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.
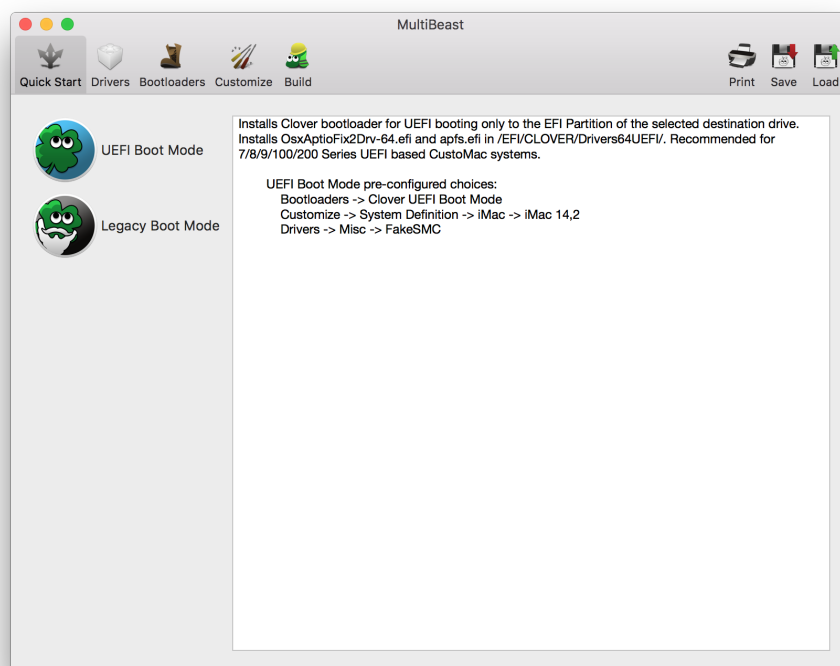
tonymacx86 & MacMan
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v10.2

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, flAKed, 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 r4359
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 for UEFI booting only to the EFI Partition of the selected destination drive. Installs OsxAptioFix2Drv-64.efi and apfs.efi in /EFI/CLOVER/Drivers64UEFI/. Recommended for 7/8/9/100/200 Series UEFI based CustoMac systems.

UEFI Boot Mode pre-configured choices:

    Bootloaders -> Clover UEFI Boot Mode
    Drivers -> Misc -> FakeSMC
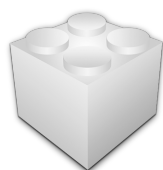   Customize -> System Definition -> iMac -> iMac14,2

Legacy Boot Mode

Installs Clover bootloader in Legacy mode to the EFI System Partition of the selected drive. Installs apfs.efi in /EFI/CLOVER/Drivers64/. 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 BIOS based CustoMac systems.

Legacy Boot Mode pre-configured choices:

    Bootloaders -> Clover 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.
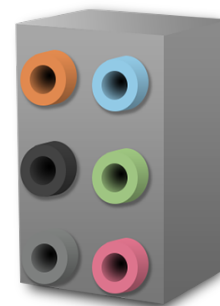
Audio

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 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 / 300 Series Audio Support

Required for 100 / 200 /300 Series onboard audio. Adds Rename HDAS to HDEF patch to Volumes/EFI/EFI/CLOVER/config.plist.

200 / 300 Series / X299 Audio Device ID Patch

Required for 200 / 300 Series and X299 onboard audio. Adds temporary device ID 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 / 2.8.9 / 2.9.0d10

Installs VoodooHDA.kext in /Library/Extensions. Also installs VoodooHDA.prefPane in /Library/PreferencePanes, 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
Changes display of Generic AHCI Controller in System Profiler for the Intel 200 Series, X79, X99 and some Intel 9 Series SATA controllers to the actual chipset name. 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 required for booting the system. Rehabman's branch of kozlek's FakeSMC, which is a branch of the original developed by netkas. Installs FakeSMC.kext in /Library/Extensions and /Volumes/EFI/EFI/CLOVER/kexts/Other.

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.
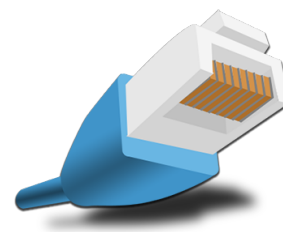
Network
Collection of kexts to fully enable specific Ethernet controllers.

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
Enables USB 2.0 and 3.0 support on 9 and 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 UEFI Boot Mode
Installs Clover bootloader for UEFI booting only to the EFI System Partition of the selected destination drive. Installs OsxAptioFix2Drv-64.efi and apfs.efi in /EFI/CLOVER/Drivers64UEFI/. Recommended for 7/8/9/100/200 Series UEFI based CustoMac systems.

Clover UEFI Boot Mode + Emulated NVRAM
Installs Clover bootloader for UEFI booting only to the EFI System Partition of the selected destination drive. Installs OsxAptioFix2Drv-64.efi, EmuVariableUefi-64.efi and apfs.efi in /EFI/CLOVER/Drivers64UEFI/. Installs Clover rc scripts files in /etc, ~/Library/Application Support/Clover and ~/Library/LaunchDaemons. Required for support of Apple Messages and/or NVIDIA Web Drivers on 7/8/9/100/200 Series UEFI based CustoMac systems that don't support native NVRAM.

Clover Legacy Boot Mode

Installs Clover bootloader in Legacy mode to the EFI System Partition of the selected drive. Installs apfs.efi in /EFI/CLOVER/Drivers64/. 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 BIOS based CustoMac 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

Fixes most Intel HD 5xx graphics issues on desktop systems. Adds 4 display patch for AppleIntelSKLGraphicsFramebuffer and Graphics/ig-platform-id=0x19120000 to /Volumes/EFI/EFI/CLOVER/config.plist. Also requires installation of Customize -> Graphics Configuration -> Intel Graphics Fixup.

Intel HD 6xx

Fixes most Intel HD 6xx graphics issues on desktop systems. Adds Graphics/ig-platform-id=0x59120000 and -disablegfxfirmware boot flag to /Volumes/EFI/EFI/CLOVER/config.plist. Also requires installation of Customize -> Graphics Configuration -> Intel Graphics Fixup.

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.
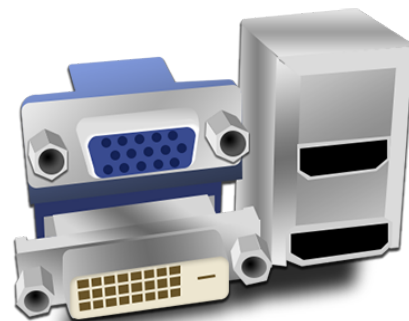
Inject NVIDIA

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.

AMD Graphics Fixup

For AMD Radeon HD6xxx and newer cards that won't wake from sleep if it's the first or only video card installed. Adds Devices/Graphics/RadeonDeInit=Yes flag to /Volumes/EFI/EFI/CLOVER/config.plist.

Intel Graphics Fixup

Uses vit9696's Lilu kernel extension platform for arbitrary kext, library and program patching and WhateverGreen for Lilu to fix numerous display issues when using AMD GPUs. Installs Lilu.kext and WhateverGreen.kext in /Library/Extensions and WhateverName.app in /Applications.

NVIDIA Graphics Fixup

Uses vit9696's Lilu kernel extension platform for arbitrary kext, library and program patching and lvs1974's NvidiaGraphicsFixup for Lilu to fix numerous display issues when using NVIDIA GPUs with MacPro6,1, iMac17,x and iMac18,x system definitions. Installs Lilu.kext and NvidiaGraphicsFixup.kext to /Library/Extensions.

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!