

887_Lion_AppleHDA_v2.1.7 (OS X 10.7.3)

Requirements

1. Realtek ALC887/Device_ID: 10ec0887
 - a. Also known as ALC888B
 - b. Also known as ALC888S
2. Lion 10.7.2 or later - 64 bit kernel (only)
3. dsdt w/HDEF/Layout-id is 0x77 0x03 0x00 0x00
 - a. For HD3000 HDMI audio; dsdt w/HDEF/layout-id is 0x83 0x01 0x00 0x00
 - b. For 3 port motherboard audio; dsdt w/HDEF/layout-id is 0x1F 0x01 0x00 0x00
4. Chimera 1.7 or later
5. Kextbeast

ALC887 Versions (IOReg/AppleHDAControllerIOHDACodecDevice/IOHDACodecVendorID)

1. Rev 100302 - Standard
2. Rev 100202 - Alternative Download

Configuration

Device	Port	Location	Notes	Audio ID: 887	Audio ID: 387	Audio ID: 287
1. Mic	Pink	Rear	1 & 2 Linked	Yes	Yes	Line Out (Center/Sub)
2. Mic (LineIn)	Pink	Front	2 Mutes 1	Yes	Yes	Yes
3. LineIn	Blue	Rear		Yes	Yes	LineOut (Rear)
4. SPDIFIn	Yellow	Rear		Optional	Optional	Optional
5. Speakers (Front)	Green	Rear	5 & 6 Linked	Yes	Yes	Yes
6. Headphones	Green	Front	6 Mutes 5	Yes	Yes	Yes
7. LineOut (Center/Sub)	Orange	Rear		Yes	No	Not Available
8. LineOut (Rear)	Black	Rear		Yes	Yes	Not Available
9. LineOut (Side)	Grey	Rear		Optional	No	Not Available
10. SPDIFOut	Orange	Rear	Stereo/DD/DTS	Yes	Yes	Yes
11. HDMI		Rear	Edits Required	AMD/Nvidia	HD3000 Only	AMD/Nvidia

[EasyGuide] How to add HDEF to your dsdt

<http://www.tonymacx86.com/viewtopic.php?f=16&t=58047>

dsdt/HDEF edits

```
Device (HDEF)
{
    Name (_ADR, 0x001B0000)
    Method (_PRW, 0, NotSerialized)
    {
        Return (Package (0x02)
        {
            0x0D,
            0x05
        })
    }
}
```

```

Method (_DSM, 4, NotSerialized)
{
    Store (Package (0x04)
    {
        "layout-id",
        Buffer (0x04)
        {
            0x77, 0x03, 0x00, 0x00 /* Example, use table below for correct layout-id */
        },

        "PinConfigurations",
        Buffer (Zero) {}
    }, Local0)
    DTGP (Arg0, Arg1, Arg2, Arg3, RefOf (Local0))
    Return (Local0)
}
}

```

Audio ID/layout-id Table

Audio ID (dec)	LayoutID (dec)	layout-id (hex)	dsdt layout-id Injection (hex)
287	287	11F	0x1F, 0x01, 0x00, 0x00
387	387	183	0x83, 0x01, 0x00, 0x00
887	887	377	0x77, 0x03, 0x00, 0x00

Installation - Rev 100202

1. Backup S/L/E/AppleHDA.kext
2. Delete ALC8xxHDA, ALC8xx, 8xxHDAEnabler and any other audio enablers from S/L/E
3. Copy AppleHDA.kext from 887_Lion_AppleHDA_887-100202 folder in Downloads to Desktop
4. Run KextBeast
5. Audio ID: 887, goto Step 9.
 - a. Audio ID: 387 (HD3000 HDMI audio); edit dsdt.aml/HDEF/layout_id to 0x83 0x01 0x00 0x00
 - b. Audio ID: 287 (3 port analog audio); dsdt w/HDEF/layout-id is 0x1F 0x01 0x00 0x00
6. Restart

Installation - Rev 100302

1. Backup S/L/E/AppleHDA.kext
2. Delete ALC8xxHDA, ALC8xx, 8xxHDAEnabler and any other audio enablers from S/L/E
3. Copy AppleHDA.kext from 887_Lion_AppleHDA_887-100302 folder in Downloads to Desktop
4. Run KextBeast
5. Audio ID: 887, goto Step 6.
 - a. Audio ID: 387 (HD3000 HDMI audio); edit dsdt.aml/HDEF/layout_id to 0x83 0x01 0x00 0x00
 - b. Audio ID: 287 (3 port analog audio); dsdt w/HDEF/layout-id is 0x1F 0x01 0x00 0x00
6. Restart

Speakers

1. Audio ID: 887 and 387, match connector color to same motherboard/case port color
2. Audio ID: 287 (3 port motherboard audio)
 - a. Plug black connector into blue motherboard port for rear speakers
 - b. Plug green connector into green motherboard port for front speakers
 - c. Plug orange connector into pink motherboard port for center/sub speakers
 - d. Front panel: Match connector color to same case port color

Audio Input Level Setting

1. Mic (Pink/Motherboard), Line In (Pink/Chassis) and Line In (Blue/Motherboard) levels are the same
2. Three Amplifiers
 - a. Source (mic, player, etc.): set volume high
 - b. OS X Input Amp (System Preferences/Sound/Input/device): set volume 50%
 - c. OS X Output Amp (System Preferences/Sound/Output/device, keyboard): set volume to personal preference

Optional Installs

1. Configure 5.1 Surround Sound Aggregate Device (Not available with Audio ID: 387)
 - a. Applications/Utilities/Audio MIDI Setup
 - b. <http://www.tonymacx86.com/viewtopic.php?f=16&t=848>
2. Install Line In - <http://www.rogueamoeba.com/freebies/>

Customization

See Customizing Lion Optimized Lion AppleHDA.kext post

Kexts

1. AppleHDA_v2.1.7
 - a. Audio ID: 887
 - i. 887 on board
 - ii. HDMI audio - discrete graphics
 - b. Audio ID: 387 (HD3000 HDMI audio only)
 - i. 887 on board
 - ii. HDMI audio - HD3000 integrated graphics
 - c. Audio ID: 287 (3 port motherboard audio)
 - i. 889 on board
 - ii. HDMI audio - AMD/Nvidia discrete graphics
 - d. Platforms.xml
 - a. For ALC887 Revision 100202

887_Lion_AppleHDA Uninstall

1. Copy AppleHDA.kext backup to Desktop (backup from Installation, Step 1, above)
2. Run KextBeast
3. Restart

10.7.2/3 Nvidia HDMI Audio Information

If your system boots to a black screen after installing this kext:

1. Reboot with GraphicsEnabler=No
2. Install your AppleHDA.kext backup
3. See 1st post of Optimized Lion AppleHDA thread

Troubleshooting

1. Shutdown/Pull power cord/Press power button twice/Wait 30 seconds/Plug power in/Boot
2. System Preferences/Sound/Output - No Audio Devices
 - a. Delete ALC8xxHDA, ALC8xx, 8xxHDAEnabler and any other audio enablers from S/L/E
 - b. Verify 10ec0887 Revision 100302 or 100202 (IOReg/AppleHDAControllerIOHDACodecDevice/IOHDACodecVendorID)
 - c. Reinstall correct 887_Lion_AppleHDA/AppleHDA.kext
3. System Preferences/Sound/Output/Audio Devices present - No Sound
 - a. Check Mute
 - b. Check Volume
 - c. Reinstall 887_Lion_AppleHDA/AppleHDA.kext
4. System Preferences/Sound/Input/Audio Devices present - No Sound
 - a. Check Mute
 - b. Check Volume

- c. Reinstall 887_Lion_AppleHDA/AppleHDA.kext
- 5. Center/Sub - No sound
 - a. Audio MIDI Setup/5.1 Surround Sound Aggregate Device/Configure Speakers
 - b. Line In/Select Input/Select Output (5.1 Surround)/Select Pass Thru
 - c. Verify Center/Sub working in Audio MIDI Setup
- 6. Internal Microphone/Line In - No sound
 - a. Audio MIDI Setup/5.1 Surround Sound Aggregate Device/Configure Speakers
 - b. Line In/Select Input/Select Output (5.1 Surround)/Select Pass Thru
 - c. Select a speaker in Audio MIDI Setup/verify test tone
- 7. Headphone static
 - a. Check green front port connection (chassis)
 - b. Check green rear port connection (motherboard)
- 8. Mic static
 - a. Check pink front port connection (chassis)
 - b. Check pink rear port connection (motherboard)