

Global Eagle Audio Software Product Offering

November 2016



Executive Summary

Silicon Labs audio software products provide a complete solution for audio post-processing in the car from low-end to premium radio systems.

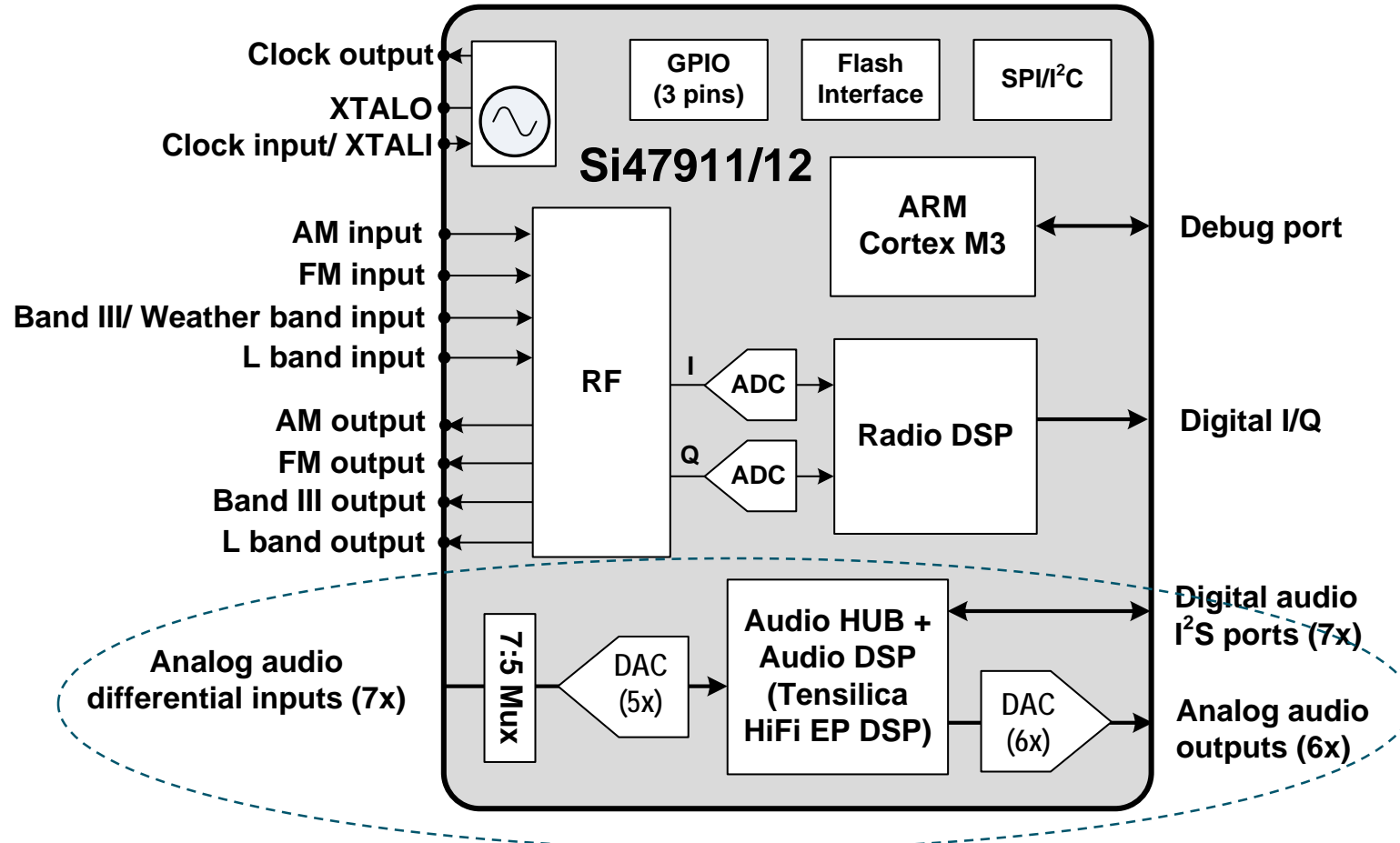
The audio software products run on the Global Eagle Si47911/12 audio system.

The audio offering includes the following:

- Audio post-processing functions which can be configured for specific car models
 - Functions such as cabin equalization, volume control, dynamic range compression, etc.
- Development tools, which enable users to do the following:
 - Port their audio algorithms to the Global Eagle Si47911/12 audio system
 - Design a custom audio processing flow utilizing Silicon Labs' library of building blocks
 - Combine their audio algorithms with Silicon Labs' audio post-processing functions

Audio Software Products Run on Si47911/12 Audio System

- The Si47911/12 integrated audio system includes the Tensilica HiFi EP DSP, embedded memory, and analog and digital audio interfaces.
- The Si47911/12 integrated audio system can run Silicon Labs' audio post-processing functions and/or user audio algorithms.



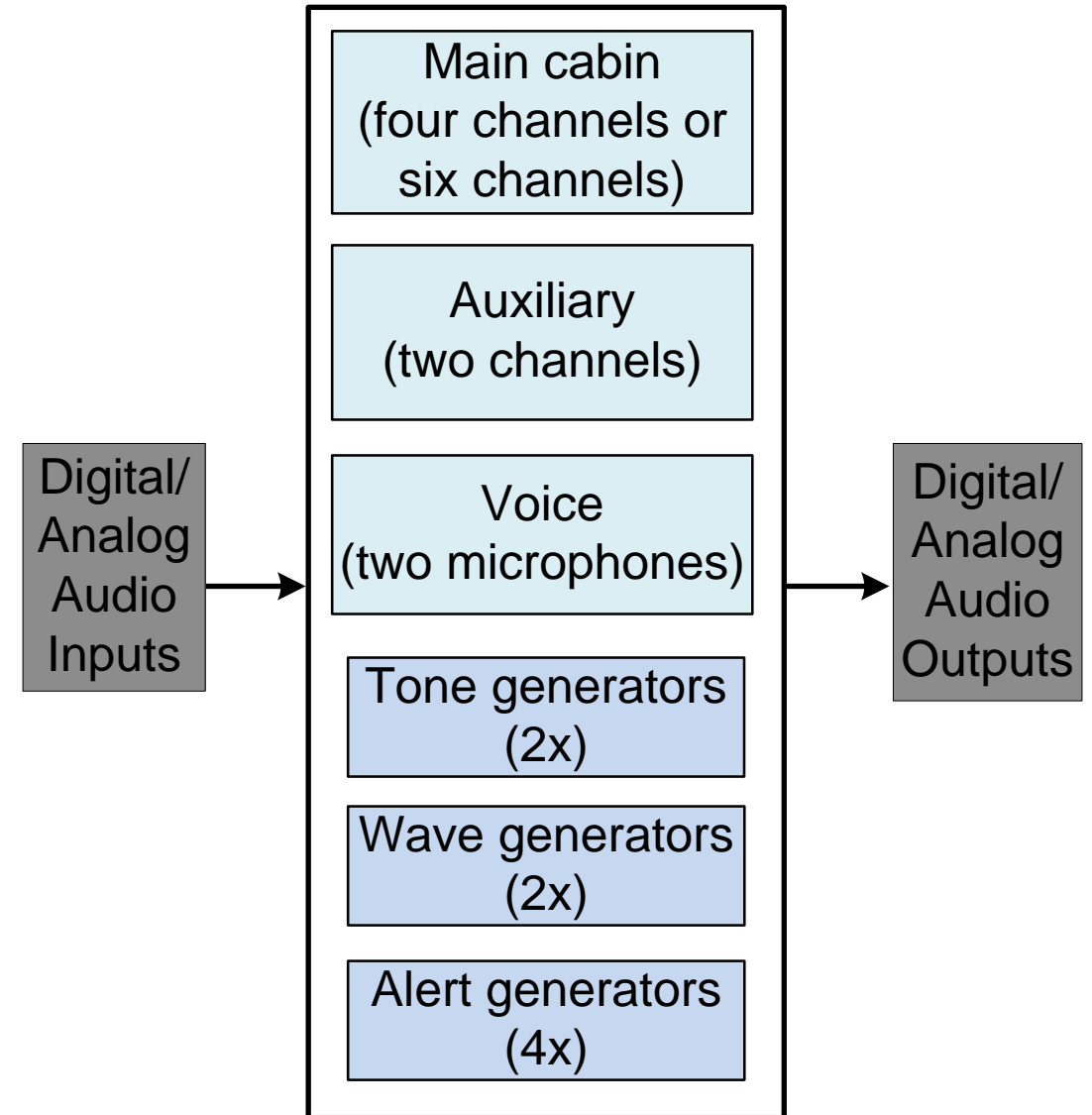
Silicon Labs Audio Products

1. Silicon Labs audio post-processing functions
 - Complete audio post-processing for four channels or for six channels
 - Fixed functionality, with user programmable parameters
2. Audio Software Development Kit (SDK)
 - Enables to port user's algorithms to the Si47911/12 audio system
3. Silicon Labs Audio Topology Editor (SLATE)
 - A graphical tool which enables to design a custom audio processing flow

Note: SDK + SLATE enables ability to integrate users' audio algorithms with Silicon Labs audio post-processing functions.

1. Silicon Labs Audio Post-processing

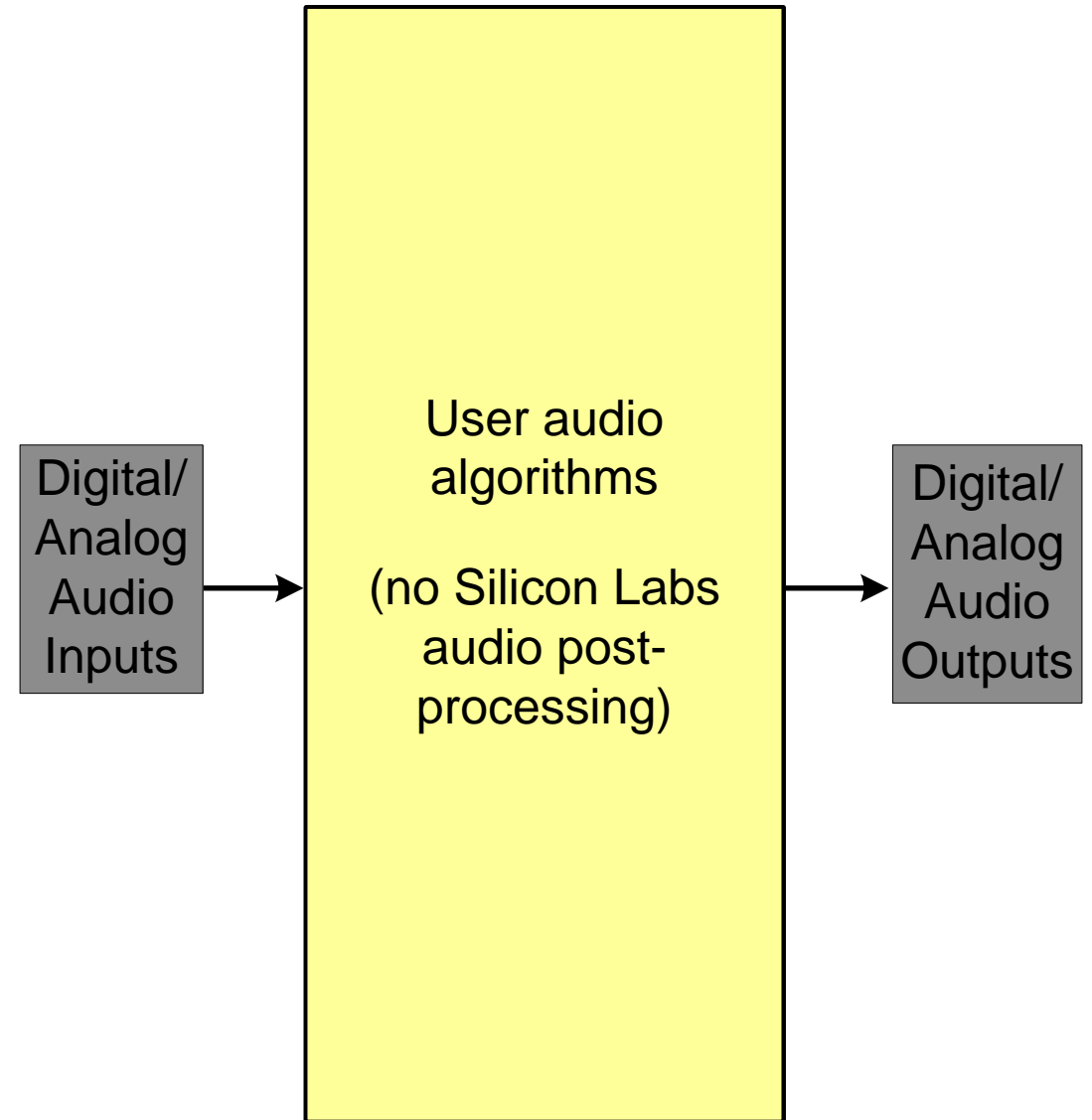
- Features
 - Three independent audio processing paths
 - Primary (main cabin): four or six channels
 - Auxiliary (rear seat): two channels
 - Voice: two microphones
 - Two tone sequence generators
 - Two wave generators
 - Played from internal memory
 - Four alert generators
- Delivery/collateral
 - A binary, with user programmable parameters
 - No customer algorithms can be added
 - Data sheet available



2. Audio Software Development Kit (SDK)

- The SDK enables users to port their algorithms to the Si47911/12 audio system
- The SDK includes
 - A library of building blocks that users' algorithms can utilize
 - MCU and radio DSP encrypted code images
 - Development board
 - Debug tools
 - Documentation

Note: SDK license does not include Silicon Labs' audio post-processing functions.

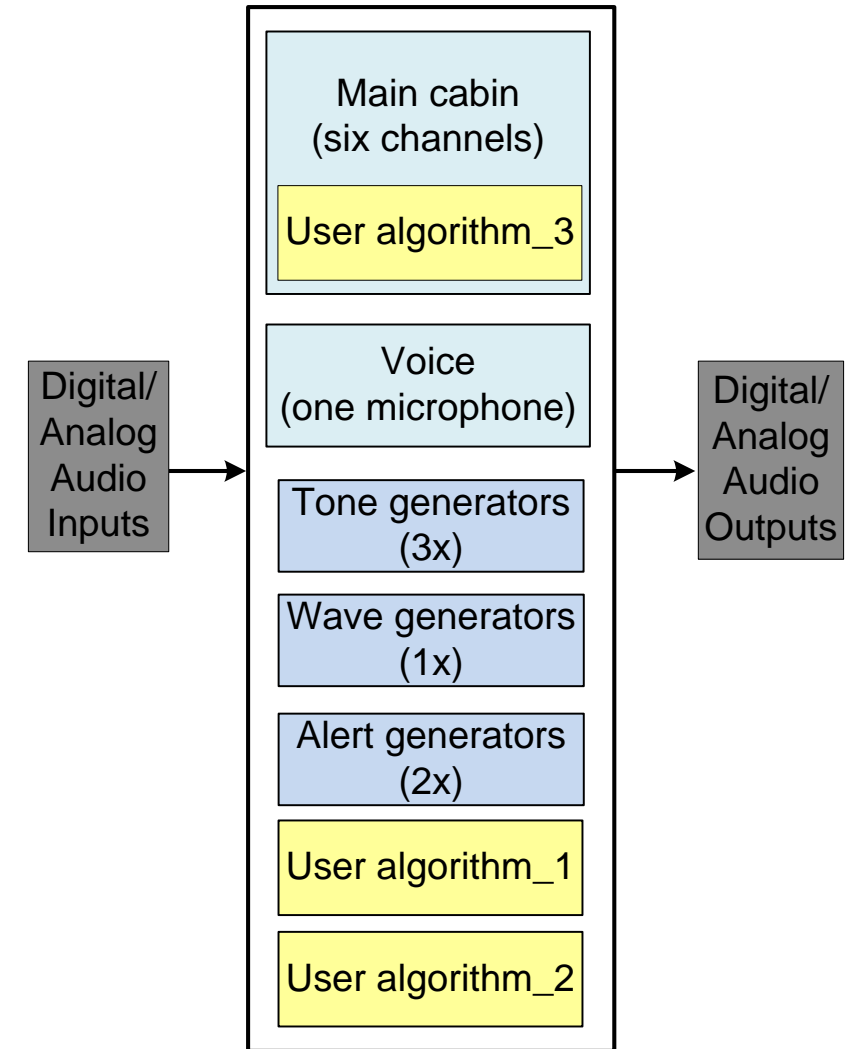


2+3. SDK + SLATE: Integration of User IP with Silicon Labs IP

- SDK:
 - Enables the user to port his IP to the audio system
 - Configure the ported IP as SLATE modules
- SLATE:
 - A flexible graphical platform based on Simulink
 - Enables user to design a custom audio processing flow
 - Utilizing user's and Silicon Labs SLATE modules

Notes:

- a. SLATE: Silicon Labs Audio Topology Editor
- b. SLATE license includes Silicon Labs audio post-processing functions.



Example of possible implementation utilizing SDK and SLATE

Audio Software Products Part Numbers

Part number	Name	Function
SW479-A4TR-GE01	Audio reference design (4-channel)	Audio post-processing for four channels
SW479-A6TR-GE01	Audio reference design (6-channel)	Audio post-processing for six channels
SW479-ASDK-GE01	Audio Software Development Kit (SDK)	Enables to port customer IP to the Si47911/12 audio system
SW479-SLATE-GE01	Silicon Labs Audio Topology Editor (SLATE)	Enables to design a custom audio processing flow

Note: To utilize any of the audio software products on the Si47911/12 the customer needs to sign Software License Agreement (SLA) with Silicon Labs.