This guide is intended for customers who have purchased the AVB Audio Endpoint Kit (XK-AVB-LC-SYS). It applies to version 6 of the reference design firmware.

Application Note: AN00202

AVB Endpoint Quick Start Guide

1. Log into xmos.com and access *My XMOS* ▶ *Reference Designs*
2. Request access to the *AVB Endpoint Software* by clicking the *Request Access* link under *AVB Audio Endpoint*. An email will be sent to your registered email address when access is granted.
3. A *Download* link will appear where the *Request Access* link previously appeared. Click and download the firmware zip.

1 Installing xTIMEcomposer Studio

The AVB-LC software requires xTIMEcomposer version 13.0.2 or greater. It can be downloaded at the following URL

2 Importing and building the firmware

To import and build the firmware, open xTIMEcomposer Studio and follow these steps:

1. Choose *File* ▶ *Import*.
2. Choose *General* ▶ *Existing Projects into Workspace* and click **Next**.
3. Click **Browse** next to **'Select archive file'** and select the firmware .zip file downloaded in section 1.
4. Make sure that all projects are ticked in the *Projects* list.
5. Click **Finish**.
6. Select the app_avb_1c_demo project in the Project Explorer and click the **Build** icon in the main toolbar.

3 Installing the application onto flash memory

1. Connect the xTAG-2 debug adapter (XA-SK-XTAG2) to the first AVB endpoint board.
2. Plug the xTAG-2 into your development system via USB.
3. Plug in the 5V power adapter and connect it to the AVB endpoint board.
4. In xTIMEcomposer, right-click on the binary within the *app_avb_lc_demo/bin* folder of the project.
5. Choose *Flash As ▶ Flash Configurations*.
6. Double click *xCORE Application* in the left panel.
7. Choose *hardware* in *Device options* and select the relevant xTAG-2 adapter.
8. Click on **Apply** if configuration has changed.
9. Click on **Flash**. Once completed, reset the AVB endpoint board using the reset button.
10. Repeat steps 1 through 8 for the second endpoint.

4 Setting up the hardware
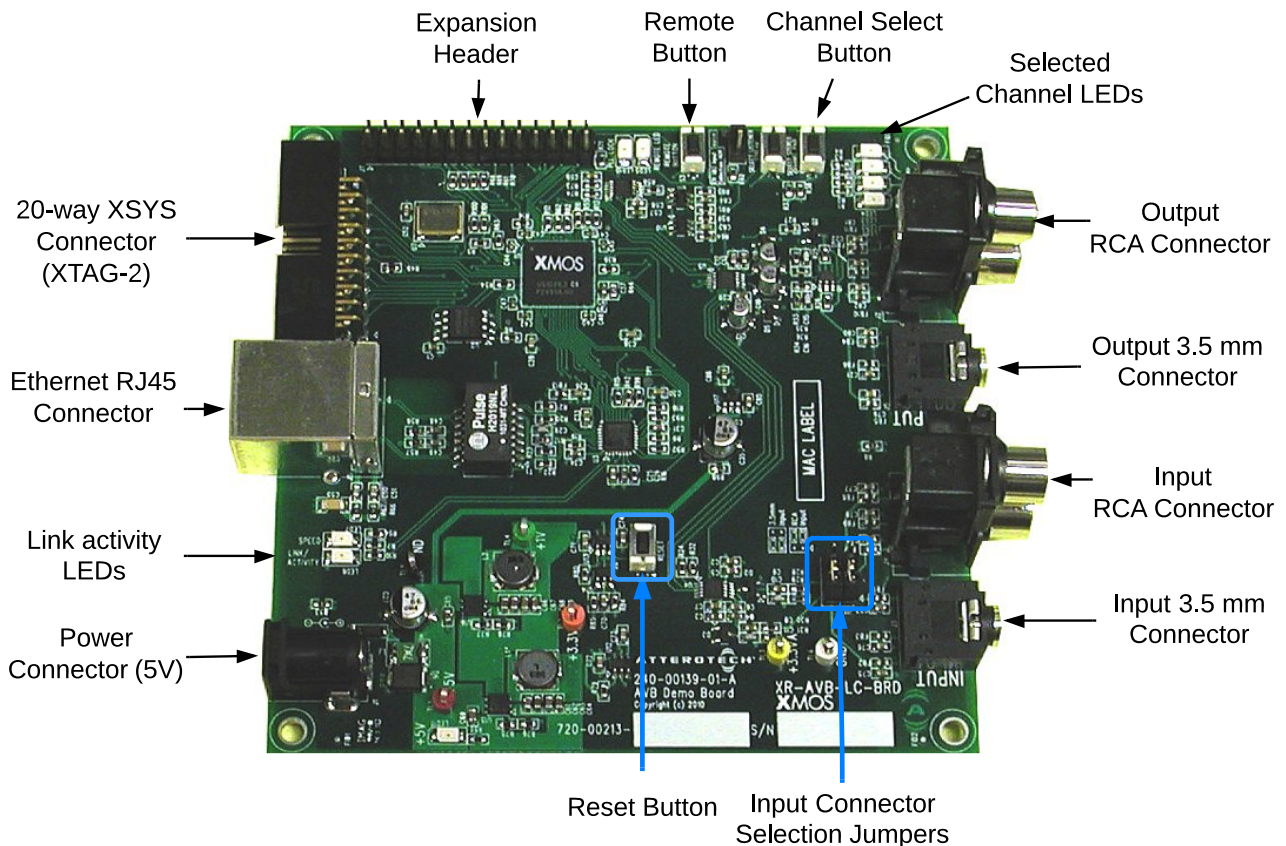
Refer to the above figure for board controls and connectors.

1. Connect the two development boards into an AVB capable Ethernet switch via the provided Ethernet cables
2. Set the audio input connection jumpers for either RCA input or 3.5 mm jack input.
3. On the first development board, connect the output of a line-level audio source to the audio input connector.
4. On the second development board, connect an audio playback device to the audio output connector.
5. If not already powered, connect the power supplies to the input power jacks of the boards and power them on.
6. A third party 1722.1 Controller application can then be used to connect and disconnect streams between the endpoints.

See https://github.com/audioscience/avdecc-lib for an example command line 1722.1 controller application and library.

Note: The audio output from the board is line level. If using headphones, an external headphone amplifier may be required.

5 Next Steps

Access more support collatoral from xmos.com, Support, Reference designs, AVB audio endpoint.

Including

- AVB Endpoint Design Guide
- Design files for XR-AVB-LC-BRD board