Vig760S Motherboard Manual

Great

Minds

Think

COMPUTERS ◆ NETWORKS ◆ SOLUTIONS

Viglen, EMC and the ‘CE’ mark

CE Marking

European standards are being harmonised across borders. If products comply with the same standards in all European countries, product exporting and importing is made simple - paving our way to a common market. If you buy a product with a 'CE' mark on it (shown below), on the box, in the manual, or on the guarantee - it complies with the currently enforced directive(s).

CE

Introduction to EMC

EMC (Electromagnetic Compatibility) is the term used to describe certain issues with RF (Radio Frequency) energy. Electrical items should be designed so they do not interfere with each other through RF emissions. El.g. If you turn on your microwave, your television shouldn't display interference if both items are CE marked to the EMC directive.

If emitted RF energy is not kept low, it can interfere with other electrical circuitry - E.g. Cars Automatic Braking Systems have been known to activate by themselves while in a strong RF field. As this has obvious repercussions ALL electrical products likely to cause RF related problems have to be 'CE' marked from 1st January 1996 onwards.

If a product conforms to the EMC directive, not only should its RF emissions be very low, but its immunity to RF energy (and other types) should be high. The apparatus has to resist many 'real world' phenomena such as static shocks and mains voltage transients.

Viglen's Environment laboratory

To gain a 'CE' mark, the Viglen computer range has had to undergo many difficult tests to ensure it is Electromagnetically Compatible. These are carried out in the in-house 'Environment lab' at Viglen Headquarters. We have made every effort to guarantee that each computer leaving our factory complies fully with the correct standards. To ensure the computer system maintains compliance throughout its functional life, it is essential you follow these guidelines.

- Install the system according to Viglen's instructions
- If you open up your Viglen:
- Keep internal cabling in place as supplied.
- Ensure the lid is tightly secured afterwards
- Do not remove drive bay shields unless installing a 'CE' marked peripheral in its place
- The clips or 'bumps' around the lips of the case increase conductivity - do not remove or damage.
- Do not remove the ferrite ring from the L.E.D cables.
- Only use your Viglen computer with 'CE' marked peripherals

This system has been tested in accordance with European standards for use in residential and light industrial areas-this specifies a 10 meter testing radius for emissions and immunity. If you do experience any adverse effects which you think might be related to your computer, try moving it at least 10 meters away from the affected item. If you still experience problems, contact Viglen's Technical Support department who will put you straight through to an EMC engineer - s/he will do everything possible to help. If modifications are made to your Viglen computer system, it might breach EMC regulations. XMA take no responsibility (with regards to EMC characteristics) of equipment which has been tampered with or modified.

This symbol on the product or on its packaging indicates that the product shall not be collection point for recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could be treated as household waste. Instead it shall be handed over to the applicable otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or XMA Ltd.

Copyrights and Trademarks

Please note

The material in this manual is subject to change without notice.

Trademarks

Microsoft, Windows 7, Windows 8/8.1, Windows 10 and MS-DOS are registered trademarks of Microsoft Corporation. IBM PC, XT, AT and PS/2 are trademarks of International Business Machines Corporation. Core i3/i5/i7™ and Pentium® are registered trademarks of Intel® Corporation. All other trademarks are acknowledged. Genie, Vig, Viglen, and Omnino are trademarks of XMA Limited.

Copyright and Patents

Vig760S Manual Version 1.0

Liability

No warranty or representation, either expressed or implied, is made with respect to this documentation, its quality, performance, merchantability or fitness for a particular purpose. As a result, the documentation is licensed as is, and you, the licensee, are assuming the entire risk as to its quality and performance. The vendor reserves the right to revise this operation manual and all accompanying software and documentation and to make changes in the content without obligation to notify any person or organisation of the revision or change.

In no event will the vendor be liable for direct, indirect, special, incidental or consequential damages arising out of the use or inability to use this product or documentation, even if advised of the possibility of such damages. In particular, the vendor shall not have liability for any hardware, software or data stored or used with the product, including the costs of repairing, replacing or recovering such hardware, software or data.

Contents

CE Marking 2
Introduction to EMC 2
Viglen's Environment laboratory 3
Please note 3
Trademarks 4
Copyright and Patents 4
Liability 4

Chapter 1 Motherboard Overview 8

1.1 Introduction 8

1.2 Feature Summary 9
1.2.1 Form factor: 9
1.2.2 Processor: 9
1.2.3 Chipset 9
1.2.4 Memory 9
1.2.5 Graphics 9
1.2.6 Audio 9
1.2.7 LAN 9
1.2.8 SATA 9
1.2.9 Internal Connectors 10
1.2.10 Expansion Capabilities 10
1.2.11 Rear I/O Ports 10

1.3 System Board Connectors 11
1.3.1 (1) CPU and chassis fan connectors (4-pin CPU_FAN, 4-pin CHA_FAN). 12
1.3.2 (2) ATX power connectors (24-pin EATXPWR, 4-pin ATX12V) 12
1.3.3 (3) Intel® LGA1151 CPU socket 12
1.3.4 (4) DDR4 DIMM slots 12
1.3.5 (5) Speaker connector (4-pin SPEAKER) 12
1.3.6 (6) System panel connector (10-1 pin PANEL) 12
1.3.7 (7) USB 3.0 connector (20-1 pin USB3_12) 13
1.3.8 (8) Intel® H110 Serial ATA 6.0Gb/s connectors (7-pin SATA6G_1~4) 13
1.3.9 (9) PCI Express 3.0/2.0 x16 slot 13
1.3.10 (10) Chassis intrusion connector (4-1 pin CHASSIS) 13
1.3.11 (11) Clear RTC RAM (2-pin CLRTC) 14
1.3.12 (12) Front panel audio connector (10-1 pin AAFP) 14
1.3.13 (13) Serial port connector (10-1 pin COM1) 14

1.3.14 (14) PM connector (14-1 pin TPM) 14
1.3.15 (15) USB 2.0 connector (10-1 pin USB910) 15
1.4 Rear panel connectors 16
1.4.1 (1) PS/2 mouse/keyboard combo port. 16
1.4.2 (2) Video Graphics Adapter (VGA) port. 16
1.4.3 (3) LAN (RJ-45) port. 17
1.4.4 (4) Line In port (light blue) 17
1.4.5 (5) Line Out port (lime) 17
1.4.6 (6) Microphone port (pink) 17
1.4.7 (7) USB 2.0 ports. 18
1.4.8 (8) USB 3.0 ports. 18
1.4.9 (9) DVI-D port 18
1.4.10 (10) HDMI port. 18
Chapter 2 - System Board Options 19
2.1 Upgrades 19
2.2 Upgrade Procedures 20
2.2.1 Upgrading the CPU 20
2.2.2 Installing & Removing Memory Modules 25
PCI Express 3.0/2.0 x16 slots 27
Chapter 3 Solving Problems 28
3.1 Technical Support 28
3.1.1 Technical Support contact details 28
3.1.2 Resetting the System 28
3.2 Troubleshooting Procedures 29
3.3 Problems & Suggestions 30
Chapter 4 System BIOS 32
4.1 What is the BIOS? 32
4.2 The Power-On sequence 32
4.3 Managing and updating BIOS 33
4.3.1 Introduction 33
4.3.2 BIOS Update Instructions under DOS 33
4.3.3 BIOS Update Instructions using EZ-Flash Method 34
4.3.4 Recovering the BIOS - CrashFree BIOS 3 35
4.4 BIOS Setup Program 36

4.4.1 Entering BIOS Setup....36
4.4.2 EZ Mode....37
4.5 Advanced Mode....38
4.5.1 My Favourites....39
4.5.2 Main menu....40
4.5.2.1 System Language [English]....40
4.5.2.2 System Date [Day xx/xx/xxxx]....40
4.5.2.3 System Time [xx:xx:xx]....40
4.5.2.4 Security....41
4.5.3 Ai Tweaker menu....43
4.5.4 Advanced Menu Screen....44
4.5.4.1 CPU Configuration....44
4.5.4.2 Platform Misc Configuration....45
4.5.4.3 System Agent (SA) Configuration....45
4.5.4.4 PCH Configuration....46
4.5.4.5 USB Configuration....46
4.5.4.6 Onboard Devices Configuration....47
4.5.4.7 APM Configuration....47
4.5.4.8 Network Stack Configuration....48
4.5.4.9 HDD/SSD SMART Information....48
4.5.5 Monitor menu....48
4.5.6 Boot menu....49
4.5.7 Tools menu....50
4.5.8 Exit menu....51
4.5.8.1 Load Optimized Defaults....51
4.5.8.2 Save Changes & Reset....51
4.5.8.3 Discard Changes & Exit....51
4.6 ASUS EZ Mode....52
4.6.1 Windows UEFI mode for Windows 8/8.1....53
4.6.2 Enabling Windows UEFI mode for Windows 8/8.1 Operating System....54
4.6.3 BIOS Settings for Windows 7 Operating System (Non UEFI Mode)....57
4.6.4 Boot\Secure Boot Menu....57

Chapter 5 :Suggestions....58

5.1 Questionnaire....58
5.2 Notes....60

Chapter 1 Motherboard Overview

1.1 Introduction

This manual describes the Viglen Vig760S motherboard inside your computer. The motherboard is the most important part of your computer. It contains the CPU, memory and graphics circuitry that make the computer work in the correct manner.

The Vig760S motherboard is a Mini ITX form factor offering legacy to premium features. PS/2 mouse/keyboard combo port, integrated Graphics via VGA, DVI, DisplayPort and HDMI, High Definition Audio via 3 flexible audio jacks and integrated 10/100/1000 network connection, as well as 4 USB 2.0 and 2 USB 3.0 ports to enrich your multimedia creation experience.

The Vig760S Motherboard supports 6th generation Intel Core i3, i5, and i7 processors, as well as being Microsoft Windows 7, 8.1 and Windows 10 WHQL certified.

This manual contains technical information about the Viglen Vig760S motherboard and other hardware components inside your computer. If you are new to computers, we recommend that you read the user guide first. If you are an experienced computer user, this manual should provide all the information you will need to perform simple upgrades and maintenance.

We hope that this manual is both readable and informative. If you have any comments for suggestions about how we could improve the format, then please fill out the form at the back of the manual and send it to us.

Above all we hope that you enjoy using your Viglen computer.

Chapter 2 Motherboard

2.1 Form factor

Atx

2.2 Feature Summary

2.2.1 Form factor:

- **Mini ITX** Form Factor 6.7 inch x 6.7 inch (17 cm x 17 cm)

2.2.2 Processor:

- Intel® for 6th Generation Core™ i7/Core™ i5/Core™ i3/Pentium®/Celeron® Processors
- Supports Intel® 14 nm CPU
- Supports Intel® Turbo Boost Technology 2.0
- The Intel® Turbo Boost Technology 2.0 support depends on the CPU types.

2.2.3 Chipset

- Intel® H110 Express Chipset

2.2.4 Memory

- 2 x DIMM, Max. 32GB, DDR4 2133 MHz Non-ECC, Un-buffered Memory
- Supports Intel® Extreme Memory Profile (XMP)

2.2.5 Graphics

- Integrated Graphics Processor- Intel® HD Graphics support
- Multi-VGA output support : HDMI/DVI-D/RGB ports
    - Supports HDMI with max. resolution 4096 x 2160 @ 24 Hz / 2560 x 1600 @ 60 Hz
    - Supports DVI-D with max. resolution 1920 x 1200 @ 60 Hz
    - Supports RGB with max. resolution 1920 x 1200 @ 60 Hz
- Maximum shared memory of 1024 MB
- Supports Intel® InTru™ 3D, Quick Sync Video, Clear Video HD Technology, Insider™
- Supports up to 2 displays simultaneously

2.2.6 Audio

- Realtek® ALC887 7.1-Channel High Definition Audio CODEC *1
- Supports: Jack-detection, Front Panel Jack-retasking

2.2.7 LAN

- Realtek® RTL8111H, 1 x Gigabit LAN Controller(s)

2.2.8 SATA

- 4 x SATA 6Gb/s connector(s)

2.2.9 Internal Connectors

- 1 x USB 3.0 connector(s) support(s) additional 2 USB 3.0 port(s)
- 1 x USB 2.0 connector(s) support(s) additional 2 USB 2.0 port(s)
- 1 x COM port(s) connector(s)
- 4 x SATA 6Gb/s connector(s)
- 1 x CPU Fan connector(s) (1 x 4 -pin)
- 1 x Chassis Fan connector(s) (1 x 4 -pin)
- 1 x 24-pin EATX Power connector(s)
- 1 x 4-pin ATX 12V Power connector(s)
- 1 x Front panel audio connector(s) (AAFP)
- 1 x Internal speaker connector(s)
- 1 x System panel(s)
- 1 x Chassis Intrusion connector(s)
- 1 x Clear CMOS jumper(s)
- 1 x 14-1 pin TPM connector

2.2.10 Expansion Capabilities

- 1 x PCI Express 3.0/2.0 x16

2.2.11 Rear I/O Ports

- 1 x PS/2 keyboard/mouse combo port(s)
- 1 x DVI-D
- 1 x D-Sub
- 1 x HDMI
- 1 x LAN (RJ45) port(s)
- 2 x USB 3.0 (blue)
- 4 x USB 2.0
- 3 x Audio jack(s)

2.3 System Board Connectors

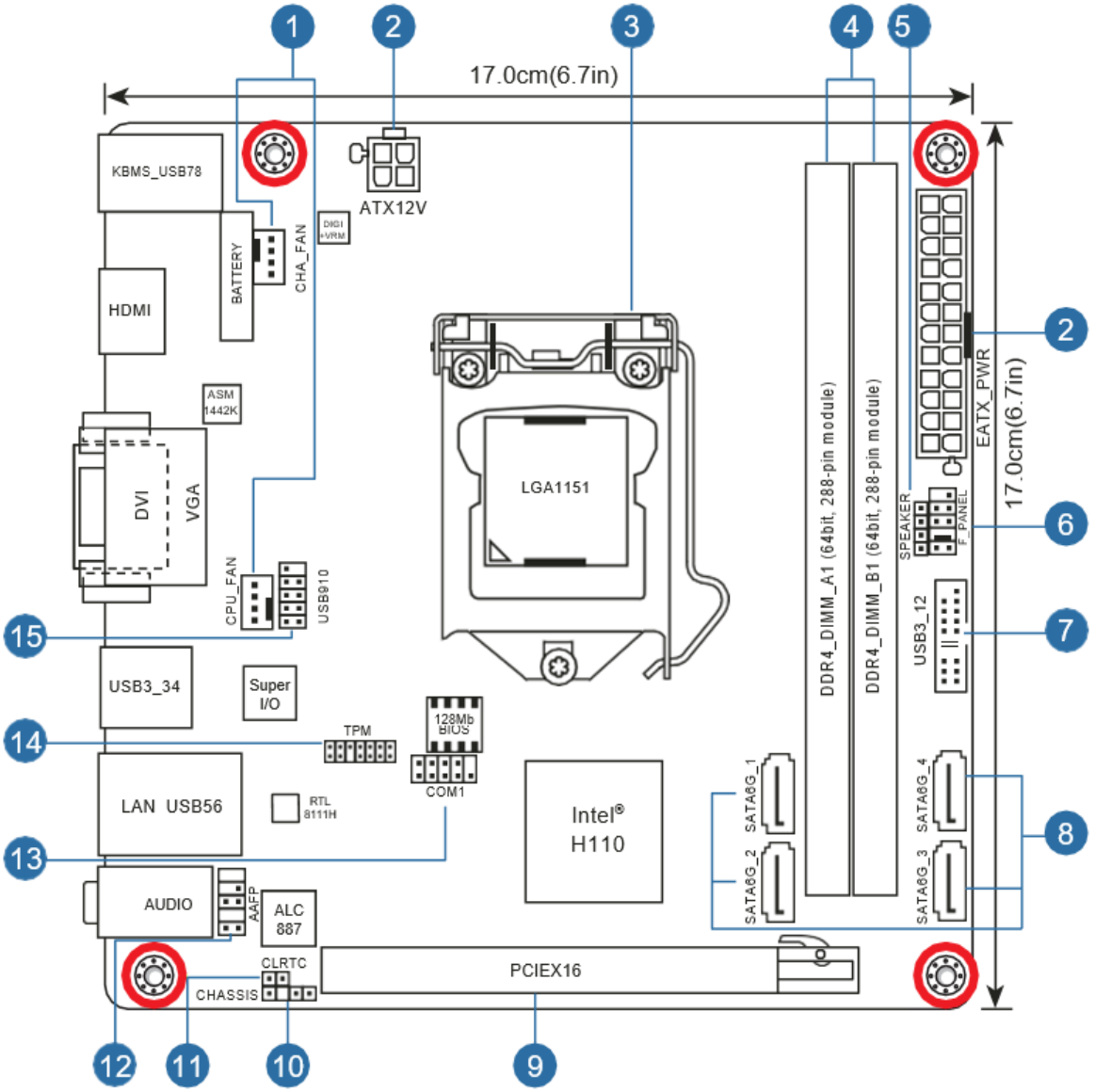


Figure 1: System Board Components

System Board Components Table			
1	CPU and chassis fan connectors (4-pin CPU_FAN, 4-pin CHA_FAN)	**9**	PCI Express 3.0/2.0 x16 slot
2	ATX power connectors (24-pin EATXPWR, 4-pin ATX12V)	**10**	Chassis intrusion connector (4-1 pin CHASSIS)
3	Intel® LGA1151 CPU socket	**11**	Clear RTC RAM (2-pin CLRTC)
4	DDR4 DIMM slots	**12**	Front panel audio connector (10-1 pin AAFP)
5	Speaker connector (4-pin SPEAKER)	**13**	Serial port connector (10-1 pin COM1)
6	System panel connector (10-1 pin PANEL)	**14**	TPM connector (14-1 pin TPM)
7	USB 3.0 connector (20-1 pin USB3_12)	**15**	USB 2.0 connector (10-1 pin USB910)
8	Intel® H110 Serial ATA 6.0Gb/s connectors (7-pin SATA6G_1~4)		

Table 1: System Board Components

2.3.1 (1) CPU and chassis fan connectors (4-pin CPU_FAN, 4-pin CHA_FAN).

Connect the fan cables to the fan connectors on the motherboard, ensuring that the black wire of each cable matches the ground pin of the connector.

NOTE: Do not forget to connect the fan cables to the fan connectors. Insufficient air flow inside the system may damage the motherboard components. These are not jumpers! Do not place jumper caps on the fan connectors! The CPU_FAN connector supports a CPU fan of maximum 1A (12 W) fan power.

2.3.2 (2) ATX power connectors (24-pin EATXPWR, 4-pin ATX12V)

Correctly orient the ATX power supply plugs into these connectors and push down firmly until the connectors completely fit.

NOTE: For a fully configured system, we recommend that you use a power supply unit (PSU) that complies with ATX 12 V Specification 2.0 (or later version) and provides a minimum power of 350 W.

2.3.3 (3) Intel® LGA1151 CPU socket

Install Intel® LGA1151 CPU into this surface mount LGA1151 socket, which is designed for 6th Generation Intel® Core™ i7 / i5 / i3, Pentium®, and Celeron® processors.

2.3.4 (4) DDR4 DIMM slots

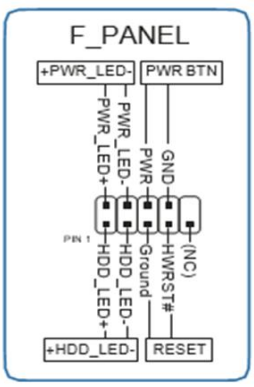
Install 2 GB, 4 GB, 8 GB, and 16 GB unbuffered non-ECC DDR4 DIMMs into these DIMM sockets.

2.3.5 (5) Speaker connector (4-pin SPEAKER)

The 4-pin connector is for the chassis-mounted system warning speaker. The speaker allows you to hear system beeps and warnings.

2.3.6 (6) System panel connector (10-1 pin PANEL)

This connector supports several chassis-mounted functions.



2.3.7 (7) USB 3.0 connector (20-1 pin USB3_12)

This connector allows you to connect a USB 3.0 module for additional USB 3.0 front or rear panel ports. With an installed USB 3.0 module, you can enjoy all the benefits of USB 3.0 including faster data transfer speeds of up to 5 Gbps, faster charging time for USB-chargeable devices, optimized power efficiency, and backward compatibility with USB 2.0.

2.3.8 (8) Intel® H110 Serial ATA 6.0Gb/s connectors (7-pin SATA6G_1~4)

These connectors connect to Serial ATA 6.0 Gb/s hard disk drives via Serial ATA Gb/s signal cables

2.3.9 (9) PCI Express 3.0/2.0 x16 slot

This motherboard has one PCI Express 3.0/2.0 x16 slot that supports PCI Express 3.0/2.0 x16 graphic cards complying with the PCI Express specifications.

	A	B	C	D	E	F	G	H
PCIEx16	shared	–	–	–	–	–	–	–
Realtek 8111H LAN Controller	–	shared	–	–	–	–	–	–
USB 3.0 Controller	shared	–	–	–	–	–	–	–
SATA Controller	shared	–	–	–	–	–	–	–
HD Audio Controller	shared	–	–	–	–	–	–	–
HD Audio Controller	shared	–	–	–	–	–	–	–

Table 2: Slots

NOTE: When using PCI cards on shared slots, ensure that the drivers support "Share IRQ" or that the cards do not need IRQ assignments. Otherwise, conflicts will arise between the two PCI groups, making the system unstable and the card inoperable.

2.3.10 (10) Chassis intrusion connector (4-1 pin CHASSIS)

This connector is for a chassis-mounted intrusion detection sensor or switch. Connect one end of the chassis intrusion sensor or switch cable to this connector. The chassis intrusion sensor or switch sends a high-level signal to this connector when a chassis component is removed or replaced. The signal is then generated as a chassis intrusion event.

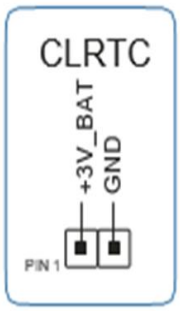
By default, the pins labelled "Intruder" are shorted with a jumper cap. Remove the jumper caps only when you intend to use the chassis intrusion detection feature.

2.3.11 (11) Clear RTC RAM (2-pin CLRTC)

This header allows you to clear the CMOS RTC RAM data of the system setup information such as date, time, and system passwords

To erase the RTC RAM:

1 *Turn OFF the computer and unplug the power cord.*
2 *Use a metal object such as a screwdriver to short the two pins.*
3 *Plug the power cord and turn ON the computer.*
4 *Hold down the <Del> key during the boot process and enter BIOS setup to re-enter data*



2.3.12 (12) Front panel audio connector (10-1 pin AAFP)

This connector is for a chassis-mounted front panel audio I/O module that supports either HD Audio or legacy AC`97 audio standard. Connect one end of the front panel audio I/O module cable to this connector.

NOTE: We recommend that you connect a high-definition front panel audio module to this connector to avail of the motherboard's high-definition audio capability.

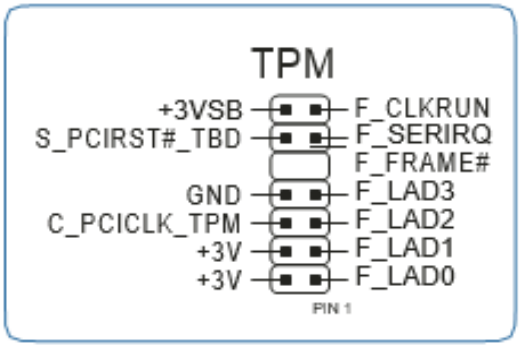
If you want to connect a high-definition front panel audio module to this connector, set the Front Panel Type item in the BIOS setup to [HD Audio]. If you want to connect an AC'97 front panel audio module to this connector, set the item to [AC97]. By default, this connector is set to [HD Audio

2.3.13 (13) Serial port connector (10-1 pin COM1)

Connect the serial port module cable to this connector, then install the module to a slot opening at the back of the system chassis.

2.3.14 (14) PM connector (14-1 pin TPM)

Connect a Trusted Platform Module (TPM) system to this connector to enhance network security, protect digital identities, and ensure platform integrity.



2.3.15 (15) USB 2.0 connector (10-1 pin USB910)

This connector is for USB 2.0 ports. Connect the USB module cable to this connector, then install the module to a slot opening at the back of the system chassis. This USB connector complies with USB 2.0 specifications and supports up to 480Mbps connection speed

2.4 Rear panel connectors

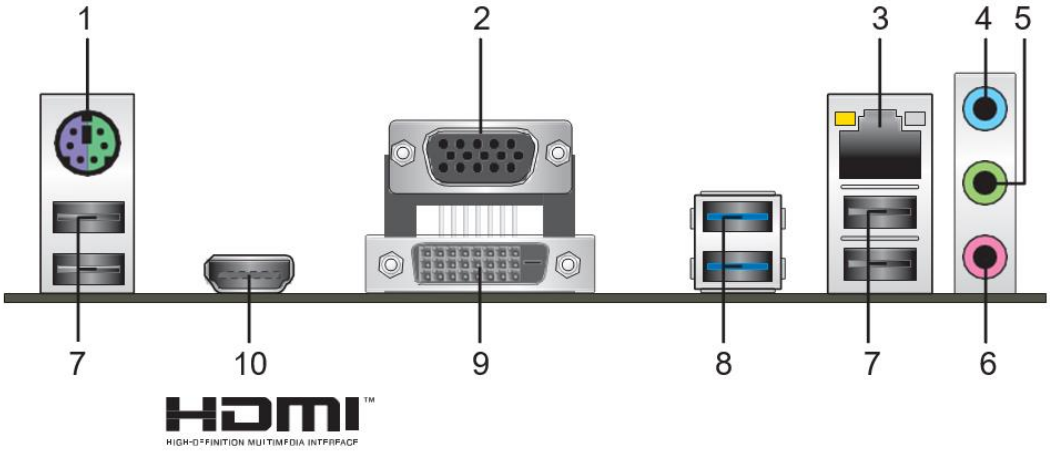


Figure 2: Rear panel connectors

1	PS/2 mouse/keyboard port (green/purple)	6	Microphone port (pink)
2	Video Graphics Adapter (VGA) port	7	USB 2.0 ports
3	LAN (RJ-45) port	8v	USB 3.0 port
4	Line In port (light blue)	9	DVI-D port
5	Line Out port (lime)	10	HDMI port.

Table 3: Rear panel connectors

2.4.1 (1) PS/2 mouse/keyboard combo port.

This port connects to a PS/2 mouse or PS/2 keyboard.

2.4.2 (2) Video Graphics Adapter (VGA) port.

This 15-pin port is for a VGA monitor or other VGA-compatible devices.

2.4.3 (3) LAN (RJ-45) port.

This port allows Gigabit connection to a Local Area Network (LAN) through a network hub.

Activity/Link LED		Speed LED	
Status	**Description**	**Status**	**Description**
Off	No link	OFF	10Mbps connection
Orange	Linked	ORANGE	100Mbps connection
Orange (Blinking)	Data activity	GREEN	1Gbps connection
Orange (Blinking then steady)	Ready to wake up from S5 mode	–	–

Table 4: LAN (RJ-45) port

RJ-45 LAN Connector LEDs

The two LEDs are built into the RJ-45 LAN connector located on the back panel. These LEDs indicate the status of the LAN as shown in Table 1.

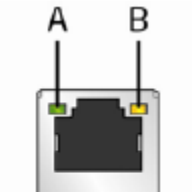
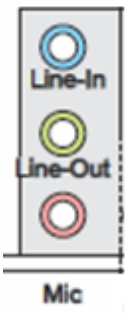


Figure 3: RJ-45 LAN Connector

Item	Description
A	Link/Activity LED (green)
B	Link Speed LED (green/yellow)

2.4.4 (4) Line In port (light blue)

This port connects to the tape, CD, DVD player, or other audio sources.



2.4.5 (5) Line Out port (lime)

This port connects to a headphone or a speaker. In the 4.1, 5.1 and 7.1-channel configurations, the function of this port becomes Front Speaker Out.

2.4.6 (6) Microphone port (pink)

This port connects to a microphone.

NOTE: Refer to the audio configuration table for the function of the audio ports in 2.1, 4.1, 5.1, or 7.1-channel configuration.

Audio 2.1, 4.1, 5.1, or 7.1-channel configuration				
Port	Headset 2.1-channel	4.1-channel	5.1-channel	7.1-channel
Light Blue (Rear panel)	Line In	Rear Speaker Out	Rear Speaker Out	Rear Speaker Out
Lime (Rear panel)	Line Out	Front Speaker Out	Front Speaker Out	Front Speaker Out
Pink (Rear panel)	Mic In	Mic In	Bass/Center	Bass/Center
Lime (Front panel)	-	-	-	Side Speaker

Table 5: Audio 2.1, 4.1, 5.1, or 7.1-channel configuration

NOTE: To configure a 7.1-channel audio output, use a chassis with HD audio module in the front panel to support a 7.1-channel audio output.

2.4.7 (7) USB 2.0 ports.

These 4-pin Universal Serial Bus (USB) ports are for USB 2.0/1.1 devices.

2.4.8 (8) USB 3.0 ports.

These 9-pin Universal Serial Bus (USB) ports are for USB 3.0 devices.

NOTE: Due to the limitation of USB 3.0 controller, USB 3.0 devices can only be used under Windows OS environment and after the USB 3.0 driver installation.

We strongly recommend that you connect USB 3.0 devices to USB 3.0 ports for faster and better performance from your USB 3.0 devices.

2.4.9 (9) DVI-D port.

This port is for any DVI-D compatible device.
DVI-D cannot be converted to output from RGB Signal to CRT and is not compatible with DVI-I.

2.4.10 (10) HDMI port.

This port is for a High-Definition Multimedia Interface (HDMI) connector, and is HDCP compliant allowing playback of HD DVD, Blu-ray, and other protected content.

Chapter 3 - System Board Options

3.1 Upgrades

The Vig760s motherboard is supports Intel® Core i3, i5, i7 and Pentium processors in the LGA1151 socket. RAM can be upgraded to a maximum of 16GB using DDR4 2133MHz Non ECC Unbuffered DIMMs.

WARNING!

Unplug the system before carrying out the procedures described in this chapter. Failure to disconnect power before you open the system can result in personal injury or equipment damage. Hazardous voltage, current, and energy levels are present in this product. Power switch terminals can have hazardous Voltages present even when the power switch is off.

The procedures assume familiarity with the general terminology associated with personal computers and with the safety practices and regulatory compliance required for using and modifying electronic equipment.

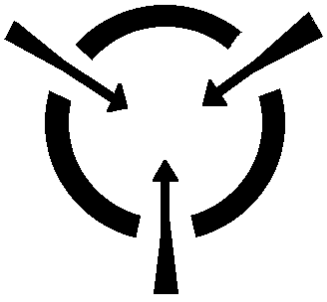
Do not operate the system with the cover removed. Always replace the cover before turning on the system.

As the colours of the wires in the mains lead of this computer may not correspond with the coloured markings identifying the terminals in your plug precede as follows:

The wire which is coloured **green-and-yellow** must be **connected** to the **terminal** in the plug which is marked by the letter **E** or by the safety Earth symbol **Q** or coloured green or **green-and-yellow**.

The wire which is coloured blue must be connected to the terminal which is marked with the letter **N** or coloured **black**.

The wire which is coloured brown must be connected to the terminal which is marked with the letter **L** or coloured **red**.



CAUTION!

The Viglen Vig760S motherboard and associated components are sensitive electronic devices. A small static shock from your body can cause expensive damage to your equipment.

3.2 Upgrade Procedures

Make sure you are earthed and free of static charge before you open the computer case. If you are unsure about upgrading your computer, return it to Viglen so a qualified engineer can perform the upgrade.

Steps to take to prevent static discharge:

1. The best way to prevent static discharge is to buy an anti-static strap from your local electrical shop. While you are wearing the strap and it is earthed, static charge will be harmlessly bled to ground.

2. Do not remove the component from its anti-static protective packaging until you are about to install it.

3. Hold boards by the edges - try not to touch components / interface strips etc.

NOTE: We recommend that you return your computer to the service department for upgrading. Any work carried out is fully guaranteed. Upgrades should only be carried out by persons who are familiar with handling ic's, as incorrect installation will invalidate the guarantee.

3.2.1 Upgrading the CPU

CAUTION!

Before installing or removing a processor, make sure the AC power has been removed by unplugging the power cord from the computer; the standby power LED should not be lit. Failure to do so could damage the processor and the board.
To install a processor, follow these instructions:

1. Unlatch the processor socket lever by pushing it down and away from the socket.

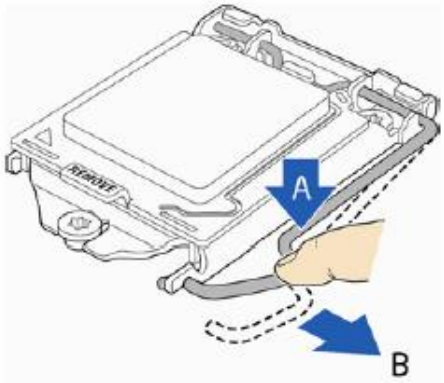


Figure 4: Unlatch the socket lever

2. Rotate the socket lever to lift the load plate away from the socket (Figure 5, A). Make sure that the load plate is in the fully open position (Figure 5, B) while being careful not to damage adjacent components. Do not touch the socket contacts.

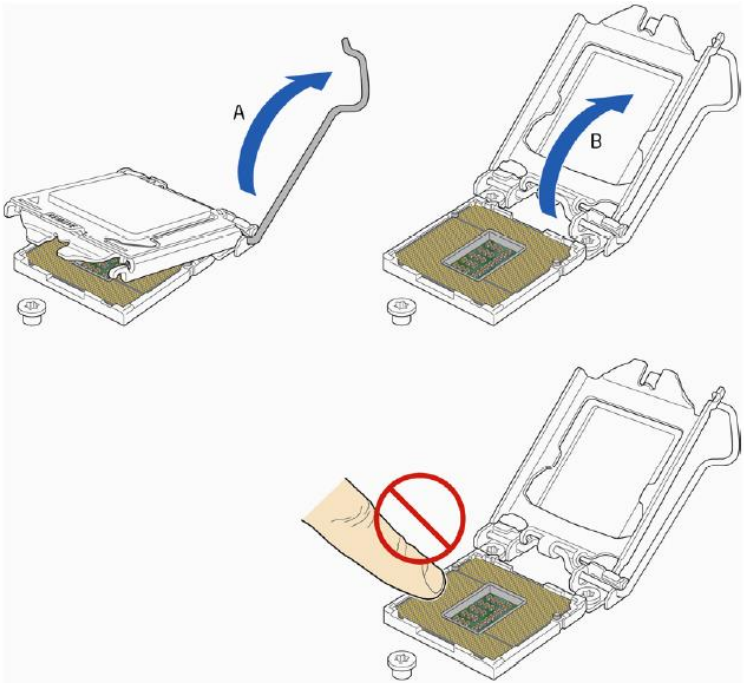


Figure 5: Lift the load plate

3. Remove the processor from its protective cover. Hold the processor only at the edges, being careful not to touch the bottom of the processor (see Figure 6).

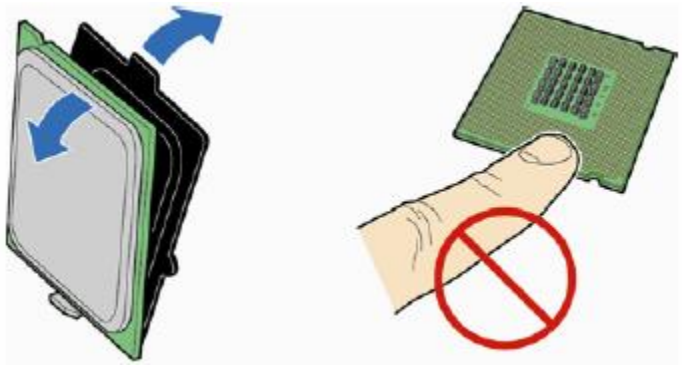


Figure 6: Remove the processor from the protective cover

Remove the processor from the protective cover

Note: *Do not discard the processor cover. Always replace the processor cover if you remove the processor from the socket.*

---

4. Hold the processor with your thumb and index finger oriented as shown in Figure 7 to align your fingers with the socket finger cut-outs. Make sure that the processor Pin 1 indicator (gold triangle) is aligned with the Pin 1 chamfer on the socket (Figure 7, B) and that the notches on the processor align with the posts on the socket (Figure 7, C). Lower the processor straight down without tilting or sliding it in the socket (Figure 7, A).

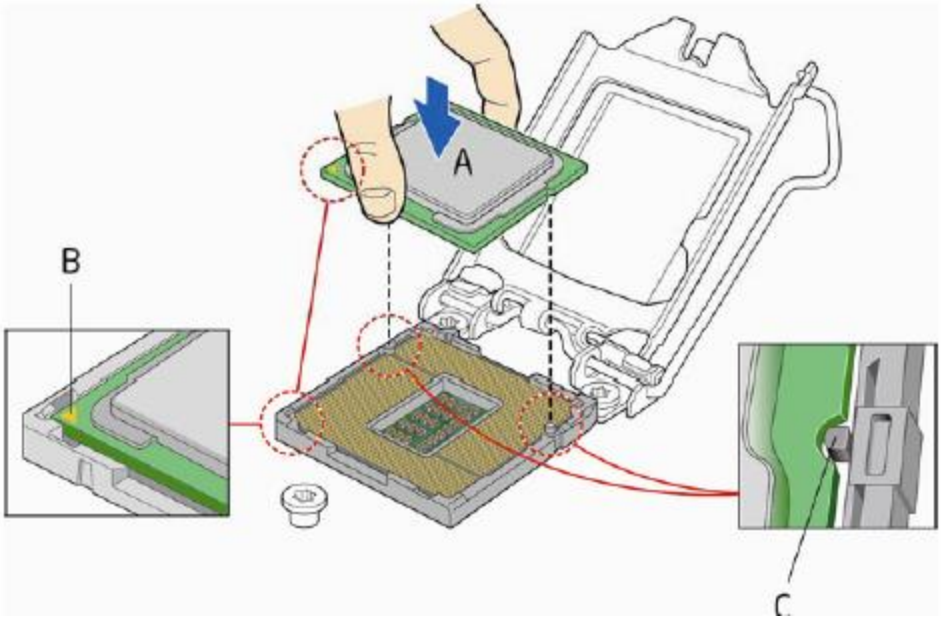


Figure 7: Install the processor

5. Carefully lower the socket lever (Figure 8) while making sure that the front edge of the load plate slides under the shoulder screw cap as the lever is lowered. Latch the socket lever under the load plate tab (Figure 8, C, and D). The socket cover (Figure 8, B) will pop off as shown.

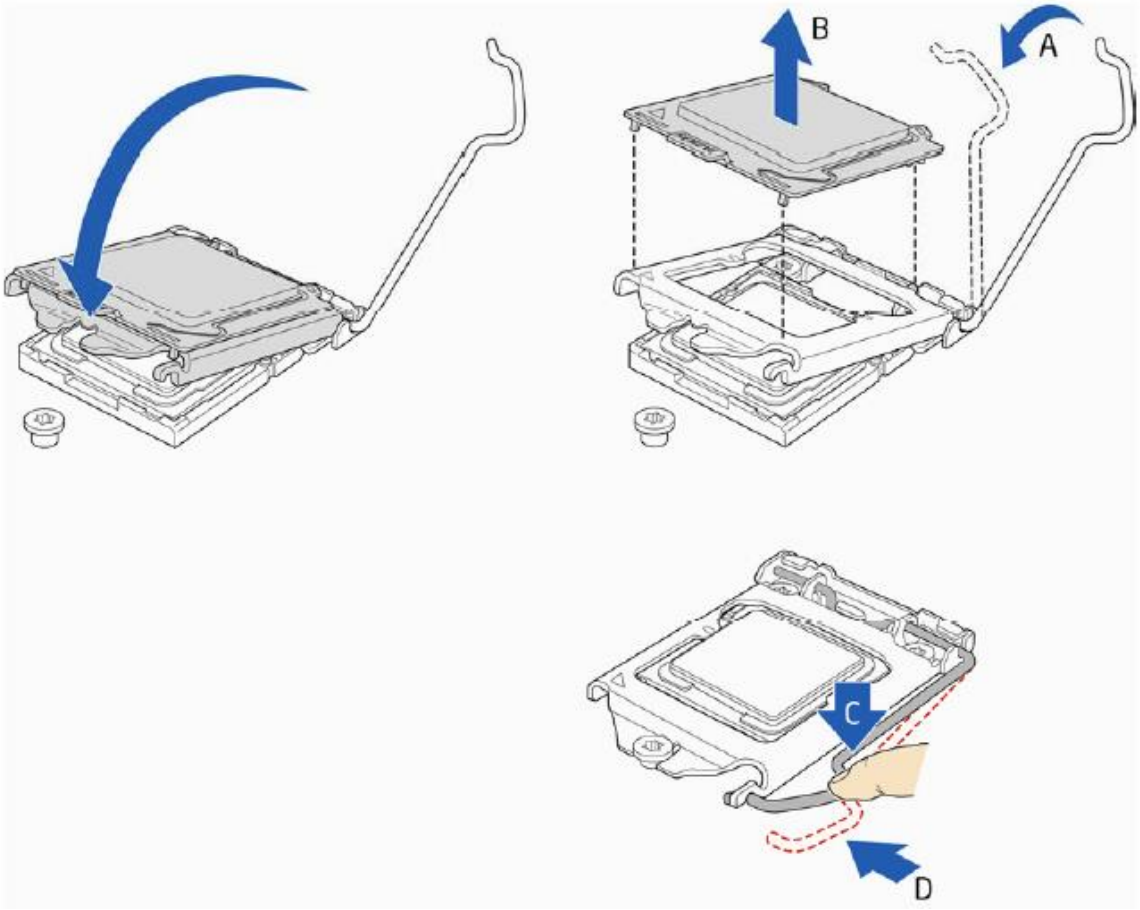


Figure 8: Secure the load plate in place

6. Pick up the socket cover and remove it from the desktop board.

Connecting the Processor Fan Heat Sink Cable

Connect the processor fan heat sink power cable to the 4-pin processor fan header (see Figure 9). A fan with a 4-pin connector as shown in Figure 9 is recommended.

1. Make sure the four hooks are in the proper position before you install the cooler.

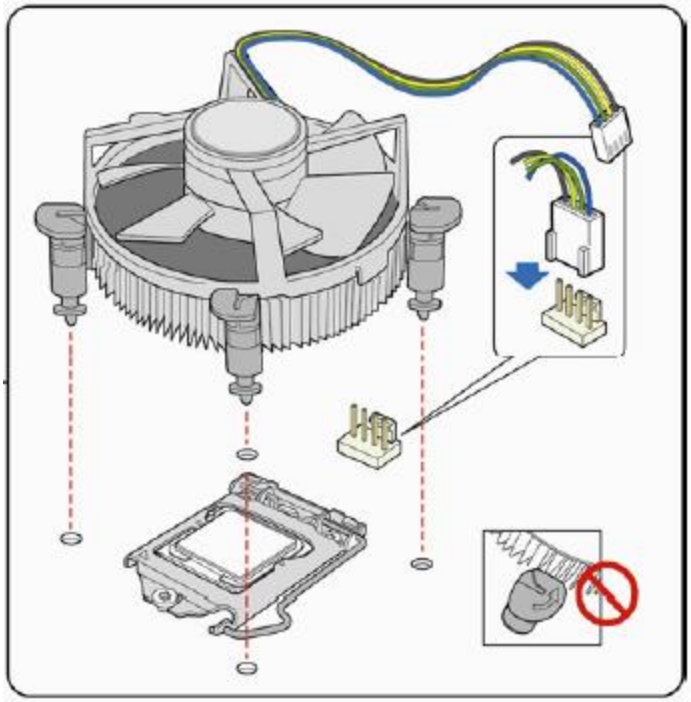


Figure 9: Connecting the processor fan

3.2.2 Installing & Removing Memory Modules

Installing Memory

You may install 2GB, 4GB, 8GB and 16GB unbuffered non‑ECC DDR4 DIMMs into the DIMM sockets.

The motherboard has four DIMM sockets. The motherboard supports the following memory features:

- 2 x DDR4 DIMMs with gold-plated contacts.
- Non-ECC (64-bit) memory.
- 2GB, 4GB, 8GB and 16GB modules.
- Memory Speeds 2133MHz
- Max. 32GB, DDR4

To install DIMMs, follow these steps:

1. Observe the precautions in “Before You Begin”. Turn off the computer and all Peripheral devices.
2. Remove the computer cover and locate the DIMM sockets.
3. Holding the DIMM by the edges, remove it from its antistatic package.
4. Make sure the clips at either end of the socket are pushed away from the socket.
5. Position the DIMM above the socket. Align the two small notches in the bottom edge of the DIMM with the keys in the socket. Insert the bottom edge of the DIMM into the socket.
6. When the DIMM is seated, push down on the top edge of the DIMM until the retaining clips at the ends of the socket snap into place. Make sure the clips are firmly in place.
7. Replace the computer cover.

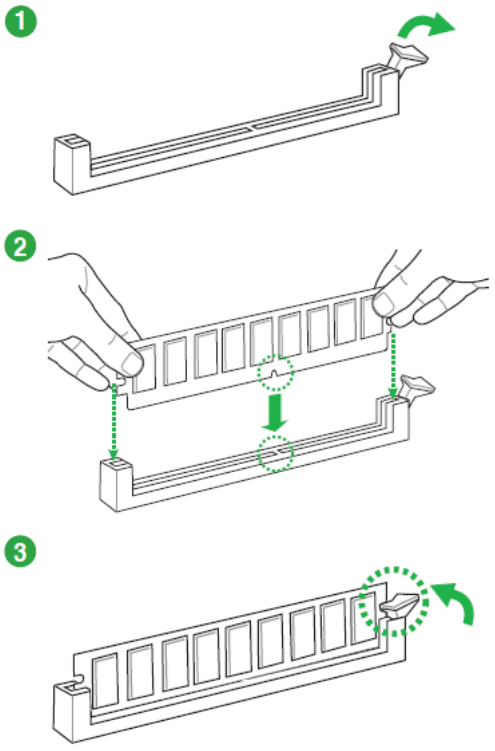


Figure 10: Memory Installation

Removing Memory

To remove a DIMM, follow these steps:

1. Observe the precautions in "Before You Begin".
2. Turn off all peripheral devices connected to the computer. Turn off the computer.
3. Remove the computer cover.
4. Gently spread the retaining clips at each end of the socket. The DIMM pops out of the socket. Hold the DIMM by the edges, lift it away from the socket, and store it in an antistatic package.
5. Reinstall and reconnect any parts you removed or disconnected to reach the DIMM sockets.

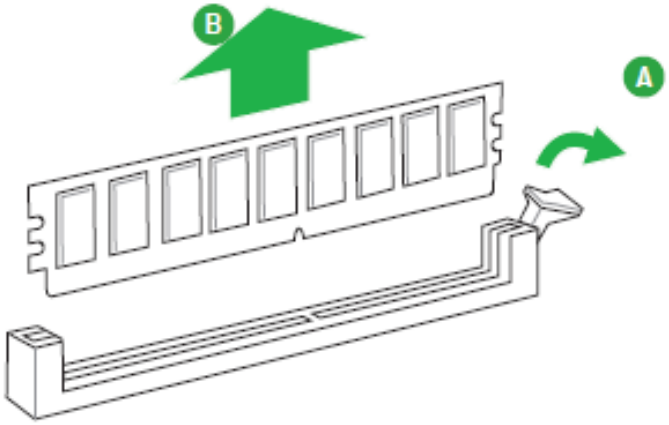


Figure 11: Removing Memory Modules

PCI Express 3.0/2.0 x16 slots

The PCI Express slot supports the PCI Express interface expansion card. The PCI Express x16 slot supports up 4.0 GB/s transfer rate.

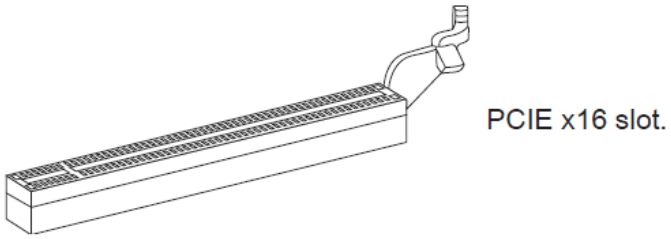


Figure 12: PCI Express Slot

Note: *When adding or removing expansion cards, make sure that you power off the system first.*

Important*: When adding or removing expansion cards, always turn off the power supply and unplug the power supply power cable from the power outlet. Read the expansion card's documentation to check for any necessary additional hardware or software changes.*

Chapter 4 Solving Problems

4.1 Technical Support

4.1.1 Technical Support contact details

The first part of this chapter helps you identify and solve problems that might occur when the system is in use. The second part lists error code messages that might be displayed.

Please remember that if you cannot solve the problem by yourself then you should contact XMA Technical Support for further assistance.

XMA Technical Support can be reached in the following ways:

Telephone: 01727 201 850
Fax: 01727 201 858
Email: technical-support@xma.co.uk

You can also look for support information on our web site:
http://www.xma.co.uk/

Device drivers and various useful utilities can be downloaded from our ftp site:
http://download.viglen.co.uk/files/Motherboards/Vig760S

4.1.2 Resetting the System

Before checking your system for hardware problems, it is always a good idea to try resetting your computer and see if a re-boot can solve the problem. Most software related problems can be solved simply by re-booting your PC.

To do the following	Press
Soft boot: Clear the system memory and reload the operating system (also called warm reset).	<Ctrl + Alt + Del>
Cold boot: Clear the system memory, halt power to all peripherals, restart POST, and reload the operating system.	Power off/on or reset button (at front of the system)

4.2 **Troubleshooting Procedures**

This section provides a step-by-step troubleshooting procedure to identify a problem and locate its source.

CAUTION!

1. *Turn off the system and any peripheral devices before you disconnect any peripheral cables from the system. Otherwise, you can permanently damage the system or the peripheral devices.*

2. *Make sure the system is plugged into a properly grounded power outlet.*

3. *Make sure your keyboard and video display are correctly connected to the system. Turn on the video display, and turn up its brightness and contrast controls to at least two-thirds of the maximum (refer to the documentation supplied with the video display).*

4. *If the operating system normally loads from the hard disk drive, make sure there is no diskette in the diskette drive. If the operating system normally loads from a diskette, insert the operating system diskette into the drive.*

5. *Turn on the system. If the power indicator does not light, but the system seems to be operating normally, the indicator is probably defective. Monitor the power-on self test (POST) execution. Each time you turn on the system, the POST checks the system board, memory, keyboard, and certain peripheral devices.*

NOTE: *If the POST does not detect any errors, the system beeps once and boots up.*

Errors that do not prevent the boot process (non-fatal errors) display a message that looks similar to the following:

Error Message Line 1
Error Message Line 2
Press <DEL> for Set-up, <F1> to Boot
You can note the error and press <F1> to resume the boot-up process, or <DEL> to enter Set-up.

Errors that prevent the boot process from continuing (fatal errors), are communicated by a series of audible beeps. If this type of error occurs, refer to the error codes and messages listed at the end of this chapter.

6. *Confirm that the operating system has loaded.*

4.3 **Problems & Suggestions**

What happens	What to do
Application software problems	Try resetting the system. Make sure all cables are installed correctly. Verify that the system board jumpers are set properly. Verify that your system hardware configuration is set correctly. In Setup, check the values against the system settings you recorded previously. If an error is evident (wrong type of drive specified, for example), make the change in Setup and reboot the system. Record your change. Make sure the software is properly configured for the system. Refer to the software documentation for information. Try a different copy of the software to see if the problem is with the copy you are using. If other software runs correctly on the system, contact the vendor of the software that fails. If you check all of the above with no success, try clearing CMOS RAM and reconfiguring the system. Make sure you have your list of system settings available to re-enter, because clearing CMOS RAM sets the options to their default values.
Characters on-screen are distorted or incorrect	Make sure the brightness and contrast controls are properly adjusted on the monitor. Make sure the video signal cable and power cables are properly installed. Make sure your monitor is compatible with the video mode you have selected.
Characters do not appear on screen	Make sure the video display is plugged in and turned on. Check that the brightness and contrast controls are properly adjusted. Check that the video signal cable is properly installed. Make sure a video board is installed, enabled, and the jumpers are positioned correctly. Reboot the system.

Table 6: Problems and Suggestions

Table 8: Problems and Suggestions (*Continued)*	
What happens	**What to do**
CMOS RAM settings are wrong	If system settings stored in CMOS RAM change for no apparent reason (for example, the time of day develops an error), the backup battery may no longer have enough power to maintain the settings. Replace the battery (Chapter 2).
Diskette drive light does not go on when drive is in use or is tested by POST	Make sure the power and signal cables for the drive are properly installed. Check that the drive is properly configured and enabled in Setup.
Hard drive light does not go on when drive is in use or is tested by POST	Make sure the power and signal cables for the drive are properly installed. Make sure the front panel connector is securely attached to the system board headers. Check that the drive is properly configured and enabled in Setup. Check the drive manufacturer's manual for proper configuration for remote hard disk drive activity.
Power-on light does not go on	If the system is operating normally, check the connector between the system board and the front panel. If OK, the light may be defective.
Prompt doesn't appear after system boots	It's probably switched off. A serious fault may have occurred consult your dealer service department / Technical Support.
Setup, can't enter	If you can't enter Setup to make changes, check the switch that disables entry into Setup (Chapter 2). If the switch is set to allow entry into Setup, you might need to clear CMOS RAM to the default values and reconfigure the system in Setup.
System halts before completing POST	This indicates a fatal system error that requires immediate service attention. Note the screen display and write down any beep code emitted. Provide this information to your dealer service department / Technical Support.

Table 8: Problems and Suggestions Continued

Chapter 5 System BIOS

5.1 What is the BIOS?

The BIOS (Basic Input Output System) is an important piece of software which is stored in a ROM (Read Only Memory) chip inside the computer. It consists of the basic instructions for controlling the disk drives, hard disk, keyboard and serial/parallel ports. The BIOS also keeps a list of the specifications of the computer in battery-backed RAM (also known as the CMOS RAM) and provides a special Setup program to change this information.

The BIOS in your Viglen computer is guaranteed to be fully compatible with the IBM BIOS. It has been written by American Megatrends Inc, an industrial leader in the field of BIOS software.

5.2 The Power-On sequence

When the computer is first switched on, certain instructions in the BIOS are executed to test various parts of the machine. This is known as the POST (Power-On Self-Test) routine. When you switch the computer on (or when you press the Reset button or press <Ctrl> + <Alt>+ <Delete> keys, which has the same effect), you can see on the monitor that it counts through the memory, testing it. The floppy disk drives are then accessed and tested, and the various interfaces are checked. If there are any errors, a message is displayed on the screen.

5.3 Managing and updating BIOS

5.3.1 Introduction

There are up three methods of updating BIOS to the latest Viglen approved version. The number of options made available for any particular board may vary depending on BIOS Support, drive support and BIOS update file size. You only need to use one.

- **BIOS Updater**
- **EZ-Flash 2 Update**
- **BIOS recovery**

Latest BIOS files and Utility are available from Viglen FTP site:
http://download.viglen.co.uk/files/Motherboards/Vig760S/Bios

NOTE: Please review the instructions distributed with the upgrade utility before attempting a BIOS upgrade.

5.3.2 BIOS Update Instructions under DOS

The BIOS Updater allows you to update BIOS in a DOS environment. This utility also allows you to copy the current BIOS file that you can use as a backup when the BIOS fails or gets corrupted during the updating process.

1. Save BIOS update zipped file to a temporary directory.
2. Extract the necessary files.
3. Copy the contents of the file to a bootable USB key or CD-ROM media.
4. Boot the target PC with the device connected or inserted.
5. Select **<F8>** during POST to display the Boot Menu and select your bootable device.
6. At the DOS prompt Type 'Flash.bat' to launch the BIOS updates process.
7. Reboot the system once complete.
8. Enter the BIOS Setup and Ensure to load the BIOS default settings to ensure system compatibility and stability. Select the Load Optimized Defaults item under the Exit menu.

IMPORTANT: DO NOT shutdown or reset the system while updating the BIOS! *Doing so may cause system boot failure!*

5.3.3 BIOS Update Instructions using EZ-Flash Method

For this method you will require a Flash USB device and required BIOS file.

1. Insert the USB flash disk that contains the latest BIOS file to the USB port.
2. Enter the **Advanced Mode** of the BIOS setup program. Go to the **Tool** menu to select **ASUS EZ Flash Utility** and press <Enter> to enable it.
3. Press <Tab> to switch to the **Drive** field.
4. Press the Up/Down arrow keys to find the USB flash disk that contains the latest BIOS, and then press <Enter>.
5. Press <Tab> to switch to the **Folder Info** field.
6. Press the Up/Down arrow keys to find the BIOS file, and then press <Enter> to perform the BIOS update process. Reboot the system when the update process is done.

Note:

• This function supports USB flash disks formatted using FAT32/16 on a single partition only.

• Ensure to load the BIOS default settings to ensure system compatibility and stability. Select the Load Optimized Defaults item under the Exit menu.

IMPORTANT!

During the update process DO NOT shut down the PC or interrupt the process, this could cause damage to the motherboard.

5.3.4 Recovering the BIOS - CrashFree BIOS 3

The CrashFree BIOS 3 is an auto recovery tool that allows you to restore the BIOS file when it fails or gets corrupted during the updating process. You can restore a corrupted BIOS file using the motherboard support DVD or a USB flash drive that contains the updated BIOS file.

> *Before using this utility, rename the BIOS file in the removable device to:* ***H110IP.CAP***

To recover the BIOS:

1. Turn on the system.
2. Insert the support DVD to the optical drive or the USB flash drive that contains the BIOS file to the USB port.
3. The utility automatically checks the devices for the BIOS file. When found, the utility reads the BIOS file and enters ASUS EZ Flash 2 utility automatically.
4. The system requires you to enter BIOS Setup to recover BIOS settings. To ensure system compatibility and stability, we recommend that you press <F5> to load default BIOS values.

IMPORTNANT: DO NOT shut down or reset the system while updating the BIOS! Doing so can cause system boot failure!

5.4 BIOS Setup Program

This chapter provides basic information on the BIOS Setup program and allows you to configure the system for optimum use. You may need to run the Setup program when:

- An error message appears on the screen during the system booting up, and requests you to run BIOS SETUP.
- You want to change the default settings for customized features.

> ***Note:*** *The items under each BIOS category described in this chapter are under continuous update for better system performance. Therefore, the description may be slightly different from the latest BIOS and should be held for reference only.*

5.4.1 Entering BIOS Setup

Power on the computer and the system will start POST (Power On Self Test) process. When the message below appears on the screen, press <F2> or <DEL> key to enter Setup. You can also press <F8> when the message below is on screen to bring up the Boot Menu.

"Press <Del> or <F2> to enter BIOS setup Menu"

If the message disappears before you respond and you still wish to enter Setup, restart the system by turning it OFF and On or pressing the RESET button. You may also restart the system by simultaneously pressing <Ctrl>, <Alt>, and <Delete> keys.

Control Keys

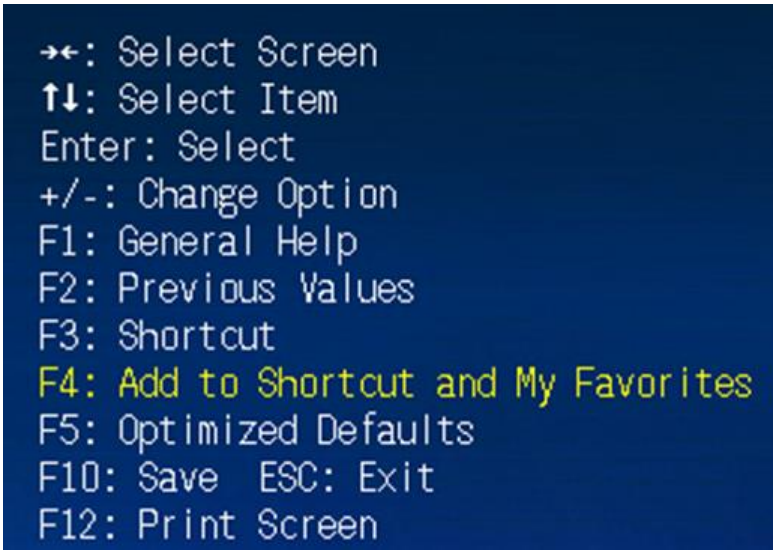


Figure 13: BIOS control keys

After entering the BIOS, the first screen you will see is the Main Menu – EZ Mode

BIOS menu screen

The BIOS setup program can be used under two modes: **EZ Mode** and **Advanced Mode**. You can change modes from the **Exit** menu or from the Exit/Advanced Mode button in the EZ Mode/Advanced Mode screen.

5.4.2 EZ Mode

By default, the EZ Mode screen appears when you enter the BIOS setup program. The EZ Mode provides you an overview of the basic system information, and allows you to select the display language, system performance mode and boot device priority. To access the Advanced Mode, click Exit/Advanced Mode, then select Advanced Mode or press F7 for the advanced BIOS settings

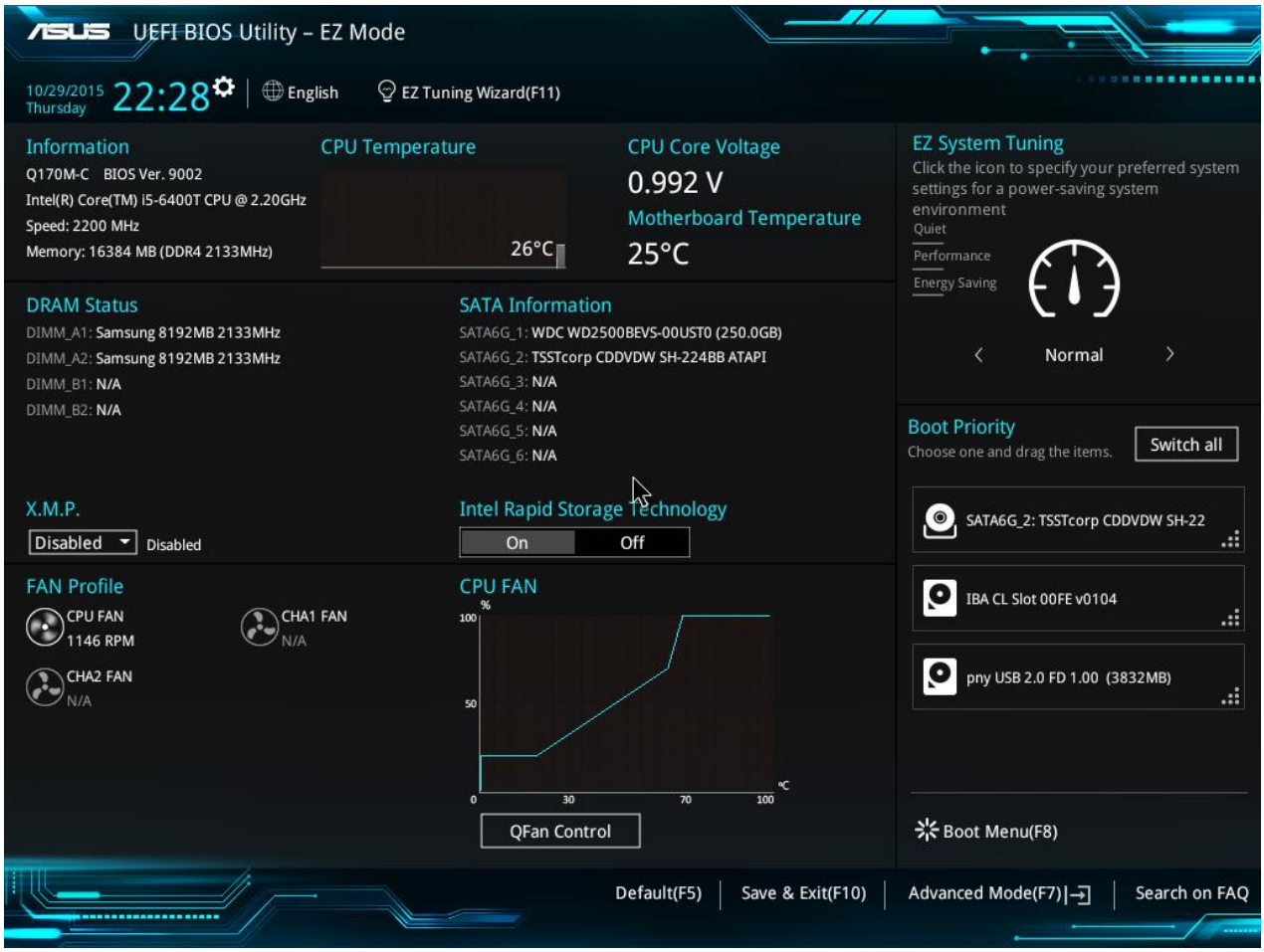


Figure 14: Bios Menu - EZ Mode

- The boot device options vary depending on the devices you installed to the system.
- The **Boot Menu (F8)** button is available only when the boot device is installed to the system.

5.5 **Advanced Mode**

The Advanced Mode provides advanced options for experienced end-users to configure the BIOS settings. The figure below shows an example of the Advanced Mode. Refer to the following sections for the detailed configurations.

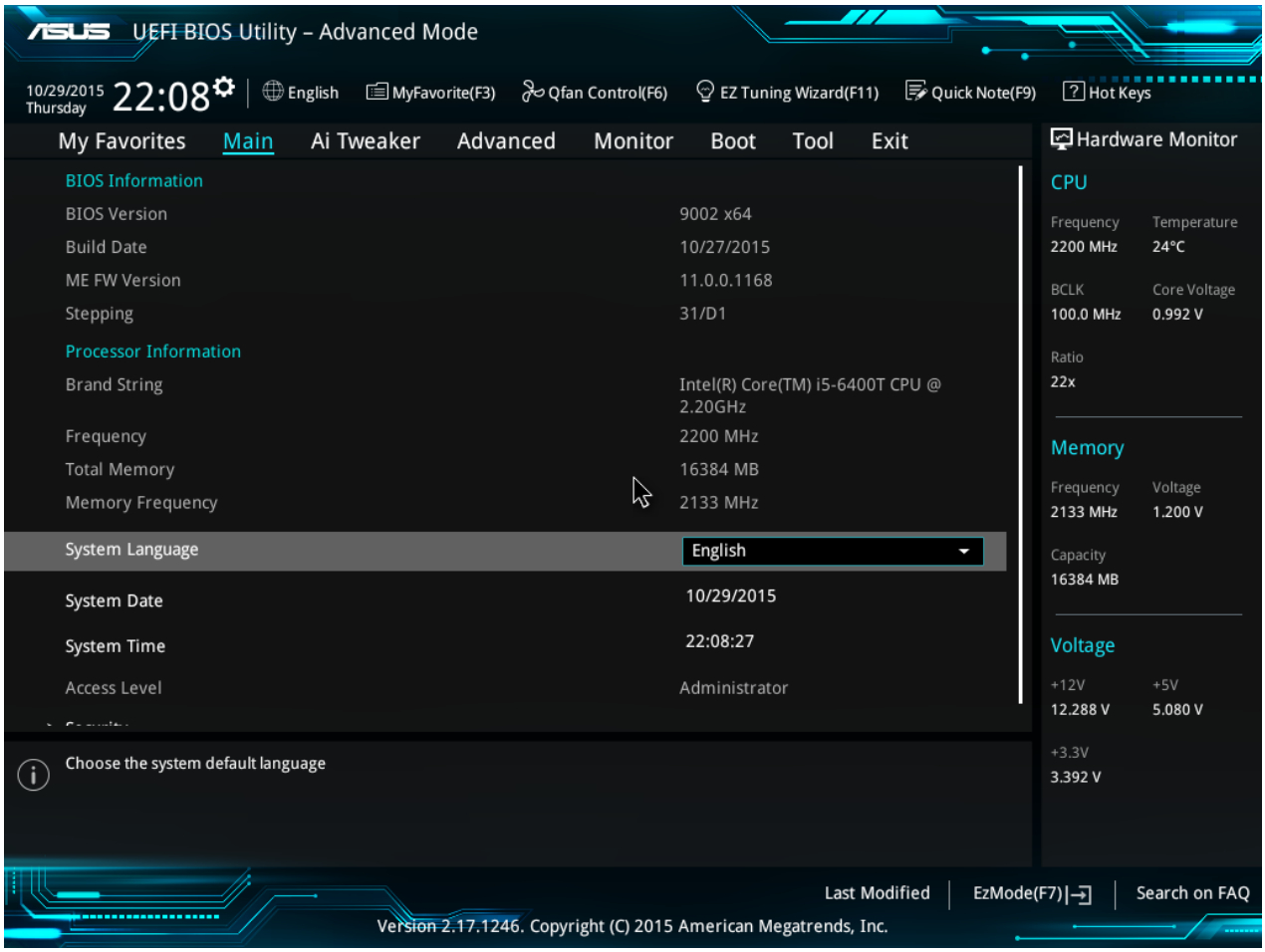


Figure 15: BIOS Main Menu – Advanced Mode

BIOS Main Menu selection

The menu bar on top of the screen has the following main items:

My Favorites	For saving the frequently-used system settings and configuration
Main	For changing the basic system configuration
Ai Tweaker	For changing the overclocking settings
Advanced	For changing the advanced system settings
Monitor	For displaying the system temperature, power status, and changing the fan settings
Boot	For changing the system boot configuration
Tool	For configuring options for special functions
Exit	For selecting the exit options and loading default settings

Menu items
The highlighted item on the menu bar displays the specific items for that menu. For example, selecting Main shows the Main menu items.

The other items (Ai Tweaker, Advanced, Monitor, Boot, Tool, and Exit) on the menu bar have their respective menu items

5.5.1 My Favourites

My Favourites is your personal space where you can easily save and access your favourite
BIOS items.

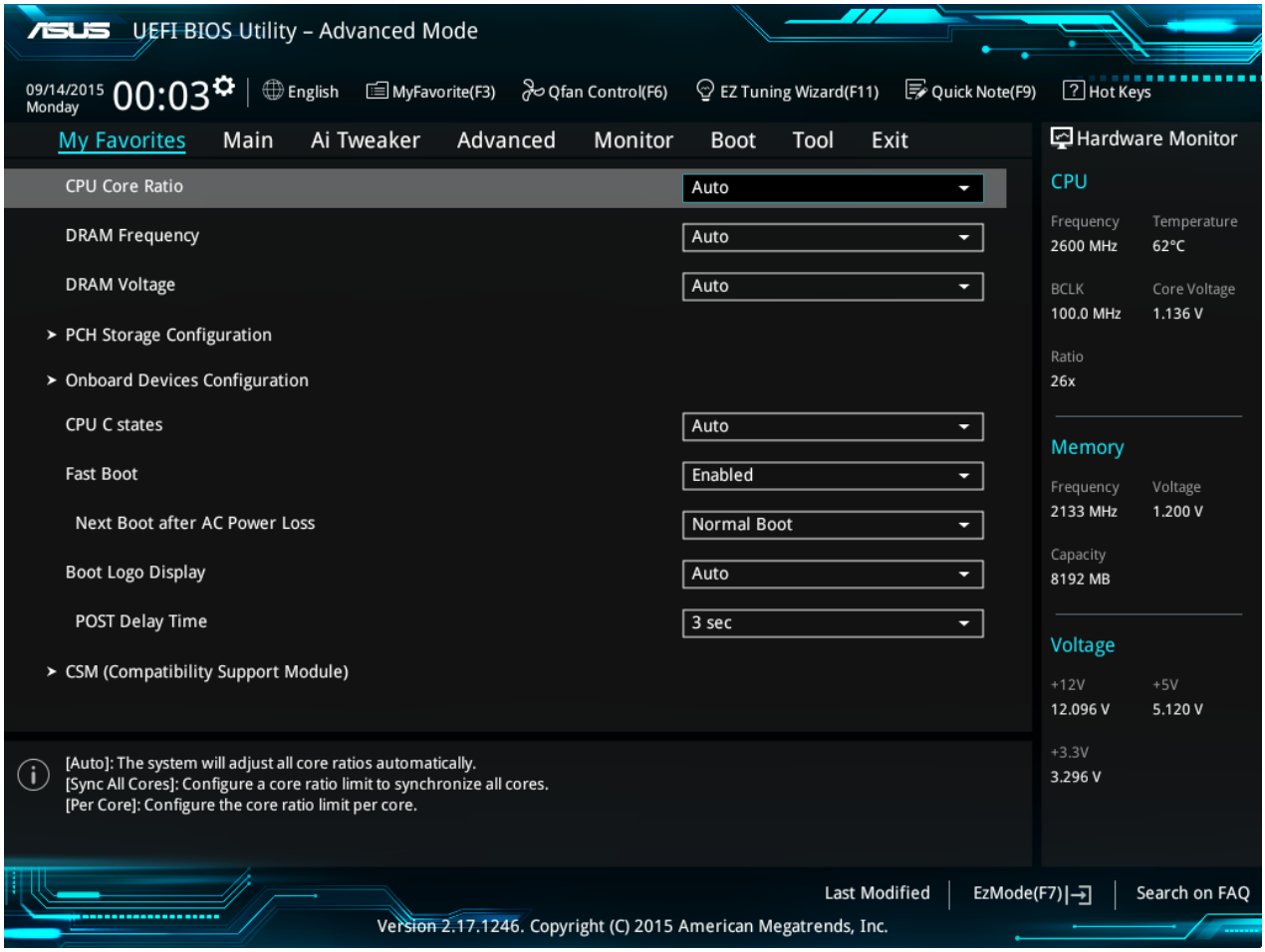


Figure 16: My Favourites Menu

5.5.2 Main menu

The Main menu screen appears when you enter the Advanced Mode of the BIOS Setup program. The Main menu provides you an overview of the basic system information, and allows you to set the system date, time, language, and security settings.

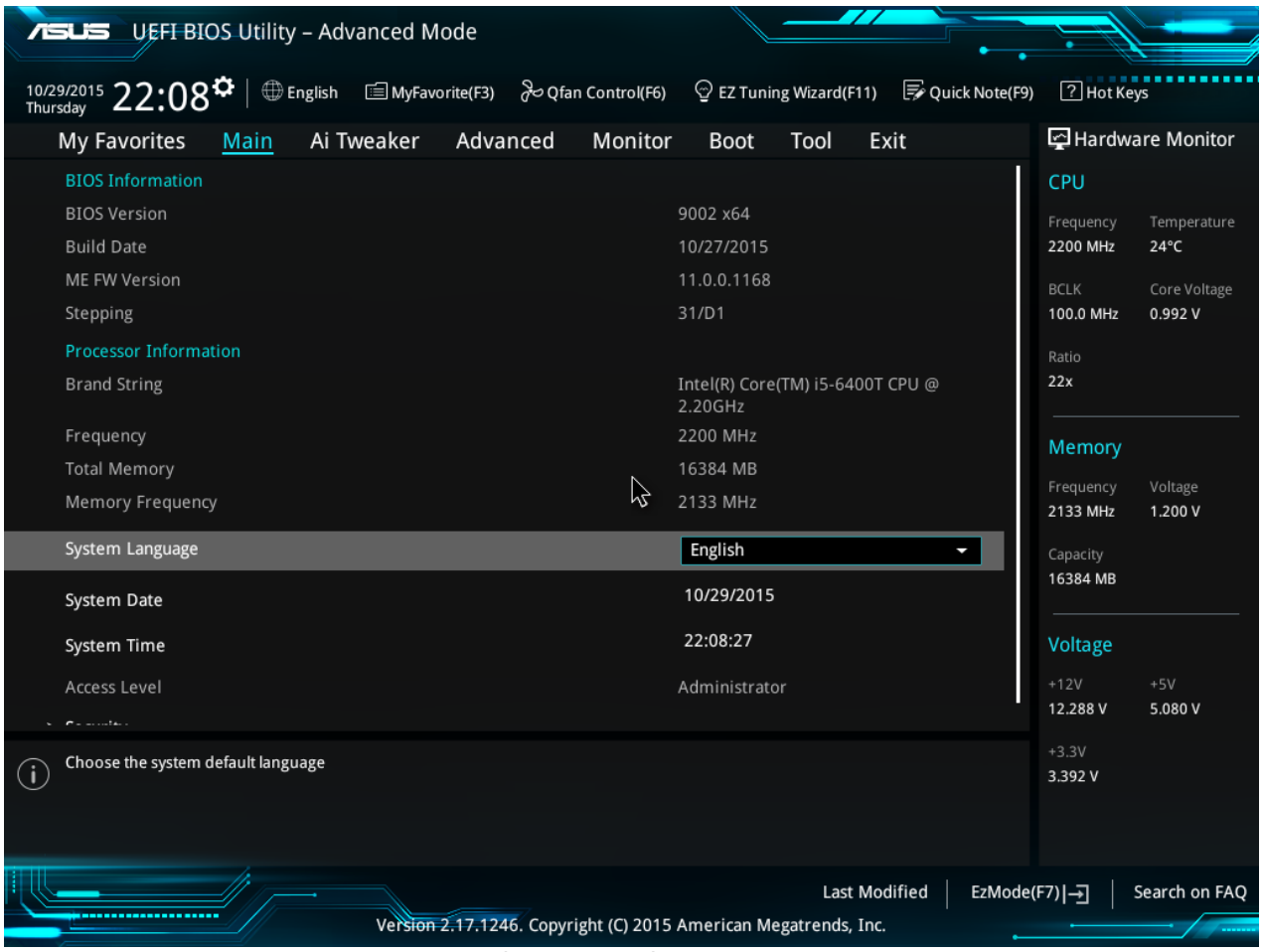


Figure 17: Main Menu

5.5.2.1 System Language [English]

Allows you to choose the BIOS language version from the options.

5.5.2.2 System Date [Day xx/xx/xxxx]

Allows you to set the system date.

5.5.2.3 System Time [xx:xx:xx]

Allows you to set the system time.

5.5.2.4 **Security**

The Security menu items allow you to change the system security settings.

- *If you have forgotten your BIOS password, erase the CMOS Real Time Clock (RTC) RAM to clear the BIOS password.*

- *The **Administrator** or **User Password** items on top of the screen show the default **Not Installed**. After you set a password, these items show **Installed**.*

Administrator Password

If you have set an administrator password, we recommend that you enter the administrator password for accessing the system. Otherwise, you might be able to see or change only selected fields in the BIOS setup program.

To set an administrator password:

1. Select the **Administrator Password** item and press <Enter>.
2. From the **Create New Password** box, key in a password, then press <Enter>.
3. Confirm the password when prompted.

To change an administrator password:

1. Select the **Administrator Password** item and press <Enter>.
2. From the **Enter Current Password** box, key in the current password, then press <Enter>.
3. From the **Create New Password** box, key in a new password, then press <Enter> Confirm the password when prompted.

To clear the administrator password, follow the same steps as in changing an administrator password, but press <Enter> when prompted to create/confirm the password. After you clear the password, the **Administrator Password** item on top of the screen shows **Not Installed**.

User Password

If you have set a user password, you must enter the user password for accessing the system. The **User Password** item on top of the screen shows the default **Not Installed**. After you set a password, this item shows **Installed**.

To set a user password:

1. Select the **User Password** item and press <Enter>.
2. From the **Create New Password** box, key in a password, then press <Enter>.

3. Confirm the password when prompted.

To change a user password:

1. Select the **User Password** item and press <Enter>.
2. From the **Enter Current Password** box, key in the current password, then press <Enter>.
3. From the **Create New Password** box, key in a new password, then press <Enter>.
4. Confirm the password when prompted.

To clear the user password, follow the same steps as in changing a user password, but press<Enter> when prompted to create/confirm the password. After you clear the password, the **User Password** item on top of the screen shows **Not Installed**.

5.5.3 Ai Tweaker menu

The Ai Tweaker menu items allow you to configure overclocking-related items.

Be cautious when changing the settings of the Ai Tweaker menu items. Incorrect field values can cause the system to malfunction.

The configuration options for this section vary depending on the CPU and DIMM model installed on the motherboard.

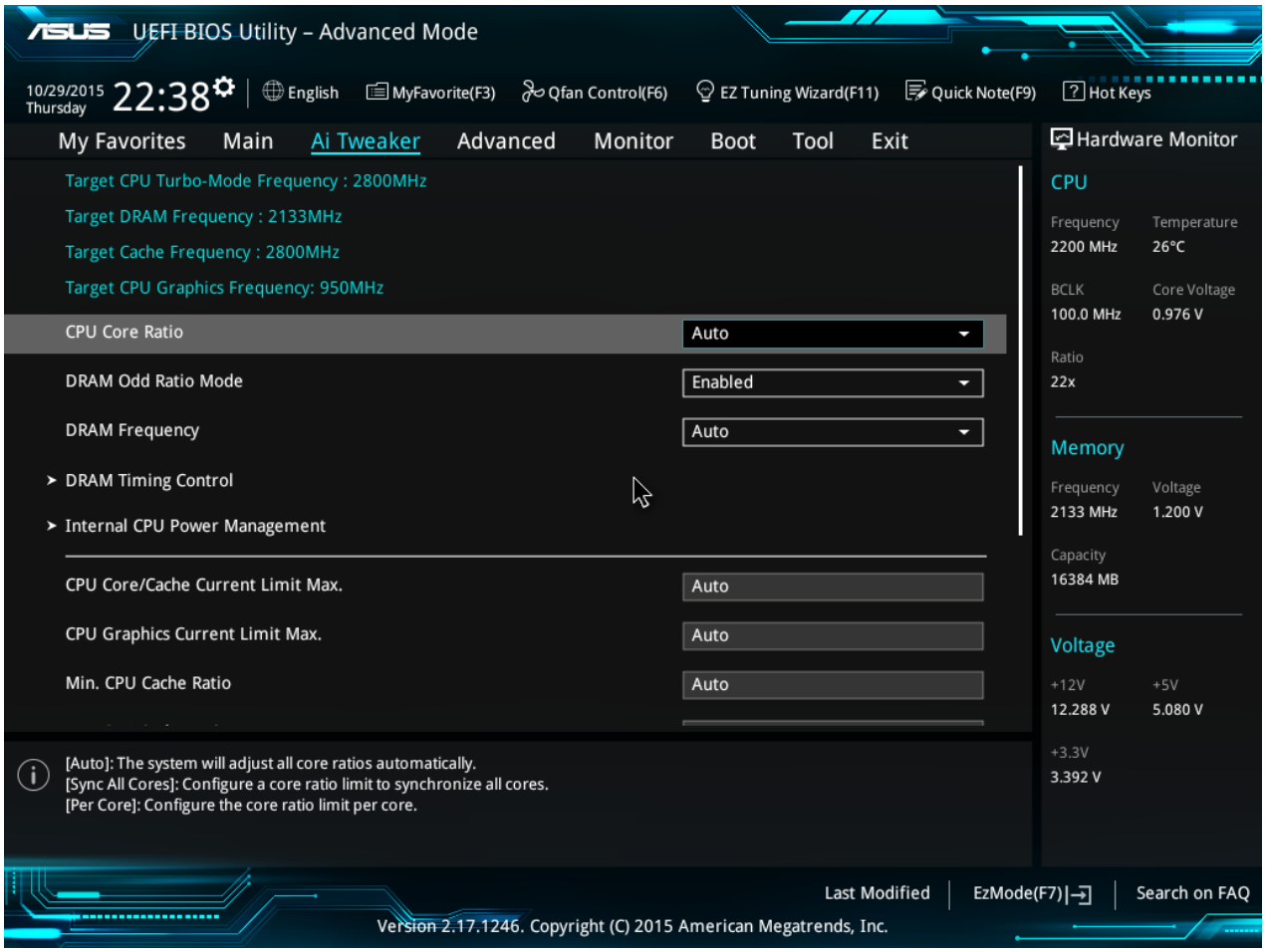


Figure 18: Ai Tweaker Menu

5.5.4 Advanced Menu Screen

The Advanced menu items allow you to change the settings for the CPU and other system devices.

NOTE: Be cautious when changing the settings of the advanced menu items. Incorrect field values can cause the system to malfunction.

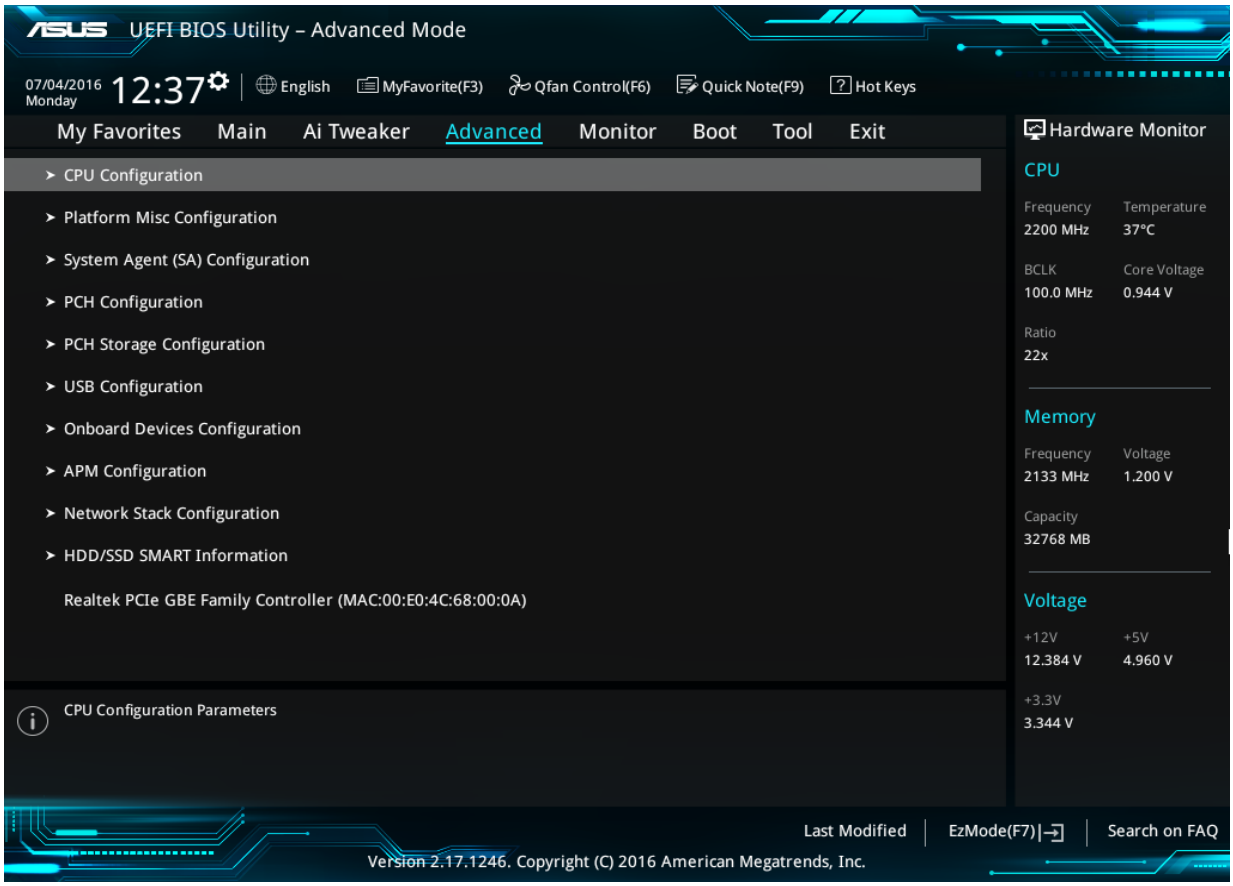


Figure 19: Advanced Sub Menu Screen

5.5.4.1 CPU Configuration

The items in this menu show the CPU-related information that the BIOS automatically detects.
The items shown in submenu may be different due to the CPU you installed.

5.5.4.2 Platform Misc Configuration

The items in this menu allow you to configure the platform-related features.

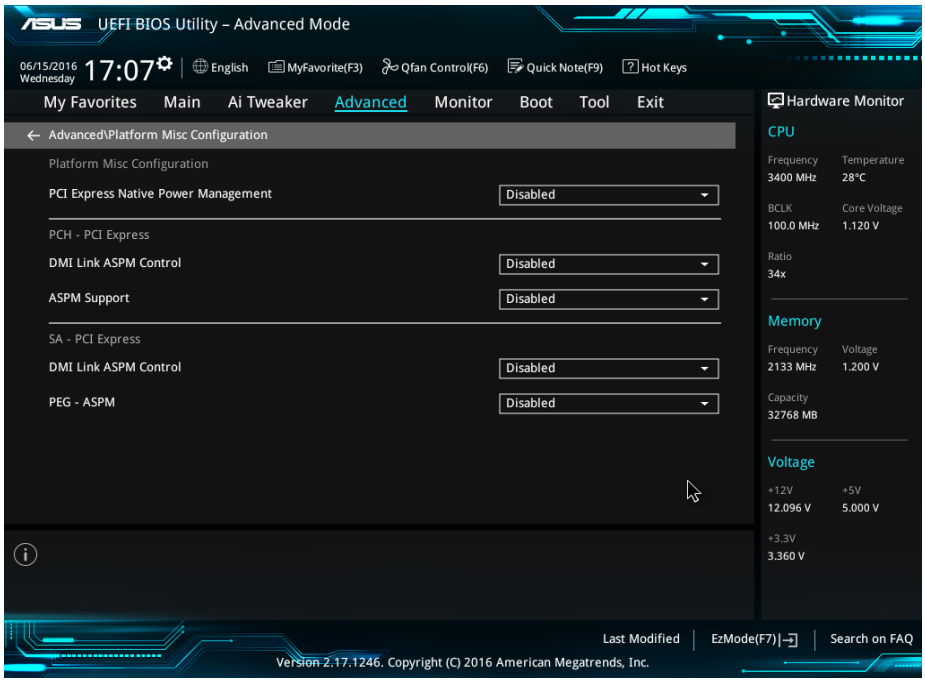


Figure 20: Platform Misc Configuration

5.5.4.3 System Agent (SA) Configuration

Allows you to set the SATA configuration.

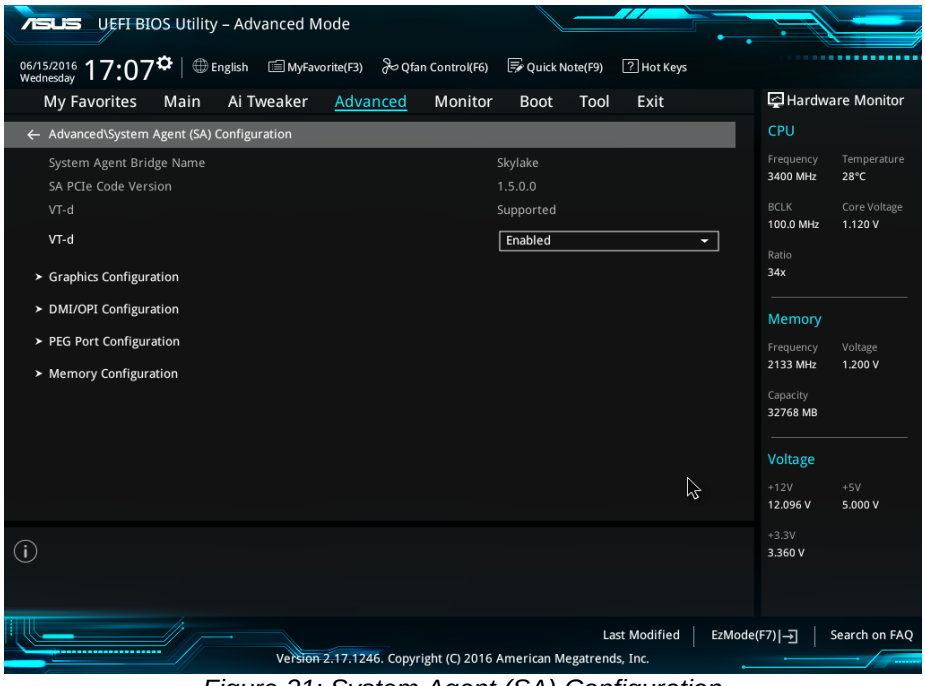


Figure 21: System Agent (SA) Configuration

5.5.4.4 PCH Configuration

While entering Setup, the BIOS automatically detects the presence of SATA devices. The SATA Port items show Not Present if no SATA device is installed to the corresponding SATA port

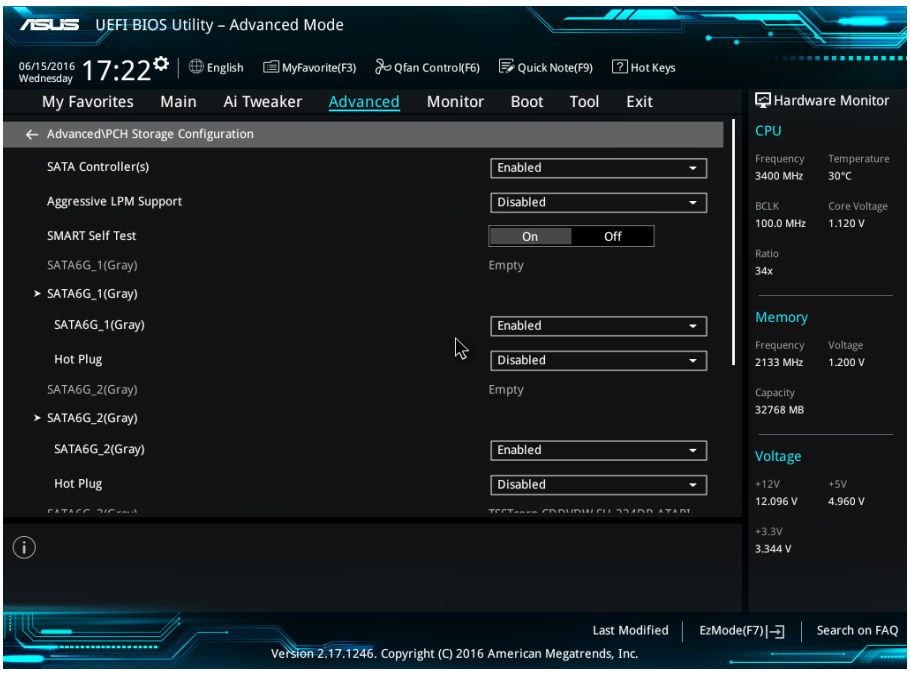


Figure 22: PCH Configuration

5.5.4.5 USB Configuration

The items in this menu allow you to change the USB-related features.

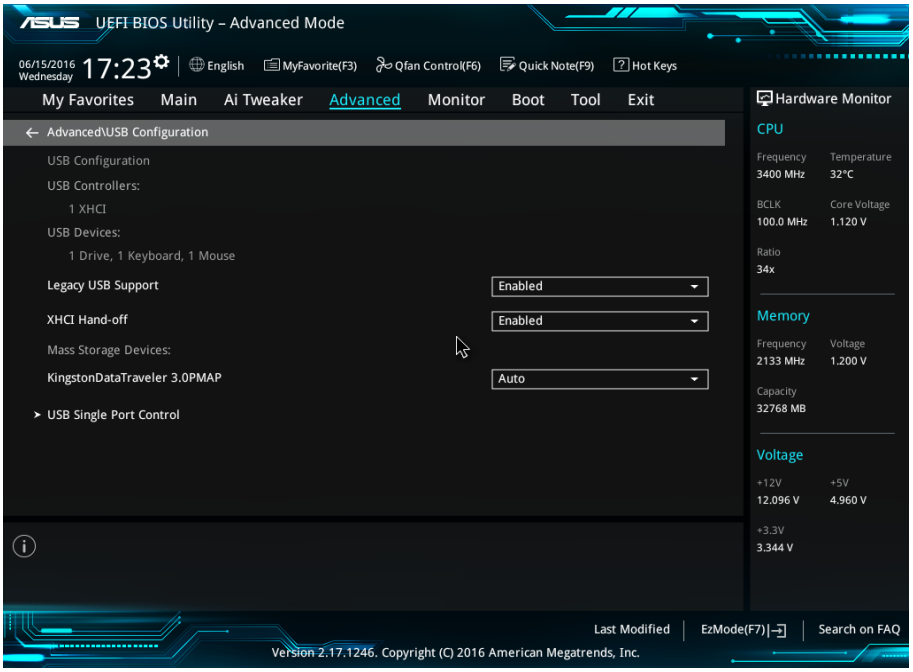


Figure 23: USB Configuration

5.5.4.6 Onboard Devices Configuration

Configuration on onboard device such as audio and serial port configuration.

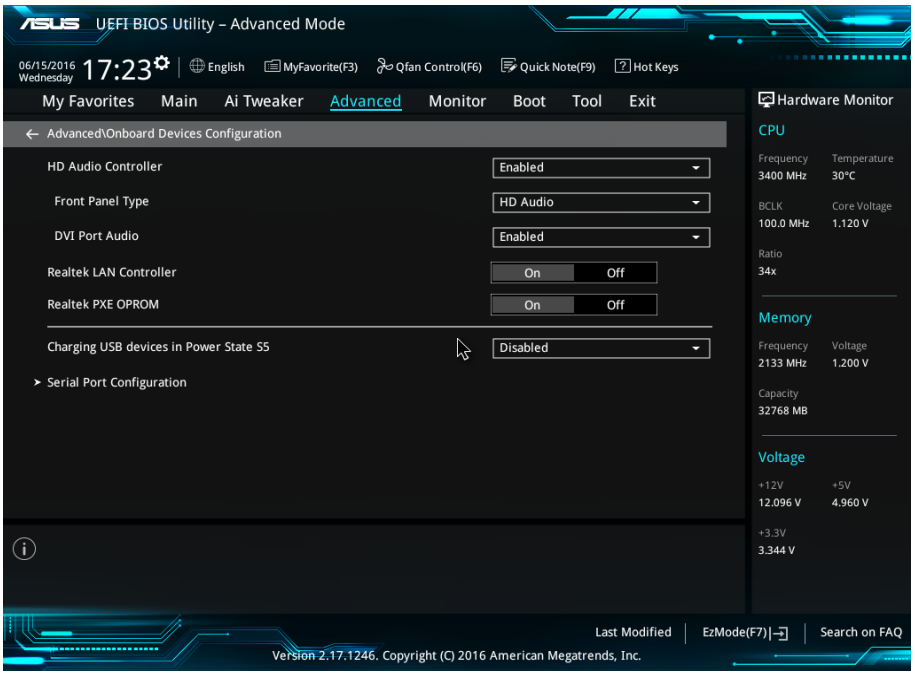


Figure 24: Onboard Devices Configuration

5.5.4.7 APM Configuration

Advanced power management.

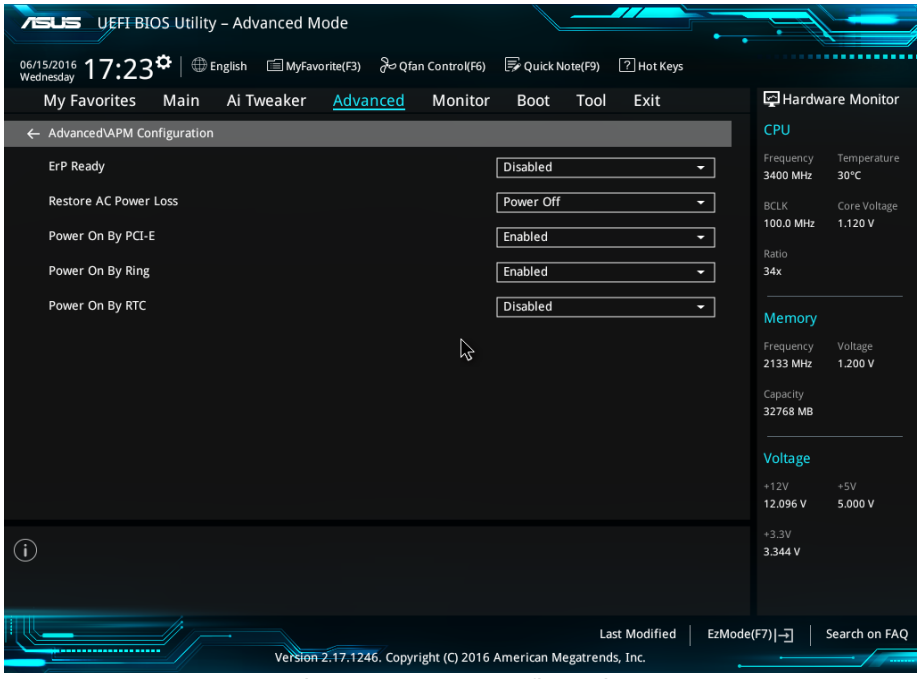


Figure 25: APM Configuration

5.5.4.8 Network Stack Configuration

This item allows user to disable or enable setting such as the UEFI network stack. Configuration options:

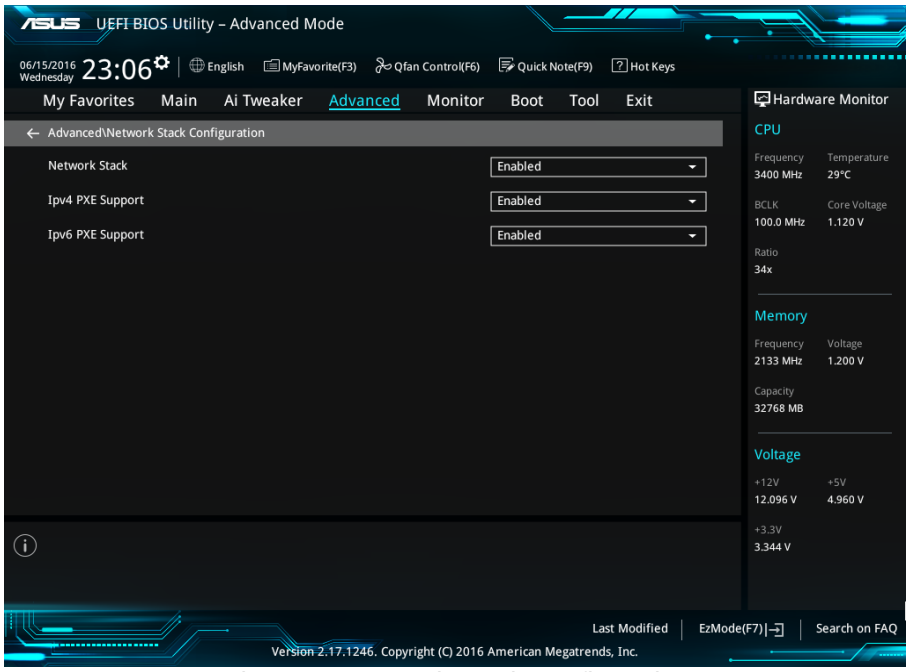


Figure 26: Network Stack Configuration

5.5.4.9 HDD/SSD SMART Information

Alows you to monitor the status of storage drives.

5.5.5 Monitor menu

The Monitor menu displays the system temperature/power status, and allows you to change the fan settings.

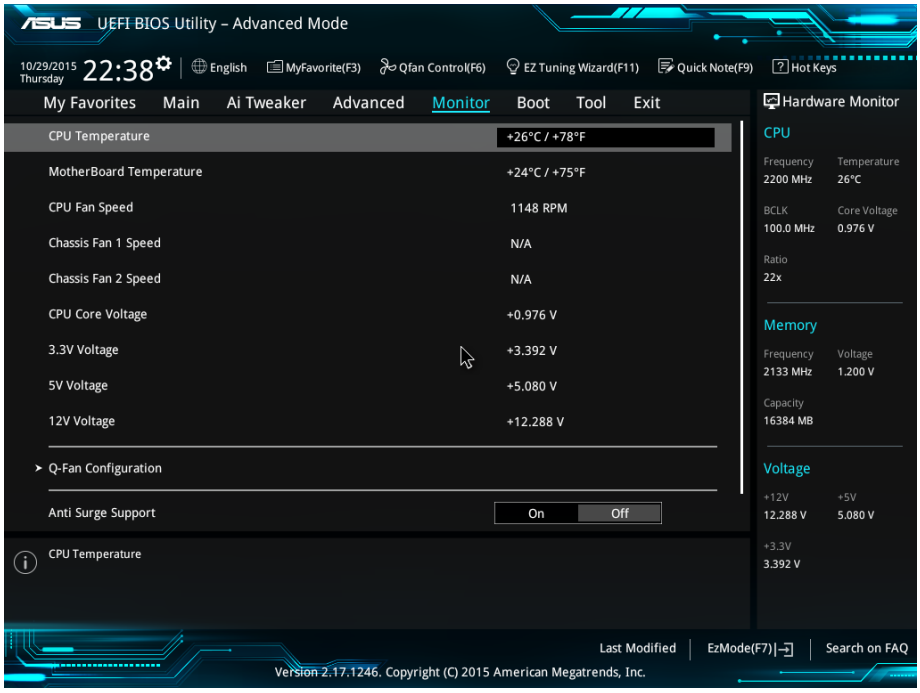


Figure 27: Monitor Menu

5.5.6 Boot menu

The Boot menu items allow you to change the system boot options.

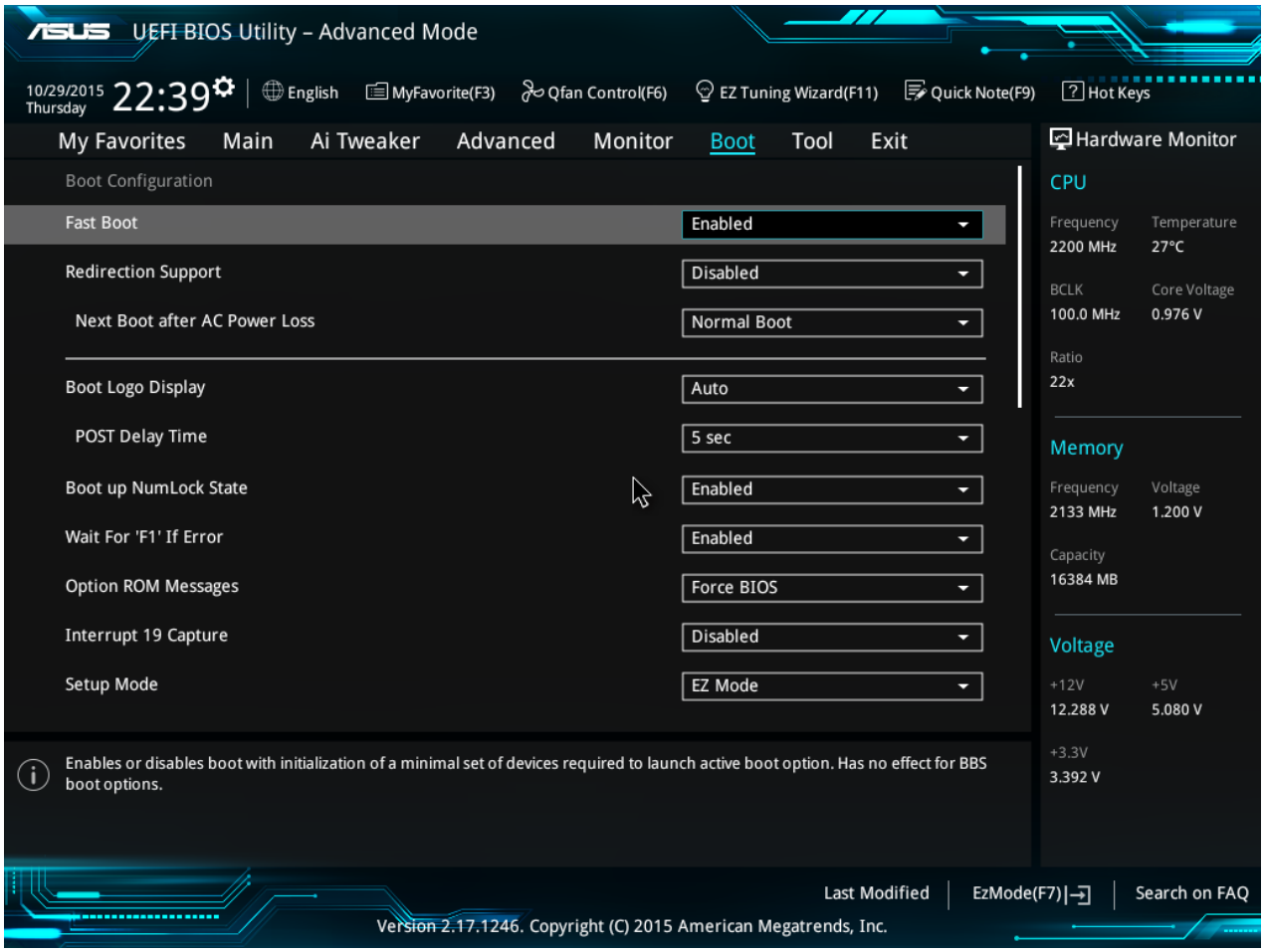


Figure 28: Boot Menu

5.5.7 Tools menu

The Tools menu items allow you to configure options for special functions. Select an item then press <Enter> to display the submenu.

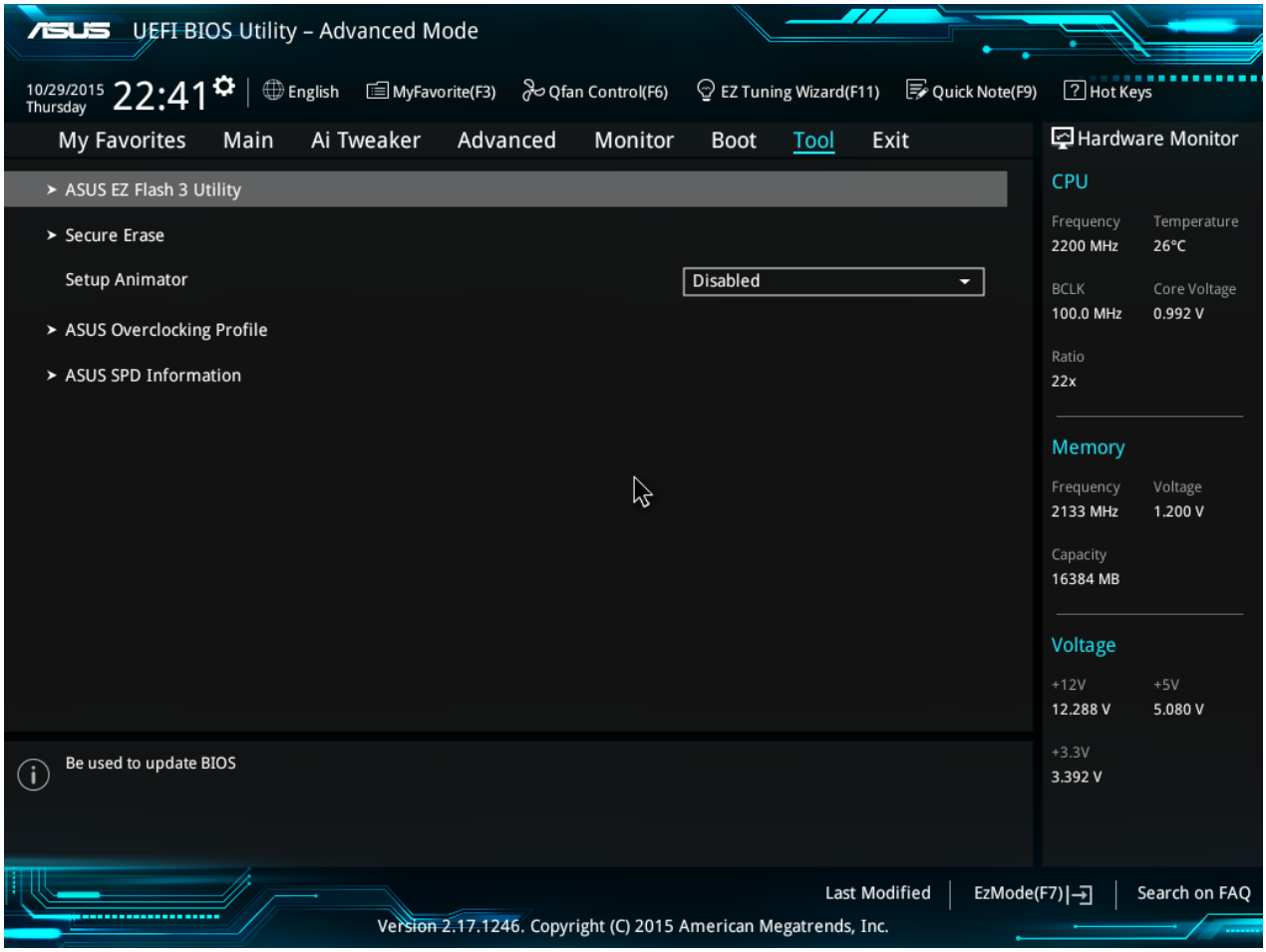


Figure 29: Tool menu

5.5.8 Exit menu

The Exit menu items allow you to load the optimal default values for the BIOS items, and save or discard your changes to the BIOS items. You can access the EZ Mode from the Exit menu.

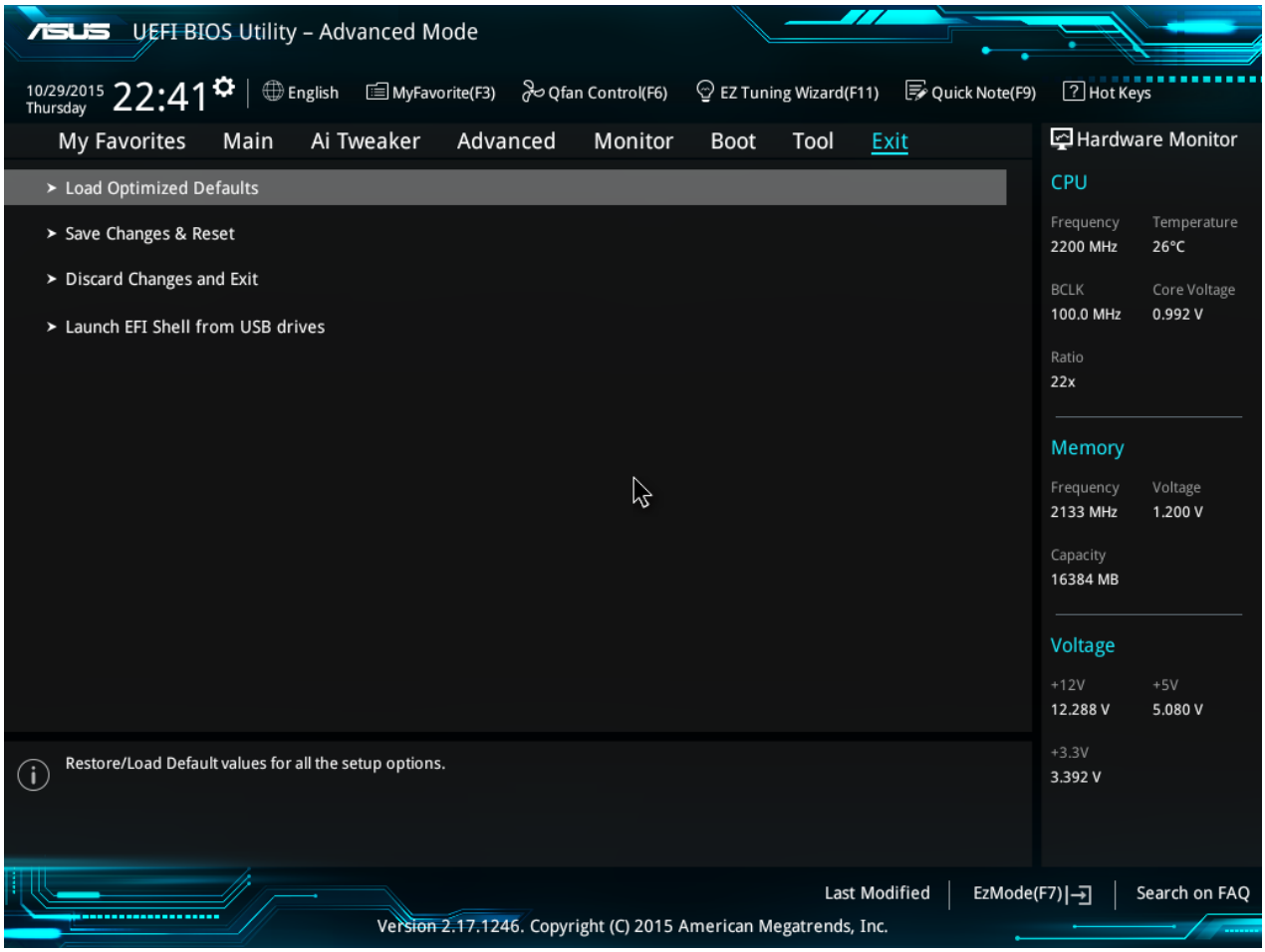


Figure 30: Exit menu

5.5.8.1 Load Optimized Defaults

This option allows you to load the default values for each of the parameters on the Setup menus. When you select this option or if you press <F5>, a confirmation window appears. Select Yes to load the default values.

5.5.8.2 Save Changes & Reset

Once you are finished making your selections, choose this option from the Exit menu to ensure the values you selected are saved. When you select this option or if you press <F10>, a confirmation window appears. Select Yes to save changes and exit.

5.5.8.3 Discard Changes & Exit

This option allows you to exit the Setup program without saving your changes. When you select this option or if you press <Esc>, a confirmation window appears. Select Yes to discard changes and exit.

5.6 ASUS EZ Mode

This option allows you to enter the EZ Mode screen.

Launch EFI Shell from filesystem device

This option allows you to attempt to launch the EFI Shell application (shellx64.efi) from one of the available devices that have a file system.

Figure 31: ASUS EZ Mode

BIOS settings for Windows 7 and Windows 8/8.1 O/S

5.6.1 Windows UEFI mode for Windows 8/8.1

Vig760S system configured with Windows 8/8.1 will have following default BIOS settings. If you wish to downgrade to Windows 7 then BIOS must be configured to Non-UEFI mode.

Boot\CSM (Compatibility Support module)

Launch CSM	**[Enabled]**
Boot Device Control	**[UEFI Only]**
Boot from Network Devices	**[UEFI drivers first]**
Boot from Storage Devices	**[UEFI drivers first]**
Boot from PCI-E/PCI Expansion Devices	**[UEFI drivers first]**

Boot\Secure Boot Menu

OS Type [**Windows UEFI mode**]

Note
Please ensure the changes of the following settings are performed by personnel with some previous experience/knowledge of altering BIOS settings.

5.6.2 Enabling Windows UEFI mode for Windows 8/8.1 Operating System

1. From the BIOS main menu bar select '**Advanced'**
2. Navigate to the **Boot** sub menu
3. Select **CSM (Compatibility Support Module)**

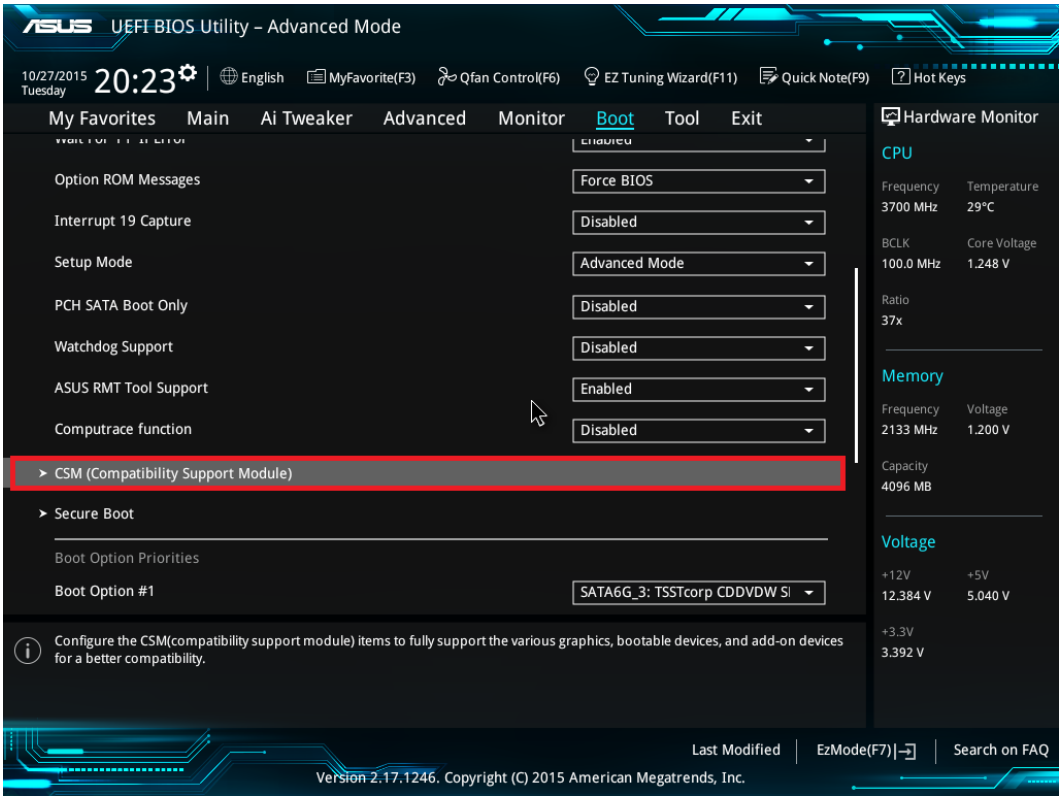


Figure 32: Boot Menu

4. In the CSM **(Compatibility Support Module)** change following settings for Windows 8/8.1.

Launch CSM	**[Enabled]**
Boot Device Control	**[UEFI Only]**
Boot from Network Devices	**[UEFI drivers first]**
Boot from Storage Devices	**[UEFI drivers first]**
Boot from PCI-E/PCI Expansion Devices	**[UEFI drivers first]**

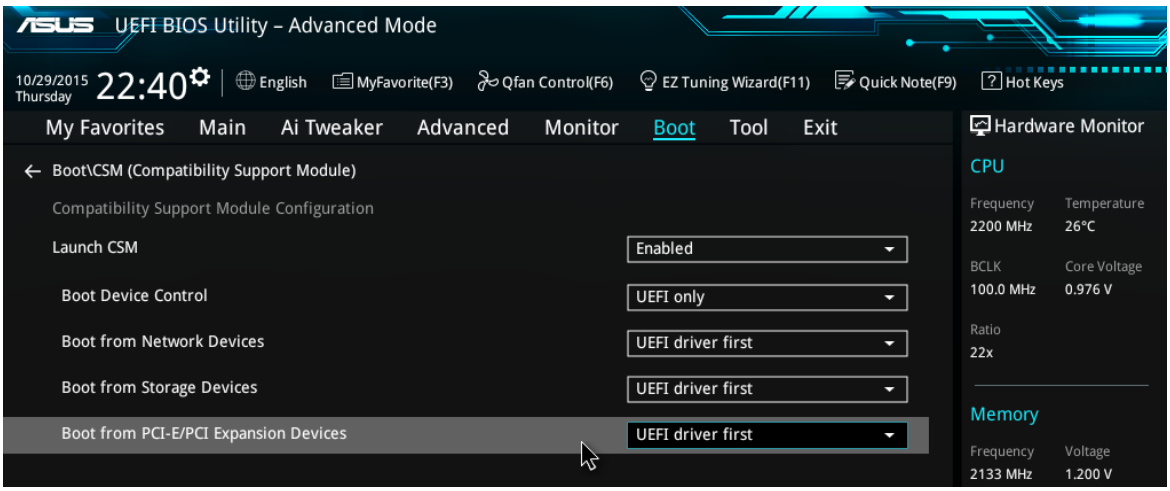


Figure 33: Compatibility Support Module

*Note: When these settings have been changed, press <Esc> or the Back Button to go back to the Boot Sub Menu to enable **Windows UEFI** for secure boot.*

5. Navigate to **Secure Boot** from within the Boot sub menu.

6. Change **OS Type** to **Windows UEFI**.

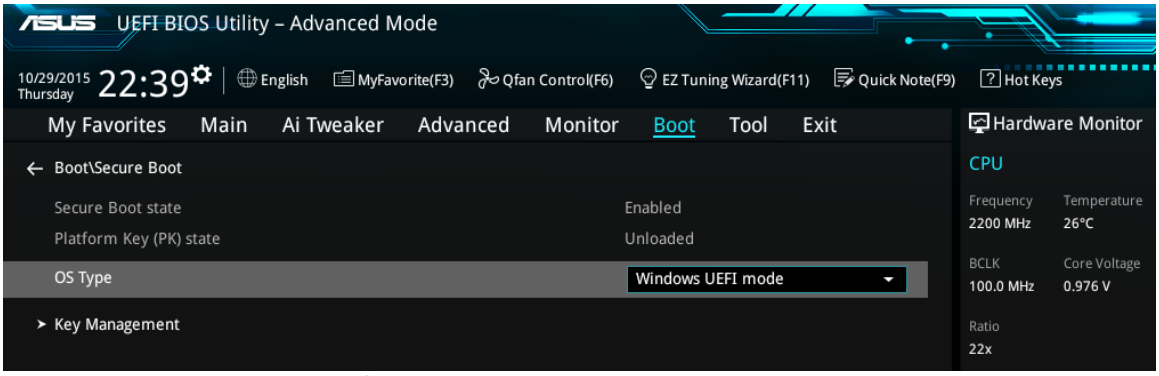


Figure 34: Secure Boot Menu

7. Select **Key Management**.

8. Select **Install default Secure Boot keys** and select **Yes** to proceed.

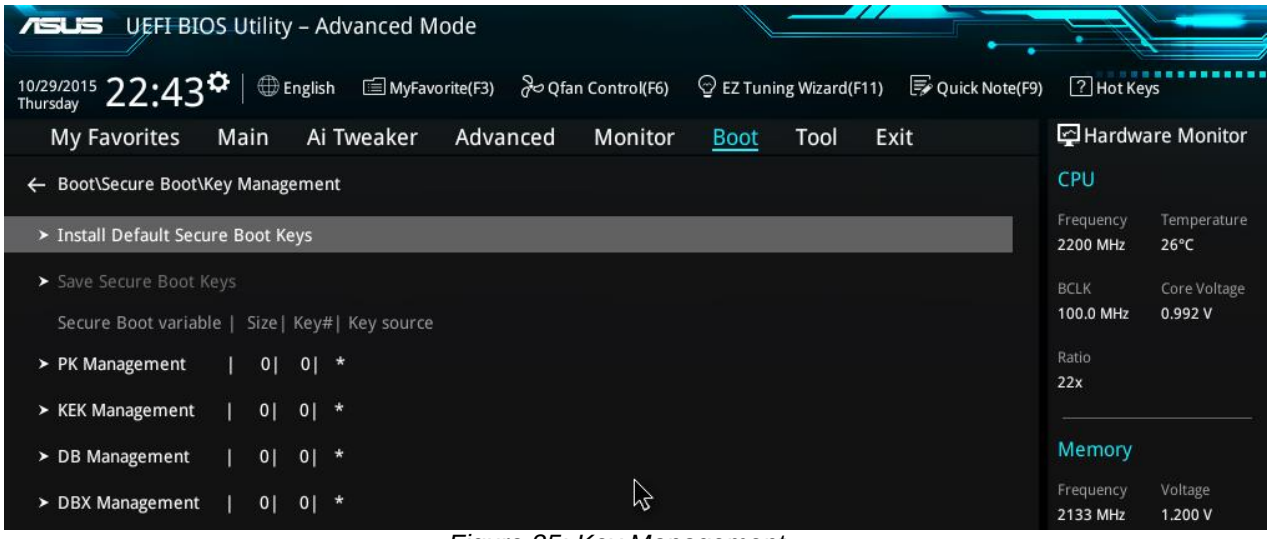


Figure 35: Key Management

9. Press **F10** to Save and exit.

> *NOTE: If you need to check changes have been saved go back into BIOS after reboot and navigate into Secure Boot settings. Check that **Secure Boot state** is **enabled** and **Platform Key (PK) state** is **Loaded**.*

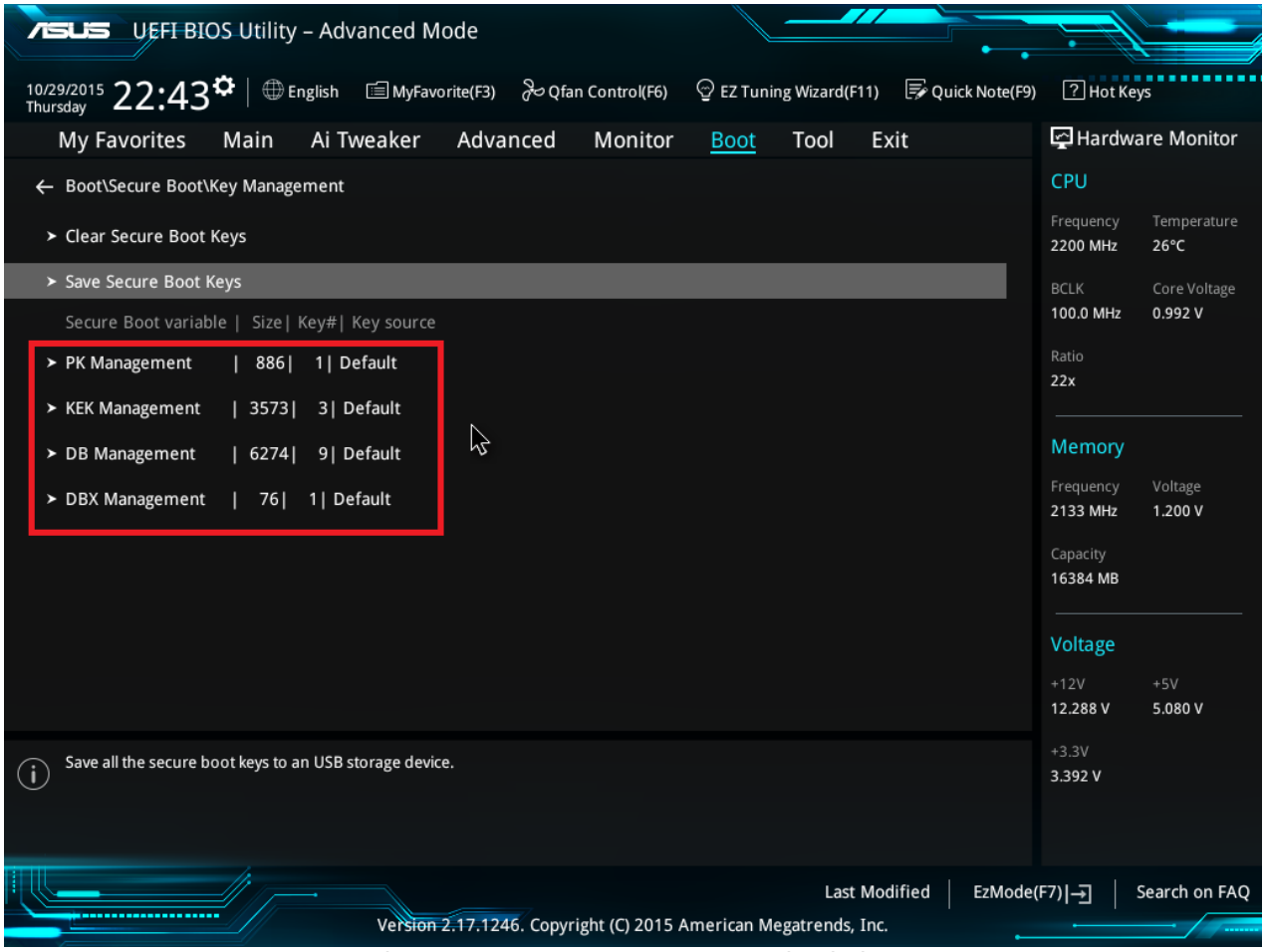


Figure 36: Key management – Key loaded

5.6.3 BIOS Settings for Windows 7 Operating System (Non UEFI Mode)

To downgrade to Windows 7 operating system, BIOS settings must be changed to boot into Legacy BIOS mode (non UEFI Mode).
For Windows 7 operating system BIOS should be configured as per below settings

Boot\CSM (Compatibility Support module)

Launch CSM	**[Enabled]**
Boot Device Control	**[UEFI and Legacy OPROM first]**
Boot from Network Devices	**[Legacy OPROM]**
Boot from Storage Devices	**[Legacy OPROM]**
Boot from PCI-E/PCI Expansion Devices	**[Legacy OPROM]**

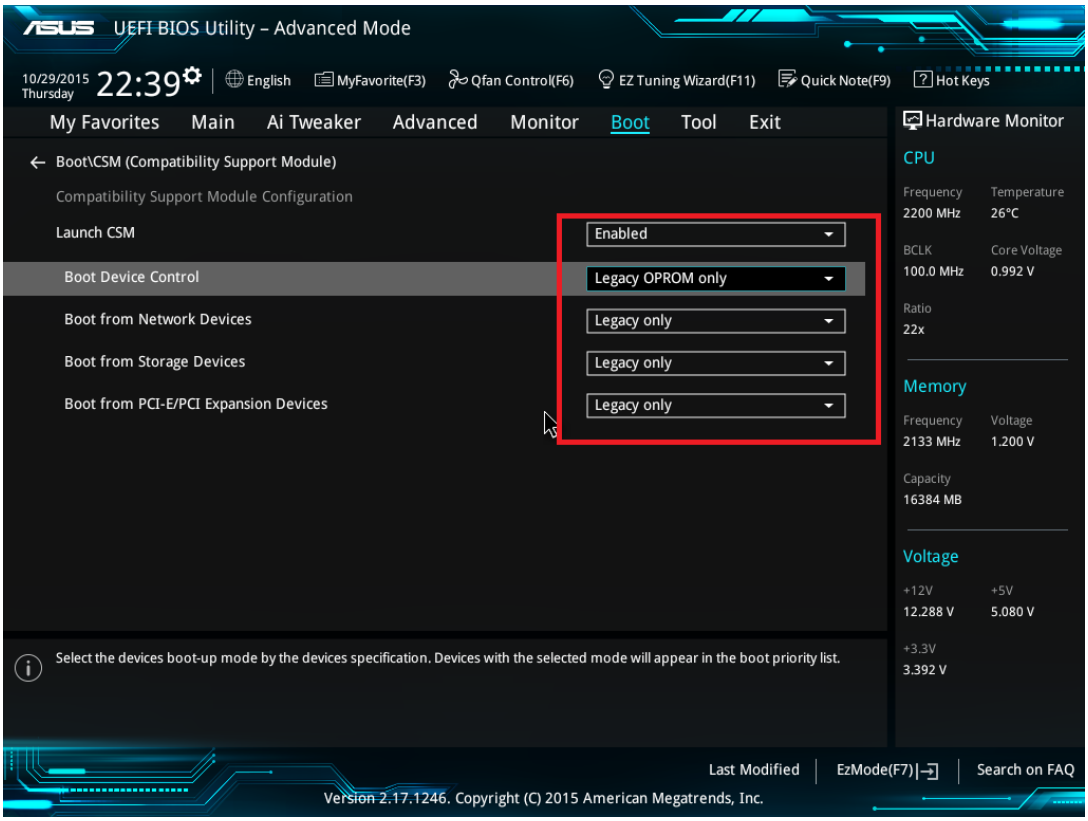


Figure 37: Windows 7 BIOS settings

5.6.4 Boot\Secure Boot Menu

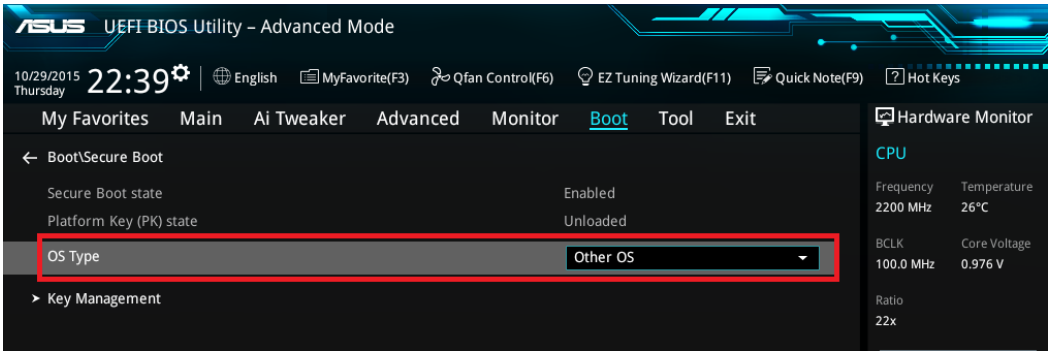


Figure 38: Windows 7 BIOS settings

Chapter 6 :Suggestions

6.1 **Questionnaire**

XMA is interested in continuing to improve the quality and information provided in their manuals. XMA has listed some questions that you may like to answer and return to Viglen. This will help Viglen help to keep and improve the standard of their manuals.

1. Is the information provided in this and other manuals clear enough?

2. What could be added to the manual to improve it?

3. Does the manual go into enough detail?

4. Would you like an on-line version of this manual?

5. How do you rate the Viglen Technical support and Service Departments?

6. Are there any technological improvements that could be made to the system?

7. Other points you would like to mention?

Please return this slip to:

Product Development Dept.
XMA Ltd.
7 Handley Page Way
Colney Street
St Albans
Hertfordshire
AL2 2DQ

6.2 Notes