



Customization - Realtek ALC AppleHDA

For Realtek ALC885 through ALC1150 on board audio codecs

Change Log

1. v2.0 - 12//20/2014 - Yosemite, cloverALC (see **Before You Begin**, H)
2. v1.0 - 10//8/2013 - Mavericks 1st Release

[toleda/audio_ALC_guides](#)

Guidelines

- A. This is not a how to guide. It tells what something looks like before and what it should look like after the edit. The how is left to the reader.

Requirements

- A. OS X versions supported:
 1. Yosemite/10.10/AppleHDA.kext_v266.5 and newer
 2. Mavericks/10.9/AppleHDA.kext_v2.5.2 and newer
- B. Realtek ALC, one of the following Device_ID - Codec Name
 1. 10ec0885 - ALC885/ALC889a
 2. 10ec0887 - ALC887/ALC888b
 3. 10ec0888 - ALC888/ALC888s
 4. 10ec0889 - ALC889
 5. 10ec0892 - ALC892
 6. 10ec0899 - ALC898
 7. 10ec0900 - ALC1150 - 10.8.5 or newer /see **Before You Begin**, G

Tools

- A. Property List Editors (PLE)
 1. Xcode - App Store
 2. Property List Editor
 3. Alternatives

1. PListEdit Pro [Fat Cat Software – PlistEdit Pro](#)
 2. Pref Setter [Pref Setter](#)
 3. Applications/TextEdit
- B. zlib_terminal - [audio_ALCInjection/zlib_terminal.zip](#)
- C. Kext Install Utility
1. Kext Wizard
 2. Kext Utility
 3. DPCIManager
 4. KextBeast
 5. etc.

Before You Begin

- A. Review Appendix 1 and 2 for AppleHDA.kext details
- B. Copy S/L/E/AppleHDA.kext to Folder for editing
- C. Duplicate AppleHDA.kext and rename copy AppleHDA-orig.kext.
- D. See zlib_terminal to uncompress AppleHDA.kext compressed files
 1. Use Terminal to inflate layout(Audio ID).xml.zlib
 2. Use Terminal to inflate Platforms.xml.zlib
- E. Identify PathMapID
 1. Find Audio ID
 1. System Information/Audio/Intel High Definition Audio/Audio ID
 2. Find PathMapID
 1. Property List Editor/Open layout(Audio ID).xml/Note PathMapID
- F. Identify Info.plist/Platforms.xml Item
 1. Find Item number/PathMap
 1. Use Item/PathMapID Table, see Appendix 2
 2. Property List Editor/Open Platforms.xml/Item ?/PathMap
- G. ALC1150 only
 1. Info.plist/ConfigData
 2. 1150 ConfigData edits
 1. 1150 only, edit each entry, 21 to 01
 2. Example/Find
 1. Orig: 21171cf0 21171d00 21171e00 21171f40
 2. After: 01171cf0 01171d00 01171e00 01171f40
 3. Repeat for all Find and Replace pinconfigs
- H. cloverALC patch - edit the files noted, not the native files
 1. AppleHDA.kext is native
 2. S/L/E/AppleHDA.kext/Contents/Resources/ (note: .zml.zlib)
 1. layout1.zml.zlib
 2. layout2.zml.zlib (na, 885)
 3. layout3.zml.zlib (na, 885, 1150)
 4. Platforms.zml.zlib
 3. EFI/CLOVER/kexts/realtekALC.kext/Contents/
 1. Info.plist

Procedures

1. Add SPDIFIn

2. Manual Mic and Front Mic Selection
3. Manual Speaker and Headphone Selection
4. Add Boost to input (Mic/Rear. Mic/Front and/or Line In)
5. Substitute Gray (Side) for Black (Rear)
6. Add Line Out (Gray/Rear -Rear Speakers) for analog 7.1 Surround Sound
7. Substitute SPDIF-2 Wire Output
8. SPDIF Optical Output/Encoded Digital Audio - Not supported in 10.9
9. 2x HD3000/HD4000 HDMI Audio

Installation

- A. Run kext installer
- B. Restart

Problem Reporting, see

- A. [toleda/audio_RealtekALC/README/Problem Reporting/thread link](#)

Editing Tips

- A. To add a property to a plist
 1. Copy (Command C) the property
 2. Select the parent of the property receiving the copied property
 3. Paste (Command V) on the parent property
- B. To reorder children in a parent property
 1. The property added is given the Item 0 name
 2. To move Item 0 to the Item 2 location
 1. Drag Item 2 to the parent item (above Item 0)
 2. Drag Item 2 to the parent item (above Item 0), 2 times total
- C. To ensure successful pasting of printed data into a plist
 1. paste first to TextEdit and make plain text (Format/Plain Text)
 2. copy from TextEdit and paste into plist

Appendix

- A. Native AppleHDA.kext Assumptions, Structure and Documents
- B. Realtek ALC AppleHDA.kext (details)

Credits

THE KiNG [\[HOW TO\] Patch AppleHDA - Knowledge Base - Project OS X Forums](#)
 VHC888 [ALC889A, Gigabyte \(Intel\): now having a working front mic - InsanelyMac Forum](#)
 RevoGirl

Procedures

1. Add SPDIFIn: Copy 885 SPDIFIn attributes to your Codec/Audio_ID

A. Prep

1. Adds Sound/Input/Digital In (Copy 885 SPDIFIn to your codec)
2. Download 885.zip, [audio_ALC885/885.zip at master · toleda/audio_ALC885](#)

3. See zlib_terminal to uncompress 885 folder compressed files
 1. Use Terminal to inflate layout1.xml.zlib
 2. Use Terminal to inflate Platforms.xml.zlib

B. Edit Layout1.xml/zml

1. 885/layout1.xmlOpen PathMapRef/Open Item 0
2. Copy SPDIFIn
3. layout1.xml/Open PathMapRef/Open Item 0
4. Paste SPDIFIn on Item 0
5. Drag each entry above SPDIFOut to Item 0, repeat until SPDIFIn is above SPDIFOut
6. Verify PathMapID
7. For PathMapID, find Item number N, see Appendix 2/Item/PathMapID Table and Item/CodecID Table

C. Edit Platforms.xml/zml

1. 885/Platforms.xmlOpen PathMaps/Open Item 0/Verify PathMapID 885/ Open PathMap
2. Copy Item 2
3. Platforms.xmlOpen PathMaps/Open Item N, verify PathMapID/Open PathMap
5. Paste Item on Pathmap
6. Drag Item 2 to PathMap (2 times)

D. Edit HDAHardwareConfigDriver/info.plist or realtekALC/Info.plist

1. Open Item/CodecID
2. Verify CodecID/LayoutID
3. Edit ConfigData
 - Find: 21f71cf0 21f71d00 21f71e00 21f71f40
 - Replace: 21f71ca0 21f71d01 21f71ecb 21f71f01

E. Save, install and restart

2. Manual Mic/Rear and Mic /Front Selection: Displays both Internal Microphone and Line In (Mic/Front) audio output devices (For 892 and 1150, see below)

885, 887, 888, 889, 898

A. Edit Platforms.xml/zml - 885, 887, 888, 889, 898

1. Open Item/PathMapID
2. Verify PathMapID
3. Copy the current Rear Mic /Front Mic
4. Paste the current Rear Mic /Front Mic on PathMap so there are two of the same (Item 0 and 1)
5. Open Item 0 and Item 0 and Item 1 appear; delete Item 1 (front mic).
6. Open Item 1 and Item 0 and Item 1 appear; delete Item 0 (rear mic).
7. Edit this path map as follows:
 - Current:
 - Item 0/NodeID/Number/9
 - Item 1/NodeID/Number/34
 - Item 2/NodeID/Number/25
 - New:

- Item 0/NodeID/Number/7
- Item 1/NodeID/Number/36
- Item 2/NodeID/Number/25

B. Save, install and restart

892 and 1150

A. Edit Platforms.xml/zml

1. Open Item/PathMapID
2. Verify PathMapID
3. Line In (Blue/Rear) is not available
4. open Item 0, Item 0 and Item 1 appear; delete Item 1 (front mic)
5. open Item 1
6. Edit this path map as follows:
 - Current:
 - Item 0/NodeID/Number/8
 - Item 1/NodeID/Number/35
 - Item 2/NodeID/Number/26
 - New:
 - Item 0/NodeID/Number/8
 - Item 1/NodeID/Number/35
 - Item 2/NodeID/Number/25

B. Save, install and restart

3. Manual Internal Speaker and Headphone Selection - Displays both Internal Speaker and Headphones audio output devices. Note: An existing audio output device must be deleted to add Headphones as an audio output device. See Procedure 9.

A. Edit Platforms.xml/zml

1. Open Item/PathMapID
2. Verify PathMapID
3. Copy the current speaker/headphone (Item 2)
4. Paste the current speaker/headphone so there are two of the same (Item 0 and 3)
5. Drag Item 2 up to PathMap - 2 times (moves new item to correct position)
6. In Item 2, open next level and there are Item 0 and Item 1; delete Item 1 (headphones).
7. In Item 3, open next level and there are Item 0 and Item 1; delete Item 0 (speakers).
8. Edit this path map as follows:
 - Current
 - Item 0/NodeID/Number/27
 - Item 1/NodeID/Number/12
 - Item 2/NodeID/Number/2
 - New:
 - Item 0/NodeID/Number/27
 - Item 1/NodeID/Number/38
 - Item 2/NodeID/Number/37

B. Save, install and restart.

4. Add Boost to input (Mic/Rear. Mic/Front and/or Line In): Increase audio level for audio input devices

A. Edit Platforms.xml/zml (add to audio input devices as appropriate)

1. Open Item/PathMapID
2. Verify PathMapID

B. Mic/Rear

1. Current:
 - Item 0/NodeID/Number/9
 - Item 1/NodeID/Number/34
 - Item 2/NodeID/Number/24
2. Select Item1
3. Select Add Item
4. Enter Boost
5. Select Number
6. Enter 3
7. New
 - Item 0/NodeID/Number/9
 - Item 1
 - Boost/Number/3
 - NodeID/Number/34
 - Item 2/NodeID/Number/24
8. Save

C. Mic/Front (displayed as Line In/Built-In) Note: NodeIDs are different if 2. Manual Mic/Rear and Mic /Front Selection (above) is implemented

1. Current:
 - Item 0/NodeID/Number/9
 - Item 1/NodeID/Number/34
 - Item 2/NodeID/Number/25
2. Select Item1
3. Select Add Item
4. Enter Boost
5. Select Number
6. Enter 3
7. New
 - Item 0/NodeID/Number/9
 - Item 1
 - Boost/Number/3
 - NodeID/Number/34
 - Item 2/NodeID/Number/25
8. Save

D. Line In

1. Current:
 - Item 0/NodeID/Number/8

- Item 1/NodeID/Number/35
- Item 2/NodeID/Number/26
- 2. Select Item1
- 3. Select Add Item
- 4. Enter Boost
- 5. Select Number
- 6. Enter 3
- 7. New
 - Item 0/NodeID/Number/8
 - Item 1
 - Boost/Number/3
 - NodeID/Number/35
 - Item 2/NodeID/Number/26

E. Save, install and restart.

5. Substitute Gray (Side Speakers) for Black (Rear Speakers): Allows configuring Side Speakers in 5.1 analog surround sound.

A. Edit Platforms.xml/zml

1. Open Item/PathMapID
2. Verify PathMapID
3. Open 2nd to last item
4. Edit this path map as follows:
5. Current:
 - Item 0/NodeID/Number/21
 - Item 1/NodeID/Number/13
 - Item 2/NodeID/Number/3
6. New:
 - Item 0/NodeID/Number/23
 - Item 1/NodeID/Number/15
 - Item 2/NodeID/Number/5

B. Edit HDAHardwareConfigDriver/info.plist or realtekALC/Info.plist

1. Open Item/CodeclID
2. Verify CodeclID/LayoutID
3. Edit ConfigData (1150 only, edit each entry, 21 to 01)
 - Find: 21771cf0 21771d00 21771e00 21771f40
 - Replace: 21771c80 21771d20 21771e01 21771f01
 - Find: 21571c80 21571d20 21571e01 21571f01
 - Replace: 21571cf0 21571d00 21571e00 21571f40

C. Save, install and restart

6. Add Line Out (Rear Speakers) for analog 7.1 Surround Sound: Adds side speaker for 7.1 analog surround sound. SPDIFOut must be deleted to add Line Out as an audio output device. Note: Not available for Audio ID: 3

A. Edit Platforms.xml/zml

1. Open Item/PathMapID

2. Verify PathMapID
3. Delete Item 5
4. Copy the Line Out
5. Paste the Line Out on PathMap so there are two of the same. (Item 0 and 5)
6. Drag Item 4 up to PathMap - 4 times (moves new item to correct position)
7. Edit this path map as follows:
8. Current:
 - Item 0/NodeID/Number/21
 - Item 1/NodeID/Number/13
 - Item 2/NodeID/Number/3
9. New:
 - Item 0/NodeID/Number/23
 - Item 1/NodeID/Number/15
 - Item 2/NodeID/Number/5

B. Edit HDAHardwareConfigDriver/info.plist or realtekALC/Info.plist

1. Open Item/CodecID
2. Verify CodecID/LayoutID
3. Edit ConfigData (1150 only, edit each entry, 21 to 01)
 - Find: 21771cf0 21771d00 21771e00 21771f40
 - Replace: 21771c80 21771d20 21771e01 21771f01
 - Find: 21e71c90 21e71d61 21e71e4b 21e71f01
 - Replace: 21e71cf0 21e71d00 21e71e00 21e71f40

C. Save, install and restart

7. Substitute SPDIF-2 Wire Output: Replaces SPDIFOut Optical with motherboard SPDIF 2 wire SPDIF audio output device

Credit: intamara: [Lion HDMI Audio - Part 2a: DSDT Edits/Discrete - AMD/Nvidia - Page 29](#), Post 289

A. Edit Platforms.xml/zml

1. Open Item/PathMapID
2. Open the current SPDIFOut (last item)
3. Edit this path map as follows:
4. Current:
 - Item 0/NodeID/Number/30
 - Item 1/NodeID/Number/6
5. New:
 - Item 0/NodeID/Number/17
 - Item 1/NodeID/Number/16

B. Edit HDAHardwareConfigDriver/info.plist or realtekALC/Info.plist

1. Open Item/CodecID
2. Verify CodecID/LayoutID
3. Edit ConfigData (1150 only, edit each entry, 21 to 01)
 - Find: 21171cf0 21171d00 21171e00 21171f40
 - Replace: 21171ca0 21171d01 21171e43 21171f99
 - Find: 21e71c90 21e71d61 21e71e4b 21e71f01

- Replace: 21e71cf0 21e71d00 21e71e00 21e71f40

C. Save, install and restart

8. SPDIF OpticalOut/Encoded Digital Audio - Not supported in 10.10+/10.9+

9. 2x HD3000/HD4000 HDMI Audio/Delete Audio Output Device: Deletes an existing audio output device to allow an additional HDMI audio output to be present (AppleHDA supports a total of 4 audio output devices). For Audio ID: 3, the orange port/line out audio device is removed for HD3000/HD4000 HDMI audio

For Audio_ID:1, Select the audio output device to delete:

Item 3: Orange port/rear/line out/center and sub speakers

Item 4: Black port/rear/line out/rear speakers

Item 5: SPDIFOut

For Audio_ID:3, Select the audio output device to delete:

Item 3: Black port/rear/line out

Item 4: SPDIFOut

A. Edit Platforms.xml/zml

1. Verify PathMapID
2. Open Item/PathMapID
3. Delete Item (Selected from Audio ID above)

B. Edit HDAHardwareConfigDriver/info.plist or realtekALC/Info.plist

1. Open Item/CodecID
2. Verify CodecID/LayoutID
3. Edit ConfigData
4. If Orange deleted (1150 only, edit each entry, 21 to 01)
 - Find: 21671c30 21671d60 21671e01 21671f01
 - Replace: 21671cf0 21671d00 21671e00 21671f40
5. If Black deleted (1150 only, edit each entry, 21 to 01)
 - Find: 21571c20 21571d10 21571e01 21571f01
 - Replace: 21571cf0 21571d00 21571e00 21571f40
6. If SPDIFOut deleted (1150 only, edit each entry, 21 to 01)
 - Find: 21e71c90 21e71d61 21e71e4b 21e71f01
 - Replace: 21e71cf0 21e71d00 21e71e00 21e71f40

C. Save, install and restart

Appendix A. Native AppleHDA.kext Assumptions, Structure and Documents

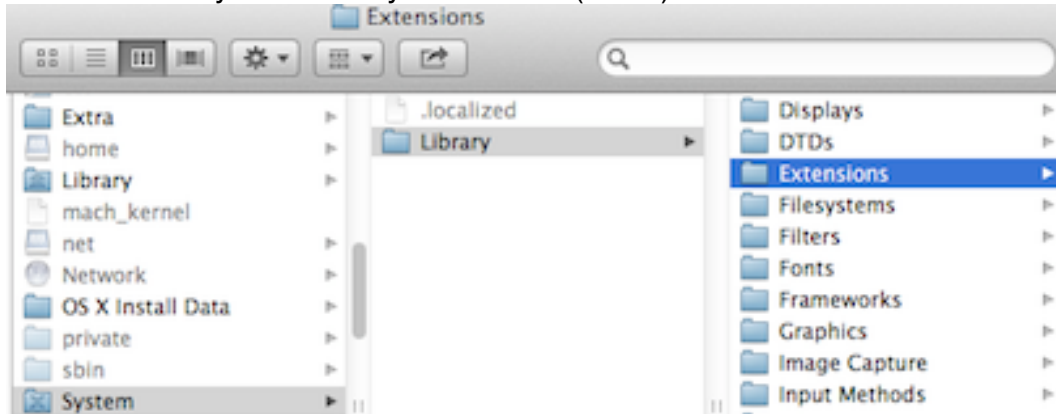
1. AppleHDA.kext Assumptions

- a. **CodecID**= decimal (codec_vendor_device_id)
Ex. dec (283904137) = hex (10ec0889)
- b. **Audio_IDs** (Audio_ID = layout-id = 1, 2 or 3)
 1. 5/6 audio port on board with and without HD4600+/AMD/Nvidia HDMI audio

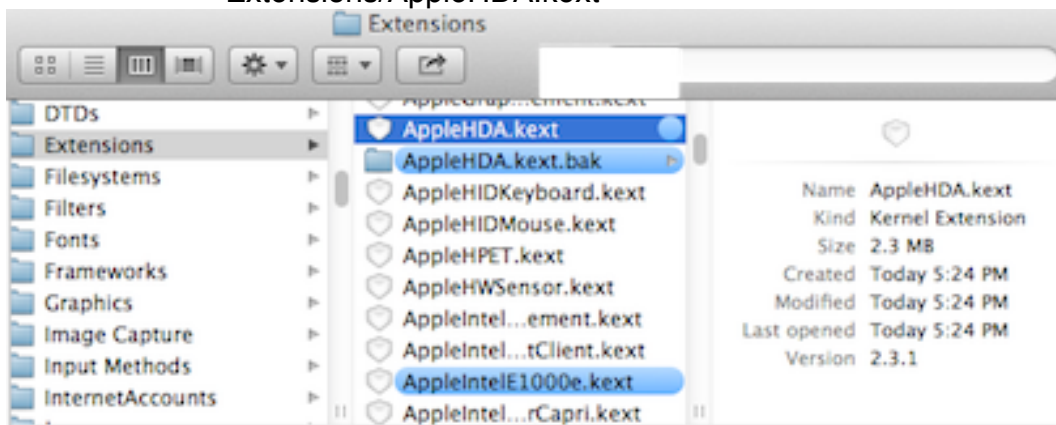
2. 3 port on board with and without HD4600+/AMD/Nvidia HDMI audio
 3. 3/5/6 onboard audio with HD3000/HD4000 HDMI audio (only)
- c. Realtek ALC AppleHDA.kext support, see **Requirements 2.** (above)

2. AppleHDA.kext Structure

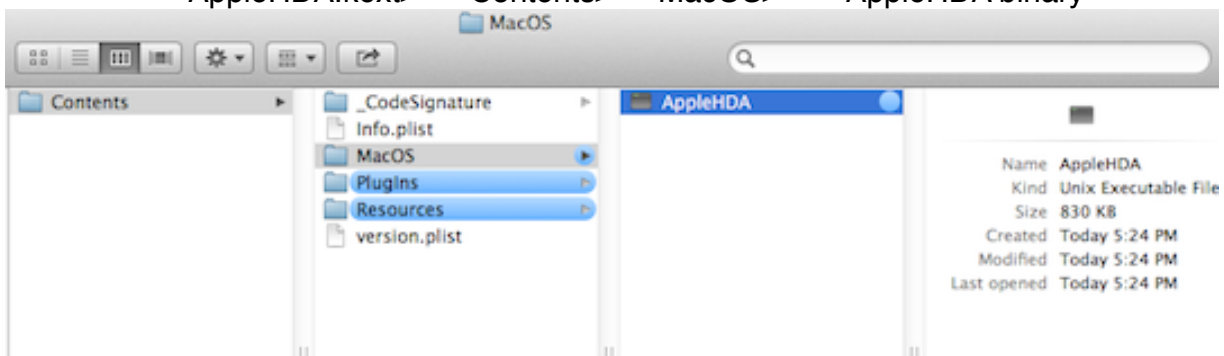
- a. AppleHDA.kext>
System/Library/Extensions (S/L/E)



Extensions/AppleHDA.kext

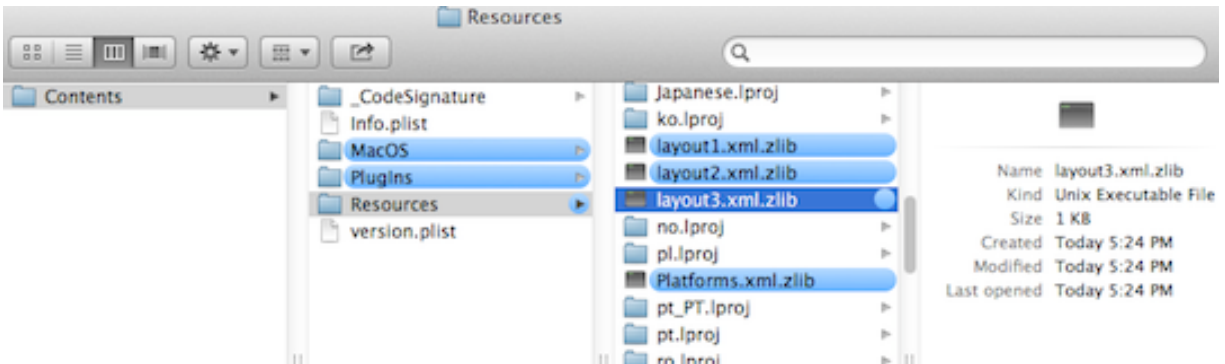


- b. AppleHDA.kext>
AppleHDA.kext> Contents> MacOS> AppleHDA binary

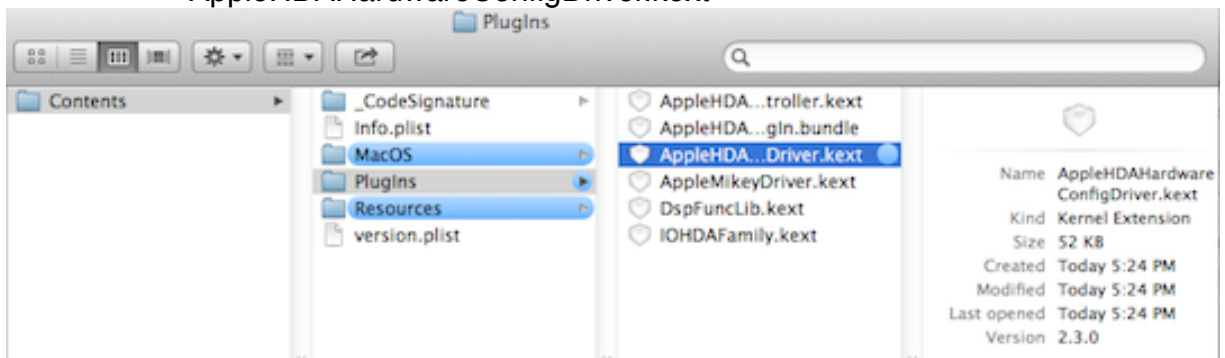


- c. layoutx.xml

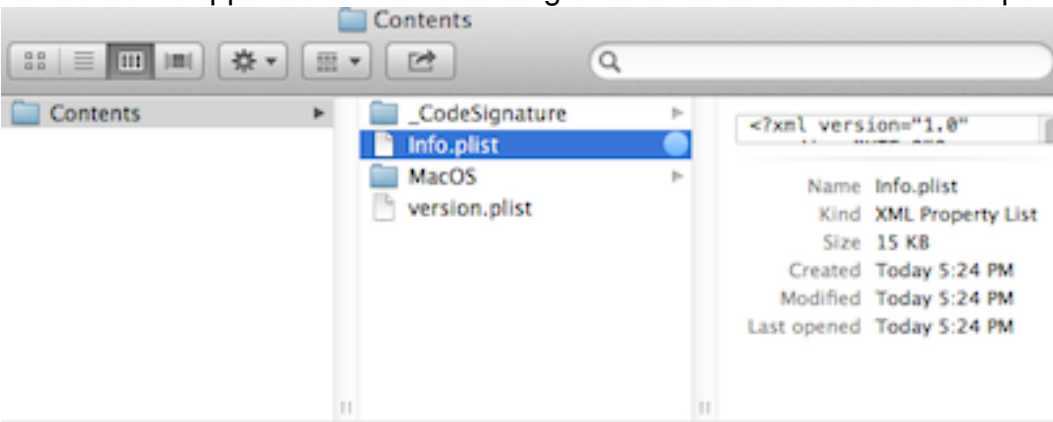
- d. Platforms.xml
 AppleHDA.kext> Contents> Resources> layoutx.xml/zml
 Platforms.xml/zml



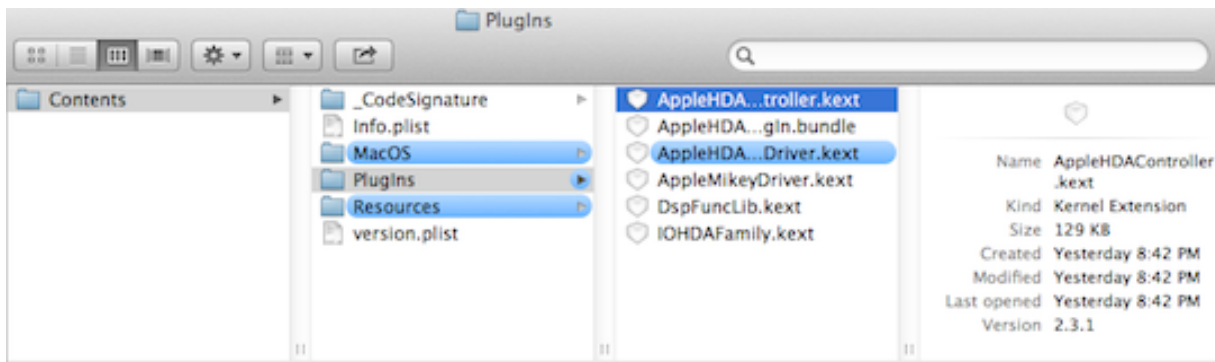
- e. Info.plist
 AppleHDA.kext> Contents> Plugins>
 AppleHDAHardwareConfigDriver.kext



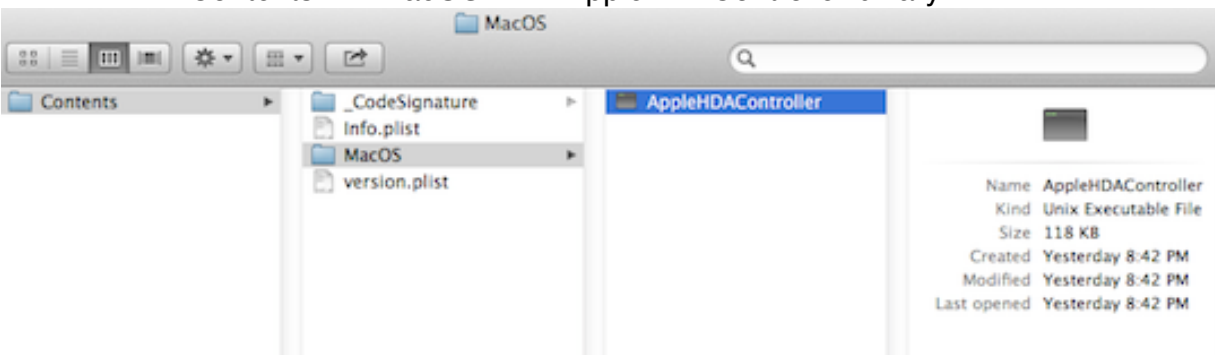
AppleHDAHardwareConfigDriver.kext> Contents> Info.plist



- f. AppleHDAController binary
 AppleHDA.kext> Contents> Plugins> AppleHDAController.kext>

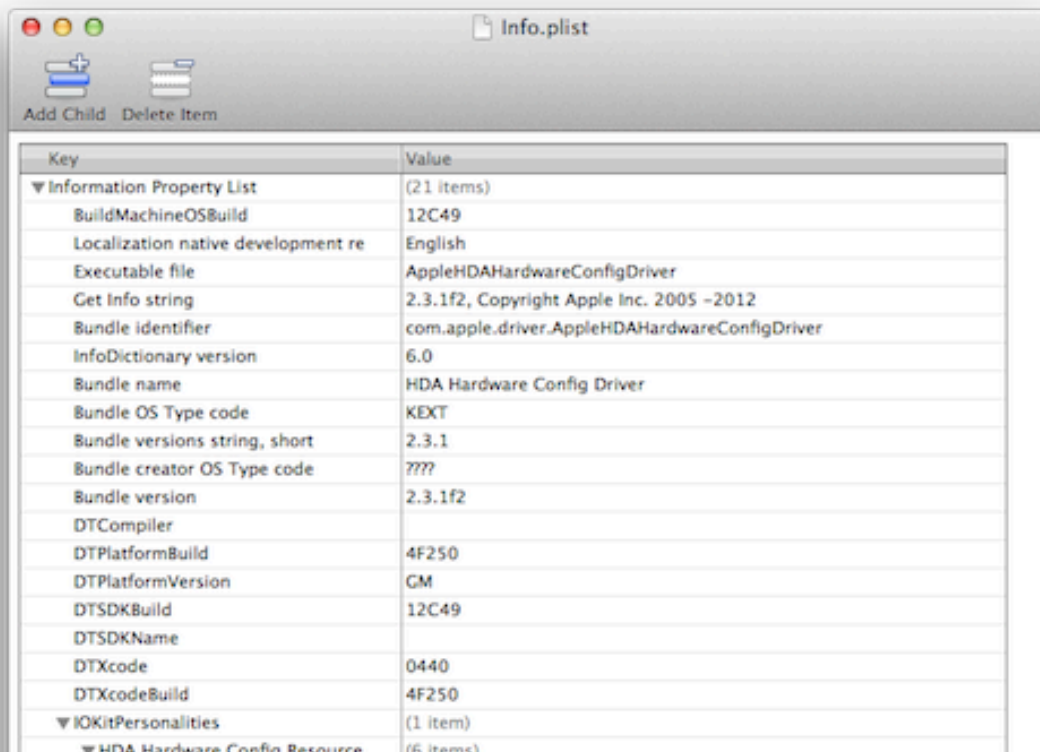


Contents> MacOS> AppleHDAController binary



3. AppleHDA.kext documents and their location

- a. Info.plist AppleHDA.kext/Contents/Plugins/
AppleHDAHardwareConfigDriver.kext/Contents>info.plist
- a1. Info.plist realtekALC..kext/Contents>info.plist

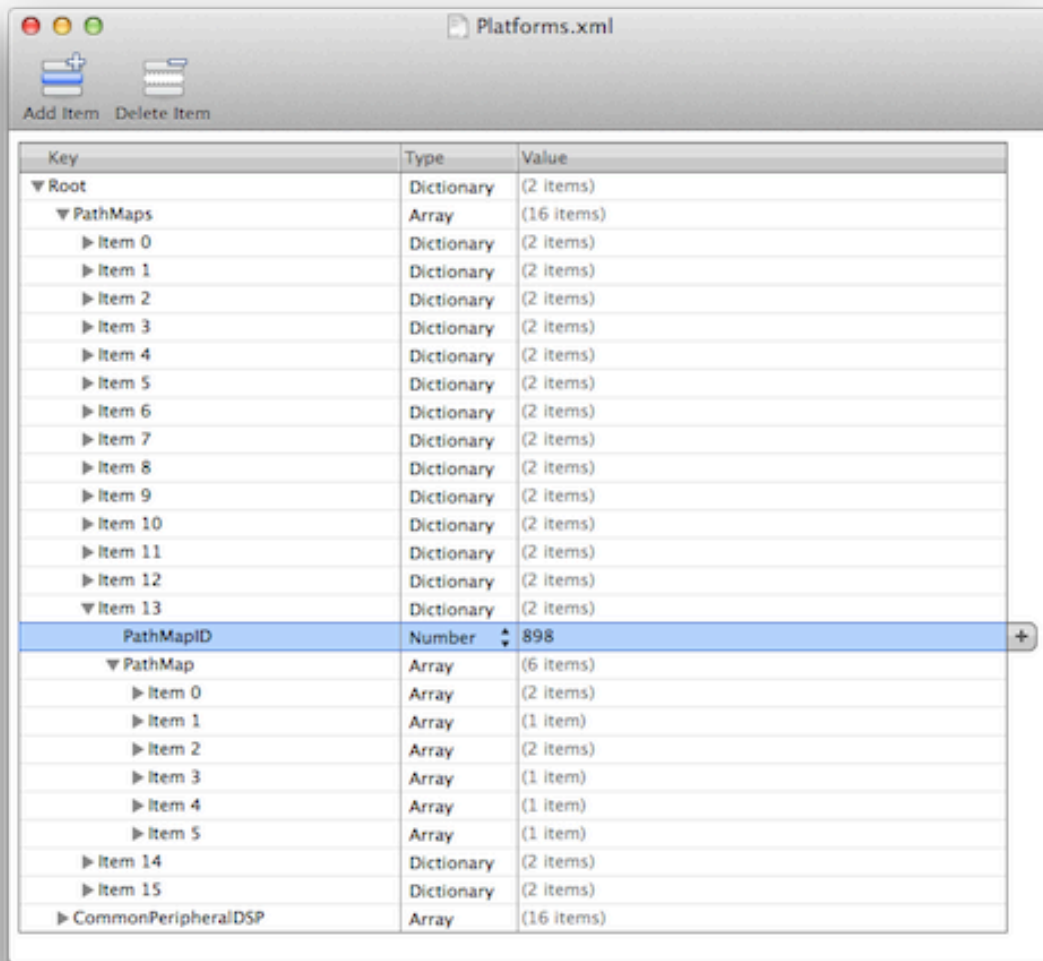


CFBundleIdentifier	com.apple.driver.AppleHDAHardwareConfigDriver
▼ HDACfgDefault	(16 items)
▶ Item 0	(4 items)
▶ Item 1	(4 items)
▶ Item 2	(4 items)
▶ Item 3	(4 items)
▶ Item 4	(4 items)
▶ Item 5	(4 items)
▶ Item 6	(4 items)
▶ Item 7	(4 items)
▶ Item 8	(4 items)
▶ Item 9	(4 items)
▶ Item 10	(4 items)
▶ Item 11	(4 items)
▶ Item 12	(4 items)
▼ Item 13	(4 items)
CodecID	283904153
ConfigData	<21471c10 21471d40 21471e11 21471f01 21571c20 21571d10 21571e11 21571f01>
FuncGroup	1
LayoutID	1
▶ Item 14	(4 items)
▶ Item 15	(4 items)
IOClass	AppleHDAHardwareConfigDriver
IOMatchCategory	AppleHDAHardwareConfigDriver
IOProviderClass	AppleHDAHardwareConfigDriverLoader
▶ PostConstructionInitialization	(6 items)
Copyright (human-readable)	Copyright © 2005–2012 Apple Inc. All rights reserved.
▶ OSBundleLibraries	(2 items)

- b. layout(Audio_ID).xml AppleHDA.kext/Contents/Resources/layout1.xml
b1. layout(Audio_ID).zml AppleHDA.kext/Contents/Resources/layout1.zml

Key	Type	Value
▼ Root	Dictionary (2 items)	
LayoutID	Number	1
▼ PathMapRef	Array (1 item)	
▼ Item 0	Dictionary (10 items)	
▼ CodecID	Array (1 item)	
Item 0	Number	283904153
▶ Headphone	Dictionary (0 items)	
▶ Inputs	Array (2 items)	
▶ IntSpeaker	Dictionary (0 items)	
▶ LineIn	Dictionary (1 item)	
▶ LineOut	Dictionary (0 items)	
▶ Mic	Dictionary (2 items)	
▶ Outputs	Array (4 items)	
PathMapID	Number	898
▶ SPDIFOut	Dictionary (0 items)	

- c. Platforms.xml AppleHDA.kext/Contents/Resources/Platforms.xml
- c1. Platforms.zml AppleHDA.kext/Contents/Resources/Platforms.zml



Appendix B. Realtek ALC AppleHDA.kext (details, before any customization)

1. Item/PathMapID Table and Item/CodecID Table

Item	PathMapID	CodecID	Audio ID
Item 0	885	283904133	1
Item 1	887	283904135	1
Item 2	287	283904135	2
Item 3	387	283904135	3
Item 4	888	283904136	1
Item 5	288	283904136	2
Item 6	388	283904136	3
Item 7	889	283904137	1
Item 8	289	283904137	2
Item 9	389	283904137	3
Item 10	892	283904146	1

Item 11	292	283904146	2
Item 12	392	283904146	3
Item 13	898	283904153	1
Item 14	298	283904153	2
Item 15	398	283904153	3
Item 16	900	283902595	1
Item 17	200	283902595	2
Item 18	269	283902569	1
Item 19	283	283902595	1

2. PathMapID 898/All Audio Devices (example)

Item	Sub Item	I/O	Device	Color	Location	NodeID
Item 0	Item 0	Input	Mic	Pink	Rear	24
	Item 1	Input	Mic	Pink	Front	25
Item 1		Input	Line In	Blue	Rear	26
Item 2	Item 0	Output	Speakers	Green	Rear	20
	Item 1	Output	Headphones	Green	Front	27
Item 3		Output	Line Out	Orange	Rear	22
Item 4		Output	Line Out	Black	Rear	21
Item 5		Output	SPDIFOut	N/A	Rear	30

Key	Type	Value
▼ Root	Dictionary	(2 items)
▼ PathMaps	Array	(16 items)
▶ Item 0	Dictionary	(2 items)
▶ Item 1	Dictionary	(2 items)
▶ Item 2	Dictionary	(2 items)
▶ Item 3	Dictionary	(2 items)
▶ Item 4	Dictionary	(2 items)
▶ Item 5	Dictionary	(2 items)
▶ Item 6	Dictionary	(2 items)
▶ Item 7	Dictionary	(2 items)
▶ Item 8	Dictionary	(2 items)
▶ Item 9	Dictionary	(2 items)
▶ Item 10	Dictionary	(2 items)
▶ Item 11	Dictionary	(2 items)
▶ Item 12	Dictionary	(2 items)
▼ Item 13	Dictionary	(2 items)
PathMapID	Number	898
▼ PathMap	Array	(6 items)
▼ Item 0	Array	(2 items)
▶ Item 0	Array	(1 item)
▶ Item 1	Array	(1 item)
▶ Item 1	Array	(1 item)
▼ Item 2	Array	(2 items)
▶ Item 0	Array	(1 item)
▶ Item 1	Array	(1 item)
▶ Item 3	Array	(1 item)
▶ Item 4	Array	(1 item)
▶ Item 5	Array	(1 item)
▶ Item 14	Dictionary	(2 items)
▶ Item 15	Dictionary	(2 items)
▶ CommonPeripheralDSP	Array	(16 items)

3. PathMapID 898/Input Audio Devices (example)

Item	Sub Item	I/O	Device	Color	Location	NodeID
Item 0	Item 0	Input	Mic	Pink	Rear	24
	Item 1	Input	Mic	Pink	Front	25
Item 1		Input	Line In	Blue	Rear	26

Key	Type	Value
▼ Root	Dictionary	(2 items)
▼ PathMaps	Array	(16 items)

▼ PathMaps	Array	(10 items)
▶ Item 0	Dictionary	(2 items)
▶ Item 1	Dictionary	(2 items)
▶ Item 2	Dictionary	(2 items)
▶ Item 3	Dictionary	(2 items)
▶ Item 4	Dictionary	(2 items)
▶ Item 5	Dictionary	(2 items)
▶ Item 6	Dictionary	(2 items)
▶ Item 7	Dictionary	(2 items)
▶ Item 8	Dictionary	(2 items)
▶ Item 9	Dictionary	(2 items)
▶ Item 10	Dictionary	(2 items)
▶ Item 11	Dictionary	(2 items)
▶ Item 12	Dictionary	(2 items)
▼ Item 13	Dictionary	(2 items)
PathMapID	Number	898
▼ PathMap	Array	(6 items)
▼ Item 0	Array	(2 items)
▼ Item 0	Array	(1 item)
▼ Item 0	Array	(3 items)
▼ Item 0	Dictionary	(2 items)
▶ Amp	Dictionary	(5 items)
NodeID	Number	9
▼ Item 1	Dictionary	(1 item)
NodeID	Number	34
▼ Item 2	Dictionary	(1 item)
NodeID	Number	24
▼ Item 1	Array	(1 item)
▼ Item 0	Array	(3 items)
▼ Item 0	Dictionary	(2 items)
▶ Amp	Dictionary	(5 items)
NodeID	Number	9
▼ Item 1	Dictionary	(1 item)
NodeID	Number	34
▼ Item 2	Dictionary	(1 item)
NodeID	Number	25
▼ Item 1	Array	(1 item)
▼ Item 0	Array	(1 item)
▼ Item 0	Array	(3 items)
▼ Item 0	Dictionary	(2 items)
▶ Amp	Dictionary	(5 items)
NodeID	Number	8
▼ Item 1	Dictionary	(1 item)
NodeID	Number	35
▼ Item 2	Dictionary	(1 item)
NodeID	Number	26
▶ Item 2	Array	(2 items)
▶ Item 3	Array	(1 item)
▶ Item 4	Array	(1 item)
▶ Item 5	Array	(1 item)
▶ Item 14	Dictionary	(2 items)
▶ Item 15	Dictionary	(2 items)
▶ CommonPeripheralDSP	Array	(16 items)

4. PathMapID 898/Output Audio Devices (example)

Item	Sub Item	I/O	Device	Color	Location	NodeID
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Item 2	Item 0	Output	Speakers	Green	Rear	20
	Item 1	Output	Headphones	Green	Front	27
Item 3		Output	Line Out	Orange	Rear	22
Item 4		Output	Line Out	Black	Rear	21
Item 5		Output	SPDIFOut	N/A	Rear	30

Platforms.xml

Add Item Delete Item

Key	Type	Value
▼ Item 13	Dictionary	(2 items)
PathMapID	Number	898
▼ PathMap	Array	(6 items)
▶ Item 0	Array	(2 items)
▶ Item 1	Array	(1 item)
▼ Item 2	Array	(2 items)
▼ Item 0	Array	(1 item)
▼ Item 0	Array	(3 items)
▼ Item 0	Dictionary	(1 item)
NodeID	Number	20
▼ Item 1	Dictionary	(2 items)
▶ Amp	Dictionary	(5 items)
NodeID	Number	12
▼ Item 2	Dictionary	(1 item)
NodeID	Number	2
▼ Item 1	Array	(1 item)
▼ Item 0	Array	(3 items)
▼ Item 0	Dictionary	(1 item)
NodeID	Number	27
▼ Item 1	Dictionary	(2 items)
▶ Amp	Dictionary	(5 items)
NodeID	Number	12
▼ Item 2	Dictionary	(1 item)
NodeID	Number	2
▼ Item 3	Array	(1 item)
▼ Item 0	Array	(1 item)
▼ Item 0	Array	(3 items)
▼ Item 0	Dictionary	(1 item)
NodeID	Number	22
▼ Item 1	Dictionary	(2 items)
▶ Amp	Dictionary	(5 items)
NodeID	Number	14
▼ Item 2	Dictionary	(1 item)
NodeID	Number	4
▼ Item 4	Array	(1 item)
▼ Item 0	Array	(1 item)
▼ Item 0	Array	(3 items)
▼ Item 0	Dictionary	(1 item)
NodeID	Number	21
▼ Item 1	Dictionary	(2 items)
▶ Amp	Dictionary	(5 items)
NodeID	Number	13
▼ Item 2	Dictionary	(1 item)
NodeID	Number	3
▼ Item 5	Array	(1 item)
▼ Item 0	Array	(1 item)

▼ Item 0	Array	(2 items)
▼ Item 0	Dictionary	(1 item)
NodeID	Number	30
▼ Item 1	Dictionary	(1 item)
NodeID	Number	6
▶ Item 14	Dictionary	(2 items)
▶ Item 15	Dictionary	(2 items)
▶ CommonPeripheralDSP	Array	(16 items)

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https://github.com/toleda/audio_ALC_guides