[Easy Guide] ML: UEFI HDMI Audio

[toleda](#)

HD4000 HDMI Audio
Ivy Bridge/7 Series/Socket 1155/UEFI - HD4000/AMD/Nvidia HDMI Audio

[Easy Guide] A simple HDMI Audio dsdt editing tool for OS X HDMI audio on UEFI motherboards. Despite the perception, all Intel based systems (including UEFI), have a DSDT. OS X HDMI audio requires dsdt edit to enable HDMI audio. Based on MaciASL built by SJ_UnderWater, the Apply button automatically makes the HDMI audio dsdt edits to your dsdt in a half dozen steps. No DSDT, no problem.

UEFI HDMI Audio dsdt edits - Desktop/Laptop/Intel NUC
[toleda/audio_hdmi_uefi · GitHub](#)
Configure MaciASL/Preferences/Sources/+ with URL:

Code:

```
https://raw.github.com/toleda/audio_hdmi_uefi/master
```

For HD4000 HDMI audio without dsdt edits, see [ML: UEFI HDMI audio, no dsdt edits](#)

Benefits
1. Automated dsdt editing for HDMI audio
2. Installs HD4K/HD3K HD Graphics HDMI audio dsdt edits
3. Installs AMD/Nvidia discrete graphics HDMI audio dsdt edits
4. Enables native CPU and GPU power management (with proper sysdef and ssdt)
5. Enables HD4K/HD3K HD Graphics with GraphicsEnabler=No

6. Supports HDMI audio on all Nvidia 6xx Kepler video connectors (HDMI, DP, DVI)

7. Minimum edits, no Method (DTGP.., faster boot

Before You Start:

1. OS X does not provide HDMI audio controls (No volume, no mute, no balance, etc.)

2. The connected HDMI device (TV, receiver, etc.) provides any and all audio controls

Requirements

1. AMI UEFI/Intel based motherboard

1a. Not supported - X79

2. OS X

2a. Mavericks - 10.9 and newer

2b. Mountain Lion - 10.8.3 and newer

3. dsdt - no compile errors

3a. No dsdt, see [PJALM's DSDT Patches](#)

4. Motherboard onboard audio codec

4a. Realtek supported audio codecs (8xy): 885, 887, 888, 889, 892, 898

4b. Unsupported audio codecs: HDMI audio works with any unsupported audio codec/no onboard audio

5. AppleHDA.kext (one of the following)

5a. MultiBeast 5.2.1 or newer/Audio/Realtek ALC8xx/With DSDT/ALC...

5b. Native AppleHDA.kext (unsupported audio codecs)

Not Supported

1. AMD HD7xxx HDMI audio, 0210 01aa_v100300 HDMI codec not supported

2. GTS 450, GTX 550 ti and GTX 560 ti (work arounds available)

More Information
Special HDMI Audio Considerations
Detailed Instructions
See [Mountain Lion HDMI Audio - AMI DSDT](#)

Tools
1. MaciASL [SourceForge.net: MaciASL - Project Web Hosting - Open Source Software](#)
2. IORegistryExplorer see [[Guide] How to Make a Copy of IOReg](#)
3. CarbonCopyCloner or SuperDuper
4. Download/ZIP: https://github.com/toleda/audio_hdmi_uefi

Audio IDs (10.8 AppleHDA.kext_v2.3.0 or newer)
1. Audio ID 1/A1: supports AMD/Nvidia HDMI and 3, 5 and 6 port ALC8xx onboard audio (HD3000/HD4000 HDMI audio not available)
2. Audio ID 3/A3: supports HD3000/HD4000 with or without AMD/Nvidia HDMI and 3, 5 and 6 port ALC8xx onboard audio (Black port - not available)

Patches
ib1. UEFI-Clean Compile - fix native dsdt compiler errors for successful dsdt edits
uefi1. Desktop-AMD/Nvidia-A1 - AMD/Nvidia HDMI audio dsdt edits
uefi2. Desktop-HD4K/HD3K/AMD/Nvidia-A3 - HD4000 HDMI audio dsdt edits
uefi3. Laptop-A3-FB_01 - Laptop HD4K/HD3K HDMI audio dsdt edits
uefi4. Laptop-A3-FB_03 - Laptop HD4K/HD3K HDMI audio dsdt edits
uefi5. NUC-HD4K-A1 - NUC HDMI audio edits (2xHDMI and TB)
ib4. HD4K-on-6_Series_MEI - HD4K MEI dsdt edit (apply once, only with uefi1 - uefi4)
sb5. HD3K-on-7_Series_MEI - HD3K MEI dsdt edit (apply once, only with

uefi1 - uefi4)

Location.aml - dsdt.aml installation folder
1. Chameleon/Chimera - Extra/
2. Clover - EFI/Clover/ACPI/Patched/

UEFI dsdt edit preparation
1. Copy Extra/dsdt.aml to Desktop
2. Backup dsdt.aml
3. Install MaciASL, see **Tools**/1.
4. Configure MaciASL/Preferences/Sources/+/https://raw.github.com/toleda/audio_hdmi_uefi/master
5. Make a copy of IOReg, see **Tools**/2.
6. Make bootable backup of system, see **Tools**/3.
7. Verify no audio enablers (S/L/E/HDAEnabler1.kext, HDAEnabler8xx.kext, etc.)

7a. If present, delete the enabler, fix permission and rebuilt cache.

8. Verify no device-properties injection (Extra/org.chameleon.Boot.plist)

8a. If present, edit/Extra/org.chameleon.Boot.plist, delete the injection string, save.

UEFI HDMI audio dsdt edits
1. MaciASL/Open dsdt.aml

1a. Verify AMI dsdt (1st line)
1b. DefinitionBlock ("./dsdt.aml", "DSDT", 2, "ALASKA", "A M I", 0x000000..)
1c. If dsdt is not AMI, this method will not work. Full Stop.

2. Optional: Fixes some Compiler Warnings and Messages

2a. Patch/MaciASL/Patch/toleda_hdmi_uefi/
2b. Select UEFI-Clean Compile
2c. Apply/Close/Compile]
2d. If errors (warnings and messages OK), see **Troubleshooting**/4

3. MaciASL/Patch/toleda_hdmi_uefi/

3a. Select patch (i.e., Desktop-HD4K/HD3K/AMD/Nvidia-A)
3b. MaciASL/Apply/Close/Compile

4. MaciASL/File/Save As... /ACPI Machine Language Binary/Desktop/dsdt.aml (add extension) 5. MaciASL/File/Save As... /ACPI Machine Language Binary/**Location.aml**/dsdt.aml (add extension)
6. Restart

Notes
1. HD4K/HD3K HD Graphics may require framebuffer edits for working HDMI audio
2. AMD HD 5xxx and 6xxx graphics may require framebuffer edits for working HDMI audio

Verify HDMI Audio
1. System Preferences/Sound/Outputs
Z77-I Deluxe/HD4000-DP and HDMI/HD6870-HDMI

Troubleshooting
1. Verify HDMI device connected

1a. System Information/Graphics/Display/HDMI device name/Television/Yes

2. Verify Extra/dsdt.aml is

2a. .aml file
2b. edited

3. Run IOReg/Verify Devices (PEGP, GFX0, HDAU, HDEF and IGPU)

3a. Device (IGPU) may not be present if HD4000 Graphics is not enabled
3b. Device (GFX0) and Device (HDAU) may not be present if no discrete graphics

4. Problem Reporting

4a. Motherboard/BIOS version/processor/graphics/OS and version
4b. Procedure/Guide Used
4c. dsdt/native (.dsl)
4d. dsdt/edited (.dsl)
4e. copy of IOReg

Credits:
PikeRAlpha:USB 3.0 DSDT mods
PJALM: PJALM's DSDT Patches
RehabMan:ASUS DSDT Patch Repository for MaciASL - Page 3
SJ_UnderWater: Native DSDT/AML IDE & Compiler: MaciASL Open Beta
VCH888: ALC889A, Gigabyte (Intel): now having a working front mic - Page 38 - Sound - InsanelyMac Forum