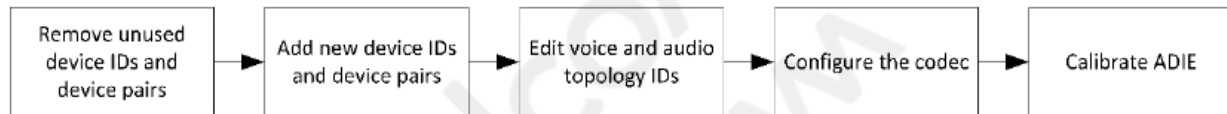


This document introduces a common project configuration workflow. Some special use case such as ANC, AANC and Speaker Protection need some additional change and is not included in this document, please refer to QTI support when you have such request. This document is for MSM/SDM, MDM and APQ platforms, for other platform may needs some additional change.

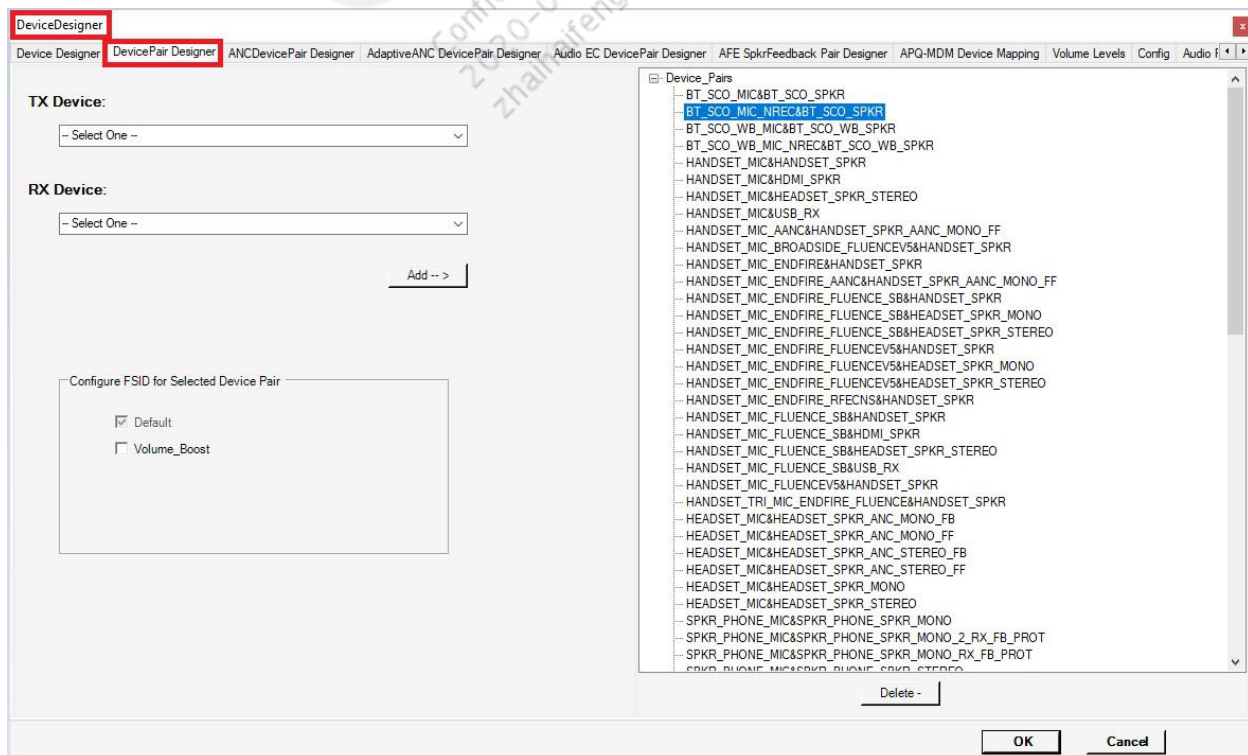
A project configurator is responsible for customizing the audio endpoint configuration, audio devices, and high-level audio path capabilities. This role establishes the infrastructure needed for other roles.

The project configurator workflow is as follows:



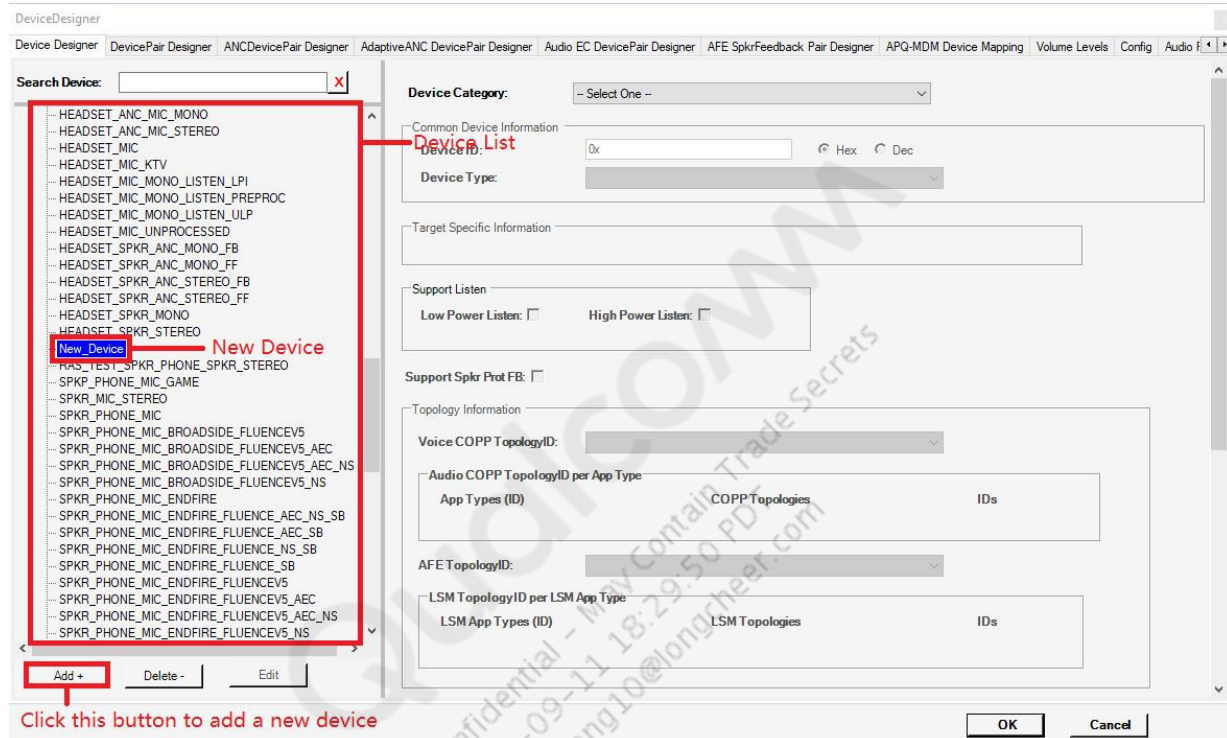
Step#1 Remove unused device IDs and device pairs

- **Delete a device**
 1. Select Tools -> Device Designer;
 2. Select a device from the Device list.
- **Delete a voice device pair**
 1. Select **Tools -> Device Designer**;
 2. Click the **DevicePair Designer** tab;
 3. Select a device pair;
 4. Click **Delete**;
 5. Click **OK** to close the window.



Step#2 Add new device IDs and device pairs

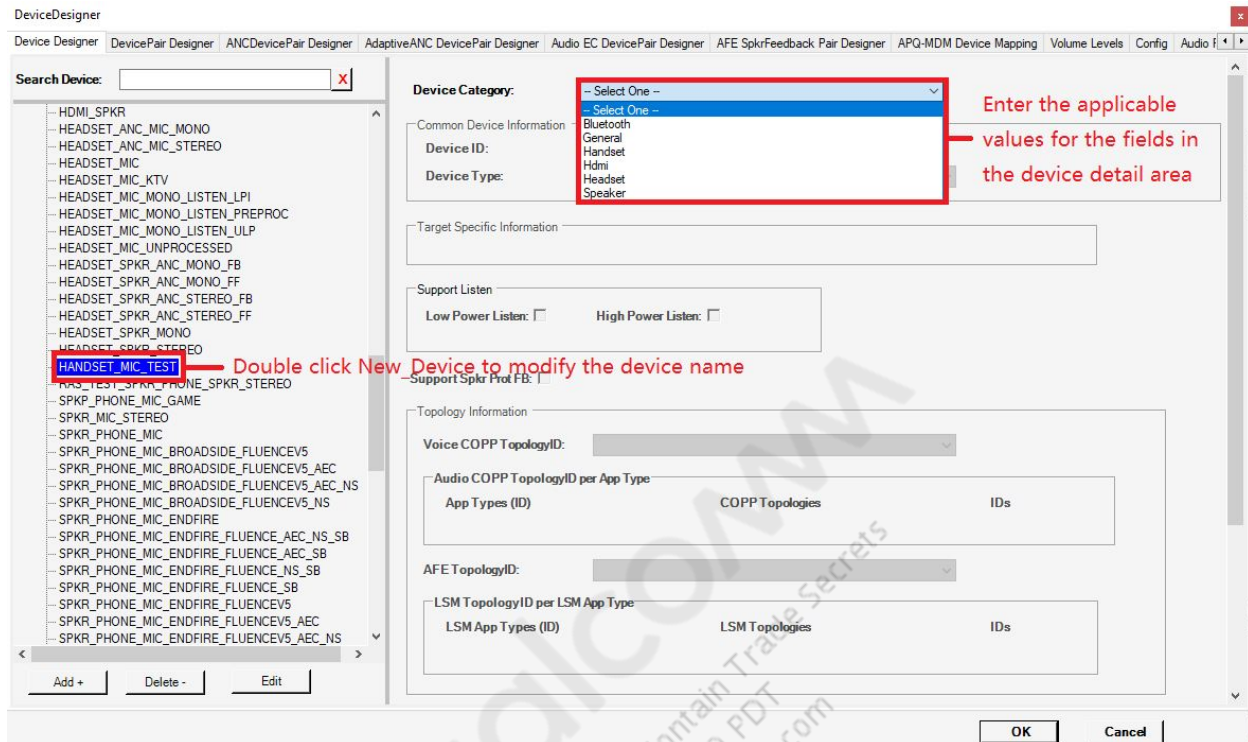
- **Add a device on an SDM product**
 1. Select **Tools -> Device Designer**;
 2. Click **Add+**. A **New_Device** node appears in the device list;



3. In the device list, double-click **New_Device** modify the device name. Ensure that the device ID is unique.

Note: Use standardized prefixes so that related devices sort together in the device list. For example, handset-related devices should begin with **HANDSET_**, headset-related devices should begin with **HEADSET_**, etc.

4. Enter the applicable values for the fields in the device detail area. These parameters vary by target;
5. Click **OK** to save the calibration file.

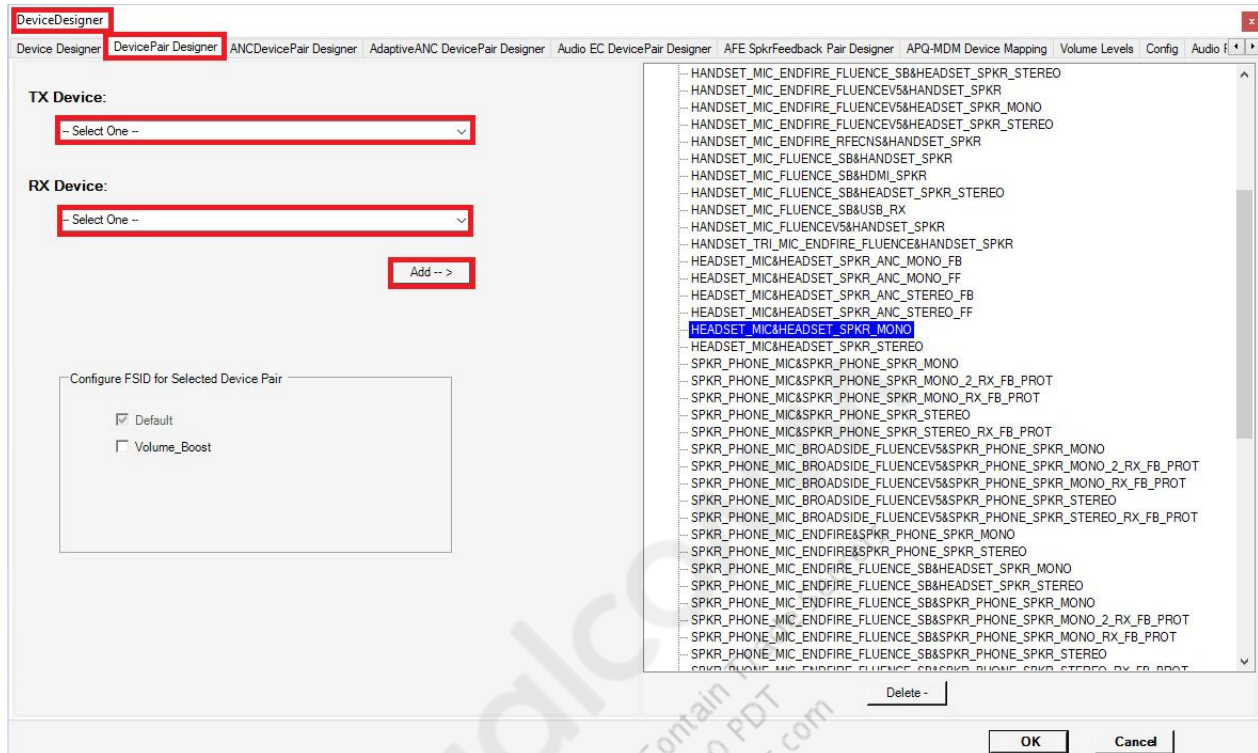


- Add a device pair

1. Select **Tools -> Device Designer**;
2. Click the **DevicePair Designer** tab. Existing device pairs display as single-line entries in the device pair list;
3. In the **TX Device** field, select a Tx device to assign to the device pair;
4. In the **RX Device** field, select a Rx device to assign to the device pair;
5. Select any additional FSIDs that are applicable for this device pair;

Note: FSIDs and AppTypes IDs may require user space updates. Contact QTI support.

6. Click **Add** to combine the selected devices as a device pair;
7. Click **OK** to close the DevicePair Designer window.

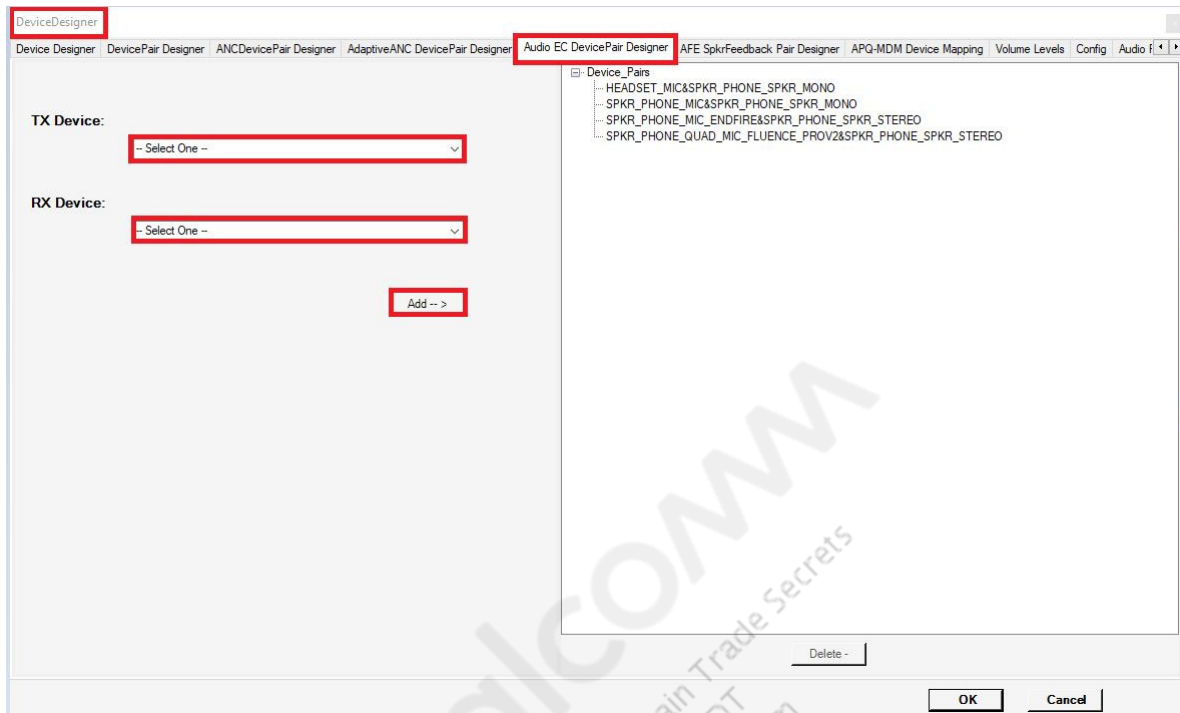


Note: If it's VoIP use case then you need to configure Audio EC device pairs

The Audio EC DevicePair Designer is used to configure Rx/Tx voice device pairs with Audio EC.

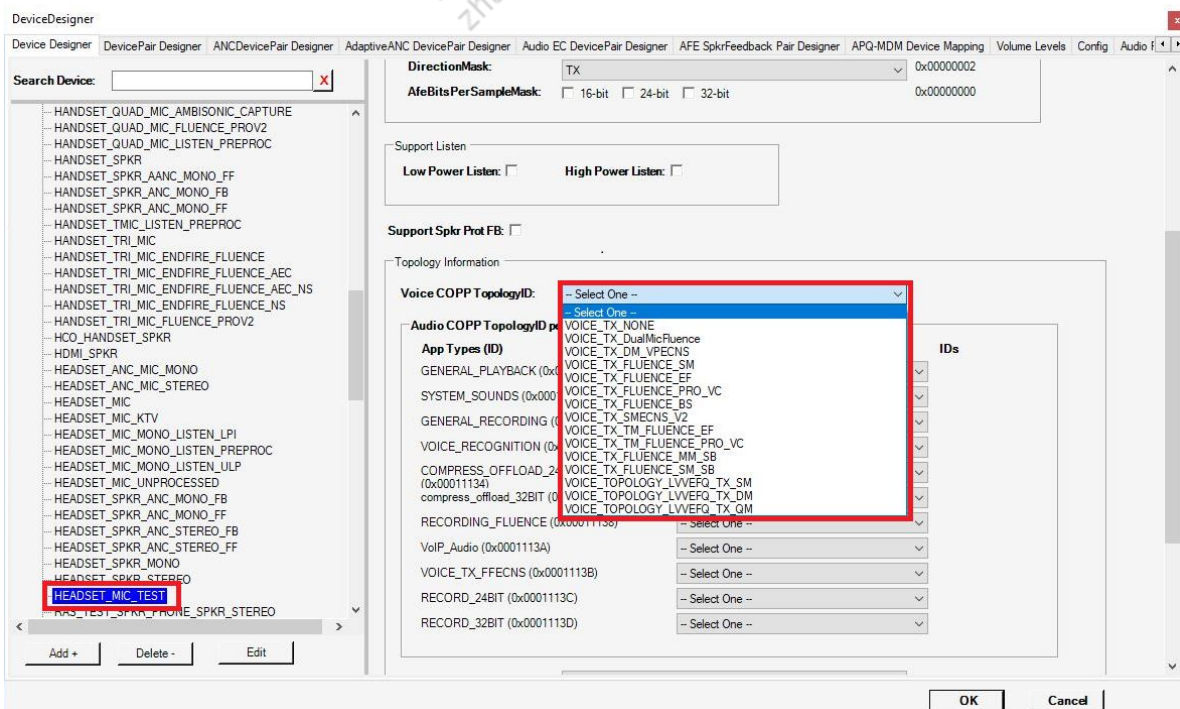
Add an Audio EC device pair

1. Select **Tools -> Device Designer**;
2. Click the **Audio EC DevicePair Designer** tab. Configure Audio EC DevicePair device pairs display as one-line entries on the right side of the window;
3. In the **TX Device** field, select a Tx device to assign to the device pair;
4. In the **RX Device** field, select a Rx device to assign to the device pair;
5. Click **Add** to combine the selected devices as an Audio EC device pair;
6. Click **OK** to close the window.



Step#3 Edit topology IDs

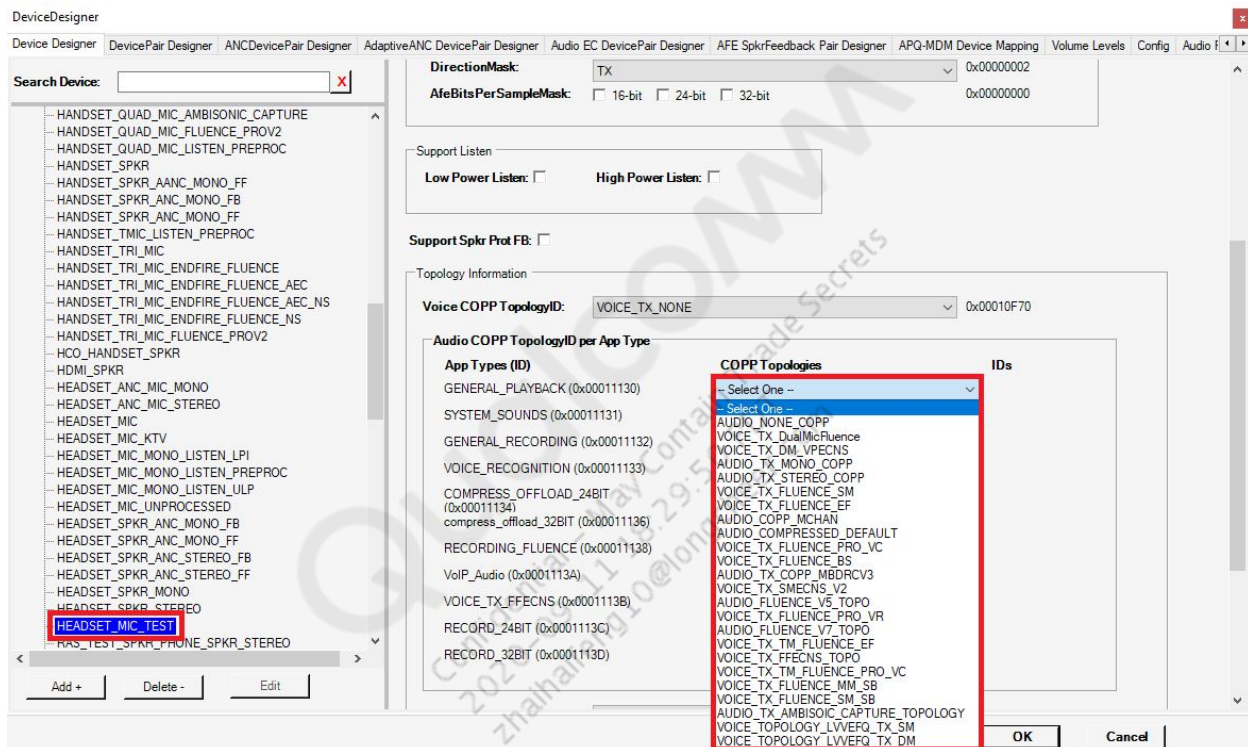
- Edit voice topology IDs
 1. Select **Tools -> Device Designer**;
 2. Select a device from the device list;
 3. Click the Voice COPP Technology ID field and select a different topology ID;
 4. Click **OK**.



- Edit audio topology IDs

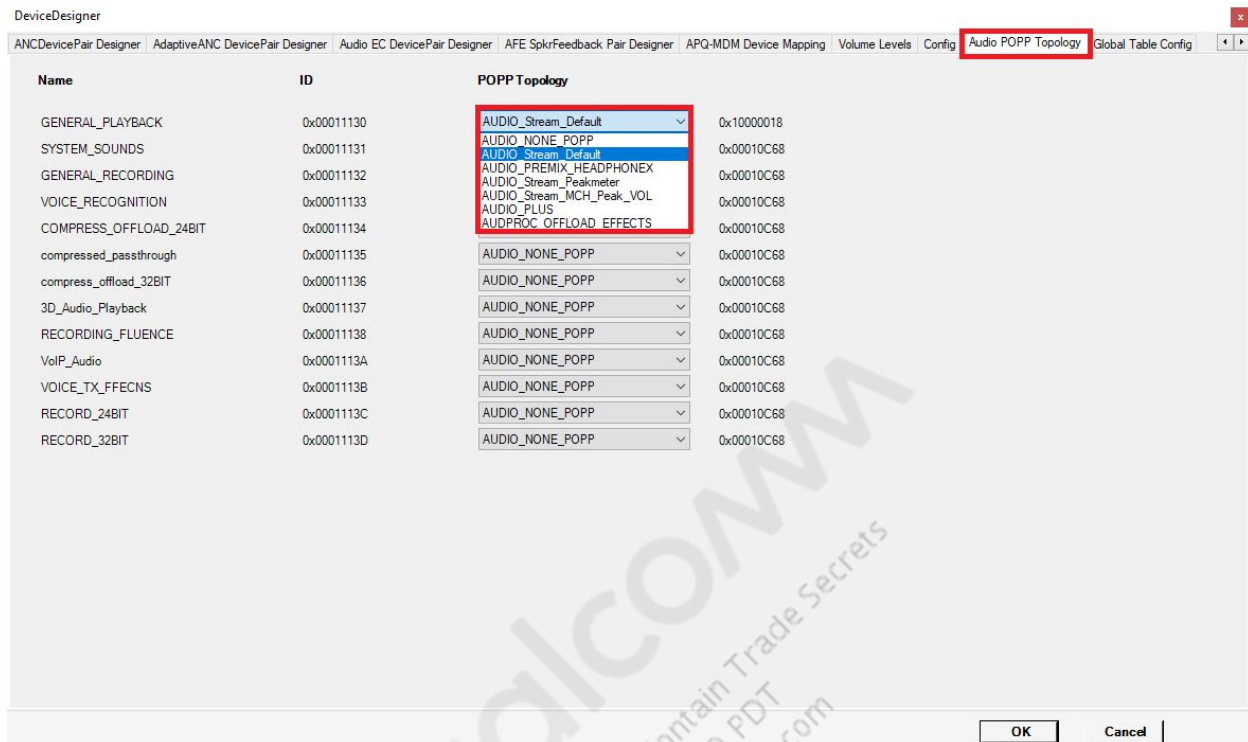
Edit audio COPP topology IDs

1. Select **Tools -> Device Designer**;
2. Select a device from the device list;
3. For each App Type that needs to be edited, click the associated COPP Topologies field and select a different topology ID;
4. Click **OK**.



Edit audio POPP topology IDs

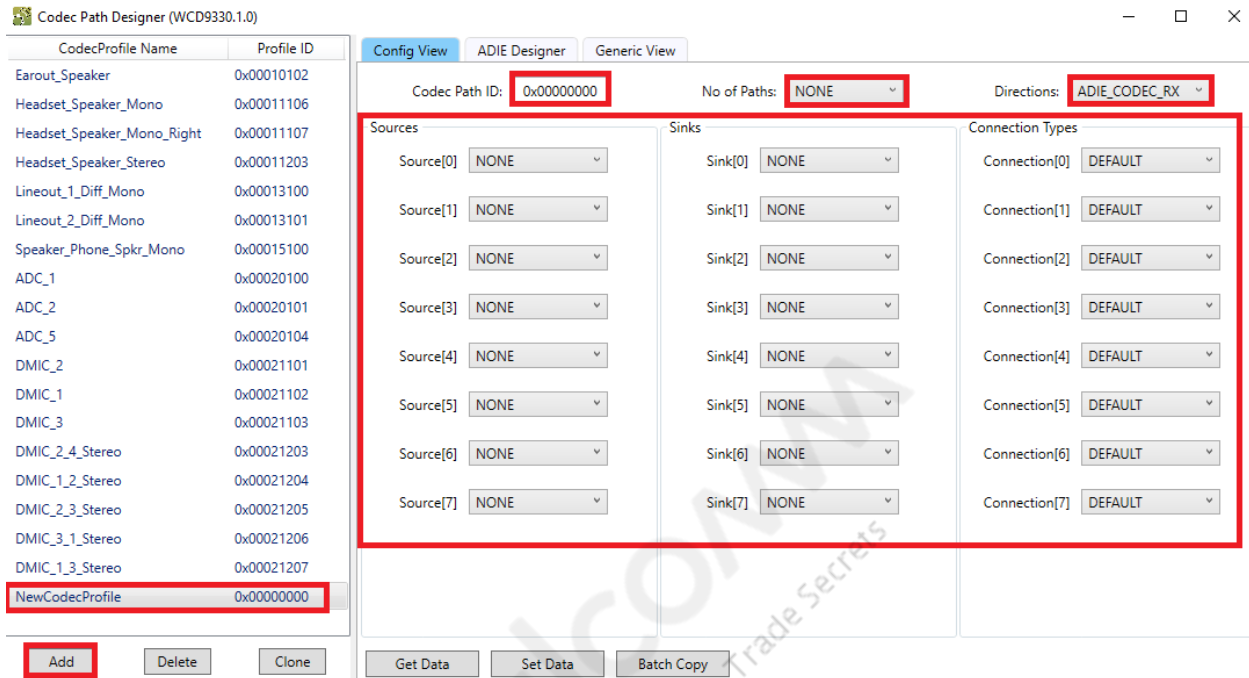
1. Select **Tools -> Device Designer**;
2. Select the Audio POPP Topology tab;
3. For each App Type that needs to be edited, click the associated POPP Topology field and select a different topology ID;
4. Click **OK**.



Step#4 Add a codec (for MDM platform)

1. Select **Tools -> Codec Designer -> Codec Path Designer**;
2. Click **Add** button to add a Codec;
3. Enter a name for the codec in the codec list;
4. Enter the ID for the codec in the **Codec Path ID** field;
5. Select the following:
 - Number of Paths
 - Direction
 - Sources, Sinks, and Connection Type values
6. Click **OK**

Specially, sometimes on ThreadX OS we want to use AUXPCM, then please follow **kba-190220173801_2_how_to_use_auxpcm_on_threadx.pdf** to add AUXPCM and change code accordingly.



Step#5 Calibrate ADIE

- Perform ADIE calibration

Note: For LA targets, the following commands must be run before using ADIE:

```
adb root
adb shell
adb remount
chmod 777 /sys/kernel/debug/asoc/*-snd-card/*_codec/codec_reg
```

1. Click **ADIE RTC** on the QACT home screen;
2. Click **Refresh** to access the content of all ADIE registers from the target device and load them in the ADIECalibrator Table;
3. Click the boxes in Bit 0 to Bit 7 to configure a value in a register. A check should appear in boxes representing bits that contain 1;
4. Click the boxes in Bit 0 to Bit 7 to configure a value in a register. A check should appear in boxes representing bits that contain 1;
5. Click **Commit** to load values entered in the ADIECalibrator Table to the target device.

- Export a register snapshot

This feature allows users to dump a register snapshot into a readable ASCII format. This helps to analyze the ADIE register settings offline. The exported file can be opened in QCET for analysis.

1. Click **ADIE RTC** on the QACT home screen;
2. Select **Menu -> Export Register Snapshot**;
3. Enter a filename in the Save dialog box and click **OK**.