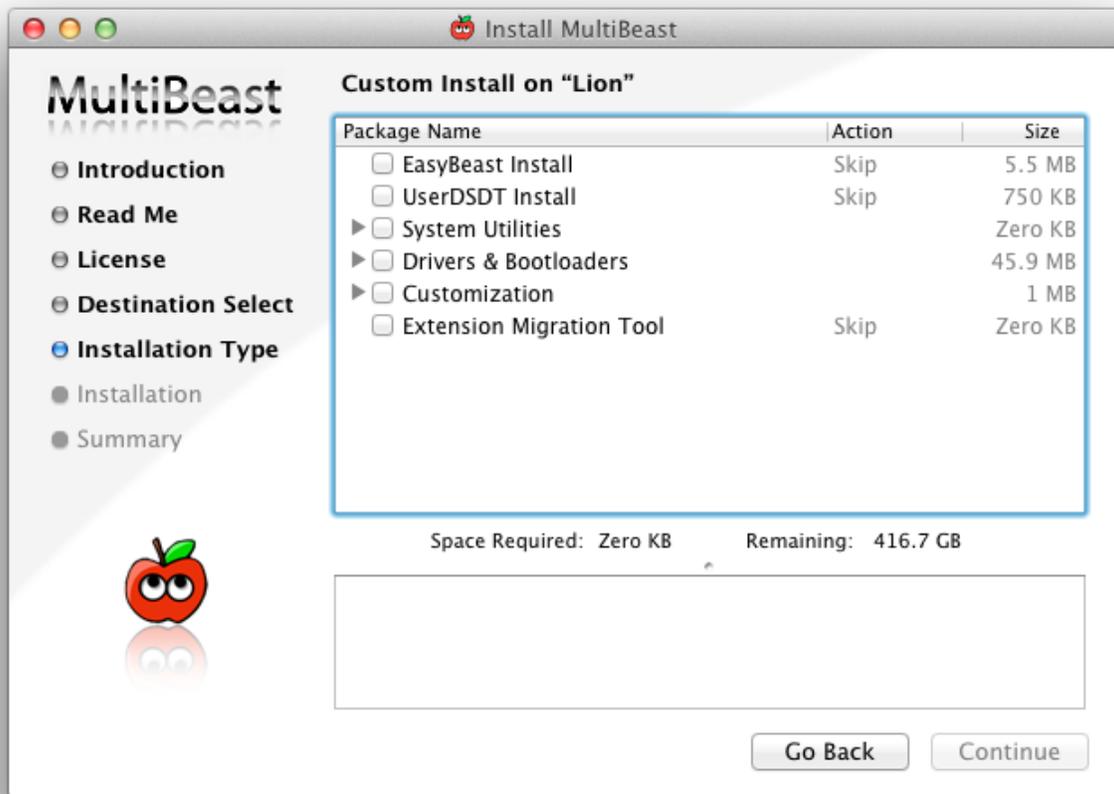




# MultiBeast



**MultiBeast** is an all-in-one post-installation tool designed to enable boot from hard drive, and install support for Audio, Network, and Graphics. It contains two different complete post-installation solutions: EasyBeast and UserDSDT. In addition it includes System Utilities to rebuild caches and repair permissions and a collection of drivers, bootloaders, boot time config files and handy software.

This document will reference all of the features of MultiBeast, as described inside the installer itself. The iBoot + MultiBeast guide is available at the [tonymacx86 Blog](#).

Please read all of the descriptions carefully. You may run MultiBeast as often as you like, but keep in mind that it will not uninstall items, just overwrite them.

**tonymacx86 & MacMan**  
[www.tonymacx86.com](http://www.tonymacx86.com)



# iBoot

Plus MultiBeast

## For Mac OS X Snow Leopard 10.6

1. Follow all [Tips & Recommendations](#)
2. Install using iBoot + Retail Snow Leopard DVD
3. Boot with iBoot
4. Set up Computer
5. Run Combo Update - DON'T REBOOT
6. Run MultiBeast
7. Reboot



## UniBeast

### For Mac OS X Lion 10.7

1. Purchase OS X Lion (Retail App or USB)
2. Prepare a USB drive
3. Create a bootable USB drive using UniBeast
4. Boot from the UniBeast created drive and install OS X Lion
5. Using the UniBeast created drive boot the new installation
6. Run MultiBeast

Thanks to the [Chameleon](#) team, [netkas](#), [Project OS X](#), [Lnx2Mac](#), el coniglio, cmf, maolj, ErmaC the candle and hnak for their efforts that make this tool possible.

Additional thanks to the tonymacx86 community for their testing and contributions to this work. Special thanks to the mods: adamsmasher, beelzebozo, bkribbs, Complx, eelhead, electronsaper, Going Bald, gordo74, ijhu, karacho, Lnx2Mac, marosell, minihack, ModBot, ModBot Jr., notshy, samisnake, SnapMan, Stork, StingRay, thelostswede, toleda, and Vendetta.



## EasyBeast Install

EasyBeast is a DSDT-free solution for Core 2 or Core i systems. Installs Chimera v1.10.0 to allow your system to boot from the hard drive. Installs FakeSMC.kext, LegacyAppleRTC.kext, EvOreboot.kext, JMicron36xATA.kext, AHCI\_3rdParty\_SATA.kext, and NullCPUPowerManagement.kext in /System/Library/Extensions. Installs 64-Bit org.chameleon.Boot.plist with GraphicsEnabler=Yes, Apple Boot Screen, UseKernelCache=Yes and npci=0x3000 and darkwake=0 kernel flags, MacPro3,1 smbios.plist and tonymacx86 Remixed theme in /Extra. Patches /System/Library/Extensions/AppleRTC.kext to prevent CMOS resets. Does not include any Network or Sound drivers.



## UserDSDT Install

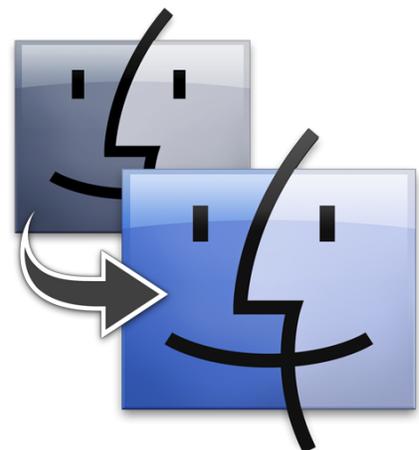
UserDSDT is a solution for those who have a pre-edited DSDT on the desktop with an .aml extension. Installs your DSDT as DSDT.aml, 64-Bit org.chameleon.Boot.plist with GraphicsEnabler=Yes, Apple Boot Screen, UseKernelCache=Yes, GenerateCStates=Yes, GeneratePStates=Yes and npci=0x3000 and darkwake=0 kernel flags, MacPro3,1 smbios.plist and tonymacx86 Remixed theme in /Extra. Installs FakeSMC.kext in /System/Library/Extensions. Installs Chimera v1.10.0 so the system will be bootable from the hard drive and ready for sleep with all hardware recognized in System Profiler. Patches /System/Library/Extensions/AppleRTC.kext to prevent CMOS resets. Does not include any Network or Sound drivers.

## Extension Migration Tool

Extension Migration Tool copies the contents of /Extra/Extensions to /System/Library/Extensions, deletes /Extra/Extensions and /Extra/Extension.mkext, rebuilds cache and adds UseKernelCache=Yes to /Extra/org.chameleon.Boot.plist. Patches /System/Library/Extensions/AppleRTC.kext to prevent CMOS resets. Only needs to be run after upgrading from Mac OS X 10.6 Snow Leopard.

## Drivers & Bootloaders

Collection of drivers, bootloaders, boot time config files and handy software. If you're unsure, don't install anything in here. Advanced users may skip EasyBeast and UserDSDT to do an à la carte install using this collection.





## Kexts & Enablers

Kexts or kernel extensions provide additional functionality to the operating system. The kexts contained here provide either enhanced hardware support or are mandatory for non-DSDT based systems. Be sure to read the descriptions carefully before installation.

## Audio

Collection of kexts to enable the on-board Audio on your system. Make sure to read the descriptions carefully and only install the correct files for your audio codec.

### Realtek ALC8xx

Enables audio for motherboards featuring the Realtek ALC888, ALC888b/887, ALC889, ALC889a/885, ALC892, or ALC898 high-definition audio codecs.

#### Unified Device Injector – ALC8xxHDA

MacMan's Unified Audio Injectors for Realtek ALC888, ALC888b/887, ALC889, ALC889a/885, ALC892, or ALC898 high-definition audio codecs. Used in conjunction with AppleHDA Rollback and a modified DSDT or HDAEnabler. Installs ALC8xxHDA.kext in /System/Library/Extensions.

#### AppleHDA Rollback

Replaces the current AppleHDA.kext in /System/Library/Extensions with an unmodified 10.6.2 AppleHDA.kext. Requires ALC8xxHDA.kext to restore full functionality for Realtek ALC888, ALC888b/887, ALC889, ALC889a/885, ALC892 or ALC898 high-definition audio codecs on systems running 10.6.3 or later.

#### Non-DSDT HDAEnabler

Required for ALC8xxHDA.kext or patched AppleHDA to work WITHOUT a DSDT and enable audio on motherboards featuring the Realtek ALC888, ALC888b/887, ALC889, ALC889a/885, ALC892 or ALC898 high-definition audio codecs. Make sure you only choose ONE HDAEnabler option. Installs HDAEnabler8xx.kext in /System/Library/Extensions.

#### Patched AppleHDA

Replaces the current AppleHDA.kext in /System/Library/Extensions with a patched 10.7.4 AppleHDA.kext to enable full functionality for the Realtek ALC888, ALC888b/887, ALC889, or ALC892 or ALC898 high-definition audio codecs. Edits by toleda.

### Universal

Enables audio for most codecs. Uses VoodooHDA which is an open source audio driver for devices compliant with the Intel High Definition Audio (HDA) specification, based primarily on code from the FreeBSD hdac driver. It is intended as an Intel-only replacement for AppleHDA. Enables sound without DSDT patching on 32/64-bit systems. Installs VoodooHDA.kext in /System/Library/Extensions.

#### VoodooHDA 0.2.1 / 0.2.2

VoodooLabs branch version 0.2.1.

#### VoodooHDA 0.2.5.6 / 0.2.6.1 / 0.2.7.2 / 0.2.7.3

Project OS X branch version 0.2.6.1. Includes VoodooHDA.prefPane installed in /System/Library/PreferencePanels. Caution- this driver may be unstable, causing system boot errors.



## Disk

Collection of kexts that provide enhanced hardware support for optical and disk drives.

### **IOAHCIBlockStorageInjector**

Makes drives appear as internal. Installs IOAHCIBlockStorageInjector.kext in /System/Library/Extensions. Not needed when using AHCI\_3rdParty\_SATA.kext.

### **3rdParty SATA**

Provides support for the ASMedia ASM1061, JMicron 36x (aka GSATA) and Marvell 88SE912 SATA controllers. All drives connected to these ports show on the desktop as Internal and can NOT be hot swapped. Installs AHCI\_3rdParty\_SATA.kext in /System/Library/Extensions.



### **3rdParty eSATA**

Provides support for the ASMedia ASM1061, JMicron 36x (aka GSATA) and Marvell 88SE912 SATA controllers. All drives connected to these ports show on the desktop as External and can be hot swapped. Installs AHCI\_3rdParty\_eSATA.kext in /System/Library/Extensions.

### **JMicron36x ATA**

MacMan's version of JMicronATA. Enables the IDE port on the JMicron 36x (aka GSATA) chips. Supports optical and hard drives. Installs JMicron36xATA.kext in /System/Library/Extensions.

### **TRIM Enabler**

Patches

/System/Library/Extensions/IOAHCIFamily.kext/Contents/PlugIns/IOAHCIBlockStorage.kext to add Trim support for non-Apple SSD drives.

## Graphics

Install to enable QE/CI full Graphics acceleration. Only install if the default GraphicsEnabler=Yes is not working correctly.

### **ATI 48xx Support**

Collection of kexts to enable ATI 48xx Graphics Controllers on your system. Can be used instead of or in addition to GraphicsEnabler.

#### **netkas ATI 48xx Patch**

netkas.org packages to get QE/CI on Radeon HD 48xx cards. Installs patched ATI4800Controller and ATIRadeonX2000 to /System/Library/Extensions.

#### **ATI 48xx Device Injector**

Installs ATI48xxInjector.kext in /System/Library/Extensions which is a device ID injector that provides all device IDs for ATI 48xx cards.

### **NVIDIA Fermi 4xx/5xx Support**

#### **10.7.0/10.7.1 netkas OpenCL Enabler**

Patches the 10.7.0 / 10.7.1 /System/Library/Extensions/GeForceGLDriver.bundle using patch info from netkas.org.

#### **10.7.2+ Combo OpenCL Enabler**

This combo patch is for 10.7.2, 10.7.3, and 10.7.4.

/System/Library/Extensions/GeForceGLDriver.bundle is patched using info from netkas.org and cmf. /System/Library/Extensions/NVDAGF100Hal.kext/Contents/Info.plist is patched using MacMan's research.



## Miscellaneous

Collection of miscellaneous kexts that provide enhanced hardware support or mandatory for systems not using a DSDT. EasyBeast and UserDSDT already installs all of the mandatory kexts. Be sure to read the descriptions carefully before installation.

### **ElliottForceLegacyRTC.kext**

Prevents a CMOS reset on reboot without a DSDT. Installs ElliottForceLegacyRTC.kext in /System/Library/Extensions.

### **EvOreboot**

If you don't have a DSDT, shutdown and reboot do not work without this kext. Installs EvOreboot.kext in /System/Library/Extensions.

### **FakeSMC**

FakeSMC.kext is the only absolutely mandatory kext, and is required for booting the system. Original by netkas, new branch by Project OS X. Installs FakeSMC.kext in /System/Library/Extensions.

### **FakeSMC Plugins**

These plugins allow software access to motherboard hardware monitors.

#### **Motherboard Plugins**

Installs ACPIsensors.kext, IntelCPUMonitor.kext, OemSMBIOS.kext, ITEIT87x.kext, WinbondW836x.kext, FintekF718x.kext, NSCPC8739x.kex and NuvotonNCT677x.kext FakeSMC plugins in /System/Library/Extensions.

#### **AMD Radeon Plugin**

Installs RadeonX.kext FakeSMC plugin in /System/Library/Extensions.

#### **NVIDIA Plugin**

Installs NVclockX.kext FakeSMC plugin in /System/Library/Extensions.

#### **HWMonitor Application**

Hardware Monitoring application from mozo and Navi of the Project OS X team. Requires FakeSMC Motherboard Plugins. Installs /Applications/HWMonitor.app.

### **IOUSBFamily Rollback**

Replaces the current IOUSBFamily.kext and IOUSBMassStorageClass.kext with the unmodified 10.6.2 and 10.6.4 versions to restore full functionality to some non-DSDT systems running 10.6.3 or later.

### **NullCPUPowerManagement**

Disables AppleIntelCPUPowerManagement.kext to prevent kernel panic without proper HPET DSDT edits. Installs NullCPUPowerManagement.kext in /System/Library/Extensions.

### **PS/2 Keyboard/Mouse/Trackpad**

Enables non-USB keyboards, mice and trackpads. Installs AppleACPIPS2Nub.kext and ApplePS2Controller.kext in /System/Library/Extensions.

### **USB 3.0 – NEC/Renseas and Etron**

Enables USB 3.0 ports for systems using the NEC/Renesas D720200 controller or Etron EJ168 controller. LaCie driver patched by modbin. Installs PXHCD.kext in /System/Library/Extensions. Caution- this driver may be unstable, causing system boot errors.



## AppleRTC Patch for CMOS Reset

Patches `/System/Library/Extensions/AppleRTC.kext/` to prevent CMOS resets.

## Patched AppleIntelCPUPowerManagement

Operating system version-specific replacement

`/System/Library/Extensions/AppleIntelCPUPowerManagement.kext` for use on UEFI motherboards with locked MSRs. It removes the requirement of `NullCPUPowerManagement.kext` to prevent kernel panic at boot which it will delete as part of the install. Patched using AICPMPatch by el coniglio.

## AppleACPIPlatform Rollback

Replaces the current `AppleACPIPlatform.kext` in `/System/Library/Extensions` with an patched 10.6.8 `AppleACPIPlatform.kext` by ErmaC for ASUS X58 motherboards running OS X Lion 10.7.4 or later.

## Network

Collection of kexts to to enable on-board Ethernet.

### Ln2Mac's RealtekRTL81xx Ethernet

Enables Realtek 81xx Ethernet controllers by launching Ln2Mac's Installer which installs `RealtekRTL81xx.kext` in `/System/Library/Extensions`. Recommended.

### Hnak's AppleIntelE1000e Ethernet

Enables Intel 825xx ethernet controllers. hnak's port of the `e1000.sourceforge.net` Intel Wired Ethernet for Linux driver. 32/64 bit. Installs `AppleIntelE1000e.kext` in `System/Library/Extensions/IONetworkingFamily.kext/Contents/PlugIns`.

### Realtek Gigabit Ethernet 2.0.6

Official Realtek 2.0.6 for 10.7 driver for 81xx Ethernet controllers. Installs `AppleRTL8169Ethernet.kext` in `/System/Library/Extensions/IONetworkingFamily.kext/Contents/PlugIns`.

### Maolj's AtherosL1c Ethernet

Enables Atheros AR8132 Fast Ethernet, AR8131 Gigabit Ethernet, AR8151 v1.0 Gigabit Ethernet, AR8151 v2.0 Gigabit Ethernet, AR8152 v1.1 Fast Ethernet and AR8152 v2.0 Fast Ethernet controllers. Created by maolj and updated by thecandle. Installs `AtherosL1cEthernet.kext` in `/System/Library/Extensions/IONetworkingFamily.kext/Contents/PlugIns`.



## Bootloader

Install to make your drive bootable. Not necessary for a EasyBeast or UserDSDT install.

### Chimera v1.10.0

MacMan's branch of Chameleon 2.0. Further information on features and source can be found [here](#). This version aims to add support for modern hardware and consolidate the best features from all of the available sources for maximum compatibility across platforms.

chimera 



# Customization

Click the triangle to expand and view the collection of boot time configuration files and system customization options.

## Boot Options

Contains pre-edited or scripts to edit `/Extra/org.chameleon.Boot.plist` files to enable/disable special boot loader features at startup. NOTE: The pre-edited files found here do NOT contain all of the options used in the EasyBeast or UserDSDT `org.chameleon.Boot.plist` files. If you used EasyBeast or UserDSDT, ONLY use the scripts to add the PCI Root ID Fix or Instant Menu options.

### 32-bit Apple Boot Screen

Pre-edited 32-bit `org.chameleon.Boot.plist`. Contains `GraphicsEnabler=Yes` (enables most NVIDIA and ATI Graphics cards), Apple Boot Screen and 32-bit kernel, `npci=0x3000` and `darkwake=0` kernel flags. Installed in `/Extra`.

### 32-bit GraphicsEnabler=No

Pre-edited 32-bit `org.chameleon.Boot.plist`. Contains `GraphicsEnabler=No`, Apple Boot Screen and 32-bit kernel, `npci=0x3000` and `darkwake=0` kernel flags. Installed in `/Extra`.

### 64-bit Apple Boot Screen

Pre-edited 64-bit `org.chameleon.Boot.plist`. Install ONLY if using a patched DSDT. Contains `GraphicsEnabler=Yes` (enables most NVIDIA and ATI Graphics cards), Apple Boot Screen and `npci=0x3000` and `darkwake=0` kernel flags. Installed in `/Extra`. Not needed when using EasyBeast or UserDSDT.

### 64-bit GraphicsEnabler=No

Pre-edited 64-bit `org.chameleon.Boot.plist`. Contains `GraphicsEnabler=No`, Apple Boot Screen and `npci=0x3000` and `darkwake=0` kernel flags. Installed in `/Extra`.

### PCI Configuration Fix

Adds `npci=0x3000` to Kernel Flags in `/Extra/org.chameleon.Boot.plist`

### PCI Root ID Fix

Adds `PCIRootUID=1` to Kernel Flags in `/Extra/org.chameleon.Boot.plist`

### Instant Menu

Adds `Instant Menu=Yes` or replaces `Timeout=n` in `/Extra/org.chameleon.Boot.plist`

### Generate CPU States

Adds `GenerateCStates=Yes` and `GeneratePStates=Yes` to `/Extra/org.chameleon.Boot.plist`

### Use KernelCache

Adds `UseKernelCache=Yes` to `/Extra/org.chameleon.Boot.plist`. Not needed when using EasyBeast or UserDSDT.

### SSDT

#### Core i5, Core i7, and Core i5/i7 Overclocked

Optimized versions of Core i CPU specific SSDTs. Each CPU type supports a specific maximum Turbo Boot clock rate. Installs `SSDT.aml` in `/Extra`.





## System Definitions

Contains pre-edited `smbios.plist` files that will identify your system as a specific Mac model. `MacPro3,1` is installed by default by EasyBeast, and `UserDSDT` installations, and is the general recommendation.

### iMac

These pre-edited `smbios.plist` files will identify your system as an iMac.

### Mac Pro

These pre-edited `smbios.plist` files will identify your system as a Mac Pro.

### MacBook Pro

These pre-edited `smbios.plist` files will identify your system as a MacBook Pro.

### Mac mini

This pre-edited `smbios.plist` file will identify your system as a Mac mini. Enables multiple port outputs with Intel onboard HD 3000 graphics.



## Themes

Themes for bootloader GUI customization. Installed in `/Extra`.

### Chameleon Default

Default Chameleon theme.

### tonymacx86 Classic

tonymacx86 theme.

### tonymacx86 Remixed

tonymacx86 theme remixed by complx.



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Please consider a [contribution](#) to support further MultiBeast development. Thanks in advance!

Contribute

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