ML_Optimized_AppleHDA_v2.3.1 (OS X 10.8.2)
For Realtek ALC8xx

Requirements
1. Realtek ALC8xy*, one of the following Device_IDs:
*See Notes below for ALC 8xy
a. 10ec0885
b. 10ec0887
c. 10ec0888
d. 10ec0889
e. 10ec0892
f. 10ec0898
2. Mountain Lion 10.8.2 or later -
3. dsdt w/HDEF/Layout-id is 0x01 0x00 0x00 0x00
a. For 3 port motherboard audio; dsdt w/HDEF/layout-id is 0x02 0x00 0x00 0x00
b. For HD3000/HD4000 HDMI audio; dsdt w/HDEF/layout-id is 0x03 0x00 0x00 0x00
4. Chimera 1.2 or later
5. KextBeast

Configuration

Device	Port	Location	Notes	Audio ID: 1	Audio ID: 2	Audio ID: 3
1. Mic	Pink	Rear	1 & 2 Linked	Yes	Line Out (Center/Sub)	Yes
2. Mic (LineIn)	Pink	Front	2 Mutes 1	Yes	Yes	Yes
3. LineIn	Blue	Rear		Yes	LineOut (Rear)	Yes
4. SPDIFIn	Yellow	Rear	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	Not Available	No
8. LineOut (Rear)	Black	Rear		Yes	Not Available	Yes
9. LineOut (Side)	Grey	Rear		Optional	Not Available	No
10. SPDIFOut	Orange	Rear	Stereo/ DD/DTS	Yes	Yes	Yes
11. HDMI		Rear	Edits Required	AMDNvidia	AMD/Nvidia	HD3000/ HD4000

No dsdt/HDEF?
Important - Use layout-ids below
[EasyGuide] How to add HDEF to your dsdt

Audio ID/layout-id Table

Audio ID (dec)	LayoutID (dec)	layout-id (hex)	dsdt layout-id Injection (hex)
1	1	1	0x01, 0x00, 0x00, 0x00
2	2	2	0x02, 0x00, 0x00, 0x00
3	3	3	0x03, 0x00, 0x00, 0x00

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)
            {
               0x01, 0x00, 0x00, 0x00   /*  Example, use table below for correct layout-id */
            },

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

Installation - MultiBeast
1. Backup S/L/E/AppleHDA.kext
2. Verify dsdt/HDEF/layout-id
3. **tonymacx86 Downloads - Downloads - tonymacx86**
3a. MultiBeast 5.2.1 or newer - Select/Drivers & Bootloaders/Drivers/Audio/Realtek ALC8xx/With DSDT/ALC8…
4. Restart

Speakers
1. Audio ID: 1 and 3, match connector color to same motherboard/case port color
2. Audio ID: 2 (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: 3)
a. Applications/Utilities/Audio MIDI Setup
b. tonymacx86 - How to enable 5.1-channel analogue audio in OS X
2. Install Line In - http://www.rogueamoeba.com/freebies/

Customization
See Mountain Lion: Customizing the Optimized AppleHDA

Notes
1. ALC8xy can be:
a. ALC885, 889a
b. ALC887, 888b
c. ALC888, 888s,
d. ALC889
e. ALC892
f. ALC898

Kexts
1. AppleHDA_v2.3.1
a. Audio ID: 1
i. ALC8xy on board
ii. HDMI audio - discrete graphics
b. Audio ID: 2 (3 port motherboard audio)
i. ALC8xy on board
ii. HDMI audio - AMD/Nvidia discrete graphics
c. Audio ID: 3 (HD3000/HD4000 HDMI audio only)
i. ALC8xy on board
ii. HDMI audio - HD3000/HD4000 integrated graphics

ALC8xy_ML_AppleHDA Uninstall
1. Copy AppleHDA.kext backup to Desktop (backup from Installation, Step 1, above)
2. Run KextBeast
3. Restart

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 HDAEnabler… and any other audio enablers from S/L/E
b. Verify 10ec 08xx (IOReg/AppleHDAControllerIOHDACodecDevice/IOHDACodecVendorID)
c. Reinstall Reinstall MultiBeast/Audio/Realtek ALC8xx/
3. System Preferences/Sound/Output/Audio Devices present - No Sound
a. Check Mute
b. Check Volume
c. Reinstall MultiBeast/Audio/Realtek ALC8xx/
4. System Preferences/Sound/Input/Audio Devices present - No Sound
a. Check Mute
b. Check Volume

c. Reinstall MultiBeast/Audio/Realtek ALC8xx/
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)