^{User Guide} EVGA Z75 SLI Motherboard

Table of Contents

User Guide	1
EVGA Z75 SLI	1
Motherboard	1
Before You Begin	4
Parts NOT in the Kit	4
Intentions of the Kit	5
Motherboard	6
Motherboard Specifications	6
Unpacking and Parts Descriptions	7
Unpacking	7
Equipment	8
Hardware Installation	10
Safety Instructions	10
Preparing the Motherboard	11
Installing the CPU	11
Installing the CPU Fan	12
Installing System Memory (DIMMs)	13
Installing the Motherboard	13
Installing the I/O Shield	14
Securing the Motherboard into a System Case	15
Connecting Cables	15
24-pin ATX Power (PWR_24)	16
8-pin ATX 12V Power (ATX_PWR_8P)	17

EVGA Z75 Motherboard

BIOS Select Jumper 1	17
The BIOS Select Jumper is located at the bottom left of the board right next to the front panel header1	17
The addition of 2 physical BIOS chips on the mainboard allows for usage of two completely different bios versions or saving of profiles to differentiate between bench sessions and regular 24/7 usage	17
Connecting Internal Headers	8
Connecting Internal Headers	8
Front Panel Header 1	8
USB Headers 1	19
Audio2	20
PCI-E x1 Slots2	21
PCI-E x16/x8 Slots2	21
Onboard Buttons	22
Clear CMOS Button	22
RESET and POWER Button2	22
Post Port Debug LED and LED Status Indicators	23
Post Port Debug LED	23
LED Status Indicators	23
Installing Drivers and Software	24
Windows 7/Vista/XP	25
Driver Installation2	25
Appendix A. POST Codes	25
EVGA Glossary of Terms	30
Compliance Information	33

Before You Begin...

Thank you for purchasing the EVGA Z75 SLI Motherboard. This board is based off of the new Intel Z75 chipset with native support for SATA III/6G and USB 3.0 for the performance you demand, delivered when you need it.

As always this board comes with the added bonus of EVGA's industry leading 24/7 technical support in case you ever have any issues or questions.

Parts NOT in the Kit

This kit contains all the hardware necessary to install and connect your new EVGA Z75 SLI Motherboard. However, it does not contain the following items that must be purchased separately to make the motherboard functional.

- □ Intel Socket 1155 Processor
- DDR3 System Memory
- □ Socket 1155 CPU cooler for the processor
- 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 CPU's on this motherboard, please visit http://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. If you are *building* a PC, you will use most of the cables provided in the kit. If however, you are *replacing* a motherboard, you will not need many of the cables.

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

EVGA Z75 SLI Motherboard

Motherboard Specifications

- Size ATX form factor of 12 inches x 9.6 inches
- Microprocessor support Intel Socket 1155 Processor
- Operating systems: Supports Windows 7/Vista/XP 32 and 64 bit
- □ Contains Intel Z75 chipset
- System Memory support Supports Dual channel DDR3-2133+. Officially supports up to 32GBs 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 up to 3.0 Gb/s (300 M/s) data transfer rate

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

- □ ESATA (optional) Supports SATA 6 / 3Gbps
- □ SATA ports up to 6.0 Gb/s (600 M/s) data transfer rate

Support for RAID 0 & RAID 1

 Onboard LAN Supports 10/100/1000 Mbit/sec Ethernet Onboard Audio

 Realtek High-Definition audio
 Supports 8-channel audio
 Supports Jack-Sensing function

 PCI-E Support

 PCI-E 3.0 Slots
 Low power consumption and power management features
 Green Function
 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

 PCI-E x1 slots
 PCI-E x8/x16 slots

Unpacking and 7 Parts Descriptions

Unpacking

The EVGA Z75 SLI 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 Z75 SLI Motherboard:

The EVGA Z75 SLI Motherboard

This PCI-E motherboard contains the Intel Z75 chipset and is SLI-ready.

1 - Visual Guide

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

1 - I/O Shield



EVA

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.



2 - 2-Port SATA Power Cables

Allows a Molex power connector to adapt to a SATA power connector.

2 – SATA II/3G Data Cables



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

2 – SATA III/6G Data Cables Used to support the SATAIII/6G high speed protocol and each one connects a single drive to the motherboard.



	1 - Installation CD
\bigcirc	Contains drivers that are needed to setup the motherboard.
TEV3A H	1 – User Manual
	Contains Information needed to properly install and configure your EVGA Motherboard.

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 CPU fan
- 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:



Unhook the socket lever by pushing *down* and *away* from the socket.

Pull the socket lever back and the load plate will automatically lift. There is a protective socket cover within the CPU socket to protect the socket when there is no CPU installed.



Remove the protective socket cover from the CPU Socket.

Note: After removing the CPU socket cover, it is recommended that you keep it in case you need to remove the CPU so for any reason you can replace the cover to avoid damaging the CPU socket pins.

Align the notches in the processor with the notches on the socket.

Lower the processor straight down into the socket without tilting or sliding it into the socket.

Note: Make sure the CPU is fully seated and level in the socket.

Close the load plate over the CPU and press down while you close and engage the socket lever.

The CPU installation is complete.



Align notches with notches on the CPU



Installing the CPU Fan

There are many different fan types that can be used with this motherboard. Follow the instruction that came with your fan assembly. Be sure that the fan orientation is correct for your chassis type and your fan assembly.

Installing System Memory (DIMMs)

Your new motherboard has four 240-pin slots for DDR3 memory. These slots support 1GB, 2GB and 4GB DDR3 DIMMs. There must be at least one memory slot populated to ensure normal operation. Use the following the recommendations for installing memory.

• One DIMM: If using 1 DIMM (Single Channel), install into: DIMM slot 2.

Two or Four DIMMs: If using 2 DIMMs (Dual Channel), install into: DIMM slots 2 and 4. If using 4 DIMMs (Dual Channel), install into: DIMM slots 1, 2, 3, and 4.

- □ Use the following procedure to install DIMMs. Note that there is only one gap near the center of the DIMM slot. This slot matches the slot on the DIMM to ensure the component is installed properly.
- 1. Unlock a DIMM slot by pressing the module clips outward.
- Align the memory module to the DIMM slot, and insert the module vertically into the DIMM slot. The plastic clips at both sides of the DIMM slot automatically lock the DIMM into the connector.



Installing the Motherboard

The sequence of installing the motherboard into a system case depends on the chassis you are using and if you are replacing an existing motherboard or working with an empty system case. Determine if it would be easier to make all the connections prior to this step or to secure the motherboard and then make all the connections. It is normally easier to secure the motherboard first.

Use the following procedure to install the I/O shield and secure the motherboard into the chassis.

Note: Be sure that the CPU fan assembly has enough clearance for the system case covers to lock into place and for the expansion cards. Also make sure the CPU Fan assembly is aligned with the vents on the covers. This will depend on the system case being used.

Installing the I/O Shield

The motherboard kit comes with an I/O shield that is used to block radio frequency transmissions, protects internal components from dust and foreign objects, and promotes correct airflow within the chassis.

Before installing the motherboard, install the I/O shield from the *inside* of the chassis. Press the I/O shield into place and make sure it fits securely. If the I/O shield does not fit into the chassis, you would need to obtain the proper size from the chassis supplier.

Also Note that for ease of installation you may want to install I/O shield Fan (optional) before installing into case.

Securing the Motherboard into a System Case

Most system cases have a base with mounting studs or spacers to allow the motherboard to be secured to the chassis and help to prevent short circuits. If there are studs that do not align with a mounting hole on the motherboard, it is recommended that you remove that stud to prevent the possibility of a short circuit. In most cases, it is recommended to secure the motherboard using a minimum of nine (9) spacers and screws.

1. Carefully place the motherboard onto the stand offs located inside the chassis.

2. Align the mounting holes with the stand offs.

3. Align the connectors to the I/O shield.

4. Ensure that the fan assembly is aligned with the chassis vents according to the fan assembly instruction.

5. Secure the motherboard with a recommended minimum of nine (9) screws.

Connecting Cables

This section takes you through all the necessary connections on the motherboard. This will include:

Power Connections

24-pin ATX power (ATX_PWR_24)8-pin ATX 12V power (ATX_PWR_8P)

□ Internal Headers

Front Panel Header

USB Headers

Audio Header

- □ SATA II
- SATA III
- Chassis Fans
- USB 2.0
- **USB 3.0**

□ Expansion slots

CMOS Clear Button

24-pin ATX Power (PWR_24)

PWR_24 is the main power supply connector located along the edge of the board next to the DIMM slots. Make sure that the power supply cable and pins are properly aligned with the connector on the motherboard. Firmly plug the power supply cable into the connector and make sure it is secure.

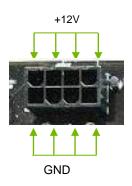
Figure 1. PWR_24 Motherboard Connector

Connector	Pin	Signal	Pin	Signal
	1	+3.3V	13	+3.3V
24 13	2	+3.3V	14	-12V
	3	GND	15	GND
	4	+5V	16	PS_ON
	5	GND	17	GND
12 1	6	+5V	18	GND
12 1	7	GND	19	GND
	8	PWROK	20	RSVD
	9	+5V_AUX	21	+5V
	10	+12V	22	+5V
	11	+12V	23	+5V
	12	+3.3V	24	GND

Table 1. PWR_24 Pin Assignments

8-pin ATX 12V Power (ATX_PWR_8P)

PW1, the 8-pin ATX 12V power connection, is used to provide power to the CPU. Align the pins to the connector and press firmly until seated.



BIOS Select Jumper

The BIOS Select Jumper is located at the bottom left of the board right next to the front panel header.

The addition of 2 physical BIOS chips on the mainboard allows for usage of two completely different bios versions or saving of profiles to differentiate between bench sessions and regular 24/7 usage.

Connecting Internal Headers

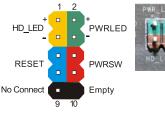
Front Panel Header

The front panel header on this motherboard is one connector used to connect the following four cables. (see Table 2 for pin definitions):

PWRLED

Attach the front panel power LED cable to these two pins of the connector. The Power LED indicates the system's status. When the system is powered on, the LED will be on. When the system is turned off, the LED is off. When the system is in S1, S3,

S3, S4 status, the LED will blink.





Note: Some system cases do not have all four cables. Be sure to match the name on the connectors to the corresponding pins.

PWRSW

Attach the power button cable from the case to these two pins. Pressing the power button on the front panel turns the system on and off rather than using the onboard button.

HD_LED

Attach the hard disk drive indicator LED cable to these two pins. The HDD indicator LED indicates the activity status of the hard disks.

RESET

Attach the Reset switch cable from the front panel of the case to these two pins. The system restarts when the **RESET** switch is pressed.

Table 2. Front Panel Header Pins

	Pin	Signal
HD LED	1	HD_PWR
	3	HD Active
PWRLED	2	PWR LED
PWKLED	4	STBY LED
RESET	5	Ground
REJEI	7	RST BTN
PWRSW	6	PWR BTN
PWRSW	8	Ground
No Connect	9	+5V
Empty	10	Empty

USB Headers

This motherboard contains six (4) USB 2.0 ports that are exposed on the rear panel of the chassis. The motherboard also contains two 10-pin internal header connectors onboard that can be used to connect an optional external bracket containing up to four (4) USB 2.0 ports.

- 1. Secure the bracket to either the front or rear panel of your chassis (not all chassis are equipped with the front panel option).
- 2. Connect the two ends of the cables to the USB 2.0 headers on the motherboard.



Connector	Pin	Signal
USB 2.0 Header Connector	1	5V_DUAL
	3	D-
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	5	D+
5 0 0 6	7	GND
7 O O 8 9 O 10	9	Empty
	Pin	Signal
	2	5V_DUAL
	4	D-
	6	D+
	8	GND
	10	No Connect

Table 3. USB 2.0 Header Pins

Audio

The audio connector supports HD audio standard and provides two kinds of audio output choices: the Front Audio and the Rear Audio. The Front Audio supports re-tasking function.

Connector	Pin	Signal
Front Audio Connector	1	PORT1_L
	2	AUD_GND
8 0 7	3	PORT1_R
6005	4	PRECENCE_J
4 0 0 3	5	PORT2_R
2 0 0 1	6	SENSE1_RETURN
	7	SENSE_SEND
	8	Empty
	9	PORT2_L
	10	SENSE2_RETURN



PCI-E x1 Slots

There are PCI-E x1 slots that are designed to accommodate less bandwidthintensive cards, such as a modem, sound or LAN card.

PCI-E x16/x8 Slots

These PCI-E slots are reserved for Graphics Cards and PCI-E x1, x4, x8 and x16 devices. The design of this motherboard supports multiple Graphics Card technologies such as SLI or CrossFireX.

When installing a PCI-E Graphics Card, be sure the retention clip snaps and locks the card into place. If the card is not seated properly, it could cause a short across the pins. Secure the card's metal bracket to the chassis back panel with the screw used to hold the blank cover.

Onboard Buttons

These onboard buttons include RESET, POWER and Clear CMOS. These functions allow you to easily reset the system, turn on/off the system, or clear the CMOS.

Clear CMOS Button

The motherboard uses the CMOS RAM to store all the set parameters. The CMOS can be cleared by pressing the Clear CMOS button either onboard or on the external I/O Panel.



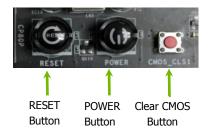
External Clear CMOS Button

RESET and POWER Button

These onboard buttons allow you to easily turn on/off the system. These buttons allow for easy debugging and testing of the system during troubleshooting situations.

The POWER button with an integrated LED indicates the system's status. When the system is powered on, the LED remains a solid red.

The RESET button with an integrated LED indicates the activity status of the hard disk drives and will flicker accordingly.



Post Port Debug LED and LED Status Indicators

Post Port Debug LED

Provides two-digit POST codes to show why the system may be failing to boot. It is useful during troubleshooting situations. This Debug LED will also display current CPU socket temperatures after the system has fully booted into the Operating System.



Debug LED with CPU Temperature Monitor

LED Status Indicators

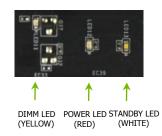
Theses LEDs indicate the system's status.

- POWER LED (Red):
 When the System is powered on: This LED is on.
- DIMM LED (Yellow):

When the Memory slot is functional: This LED is on.

□ STANDBY LED (White):

When the System is in Standby Mode: This LED is on. This LED will remain on as long as the motherboard is receiving constant power.



Installing Drivers and Software

Note: It is important to remember that *before* installing the driver CD that is shipped in the kit, you need to load your operating system. The motherboard supports Windows 7, Vista and XP both 32 and 64 Bit.

The kit comes with a CD that contains utilities, drivers, and additional software.

The CD that has been shipped with the EVGA Z75 SLI Motherboard contains the following software and drivers:

- □ Chipset Drivers
- Audio Drivers
- RAID Drivers
- LAN Drivers
- Matrix Storage
- □ USB 3.0 Drivers
- EVGA E-LEET
- User's Manual

Windows 7/Vista/XP

Driver Installation

- 1. Insert the EVGA Z75 SLI installation CD for the motherboard included in the kit.
- 2. The CD will autorun, install the drivers and utilities listed on the install screen. If the CD does not run, go to My Computer and click on the CD to open.

Appendix A. POST Codes

This section provides the AMI POST Codes (Table 6) for the EVGA Z75 SLI Motherboard during system boot up.

The POST Codes are displayed on the Debug LED readout located directly onboard the motherboard.

This Debug LED will also display current CPU temperatures after the system has fully booted



Debug LED with CPU Temperature Monitor

into the Operating System.

Table 5. AMI POST Code

01	Power on. Reset type detection (soft/hard).
02	AP initialization before microcode loading
03	North Bridge initialization before microcode loading
04	South Bridge initialization before microcode loading
05	OEM initialization before microcode loading
06	Microcode loading
07	AP initialization after microcode loading
08	North Bridge initialization after microcode loading
09	South Bridge initialization after microcode loading

0A	OEM initialization after microcode loading
0B	Cache initialization
0C-	Reserved for future AMI SEC error codes
0D	
0E	Microcode not found
0F	Microcode not loaded
10	PEI Core is started
11-	Pre-memory CPU initialization is started
14	
15-	Pre-memory North Bridge initialization is started
18	
19-	Pre-memory South Bridge initialization is started
1C	
1D-	OEM pre-memory initialization codes
2A	
2B	Memory initialization. Serial Presence Detect (SPD)
	data reading
2C	Memory initialization. Memory presence detection
2D	Memory initialization. Programming memory timing
	information
2E	Memory initialization. Configuring memory
2F	Memory initialization (other).
30	Reserved for ASL (see ASL Status Codes section
	below)
31	Memory Installed
32	CPU post-memory initialization is started
33	CPU post-memory initialization. Cache initialization
34	CPU post-memory initialization. Application
	Processor(s) (AP) initialization
35	CPU post-memory initialization. Boot Strap
	Processor (BSP) selection
36	CPU post-memory initialization. System
00	Management Mode (SMM) initialization
37-	Post-Memory North Bridge initialization is started
3A	
3B-	Post-Memory South Bridge initialization is started
3E	
3F-	OEM post memory initialization codes
4E	
4F	DXE IPL is started
50	Memory initialization error. Invalid memory type or
50	memory milianzation error. Invalid memory type of

	incompatible memory speed
51	Memory initialization error. SPD reading has failed
52	Memory initialization error. Invalid memory size or
	memory modules do not match.
53	Memory initialization error. No usable memory
	detected
54	Unspecified memory initialization error.
55	Memory not installed
56	Invalid CPU type or Speed
57	CPU mismatch
58	CPU self test failed or possible CPU cache error
59	CPU micro-code is not found or micro-code update
	is failed
5A	Internal CPU error
5B	reset PPI is not available
5C-	Reserved for future AMI error codes
5F	
E0	S3 Resume is stared (S3 Resume PPI is called by
	the DXE IPL)
E1	S3 Boot Script execution
E2	Video repost
E3	OS S3 wake vector call
E4-	Reserved for future AMI progress codes
E7	
E8-	S3 Resume Failed
EB	
EC-	Reserved for future AMI error codes
EF	
F0	Recovery condition triggered by firmware (Auto
	recovery)
F1	Recovery condition triggered by user (Forced
	recovery)
F2	Recovery process started
F3	Recovery firmware image is found
F4	Recovery firmware image is loaded
F5-	Reserved for future AMI progress codes
F7	
F8	Recovery PPI is not available
F9	Recovery capsule is not found
FA	Invalid recovery capsule
FB–	Reserved for future AMI error codes

60 DXE Core is started 61 NVRAM initialization 62 Installation of the South Bridge Runtime Services 63- CPU DXE initialization is started 67	FF	
61 NVRAM initialization 62 Installation of the South Bridge Runtime Services 63- CPU DXE initialization is started 67 68 68 PCI host bridge initialization is started 6A North Bridge DXE initialization is started 6A North Bridge DXE initialization is started 6B- North Bridge DXE initialization (North Bridge 6F module specific) 70 South Bridge DXE SMM initialization is started 71 South Bridge DXE Initialization is started 72 South Bridge DXE Initialization 73- South Bridge DXE Initialization 74- Reserved for future AMI DXE codes 77 Module specific) 78 ACPI module initialization codes 77 OEM DXE initialization codes 77 Reserved for future AMI DXE codes 77 OEM DXE initialization is started 90 Boot Device Selection (BDS) phase is started 91 Driver connecting is started 92 PCI Bus Initialization is started 93 PCI Bus Request Resources 96 PCI Bus Reset		DVE Core is started
62 Installation of the South Bridge Runtime Services 63- CPU DXE initialization is started 67 68 68 PCI host bridge initialization 69 North Bridge DXE initialization is started 6A North Bridge DXE initialization is started 6B- North Bridge DXE initialization (North Bridge 6F module specific) 70 South Bridge DXE SMM initialization is started 71 South Bridge DXE SMM initialization is started 72 South Bridge DXE Initialization 73- South Bridge DXE Initialization (South Bridge 77 module specific) 78 ACPI module initialization 79 CSM initialization 74- Reserved for future AMI DXE codes 7F 7 80- OEM DXE initialization codes 8F 7 90 Boot Device Selection (BDS) phase is started 91 Driver connecting is started 92 PCI Bus Initialization is started 93 PCI Bus Request Resources 96 PCI Bus Reset Resources 97 Console Output de		
63- 67 CPU DXE initialization is started 68 PCI host bridge initialization 69 North Bridge DXE initialization is started 6A North Bridge DXE SMM initialization is started 6B- North Bridge DXE initialization (North Bridge module specific) 70 South Bridge DXE initialization is started 71 South Bridge DXE Initialization is started 72 South Bridge DXE Initialization 73- South Bridge DXE Initialization (South Bridge 77 module specific) 78 73- South Bridge DXE Initialization (South Bridge 77 74- Reserved for future AMI DXE codes 7F 80- OEM DXE initialization codes 8F 90 Boot Device Selection (BDS) phase is started 91 91 Driver connecting is started 92 92 PCI Bus initialization is started 93 94 PCI Bus Request Resources 96 97 Console Output devices connect 98 98 USB Reset 97 99 Super IO Initialization 98 99 Super IO Initialization 99 90 Super IO Initialization 99 91 Dristeatest 92 </td <td>-</td> <td></td>	-	
6768PCI host bridge initialization69North Bridge DXE initialization is started6ANorth Bridge DXE initialization is started6B-North Bridge DXE initialization (North Bridge6Fmodule specific)70South Bridge DXE initialization is started71South Bridge DXE initialization is started72South Bridge DXE Initialization73-South Bridge DXE Initialization74-Reserved for future AMI DXE codes77module specific)78ACPI module initialization79CSM initialization74-Reserved for future AMI DXE codes7F80-OEM DXE initialization codes8F90Boot Device Selection (BDS) phase is started91Driver connecting is started92PCI Bus initialization is started93PCI Bus Enumeration94PCI Bus Request Resources96PCI Bus Assign Resources97Console output devices connect98Console input devices connect99Super IO Initialization is started98USB Reset90USB Enable91USB Enable92PCI Bus Enable93PCI Enable94PCI Bus Reset95QCI Initialization is started96PCI Bus Assign Resources97Console input devices connect98USB Reset99USB Enable91ISE Enable <td></td> <td></td>		
68PCI host bridge initialization69North Bridge DXE initialization is started6ANorth Bridge DXE SMM initialization is started6B-North Bridge DXE initialization (North Bridge6Fmodule specific)70South Bridge DXE initialization is started71South Bridge DXE initialization is started72South Bridge DXE SMM initialization is started73-South Bridge devices initialization73-South Bridge DXE Initialization (South Bridge77module specific)78ACPI module initialization79CSM initialization79CSM initialization79CSM initialization77Reserved for future AMI DXE codes7F*********************************		CPU DXE initialization is started
69North Bridge DXE initialization is started6ANorth Bridge DXE SMM initialization is started6BNorth Bridge DXE initialization (North Bridge6Fmodule specific)70South Bridge DXE initialization is started71South Bridge DXE SMM initialization is started72South Bridge DXE Initialization73-South Bridge devices initialization73-South Bridge DXE Initialization (South Bridge77module specific)78ACPI module initialization79CSM initialization79CSM initialization77Reserved for future AMI DXE codes7F*********************************		
6ANorth Bridge DXE SMM initialization is started6B-North Bridge DXE initialization (North Bridge6Fmodule specific)70South Bridge DXE initialization is started71South Bridge DXE SMM initialization is started72South Bridge devices initialization73-South Bridge DXE Initialization (South Bridge77module specific)78ACPI module initialization79CSM initialization74-Reserved for future AMI DXE codes7F80-80-OEM DXE initialization codes8F9090Boot Device Selection (BDS) phase is started91Driver connecting is started92PCI Bus initialization is started93PCI Bus Hot Plug Controller Initialization94PCI Bus Request Resources95PCI Bus Request Resources96PCI Bus Assign Resources97Console Output devices connect98Console input devices connect99Super IO Initialization is started91USB Reset92USB Detect93DEt initialization is started		
6B- 6FNorth Bridge DXE initialization (North Bridge module specific)70South Bridge DXE initialization is started71South Bridge DXE SMM initialization is started72South Bridge devices initialization73-South Bridge DXE Initialization (South Bridge module specific)78ACPI module initialization79CSM initialization79CSM initialization74- 7FReserved for future AMI DXE codes7F080- 90Boot Device Selection (BDS) phase is started91Driver connecting is started92PCI Bus initialization is started93PCI Bus Hot Plug Controller Initialization94PCI Bus Request Resources96PCI Bus Request Resources97Console Output devices connect98Console input devices connect99Super IO Initialization94USB initialization is started95PCI Bus Request Resources96PCI Bus Reset97Console Output devices connect98USB Reset90USB Enable91USB Enable92PCI bus Reset93USB Enable94PCI bus Reset95OL of tuture AMI codes96PCI Bus Assign Resources97Console input devices connect98USB Reset90USB Enable91USB Enable92PCI bus Initialization is started94PCI bus Initializatio		
6Fmodule specific)70South Bridge DXE initialization is started71South Bridge DXE SMM initialization is started72South Bridge devices initialization73-South Bridge DXE Initialization (South Bridge77module specific)78ACPI module initialization79CSM initialization74-Reserved for future AMI DXE codes7F80-OEM DXE initialization codes8F90Boot Device Selection (BDS) phase is started91Driver connecting is started92PCI Bus initialization is started93PCI Bus Hot Plug Controller Initialization94PCI Bus Request Resources96PCI Bus Request Resources97Console Output devices connect98Console input devices connect99Super IO Initialization is started98USB nest99USB Reset90USB Enable91USB Enable92PE-93Reserved for future AMI codes949595PCI Bus Reset96OSD Net Console Output devices connect97Osnable input devices connect98USB Reset99USB Initialization is started99Buse Reset90USB Enable91USB Enable92-PE-93-IDE initialization is started		, <u> </u>
70South Bridge DXE initialization is started71South Bridge DXE SMM initialization is started72South Bridge devices initialization73-South Bridge DXE Initialization (South Bridge77module specific)78ACPI module initialization79CSM initialization74-Reserved for future AMI DXE codes7F80-OEM DXE initialization codes8F90Boot Device Selection (BDS) phase is started91Driver connecting is started92PCI Bus initialization is started93PCI Bus Hot Plug Controller Initialization94PCI Bus Request Resources95PCI Bus Request Resources96PCI Bus Assign Resources97Console Output devices connect98Console input devices connect99Super IO Initialization is started98USB Reset90USB Enable91USB Enable92PCI Initialization is started		
71South Bridge DXE SMM initialization is started72South Bridge devices initialization73-South Bridge DXE Initialization (South Bridge77module specific)78ACPI module initialization79CSM initialization74-Reserved for future AMI DXE codes7F80-OEM DXE initialization codes8F90Boot Device Selection (BDS) phase is started91Driver connecting is started92PCI Bus initialization is started93PCI Bus Hot Plug Controller Initialization94PCI Bus Request Resources95PCI Bus Request Resources96PCI Bus Assign Resources97Console Output devices connect98Console input devices connect99Super IO Initialization is started94USB Initialization is started95PCI Bus Reset96PCI Bus Reset97Console for future AMI codes98USB Reset99USB Enable99USB Enable91USB Enable92-PE-93Reserved for future AMI codes949495PCI Bus Assign Resources96PCI Bus Assign Resources97Console input devices connect98USB Reset99USB Reset90USB Enable91USB Enable92-IDE initialization is started		
72South Bridge devices initialization73-South Bridge DXE Initialization (South Bridge77module specific)78ACPI module initialization79CSM initialization74-Reserved for future AMI DXE codes7F80-OEM DXE initialization codes8F90Boot Device Selection (BDS) phase is started91Driver connecting is started92PCI Bus initialization is started93PCI Bus Hot Plug Controller Initialization94PCI Bus Request Resources95PCI Bus Request Resources96PCI Bus Assign Resources97Console Output devices connect98Console input devices connect99Super IO Initialization is started98USB Reset90USB Detect91USB Enable92PCI Bus Request Resources		
 73- South Bridge DXE Initialization (South Bridge module specific) 78 ACPI module initialization 79 CSM initialization 7A- Reserved for future AMI DXE codes 7F 80- OEM DXE initialization codes 8F 90 Boot Device Selection (BDS) phase is started 91 Driver connecting is started 92 PCI Bus initialization is started 93 PCI Bus Hot Plug Controller Initialization 94 PCI Bus Request Resources 95 PCI Bus Request Resources 96 PCI Bus Assign Resources 97 Console Output devices connect 98 Console input devices connect 99 Super IO Initialization is started 91 USB Initialization is started 92 PCI BUS Initialization 94 USB Initialization 95 PCI Bus Assign Resources 96 PCI Bus Assign Resources 97 Console Output devices connect 98 USB Reset 90 USB Enable 91 USB Enable 92 PCI BUS Farable 93 USB Initialization is started 94 DISB Enable 95 PCI BUS Farable 96 PCI BUS Farable 97 Output for future AMI codes 98 USB Enable 99 Super IO Initialization is started 		
 77 module specific) 78 ACPI module initialization 79 CSM initialization 7A- Reserved for future AMI DXE codes 7F 80- OEM DXE initialization codes 8F 90 Boot Device Selection (BDS) phase is started 91 Driver connecting is started 92 PCI Bus initialization is started 93 PCI Bus Hot Plug Controller Initialization 94 PCI Bus Enumeration 95 PCI Bus Request Resources 96 PCI Bus Assign Resources 97 Console Output devices connect 98 Console input devices connect 99 Super IO Initialization is started 91 USB Reset 92 USB Detect 93 USB Enable 95 PE- Reserved for future AMI codes 94 IDE initialization is started 		
78ACPI module initialization79CSM initialization7A-Reserved for future AMI DXE codes7F80-OEM DXE initialization codes8F90Boot Device Selection (BDS) phase is started91Driver connecting is started92PCI Bus initialization is started93PCI Bus Hot Plug Controller Initialization94PCI Bus Request Resources96PCI Bus Request Resources97Console Output devices connect98Console input devices connect99Super IO Initialization is started98USB Initialization is started99USB Reset90USB Detect90USB Enable91DE initialization is started92PCI Bus Request Resources93OC Infitialization94PCI Bus Reset95OC Infitialization96PCI Bus Reset97Console input devices connect98USB Initialization is started99Super IO Initialization94USB Detect95PCI Bus Reset96OC USB Detect97OSB Detect98IDE initialization is started99IDE initialization is started	-	
79CSM initialization7A-Reserved for future AMI DXE codes7F80-80-OEM DXE initialization codes8F9090Boot Device Selection (BDS) phase is started91Driver connecting is started92PCI Bus initialization is started93PCI Bus Hot Plug Controller Initialization94PCI Bus Request Resources96PCI Bus Assign Resources97Console Output devices connect98Console input devices connect99Super IO Initialization is started98USB Reset90USB Detect90USB Enable91PE-92Reserved for future AMI codes94IDE initialization is started		
7A- 7FReserved for future AMI DXE codes7F0EM DXE initialization codes80- 8F0EM DXE initialization codes90Boot Device Selection (BDS) phase is started91Driver connecting is started92PCI Bus initialization is started93PCI Bus Hot Plug Controller Initialization94PCI Bus Request Resources96PCI Bus Assign Resources97Console Output devices connect98Console input devices connect99Super IO Initialization is started98USB initialization is started99USB Reset90USB Enable91USB Enable92PE- Reserved for future AMI codes94IDE initialization is started		
7F80- 8FOEM DXE initialization codes8F90Boot Device Selection (BDS) phase is started91Driver connecting is started92PCI Bus initialization is started93PCI Bus Hot Plug Controller Initialization94PCI Bus Enumeration95PCI Bus Request Resources96PCI Bus Assign Resources97Console Output devices connect98Console input devices connect99Super IO Initialization9AUSB initialization is started9BUSB Reset9CUSB Detect9DUSB Enable9F- A0IDE initialization is started		
80- 8FOEM DXE initialization codes90Boot Device Selection (BDS) phase is started91Driver connecting is started92PCI Bus initialization is started93PCI Bus Hot Plug Controller Initialization94PCI Bus Enumeration95PCI Bus Request Resources96PCI Bus Assign Resources97Console Output devices connect98Console Input devices connect99Super IO Initialization is started98USB initialization is started99USB Reset90USB Reset91USB Enable92PE- Reserved for future AMI codes94IDE initialization is started		Reserved for future AMI DXE codes
8F90Boot Device Selection (BDS) phase is started91Driver connecting is started92PCI Bus initialization is started93PCI Bus Hot Plug Controller Initialization94PCI Bus Enumeration95PCI Bus Request Resources96PCI Bus Assign Resources97Console Output devices connect98Console input devices connect99Super IO Initialization9AUSB initialization is started9BUSB Reset9CUSB Detect9DUSB Enable9FA0A0IDE initialization is started	7F	
90Boot Device Selection (BDS) phase is started91Driver connecting is started92PCI Bus initialization is started93PCI Bus Hot Plug Controller Initialization94PCI Bus Enumeration95PCI Bus Request Resources96PCI Bus Assign Resources97Console Output devices connect98Console input devices connect99Super IO Initialization9AUSB initialization is started9BUSB Reset9CUSB Detect9DUSB Enable9FA0A0IDE initialization is started		OEM DXE initialization codes
91Driver connecting is started92PCI Bus initialization is started93PCI Bus Hot Plug Controller Initialization94PCI Bus Enumeration95PCI Bus Request Resources96PCI Bus Assign Resources97Console Output devices connect98Console input devices connect99Super IO Initialization9AUSB initialization is started9BUSB Reset9CUSB Detect9DUSB Enable9FA0A0IDE initialization is started		
92PCI Bus initialization is started93PCI Bus Hot Plug Controller Initialization94PCI Bus Enumeration95PCI Bus Request Resources96PCI Bus Assign Resources97Console Output devices connect98Console input devices connect99Super IO Initialization9AUSB initialization is started9BUSB Reset9CUSB Detect9DUSB Enable9FA0A0IDE initialization is started		· · · ·
93PCI Bus Hot Plug Controller Initialization94PCI Bus Enumeration95PCI Bus Request Resources96PCI Bus Assign Resources97Console Output devices connect98Console input devices connect99Super IO Initialization9AUSB initialization is started9BUSB Reset9CUSB Detect9DUSB Enable9FA0A0IDE initialization is started	-	
94PCI Bus Enumeration95PCI Bus Request Resources96PCI Bus Assign Resources97Console Output devices connect98Console input devices connect99Super IO Initialization9AUSB initialization is started9BUSB Reset9CUSB Detect9DUSB Enable9E-Reserved for future AMI codes9FA0A0IDE initialization is started		
95PCI Bus Request Resources96PCI Bus Assign Resources97Console Output devices connect98Console input devices connect99Super IO Initialization9AUSB initialization is started9BUSB Reset9CUSB Detect9DUSB Enable9E-Reserved for future AMI codes9FA0		PCI Bus Hot Plug Controller Initialization
96PCI Bus Assign Resources97Console Output devices connect98Console input devices connect99Super IO Initialization9AUSB initialization is started9BUSB Reset9CUSB Detect9DUSB Enable9E-Reserved for future AMI codes9FA0IDE initialization is started	-	PCI Bus Enumeration
97Console Output devices connect98Console input devices connect99Super IO Initialization9AUSB initialization is started9BUSB Reset9CUSB Detect9DUSB Enable9E-Reserved for future AMI codes9FA0IDE initialization is started	95	PCI Bus Request Resources
98Console input devices connect99Super IO Initialization9AUSB initialization is started9BUSB Reset9CUSB Detect9DUSB Enable9E-Reserved for future AMI codes9FA0IDE initialization is started	96	PCI Bus Assign Resources
99Super IO Initialization9AUSB initialization is started9BUSB Reset9CUSB Detect9DUSB Enable9E-Reserved for future AMI codes9FA0IDE initialization is started	97	Console Output devices connect
9AUSB initialization is started9BUSB Reset9CUSB Detect9DUSB Enable9E-Reserved for future AMI codes9FA0IDE initialization is started	98	Console input devices connect
9B USB Reset 9C USB Detect 9D USB Enable 9E- Reserved for future AMI codes 9F A0 IDE initialization is started	99	Super IO Initialization
9C USB Detect 9D USB Enable 9E- Reserved for future AMI codes 9F A0 IDE initialization is started	9A	
9D USB Enable 9E- Reserved for future AMI codes 9F A0 IDE initialization is started	9B	USB Reset
9E- Reserved for future AMI codes 9F A0 IDE initialization is started	9C	USB Detect
9F A0 IDE initialization is started	9D	USB Enable
9F A0 IDE initialization is started	9E-	Reserved for future AMI codes
A0 IDE initialization is started	9F	
A1 IDE Reset	A0	IDE initialization is started
	A1	IDE Reset

A2	IDE Detect
A3	IDE Enable
A4	SCSI initialization is started
A5	SCSI Reset
A6	SCSI Detect
A7	SCSI Enable
A8	Setup Verifying Password
A9	Start of Setup
AA	Reserved for ASL (see ASL Status Codes section below)
AB	Setup Input Wait
AC	Reserved for ASL (see ASL Status Codes section
	below)
AD	Ready To Boot event
AE	Legacy Boot event
AF	Exit Boot Services event
BO	Runtime Set Virtual Address MAP Begin
B1	Runtime Set Virtual Address MAP End
B2	Legacy Option ROM Initialization
B3	System Reset
B4	USB hot plug
B5	PCI bus hot plug
B6	Clean-up of NVRAM
B7	Configuration Reset (reset of NVRAM settings)
B8- BF	Reserved for future AMI codes
C0– CF	OEM BDS initialization codes
D0	CPU initialization error
D1	North Bridge initialization error
D2	South Bridge initialization error
D3	Some of the Architectural Protocols are not
	available
D4	PCI resource allocation error. Out of Resources
D5	No Space for Legacy Option ROM
D6	No Console Output Devices are found
D7	No Console Input Devices are found
D8	Invalid password
D9	Error loading Boot Option (LoadImage returned error)

EVGA Glossary of Terms

- 1337 This is reserved for EVGA level elite
- AC Alternating Current
- ACPI Advanced Configuration and Power Interface
- AFR Alternate Frame Rendering
- APIC Advanced Programmable Interrupt Controller
- ACPI Advanced Configuration and Power Interface
- BCLK Base Clock (or operating frequency of base system bus)
- BIOS Basic Input Output System
- CD-ROM Compact Disc Read-Only Memory
- CMOS Complementary Metal-Oxide Semiconductor
- CPU Central Processing Unit
- D-ICE Dry Ice Cooling
- DDR2 Double Data Rate 2
- DDR3 Double Data Rate 3
- DIMM Dual In-line Memory Module
- DMI Direct Memory Interface
- DRAM Dynamic random access memory
- DVD Digital Versatile Disc
- DVI Digital Video Interface
- FDC Floppy Disk Controller

- FSB Front Side Bus
- FTW For The Win!
- GHz Gigahertz
- GPU Graphics Processing Unit
- HDD Hard Disk Drive
- HDMI High-Definition Multimedia Interface
- HDR High Dynamic Range Lighting
- HPET High Precision Event Timer
- HT Hyper-Threading
- HSF Heat Sink Fan
- I/O Input/Output
- **IDE Integrated Drive Electronics**
- IEEE Institute of Electrical and Electronics Engineers
- IGP Integrated Graphics Processors
- IMC Integrated memory controller
- IRQ Interrupt Request
- JBOD Just a Bunch of Disks
- JEDEC Joint Electron Device Engineering Council
- LAN Local Area Network
- LCD Liquid Crystal Display
- LGA Land Grid Array
- LN2 Liquid Nitrogen Cooling
- MAC Media Access Control
- MCP Media and Communications Processor
- MHz Megahertz
- MMIO Memory Mapped I/O
- NB Northbridge
- NCQ Native Command Queuing
- NIC Network Interface Card
- NTFS New Technology File System

- **OEM Original Equipment Manufacturer**
- PATA Parallel Advanced Technology Attachment
- PCB Printed Circuit Board
- PCI Peripheral Component Interconnect
- PCIe Peripheral Component Interconnect Express
- PCI-x Peripheral Component Interconnect Extended
- POST Power on Self Test
- PWM Pulse Width Modulation
- QDR Quad Data Rate
- QPI Quick Path Interconnect
- RAID Redundant Array of Inexpensive Disks
- RGB Red Green Blue
- SATA Serial Advanced Technology Attachment
- SB Southbridge
- SCSI Small Computer System Interface
- SFR Split Frame Rendering
- SLI Scalable Link Interface
- SPD Serial Presence Detect
- SPDIF Sony/Philips Digital Interconnect Format
- SPP System Platform Processors
- SSD Solid State Drive
- TCP/IP Transmission Control Protocol/Internet Protocol
- USB Universal Serial Bus
- VDroop V-core Voltage Drop
- VGA Video Graphics Array

Compliance Information

FCC Compliance Information

This device complies with FCC Rules Part 15. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: (1) Increase the separation between the equipment and signal source, or (2) connect the equipment to an outlet on a circuit different from that to which the signal source is connected. Consult the dealer or an experienced computer technician for help. The use of shielded cables for connections to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CE Compliance Information

Generic Radiation Interference Standard for Information Technology Equipment. (EN 55022: 2006, Class B), (EN 61000-3-2: 2006), (EN 61000-3-3: 1995 + A1: 2001 + A2: 2005). Warning: This is a Class B product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measure. Generic Immunity Standard for Information Technology Equipment. (EN 55024: 1998 + A1: 2001 + A2: 2003).

Trademark & Copyright Information

2001-2012 EVGA Corp. EVGA, the EVGA logo and combinations thereof are trademarks of EVGA Corp. All brand names, company names, service marks, logos, and trademarks of the company, or its affiliates or licensors are trademarks or registered trademarks of the company or its subsidiaries, affiliates or licensors in the US and other countries. Other company, products and service names may be trademarks or service marks of others. EVGA reserves the right to terminate this license if there is a violation of its terms or default by the Original Purchaser. Upon termination, for any reason, all copies of Software and materials must be immediately returned to EVGA and the Original Purchaser shall be liable to EVGA.com CORP for any and all damages suffered as a result of the violation or default.

Legal Information

All material including but not limited to, text, data, design specifications, diagnostics, graphics, logos, reference boards, files, images, drawings, and software including this document and the software itself (together and separately) is owned, controlled by, licensed to, or used with permission by Company and is protected by copyright, trademark, and other intellectual property rights. All is being provided "as is", EVGA Corporation makes no warranties, whether express or implied, statutory or otherwise with respect to the materials and expressly disclaims all implied warranties of non-infringement, merchantability, and fitness for a particular purpose. In no event shall the liability of EVGA Corporation's option). All information furnished is believed to be accurate and reliable. However, EVGA Corporation assumes no responsibility for the consequences of use of such information or for any infringement of patents or other rights of third parties that may result from its use, or use of the Software. No license is granted by implication or otherwise under any patent or patent rights of EVGA Corporation except as expressly provided herein. All specifications mentioned in this publication are subject to change without notice.