

User Guide

EVGA Z87

Motherboard

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Before You Begin...

Welcome to a new class of high performance motherboards that boast 4th Generation Intel® Core™ Processor compatibility. These platforms offer a return to greatness with a completely redesigned GUI BIOS interface, reimagined power VRM that focuses on efficiency, and loaded with features like up to 4-Way SLI, Creative Sound Core3D quad-core audio processor, Intel Gigabit LAN, native SATA 6G/USB 3.0 and more.

Did we also mention that this motherboard is designed for the overclocker? Built from the ground up to give you all the essentials you need for overclocking, with a GUI BIOS that is focused on functionality, brand new software interface for overclocking in the O.S., ultra high quality components, and robust PCI-E 3.0 and memory trace layout.

With these features and more, it is clear that the EVGA Z87 motherboards are not engineered to just be the **best**, they are engineered to **exceed** the best.

Parts NOT in the Kit

This kit contains all the hardware necessary to install and connect your new EVGA Z87 Motherboard. However, it does not contain the following items that must be purchased separately to make the motherboard functional.

- ❑ **Intel Socket 1150 Processor**
- ❑ **DDR3 System Memory**
- ❑ **CPU Cooling Device**
- ❑ **PCI Express Graphics Card**
- ❑ **Power Supply**

EVGA assumes you have purchased all the necessary parts needed to allow for proper system functionality. For a full list of supported CPUs on this motherboard, please visit www.evga.com/support/motherboard

Intentions of the Kit

This kit provides you with the motherboard and all connecting cables necessary to install the motherboard into a PC case.

When replacing a motherboard in a PC case, you will need to reinstall an operating system even though the current storage drive may already have one installed.

EVGA Z87 Motherboard

Motherboard Specifications

- ❑ **Size**

Classified: EATX form factor of 12 inches x 10.3 inches

FTW: ATX form factor of 12 inches x 9.6 inches

Stinger: mITX form factor of 6.7 inches x 6.7 inches

- ❑ **Microprocessor support**

Intel Socket 1150 Processor

- ❑ **Operating systems**

Supports Windows 8 / 7

- ❑ **Contains Intel Z87 chipset**

- ❑ **System Memory support**

Supports Dual channel DDR3-2666MHz+. Officially supports up to 32GB/16GB of DDR3 memory.

- ❑ **USB 2.0 Ports**

Supports hot plug

Supports wake-up from S1 and S3 mode

Supports USB 2.0 protocol up to a 480 Mbps transmission rate

- ❑ **USB 3.0 Ports**

Backwards compatible USB 2.0 and USB 1.1 support

Supports transfer speeds up to 5Gbps

❑ **SATA Ports**

SATA ports up to 3G (300 MB/s) data transfer rate

SATA ports up to 6G (600 MB/s) data transfer rate

Support for RAID 0, RAID 1, RAID 0+1, RAID5 and RAID 10
ESATA

❑ **Onboard Intel LAN**

Supports 10/100/1000 Mb/sec Ethernet

❑ **Onboard Audio**

Classified/Stinger: 6 Channel Creative Core3D Quad-Core Audio Processor

Supports Jack-Sensing function

Supports Optical Output

FTW: 8 Channel Realtek ALC898 High-Definition audio

Supports Jack-Sensing function

Supports Optical Output

❑ **PCI-E 3.0 Support**

Low power consumption and power management features

❑ **Power Functions**

Supports ACPI (Advanced Configuration and Power Interface)

Supports S0 (normal), S1 (power on suspend), S3 (suspend to RAM), S4
(Suspend to disk - depends on OS), and S5 (soft - off)

❑ **Expansion Slots**

Classified/FTW: PCI-E x1 slot

Classified/FTW/Stinger: PCI-E 3.0 x16/x8 slots

Classified/Stinger: mSATA/mPCI-E Slot

Unpacking and Parts Descriptions

Unpacking

The EVGA Z87 Motherboard comes with all the necessary cables for adding a motherboard to a system case. If replacing a motherboard, you may not need many of these cables.

Equipment

The following accessories are included with the EVGA Z87 Motherboard:

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This PCI-E motherboard contains the Intel Z87 chipset and is SLI® -ready.



Visual Guide

Helps to quickly and visually guide you through the hardware installation of the motherboard.



I/O Shield

Installs in the system case to block radio frequency transmissions, protect internal components from dust, foreign objects, and aids in proper airflow within the chassis.



SATA Data Cables

Used to support the SATA protocol and each one connects a single drive to the motherboard.



4-way SLI® Bridge (Classified only)

Bridges four graphics cards together which allows for 4-way SLI®.



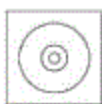
3-way SLI® Bridge (Classified Only)

Bridges three graphics cards together which allows for 3-way SLI®.



2-way SLI® Bridge (Classified/FTW Only)

Bridges two graphics cards together which allows for 2-way SLI®.



Installation CD

Contains drivers and software needed to setup the motherboard.



User Manual

The user manual you are reading right now!

Hardware Installation

This section will guide you through the installation of the motherboard. The topics covered in this section are:

- ❑ Preparing the motherboard
- ❑ Installing the CPU
- ❑ Installing the Cooling Device
- ❑ Installing the memory
- ❑ Installing the motherboard
- ❑ Connecting cables

Safety Instructions

To reduce the risk of fire, electric shock, and injury, always follow basic safety precautions.

Remember to remove power from your computer by disconnecting the AC main source before removing or installing any equipment from/to the computer chassis.

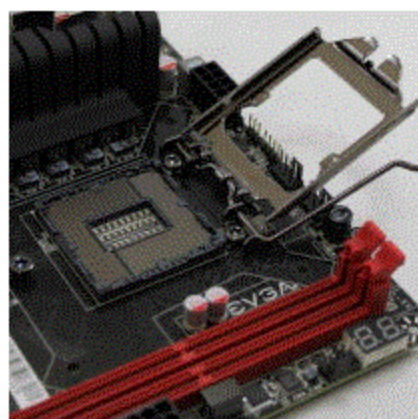
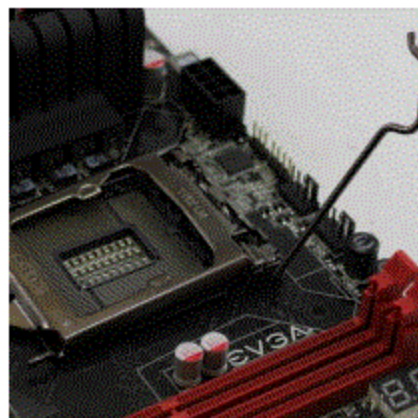
Preparing the Motherboard

Installing the CPU

Be very careful when handling the CPU. Hold the processor only by the edges and do not touch the bottom of the processor.

Use the following procedure to install the CPU onto the motherboard:

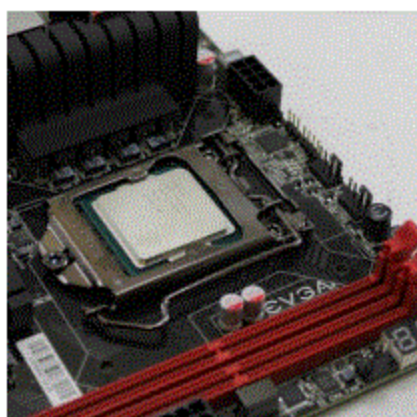
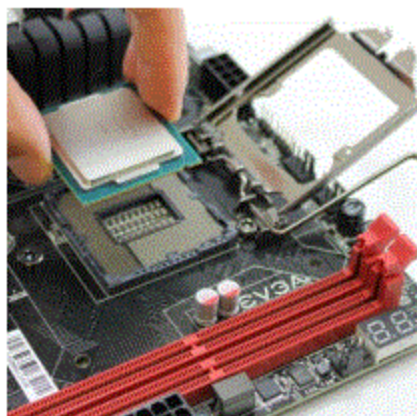
- ❑ Remove the protective socket cover by pulling it straight up. Be sure not to damage any of the pins inside the socket
- ❑ Unhook the socket lever by pushing down and away from the socket.
- ❑ Pull the socket lever back and the load plate will automatically lift.
- ❑ Open the load plate and make sure not to damage any of the pins inside of the socket.



Note: After removing the CPU socket cover, it is recommended to store it in case you ever need to transport your motherboard. If you ever remove the CPU, it is highly recommended to reinstall the socket cover.

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- ❑ Align the notches on the CPU to the notches in the socket.
- ❑ Lower the processor straight down into the socket.
- ❑ Lower the load plate so it is resting on the CPU.
- ❑ Pull back the socket lever again to ensure the load plate tip engages under the shoulder screw.
- ❑ Carefully lock the lever back into place.



Installing the Cooling Device

There are many different cooling devices that can be used with this motherboard. Follow the instructions that came with your cooling assembly.