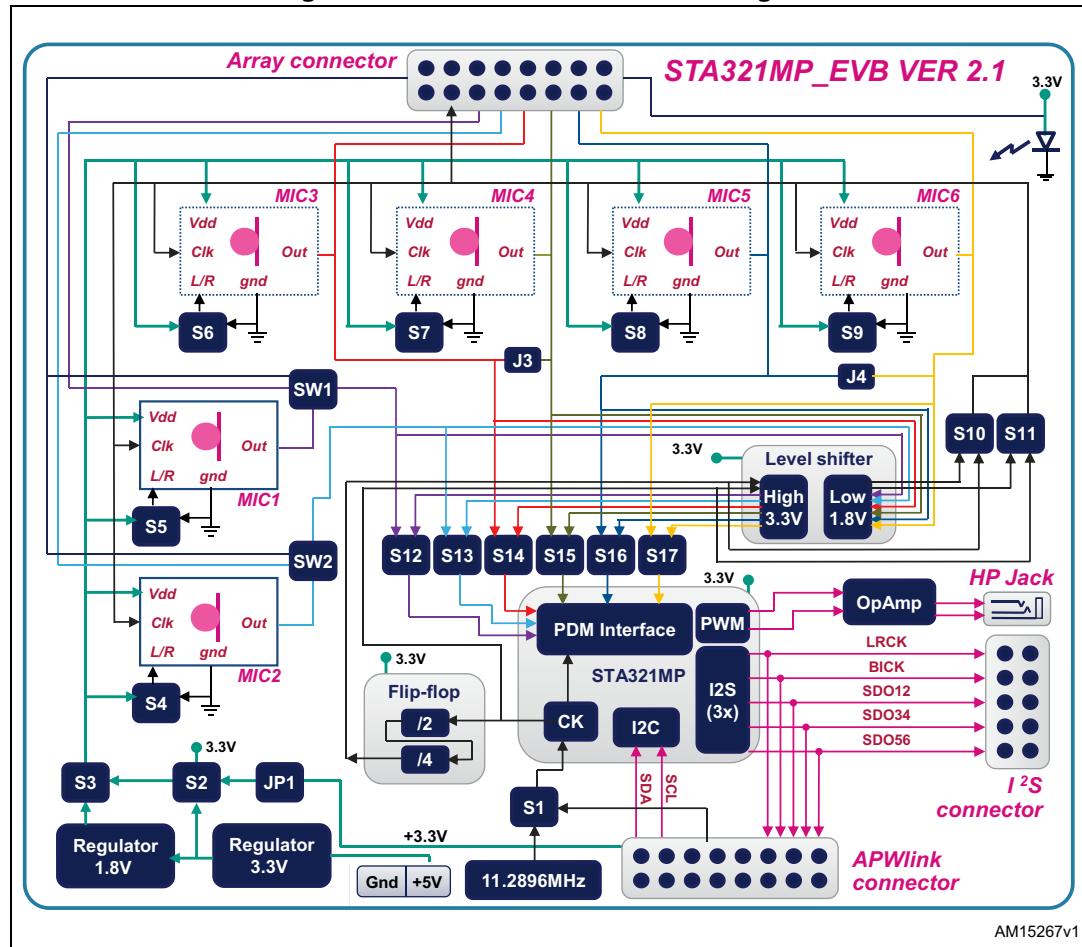
The main function of the STEVAL-MKI126V3 is to convert the PDM signals from the microphones into more common I²S and PWM signals.

The I²S signal is routed both on a general and interface connector. appropriately filtered PWM signals provide an analog interface.

The STEVAL-MKI126V3 is equipped with two MP34DT01 microphones and an STA321MPL scalable digital microphone processor.

1 Block diagram

Figure 1. STEVAL-MKI126V3 block diagram



2 Schematic diagrams

Figure 2. Schematic diagram 1/5

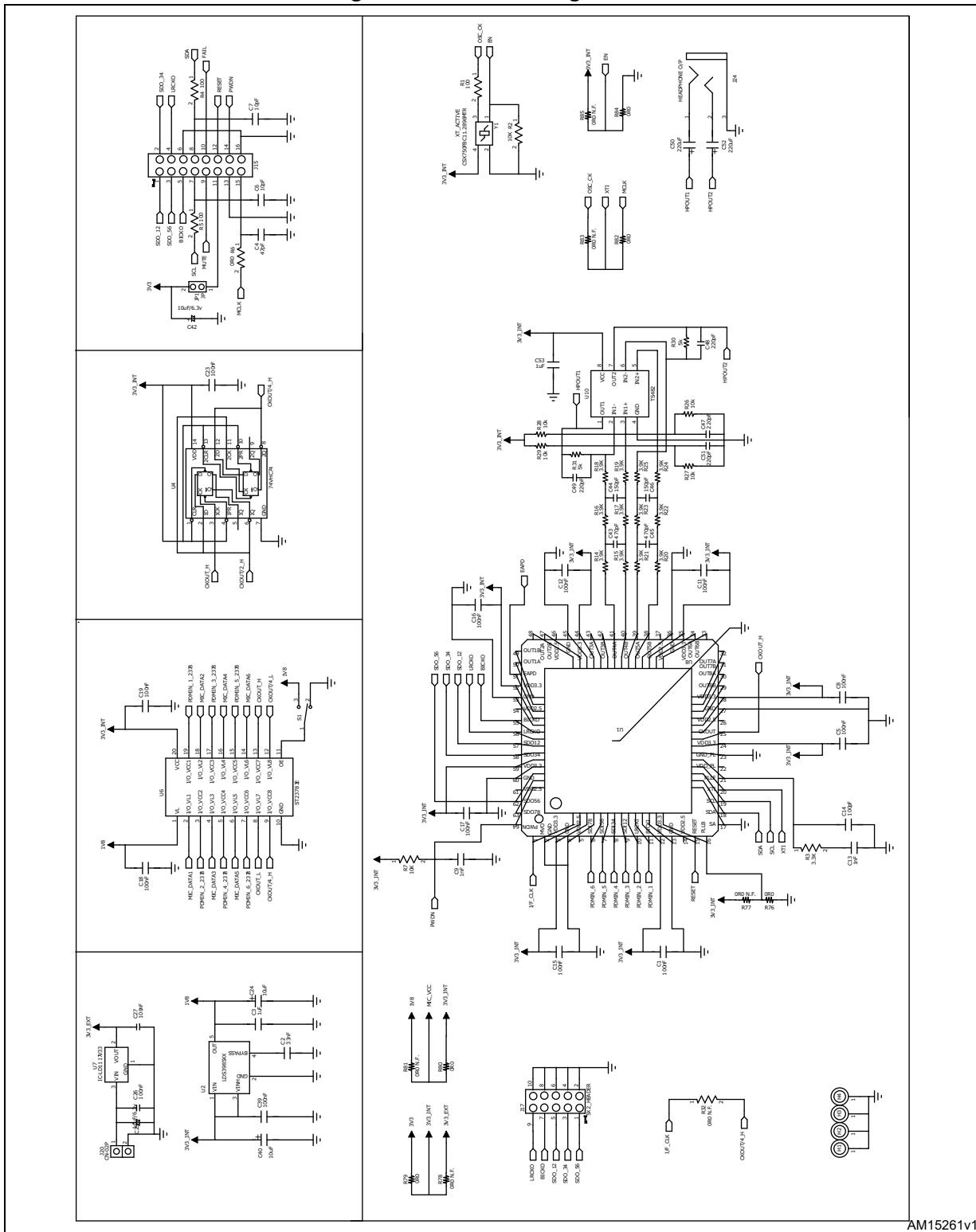


Figure 3. Schematic diagram 2/5

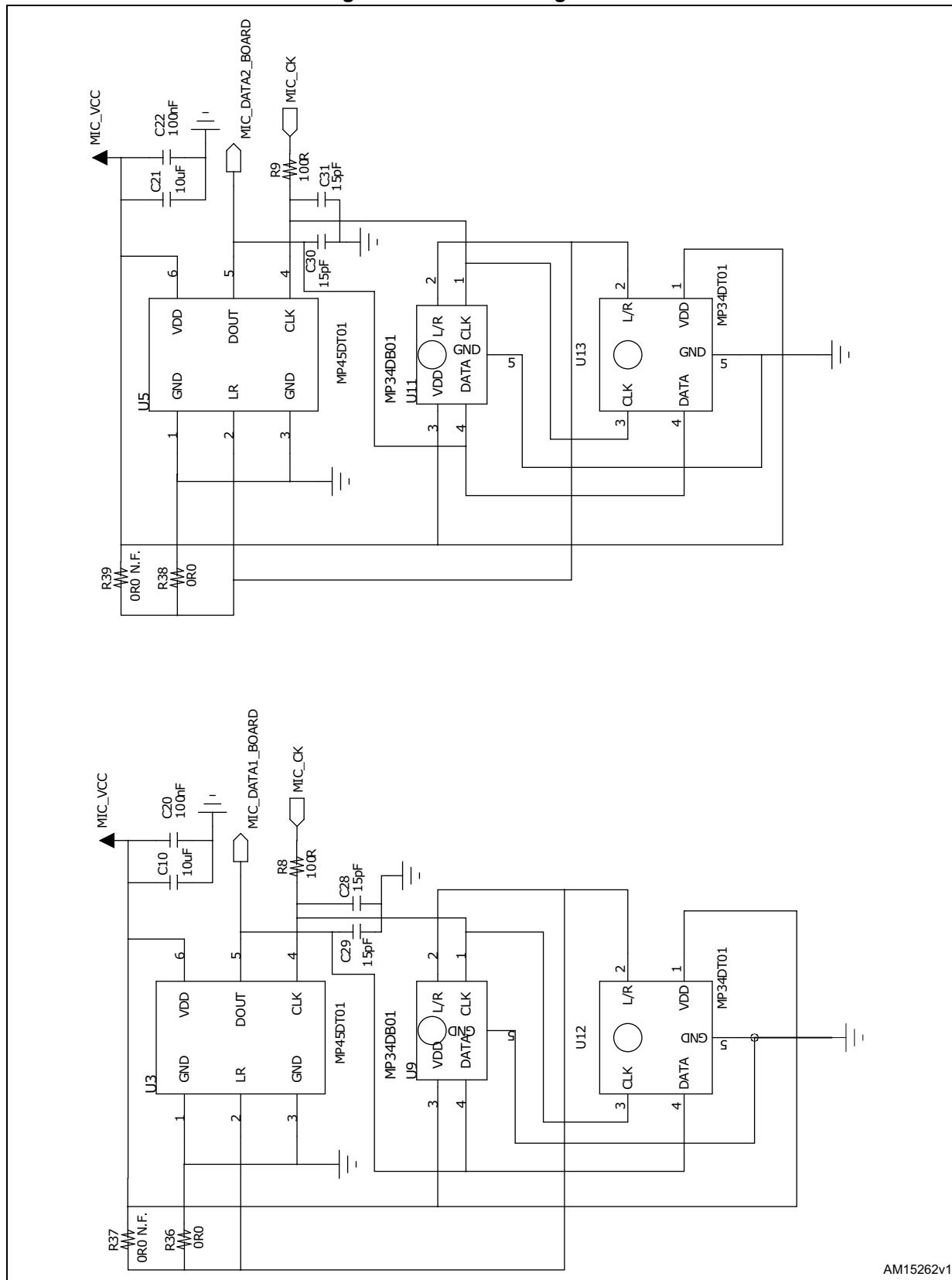
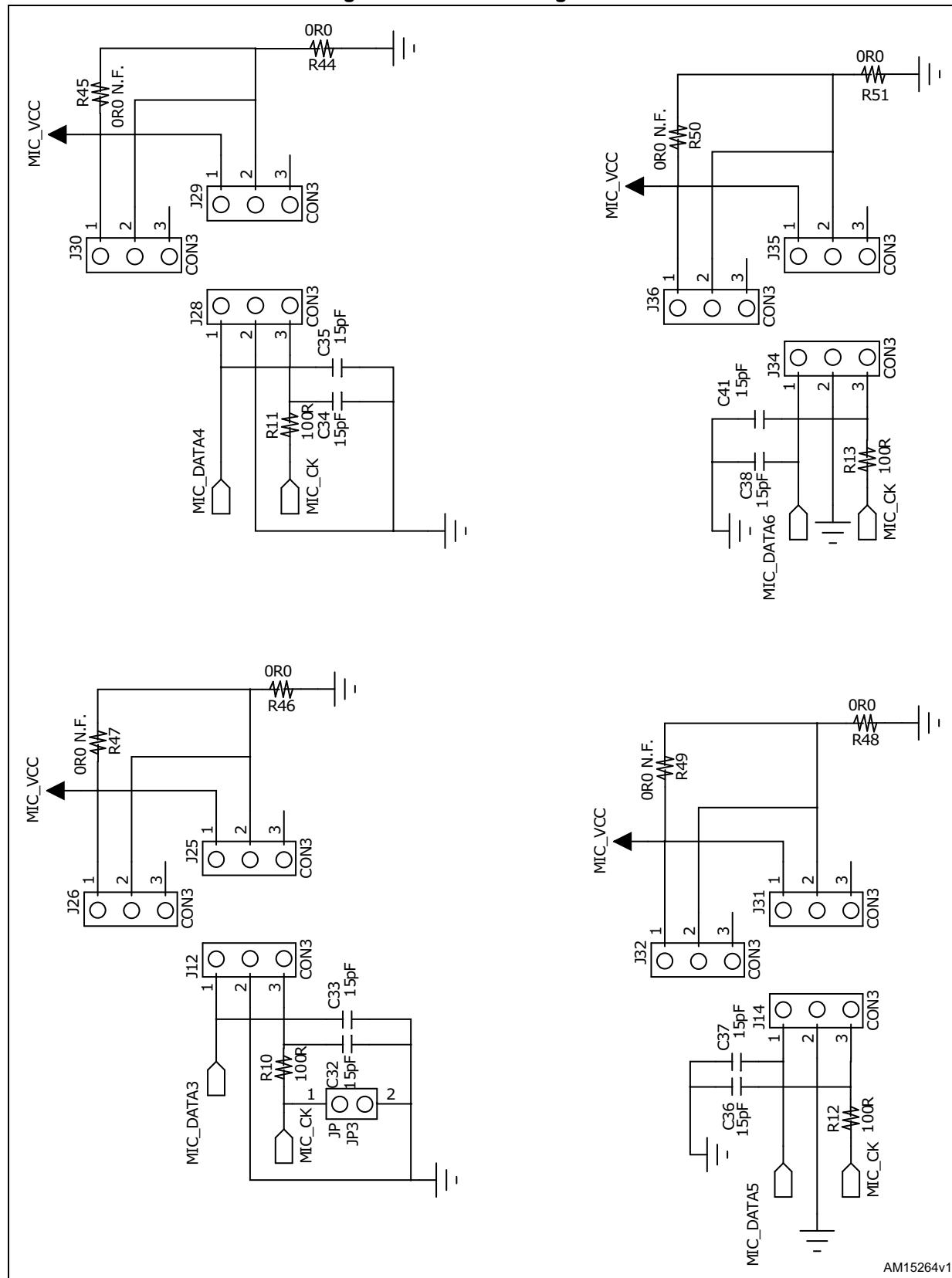


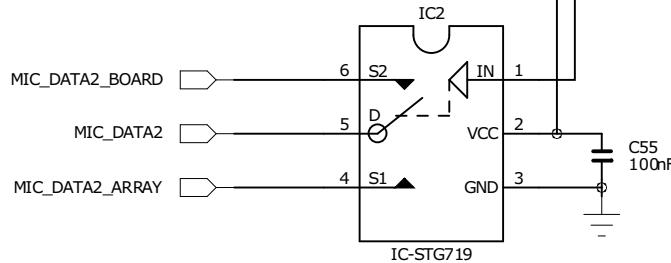
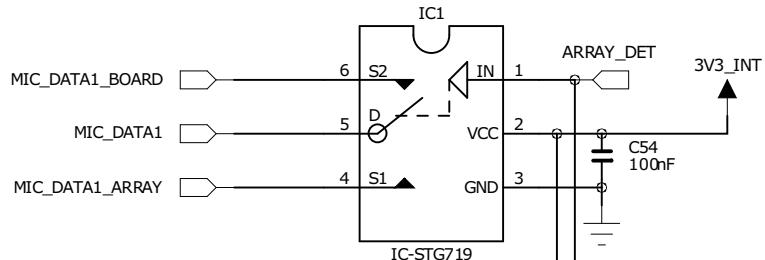
Figure 4. Schematic diagram 3/5



AM15264v1

Figure 5. Schematic diagram 4/5

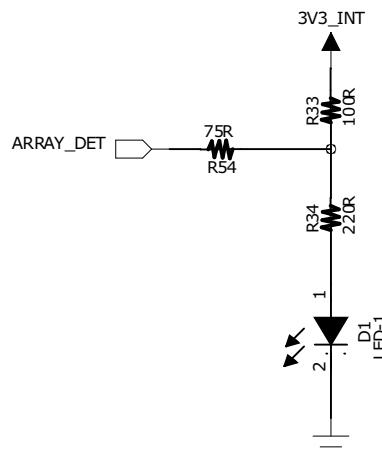
Mic Array / on board Mic switch



J3-1 — MIC_DATA3
 J3-2 — MIC_DATA4

J4-1 — MIC_DATA5
 J4-2 — MIC_DATA6

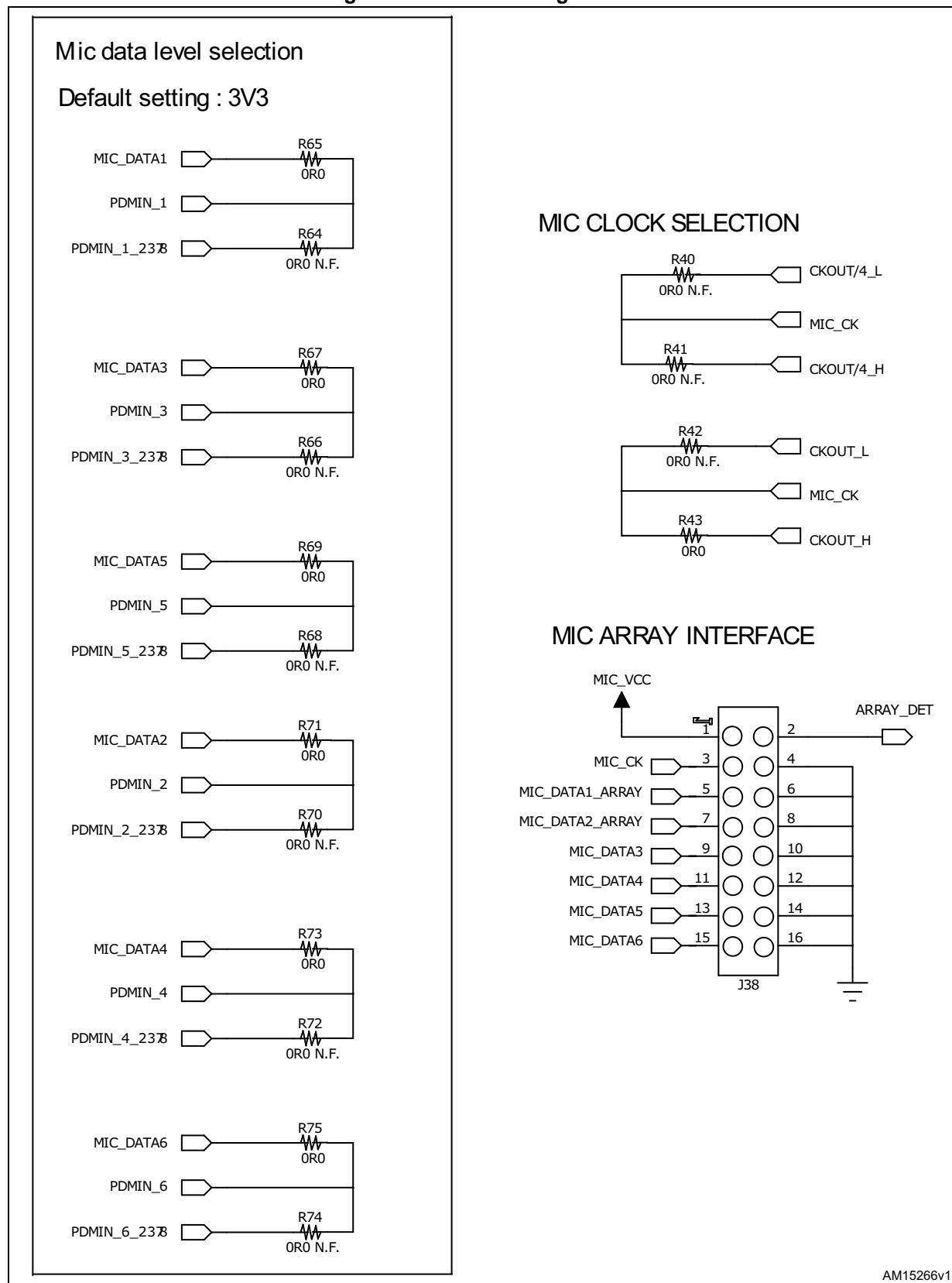
MIC Input Selection Indicator



LED On: On board Mic
 LED Off: Mic Array

AM15265v1

Figure 6. Schematic diagram 5/5



AM15266v1

3 Revision history

Table 1. Document revision history

Date	Revision	Changes
18-Sep-2012	1	Initial release.
24-Jun-2013	3	Title has been changed.

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