Connect the 3.5 mm audio jack on the RPi3 (J7) to LINE IN on the CX20921 evaluation board (J25).

Connect J3 on the CX20921 evaluation board (Line Out port labeled as HP) to a powered speaker.

Connect the microphone module to the CX20921 evaluation board (J19).

Connect the audio path from micro USB (J1) to USB port on RPi3.

* Optimal performance is achieved when distance between two mics is 55 mm
* Software tool (FCP Essential) will be provided for mic distance adjustment between 30 mm to 120 mm

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5. Connect Ground (GND) at P2.pin15 from CX20921 evaluation board to J8.pin14 on RPi3, and GPIO1 at P2.pin14 from CX20921 evaluation board to J8.pin13 on RPi3.

6. Connect the power supplies for both CX20921 evaluation board, (J10, +5V power supply included) and RPi3 (J1). Switch the power switch (SW3) to turn on the CX20921 evaluation board. LED D6 (5V LED) will turn on when there is power on the board.


To verify the setup, say “Alexa” followed by a question or command.

1. A green LED lights if the evaluation board is working properly.

2. A voice response is heard if Raspberry Pi is set up correctly with AVS.

To learn more about Amazon Alexa Voice Service and access the AVS API reference guide, visit: https://developer.amazon.com/alexa-voice-service/

Proper speaker selection will enhance overall performance.

Download “External Loudspeaker Guidelines and Recommendation for Smart Speaker Applications” for additional information.

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