

COMPONENTS

EVAL-ADAQ7980SDZ

EVAL-SDP-CB1Z

(2) EVAL-ADXL100xZ

3" Speaker with 3.5mm Audio Jack

Speaker-to-Sensor Fixture

Short Connectors

Long Connectors

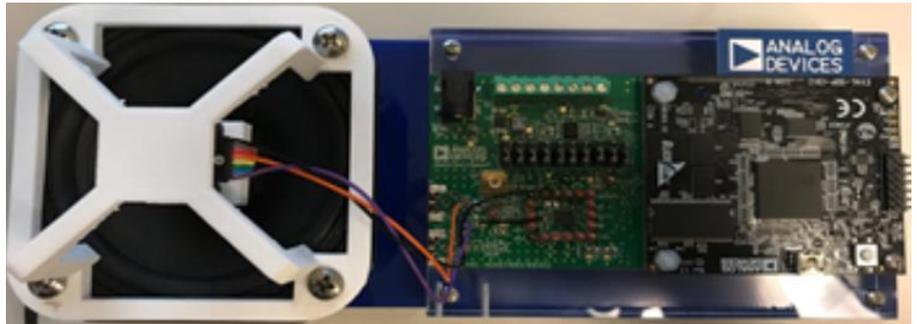
Plastic Mounting Base

Power supply, +7.5 V/-2.5 V (optional)

USB Cable

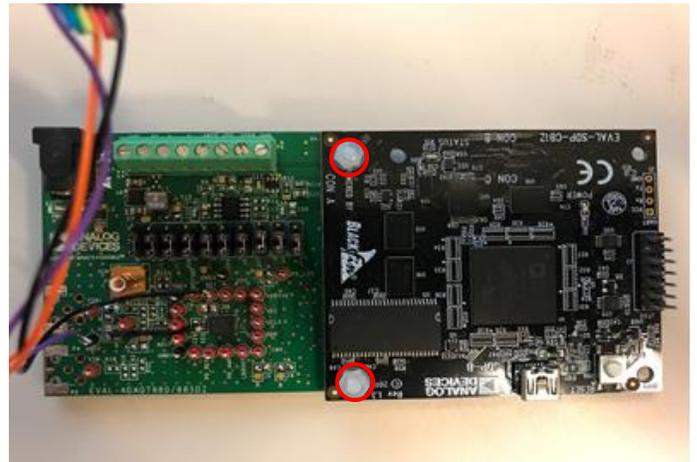
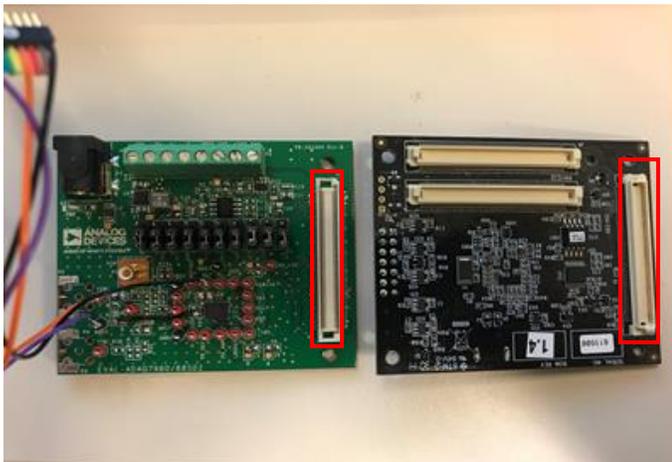
Screws (Metal/Nylon)

Nylon Nuts

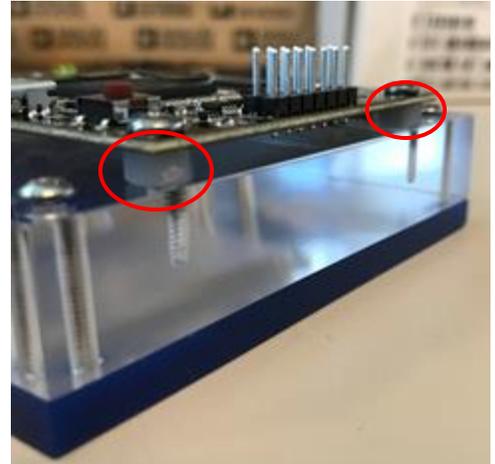
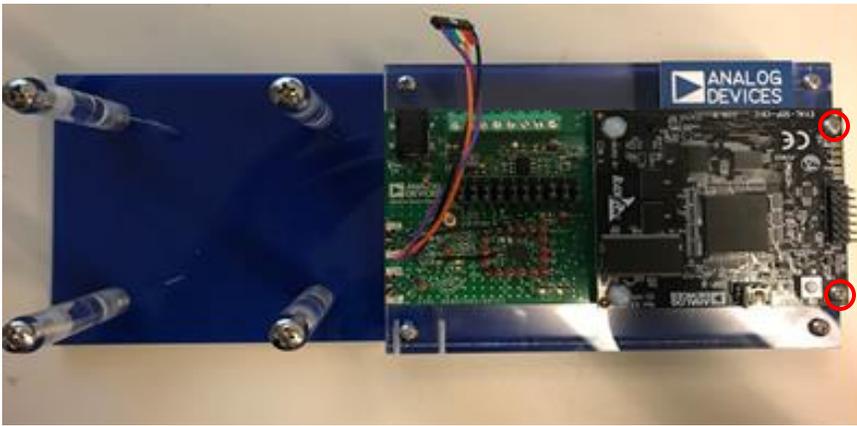


CONSTRUCTION STEPS

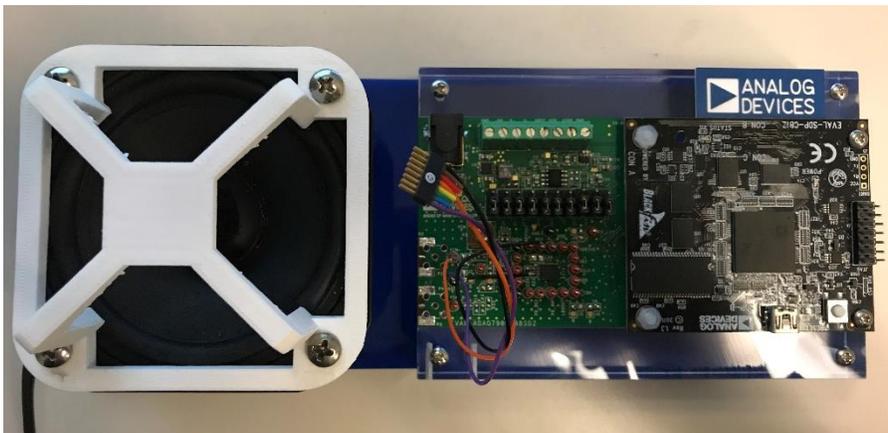
1. Connect the EVAL-SDP-CB1Z board to the EVAL-ADAQ7980 board via the 120-pin connector on the bottom of the SDP board and top of the ADC board. Secure the two together with 2 pairs of nylon screws and nuts via the through holes that align on the boards.



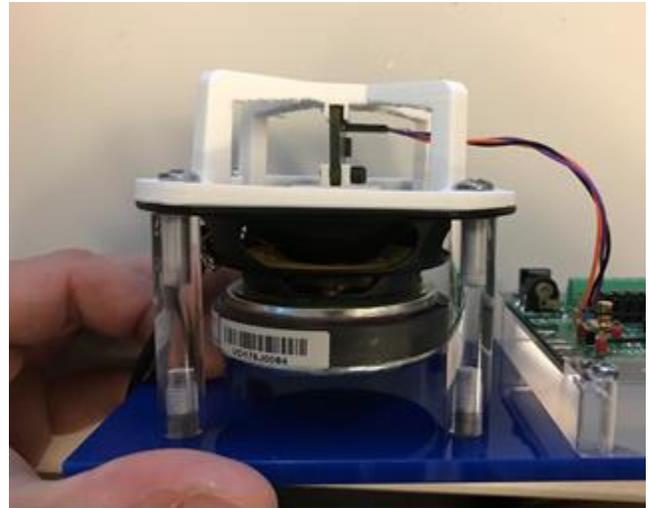
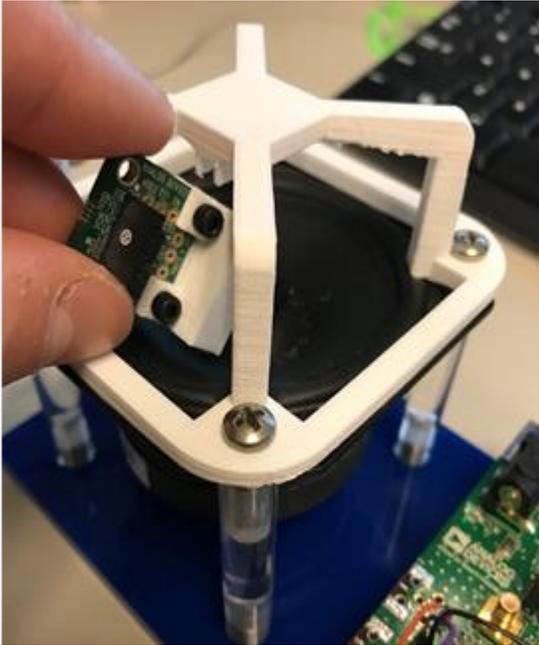
- Place the connected boards on the base so that the ADC board sits within the cavity of the clear block and the SDP board is beneath the ADI logo. Secure the boards to the base via the two metal screws that align with the through holes of the SDP board; make sure to keep the nylon nut beneath the board.



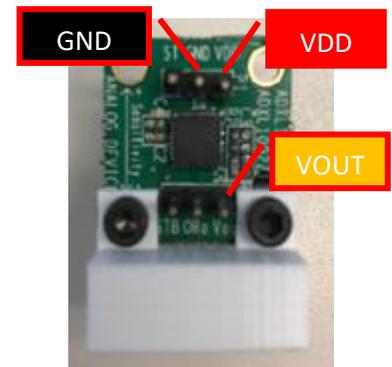
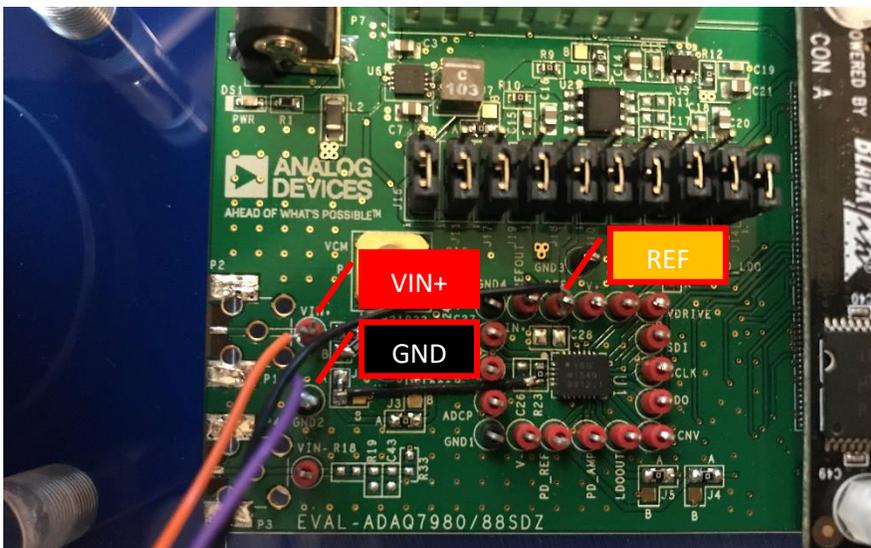
- Place the speaker on top of the posts so that it aligns the posts with the through holes, and align it so that the audio cable is facing any direction other than the direction of the mounted boards. Then, place the top part of the speaker-to-sensor fixture on top of the speaker. Align the upper fixture so that the narrow trench on the ceiling of the fixture is perpendicular to the long ends of the base, or in other words, so that the side openings of the trench face the long ends of the base. Secure the upper fixture and speaker to the posts via the four screws.



- Place the EVAL-ADXL100xZ that is secured to the bottom speaker-to-sensor fixture in the middle of the speaker. The sensor should be facing the boards and be set into place by the trench on the ceiling of the upper fixture and the hook-and-loop fasteners in the middle of the speaker and the bottom of the lower fixture. The placement is made easier by carefully pressing down the cone of the speaker and inserting the lower fixture bottom first.



- For adjusting and swapping between the speaker mounted sensor and the free mounting sensor, ensure that the connection from the ADC to the accelerometer is as follows: the reference pin is connected to the VDD pin, the VIN+ pin is connected to the VOUT pin, and the GND pin is connected to the GND pin.



Once the demo is assembled, connect the USB cable to the J1 port on the SDP board and the power supply to the ADC board. Before connecting the USB to a computer, refer to the User Guide to enable and use the software. Refer to the EVAL-ADAQ7980 User Guide to configure the jumpers on the ADC board. Use any audio connective capable device (e.g. the computer in use) to connect to the speaker to play audio files to induce vibrations on the sensor. The long cable can be used to connect to the free mounting sensor to collect data from objects and machinery not included in the demo.