



# MultiBeast

MultiBeast is an all-in-one post-installation utility designed to enable boot from a hard drive. It also features a collection of drivers and customization options.



This document will reference all of the features of MultiBeast, as described inside the app itself. 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.

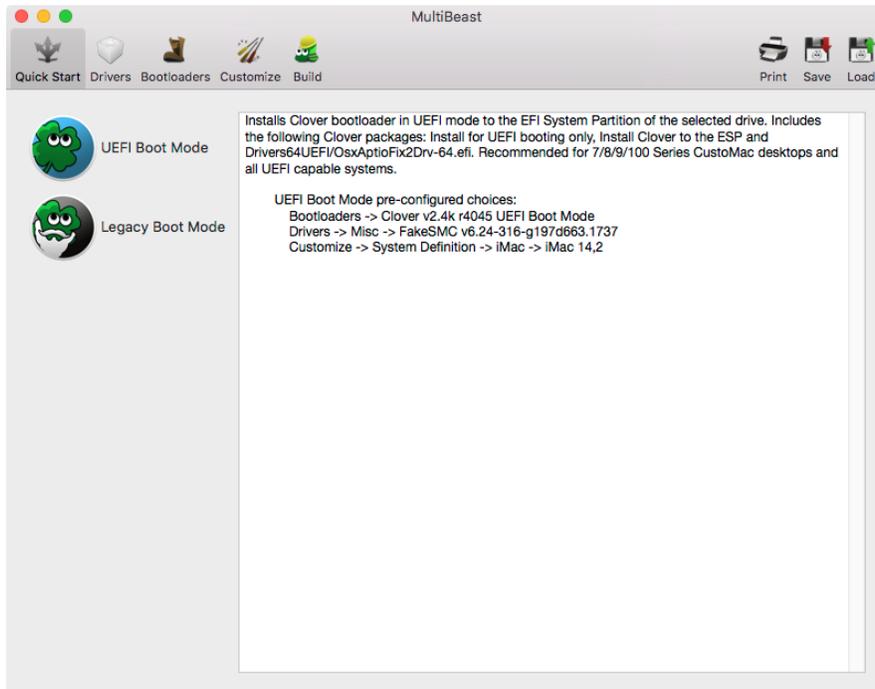
**tonymacx86 & MacMan**  
[www.tonymacx86.com](http://www.tonymacx86.com)

**v9.1**



# How to Use MultiBeast

1. Click **Quick Start** to choose Bootloader Configuration
2. Click **Drivers** for Audio and Network options
3. Click **Customize** for further options
4. Click **Print** or **Save** to back up your configuration
5. Click **Build** then **Install**
6. Restart computer to complete installation



Thanks to the Clover team, [netkas](#), Project OS X, kozlek, toleda, Lnx2Mac, fIAKed, cmf, Shailua, the candle, Henties, RehabMan, Zenith432, Mieze and hnak for their contributions that make this tool possible. Additional thanks to the tonymacx86 community for their testing and contributions to this work. Special thanks to all of the tonymacx86.com mods.

## Contains Clover EFI v2.4k r4063

Clover v2 is open source based on different projects: Clover, rEFIt, XNU, VirtualBox. The main is EDK2 latest revision. <http://sourceforge.net/projects/cloverefiboot/>

## Developers:

Slice, with help of Kabyl, usr-sse2, jadran, Blackosx, dmazar, STLVNUB, pcj, apianti, JrCs, pene, FrodoKenny, skoczy, ycr.ru, Oscar09, xsmile, SoThOr, rehabman...

## Source code credits to:

Intel, Apple, Oracle, Chameleon, rEFIt and Xom.  
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**MultiBeast concept and design by tonymacx86, MacMan, and adamsmasher.**  
**MultiBeast user interface, architecture, and development by Rob Wallace.**



## Quick Start

Quick Start will load a pre-built configuration based on which option is chosen. If you don't want to use any of these pre-built options, you can build your own by selecting a bootloader, theme and kexts.

## Bootloader Configurations

### UEFI Boot Mode

Installs Clover bootloader in UEFI mode to the EFI System Partition of the selected drive. Includes the following Clover packages: Install for UEFI booting only, Install Clover to the ESP and Drivers64UEFI/OsxAptioFix2Drv-64.efi. Recommended for 7/8/9/100 Series CustoMac desktops and all UEFI capable systems.

UEFI Boot Mode pre-configured choices:

Bootloaders -> Clover v2.4k r4063 UEFI Boot Mode  
Drivers -> Misc -> FakeSMC  
Customize -> System Definition -> iMac -> iMac14,2

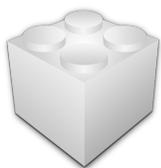


### Legacy Boot Mode

Installs Clover bootloader in Legacy mode to the EFI System Partition of the selected drive. Includes the following Clover packages: Bootloader/Install boot0af in MBR, CloverEFI/CloverEFI 64-bits SATA. Adds ACPI/DSDT/Fixes/AddDTGP\_0001=YES, ACPI/DSDT/Fixes/FixHPET\_0010=YES, ACPI/DSDT/Fixes/FixHDA\_8000=YES, ACPI/DSDT/Fixes/FixIPIC\_0040=YES and FixUSB\_1000=YES to CustoMac Default config.plist to support BIOS-based systems. Recommended for 5/6 Series CustoMac desktops and all BIOS based systems.

Legacy Boot Mode pre-configured choices:

Bootloaders -> Clover v2.4k r4063 Legacy Boot Mode  
Drivers -> Misc -> FakeSMC  
Customize -> System Definition -> iMac -> iMac14,2



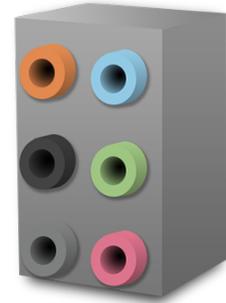
## Drivers

Drivers provide additional functionality to the operating system. The drivers 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. CloverALC patching technique by toleda.



### Realtek ALC8xx

Enables audio for motherboards featuring the Realtek ALC269, ALC283, ALC887/888b, ALC888, ALC885/889a, ALC889, ALC892, ALC898, ALC1150, or ALC1220 high-definition audio codecs.

### Optional 3 Port (5.1) Audio

Optional for 3 port audio layouts. Remaps audio input and output ports for 5.1 analog support. Adds Devices/Audio/Inject=2 to /Volumes/EFI/EFI/CLOVER/config.plist.

### Optional HD 3000/HD 4000 HDMI Audio

Enables HDMI audio on HD 3000/4000 with limited analog output options. May need additional edited DSDT or SSDT and Intel Framebuffer patch for full support. Adds Devices/Audio/Inject=3 to /Volumes/EFI/EFI/CLOVER/config.plist.

### 100/200 Series Audio

Required for 100/200 Series onboard audio. Adds Rename HDAS to HDEF patch to Volumes/EFI/EFI/CLOVER/config.plist.

### 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. Click the triangle to expand and then choose the appropriate version.

### VoodooHDA 2.8.6 / 2.8.7 / 2.8.8

Installs VoodooHDA.kext in /Library/Extensions. Also installs VoodooHDA.prefPane in /Library/PreferencePanels, VoodooHdaSettingsLoader.app in /Applications and getdump in /usr/local/bin.

## Disk

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

### 3rd Party SATA

Provides support for the ASMedia ASM1061, JMicron 36x (aka GSATA) and Marvell 88SE912x, 88SE9172 and 88SE9230 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 /Library/Extensions.





### **3rd Party eSATA**

Provides support for the ASMedia ASM1061, JMicron 36x (aka GSATA) and Marvell 88SE912x, 88SE9172 and 88SE9230 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 /Library/Extensions.

### **Intel Generic AHCI SATA**

Provides support for the Intel 9 Series, X79 and X99 SATA controllers which are displayed as Generic AHCI Controller in System Profiler. All drives connected to these ports show on the desktop as Internal. Installs AHCI\_Intel\_Generic\_SATA.kext in /Library/Extensions.

## **Misc**

Collection of miscellaneous kexts that provide enhanced hardware support. Be sure to read the descriptions carefully before installation.

### **FakeSMC**

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

### **FakeSMC Plugins**

Installs FakeSMC plugins ACPIsensors.kext, CPUSensors.kext, GPUSensors.kext and LPCsensors.kext in /Library/Extensions. These plugins allow software access to motherboard hardware monitors.

### **FakeSMC HWMonitor Application**

Hardware Monitoring application from RehabMan's branch. Requires FakeSMC Motherboard Plugins. Installs /Applications/HWMonitor.app.

### **NullCPUPowerManagement**

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

### **VoodooTSCSync**

VoodooTSCSync.kext synchronizes the Timer Stamp Counter (TSC) on x86/Intel®64 CPUs. Only necessary for LGA2011 CPUs. Written by Cosmosis Jones.

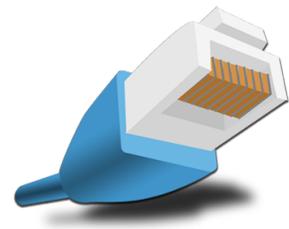
## **Network**

Collection of kexts to fully enable specific Ethernet controllers.

### **Atheros**

#### **AtherosE2200Ethernet**

Mieze's driver based on Johannes Berg's alx driver and RealtekRTL811 for the Killer E2200 controller. Installs AtherosE2200Ethernet in /Library/Extensions.



### **Intel**

#### **AppleIntelE1000e**

Enables Intel 825xx ethernet controllers. hnak's port of the e1000.sourceforge.net Intel Wired Ethernet for Linux driver. Installs AppleIntelE1000e.kext in /Library/Extensions.

#### **AppleIGB**

Enables Intel 82575, 82576, 82580, dh89xxcc, i350, i210 and i211 ethernet controllers. hnak's port of the Intel igb ethernet driver for Linux. Installs AppleIGB.kext in /Library/Extensions.



### **IntelMausiEthernet**

Mieze's OS X driver for Intel onboard LAN based on Linux source. Adds new device IDs for new 200 Series Ethernet controllers. Installs IntelMausiEthernet.kext in /Library/Extensions.

### **Realtek**

#### **RealtekRTL8111**

Mieze's port of the Realtek Linux v8.037.00 driver. Installs RealtekRTL8111.kext in /Library/Extensions.

## **USB**

### **3rd Party USB 3.0**

Enables 3rd Party USB 3.0 controller support. Installs GenericUSBXHCI.kext to /Library/Extensions.

### **7/8/9 Series USB Support**

Enables full USB 2.0 and 3.0 support on 7/8/9 Series motherboards. Installs FakePCIID.kext and FakePCIID\_XHCIMux.kext to /Library/Extensions.

### **Increase Max Port Limit 9 Series, 100 Series**

Enables USB 2.0 and 3.0 support on 9/100 Series motherboards. Adds Raise Port Limit Patch to Volumes/EFI/EFI/CLOVER/config.plist and installs USBInjectAll.kext to /Library/Extensions.

### **Increase Max Port Limit 200 Series**

Enables USB 2.0 and 3.0 support on 200 Series motherboards. Adds Raise Port Limit Patch to Volumes/EFI/EFI/CLOVER/config.plist and installs USBInjectAll.kext and XHCI-200-series-injector.kext to /Library/Extensions



## **Bootloaders**

Install Clover to make your drive bootable. Includes tonymacx86 theme and standard config.plist.

### **Clover v2.4k r4063 UEFI Boot Mode**

Installs Clover bootloader in UEFI mode to the EFI System Partition of the selected drive. Includes the following Clover packages: Install for UEFI booting only, Install Clover to the ESP and Drivers64UEFI/OsxAptioFix2Drv-64.efi. Recommended for 7/8/9/100 Series CustoMac desktops and all UEFI capable systems.

### **Clover v2.4k r4063 UEFI Boot Mode + Emulated NVRAM**

Installs Clover bootloader in UEFI mode with emulated NVRAM for those motherboards that don't support it to the EFI System Partition of the selected drive. Includes the following Clover packages: Install for UEFI booting only, Install Clover to the ESP, Drivers64UEFI/OsxAptioFix2Drv-64.efi and Drivers64UEFI/EmuVariableUefi-64.efi. Installs Clover rc scripts files in /etc, ~/Library/Application Support/Clover and ~/Library/LaunchDaemons. Required for UEFI motherboards that don't support native NVRAM, which Apple Messages needs.



## Clover v2.4k r4063 Legacy Boot Mode

Installs Clover bootloader in Legacy mode to the EFI System Partition of the selected drive. Includes the following Clover packages: Bootloader/Install boot0af in MBR, CloverEFI/CloverEFI 64-bits SATA. Adds ACPI/DSDT/Fixes/AddDTGP\_0001=YES, ACPI/DSDT/Fixes/FixHPET\_0010=YES, ACPI/DSDT/Fixes/FixHDA\_8000=YES, ACPI/DSDT/Fixes/FixIPIC\_0040=YES and FixUSB\_1000=YES to CustoMac Default config.plist to support BIOS-based systems. Recommended for 5/6 Series CustoMac desktops and all BIOS based systems.



## Customize

A collection of boot time configuration files and system customization options.

## Graphics Configuration

Choose from the following additional graphics configurations.

### Intel HD 3000

For desktop systems with Intel HD 3000 graphics. Adds Devices/FakeID/IntelGFX=0x01268086 and Devices/AddProperties/AAPL,snb-platform-id/10000300 to CustoMac Default config.plist.

### Intel HD 5xx

For desktop systems with Intel HD 5xx graphics. Fix for most Intel HD 5xx graphics port layouts on 100 Series motherboards. Adds the following to Volumes/EFI/EFI/CLOVER/config.plist: 4 display patch for AppleIntelSKLGraphicsFramebuffer, ig-platform-id=0x19120000 and 'Skylake Glitch Fix' (AAPL,GfxYTile) to Devices/AddProperties/.

### Intel HD 6xx

For desktop systems with Intel HD 6xx graphics. Fix for most Intel HD 6xx graphics port layouts on 200 Series motherboards. Installs FakePCIID.kext and FakePCIID\_Intel\_HD\_Graphics.kext in /Library/Extensions. Adds the following to Volumes/EFI/EFI/CLOVER/config.plist: FakeCPUID 0x0506E3, /Devices/FakeID/IntelGFX=0x19168086, 4 display patch for AppleIntelSKLGraphicsFramebuffer, ig-platform-id=0x19120000 and 'Skylake Glitch Fix' (AAPL,GfxYTile) to Devices/AddProperties/.

### Inject ATI

For desktop systems with older ATI graphics cards such as ATI Radeon 4xxx. Adds Graphics/Inject/ATI=YES to CustoMac Default /Volumes/EFI/EFI/CLOVER/config.plist.

### Inject NVIDIA

For desktop systems with older NVIDIA graphics cards such as GeForce 8xxx, 9xxx, 2xx, 4xx, 610, and 630. Adds Graphics/Inject/NVIDIA=YES to CustoMac Default /Volumes/EFI/EFI/CLOVER/config.plist.





## **NVIDIA Web Drivers Boot Flag**

For desktop systems with newer NVIDIA graphics cards based on Kepler, Maxwell, or Pascal GPUs. Adds SystemParameters/NvidiaWeb =YES to CustoMac default /Volumes/EFI/EFI/CLOVER/config.plist.

## **SSDT Options**

Optimized versions of Sandy Bridge Core i CPU specific SSDTs. Each CPU type supports a specific maximum Turbo Boot clock rate. Installs SSDT.aml in /Volumes/EFI/EFI/CLOVER/ACPI/patched/.

### **Sandy Bridge Core i5**

Optimized SSDT supporting Sandy Bridge Core i5 CPUs with a maximum Turbo Boost clock of 3.8 GHz.

### **Sandy Bridge Core i7**

Optimized SSDT supporting Sandy Bridge Core i7 CPUs with a maximum Turbo Boost clock of 3.9 GHz.

### **Sandy Bridge Core i5/i7 Overclocked**

Optimized SSDT supporting Sandy Bridge Core i5 or Core i7 CPUs overclocked up to 4.2 Ghz.



## **System Definitions**

Updates SMBIOS in /Volumes/EFI/EFI/CLOVER/config.plist to identify your system as the chosen Mac model with a valid serial number. iMac14,2 is installed by default QuickStart installations, and is the general recommendation.

### **Mac Pro, iMac, Mac mini, MacBook Pro, MacBook Air**

Identifies your system as the chosen Mac model with a valid serial number.





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

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