[Guide] Add HDEF/Clover_v2

For Realtek ALC AppleHDA

Clover supports Realtek ALC AppleHDA.kext Audio ID Injection; no kext, dsdt or ssdt enabler required. If required, Clover can add dsdt/HDEF.

audio_ALCInjection
toleda/audio_ALCInjection

Requirements

A. OS X versions supported:
   1. Yosemite/10.10 or newer
   2. Mavericks/10.9 or newer
   3. Mountain Lion/10.8.4 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

C. Supported Audio-IDs (Audio_ID = layout-id)
   1. Audio_ID: 1
      - 5/6 port Realtek ALC onboard audio and HD4600/AMD/Nvidia HDMI audio
   2. Audio_ID: 2

- 3 port/5.1 Realtek ALC onboard audio and HD4600/AMD/Nvidia HDMI audio

3. Audio_ID: 3
   - 1/2/3/5/6 port Realtek ALC onboard audio and HD3000/HD4000/AMD/Nvidia HDMI audio
4. Audio_IDs: 1 and 2 support analog 5.1 surround sound, 3 does not
5. Audio_IDs: 1, 2 and 3 require HDMI audio dsdt edits/ssdts for HDMI audio

D. Clover_v1597 or newer

Remove Enabler (if installed)

A. Remove any audio enablers
   1. kexts, S/L/E/HDAEnabler1.kext, HDAEnabler8--.kext, ALC8xxHDA.kext, etc.
   2. dsdt, remove dsdt/HDEF/layout-id
   3. ssdt, remove ssdt/HDEF/layout-id

Tools

A. IORegistryExplorer (Download: select View Raw)
B. Clover Configurator

Procedures

I. IOReg/HDEF Verification
II. IOReg/Audio_ID verification
III. Add dsdt/HDEF
IV. Set Audio ID
V. Verification
VI. Troubleshooting

I. IOReg/HDEF Verification

A. IOReg/Search: HDEF
B. IF IOReg/HDEF present, see **II. IOReg/Audio_ID verification**
C. If no IOReg/HDEF
   1. IOReg/Search: @1B
      a. Example: IOReg/pci8086,1c20@1B, see **III. Add dsdt/HDEF**
      b. If no IOReg/@1B, **No Codec**, do not proceed

II. IOReg/Audio_ID verification

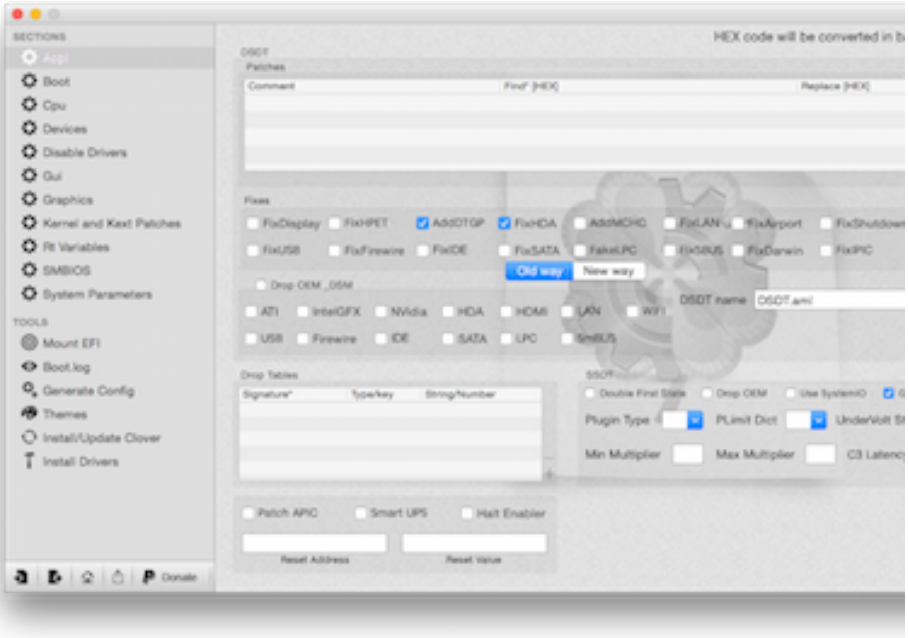
A. Search: HDEF
B. Locate: layout-id (right pane, scroll down)
C. Verify layout-id:
   - <01 00 00 00> valid, all supported codecs

- <02 00 00 00> valid, except ALC885
- <03 00 00 00> valid, except ALC885 and ALC1150
- <00 00 00 00> not valid, see **IV. Set Audio ID**

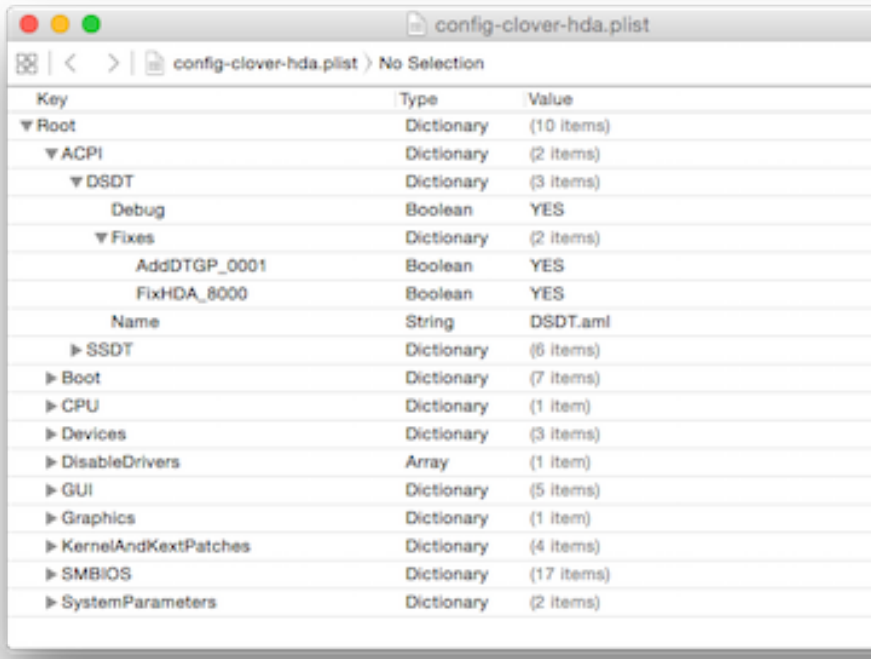
III. Add dsdt/HDEF

A. Edit config.plist **(**EFI/CLOVER/config.plist or EFI/CLOVER/OEM/ProductName/config.plist)

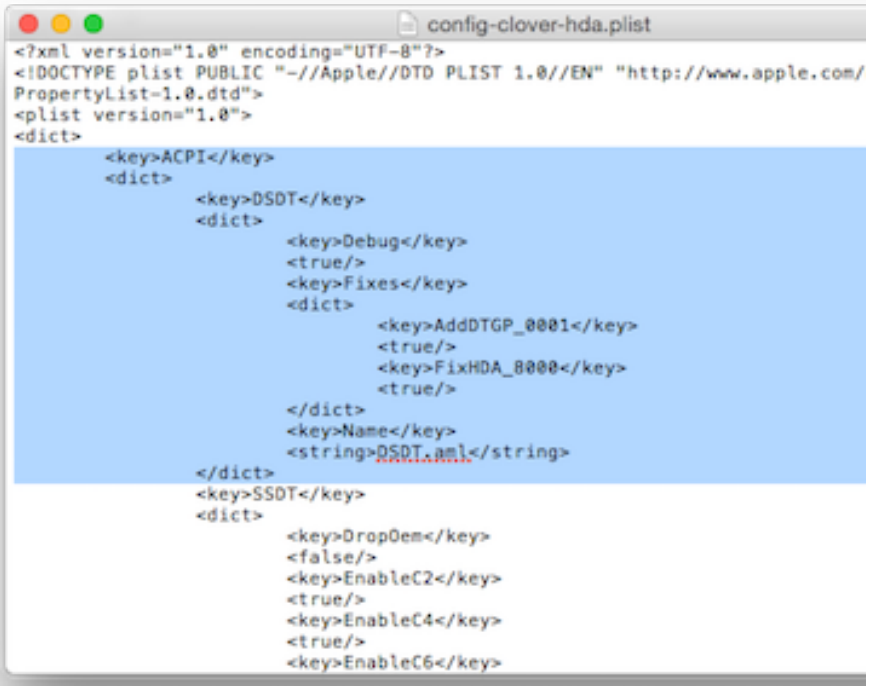
1. Add config.plist/ACPI/DSDT/Fixes/
   a. AddDTGP_0001/YES
   b. FixHDA_8000/YES
2. Add config.plist/ACPI/DSDT/ Debug/YES (optional; use to verify and then remove)
   a. Edited dsdt: EFI/CLOVER/ACPI/origin/
      - Native: DSDT-or.aml
      - Edited: DSDT-pa-.aml
2. Save
   a. Clover Configurator



   b. Xcode/config.plist



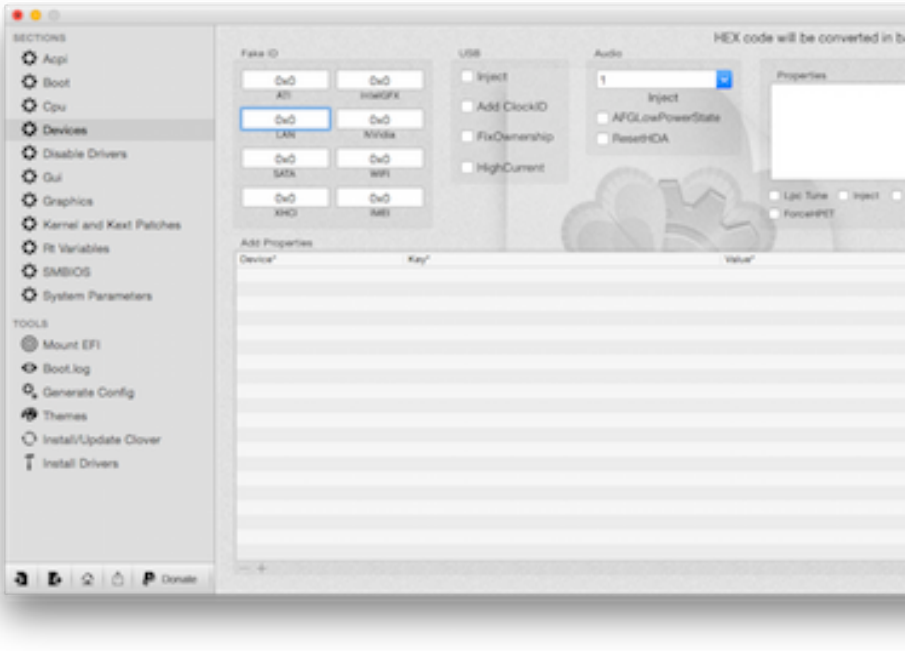
c. TextEdit/config.plist



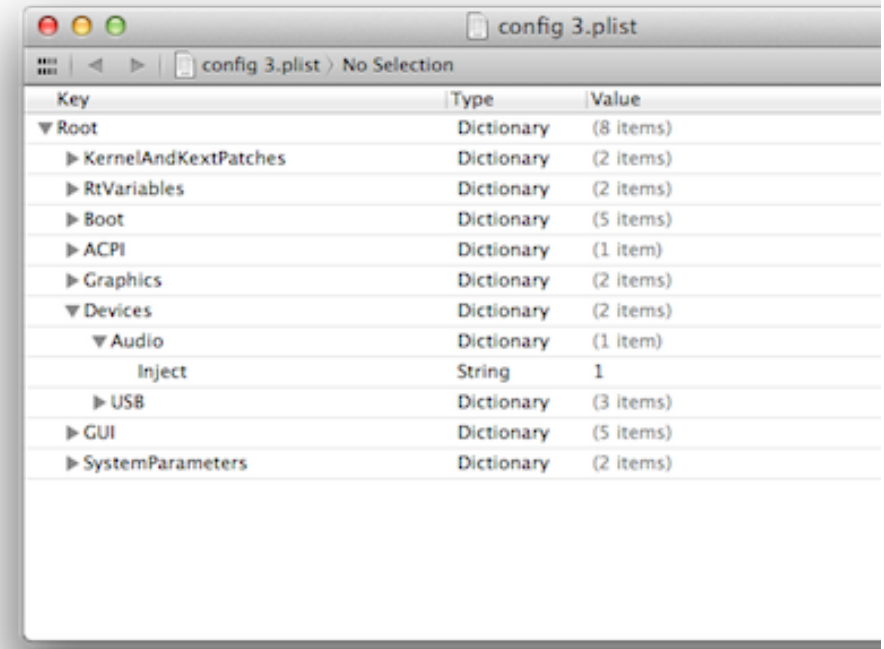
IV. Set Audio ID

A. Edit config.plist **(**EFI/CLOVER/config.plist or EFI/CLOVER/OEM/ProductName/config.plist)

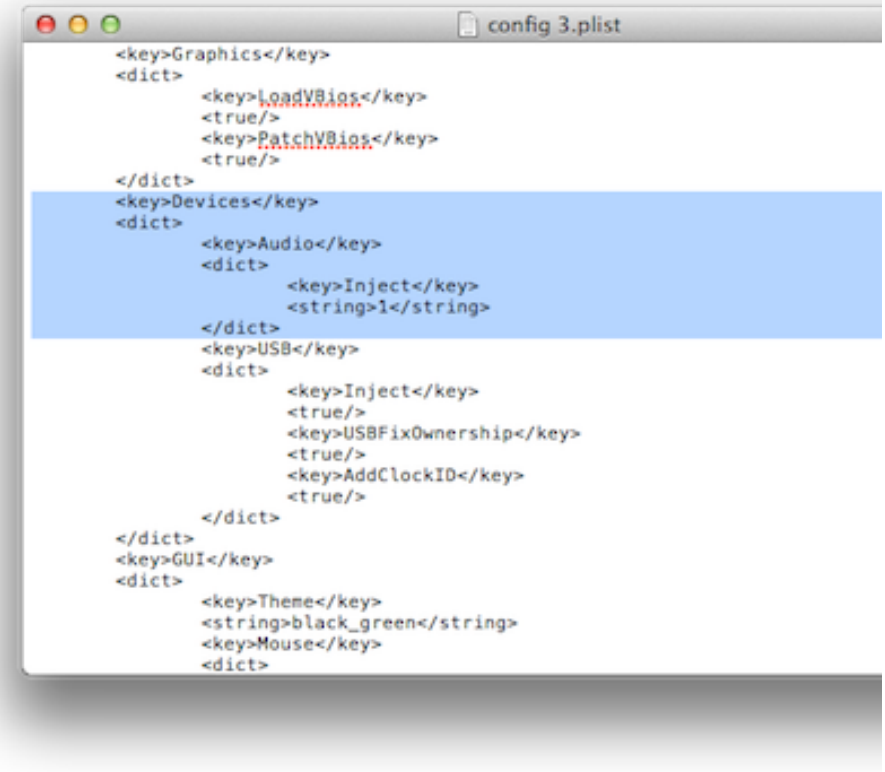
1. Determine Devices/Audio/Inject (from supported Audio_IDs above)
   - Audio_ID = 1, Audio/Inject=1
   - Audio_ID = 2, Audio/Inject=2
   - Audio_ID = 3, Audio/Inject=3
2. Add config.plist/DevicesAudio/Inject/1, 2 or 3
3. Save
   a. Clover Configurator



   b. Xcode/config.plist



c. TextEdit/config.plist



V. Verification

1. Restart
2. IORegistryExplorer
    a. Search: HDEF
    b. Locate: layout-id (right pane, scroll down)
    c. Verify:
        - <01 00 00 00> or
        - <02 00 00 00>

VI. Troubleshooting

1. See audio_RealtekALC/DETAILS.md