SI-64 Series

User Manual

2013 Oct V1

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Safety Information

Your SI-64 is designed and tested to meet the latest standards of safety for information technology equipment. However, to ensure your safety, it is important that you read the following safety instructions

Setting up your system

- Read and follow all instructions in the documentation before you operate your system.
- Do not use this product near water.
- Set up the system on a stable surface. Do not secure the system on any unstable plane.
- Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
- Slots and openings on the chassis are for ventilation. Do not block or cover these openings. Make sure you leave plenty of space around the system for ventilation. ***Never insert objects of any kind into the ventilation openings***.
- This system should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- Use this product in environments with ambient temperatures between 0˚C and 40˚C.
- If you use an extension cord, make sure that the total ampere rating of the devices plugged into the extension cord does not exceed its ampere rating.
- DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THESTORAGE TEMPERATURE MAY GO BELOW -20° C (-4° F) OR ABOVE 80° C (176° F). THIS COULD DAMAGE THE EQUIPMENT. THE EQUIPMENT SHOULD BE IN A CONTROLLED ENVIRONMENT.

Care during use

- Do not walk on the power cord or allow anything to rest on it.
- Do not spill water or any other liquids on your system.
- When the system is turned off, a small amount of electrical current still flows. Always unplug all power, and network cables from the power outlets before cleaning the system.
- If you encounter the following technical problems with the product, unplug the power cord and contact a qualified service technician or your retailer.
  - The power cord or plug is damaged.
  - Liquid has been spilled into the system.
  - The system does not function properly even if you follow the operating instructions.
  - The system was dropped or the cabinet is damaged.

Lithium-Ion Battery Warning

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

NO DISASSEMBLY

The warranty does not apply to the products that have been disassembled by users

WARNING
HAZARDOUS MOVING PARTS
KEEP FINGERS AND OTHER BODY PARTS AWAY

Acknowledgments

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CHAPTER 1 INTRODUCTION

1.1 General Description

SI-64 comes with the Intel® Q77 Express Chipset and Radeon E6760 embedded discrete graphics processor that enables outstanding graphics experience and up to four DVI outputs using AMD Eyefinity Technology for video wall application.

1.2 System Specifications

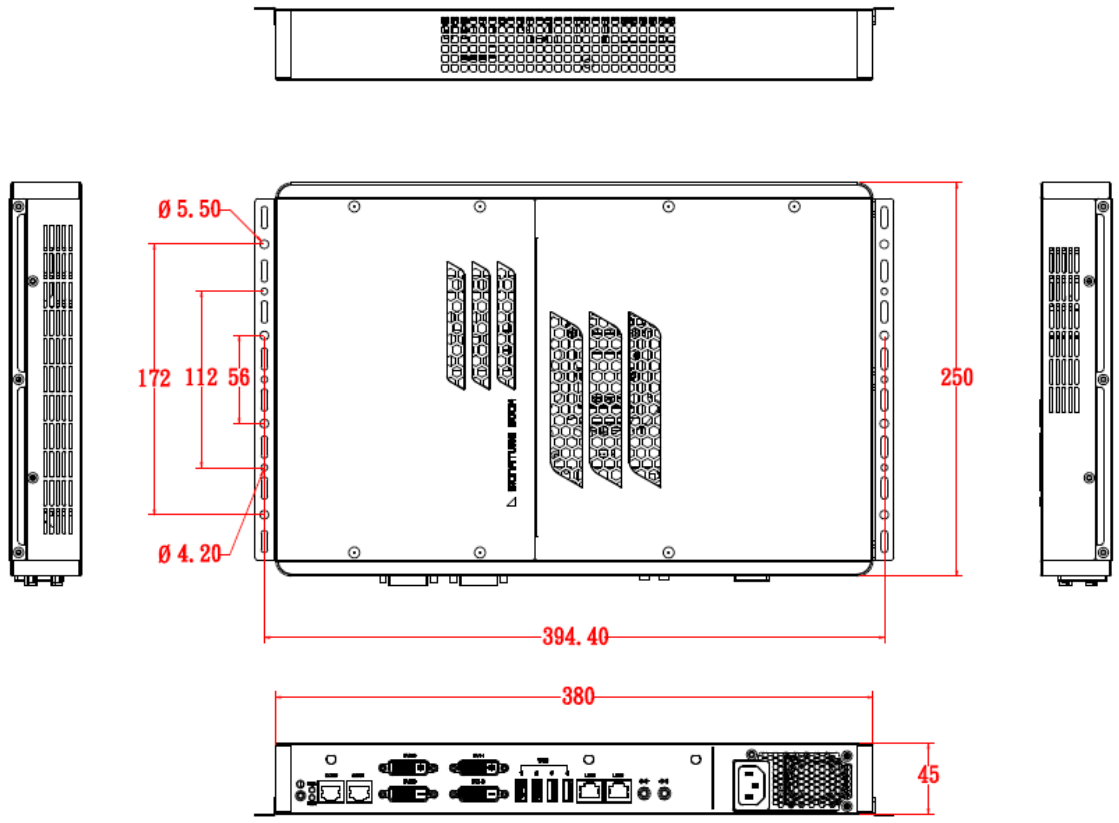
1.2.1 Hardware Specifications

Model Name	SI-64
System Mainboard	IB964
CPU	3rd Generation Intel® Core™ i7/i5/i3, Pentium QC/DC Desktop Processors *The maximum TDP supported 77W
Chipset	Intel® Q77 PCH
Memory	2 x DDR3 1600MHz DIMM, Max. 16GB (Non-ECC)
I/O Interface	3 x DVI, 1x Hybrid DVI (DVI/ VGA / HDMI with audio) 2 x USB 2.0 ports, 2 x USB 3.0 ports 2 x RJ45 for LAN, 2 x RJ45 for RS232 2 x Micro jack audio connectors for Line-in / Line-out 1 x Power / HDD LED 1 x Power on/off button 1 x Power jack
Storage	1 x mSATA 1 x 2.5” 320GB SATA 3.0 HDD
Expansion Slots	2 x Mini PCI-E(x1) slots for WiFi, 3G and TV tuner options
Power Supply	AC in, Internal 250w PSU

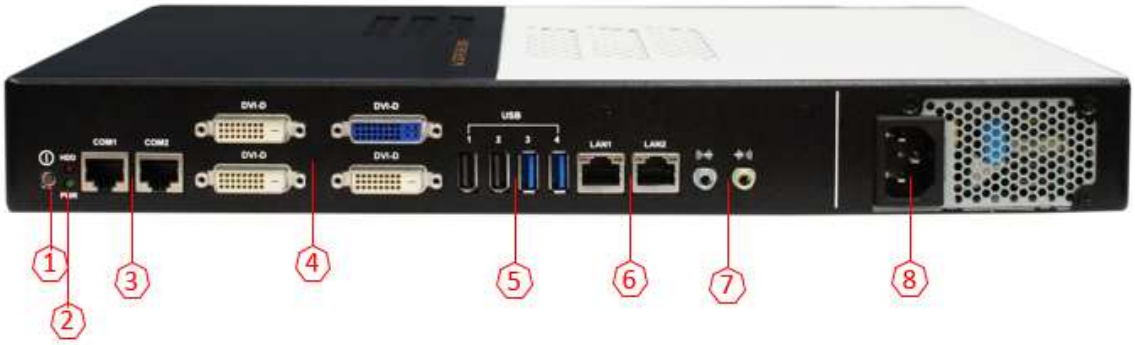
Construction	SGCC
Chassis Color	Black & White
Mounting	Wall mount
Dimensions	380mm(W) x 250mm(D) x 45mm(H) 14.9”(W) x 9.8”(D) x 1.77”(H)
Operating Temperature	0°C ~ 45°C
Storage Temperature	-20°C ~ 80°C
Relative Humidity	5~90% @45°C (non-condensing)
Vibration	mSATA: 5 Grms/5~500Hz random operation
RoHS	Yes
Certification	CE, FCC class B, CCC and UL

·This specification is subject to change without prior notice.

1.2.2 Dimensions

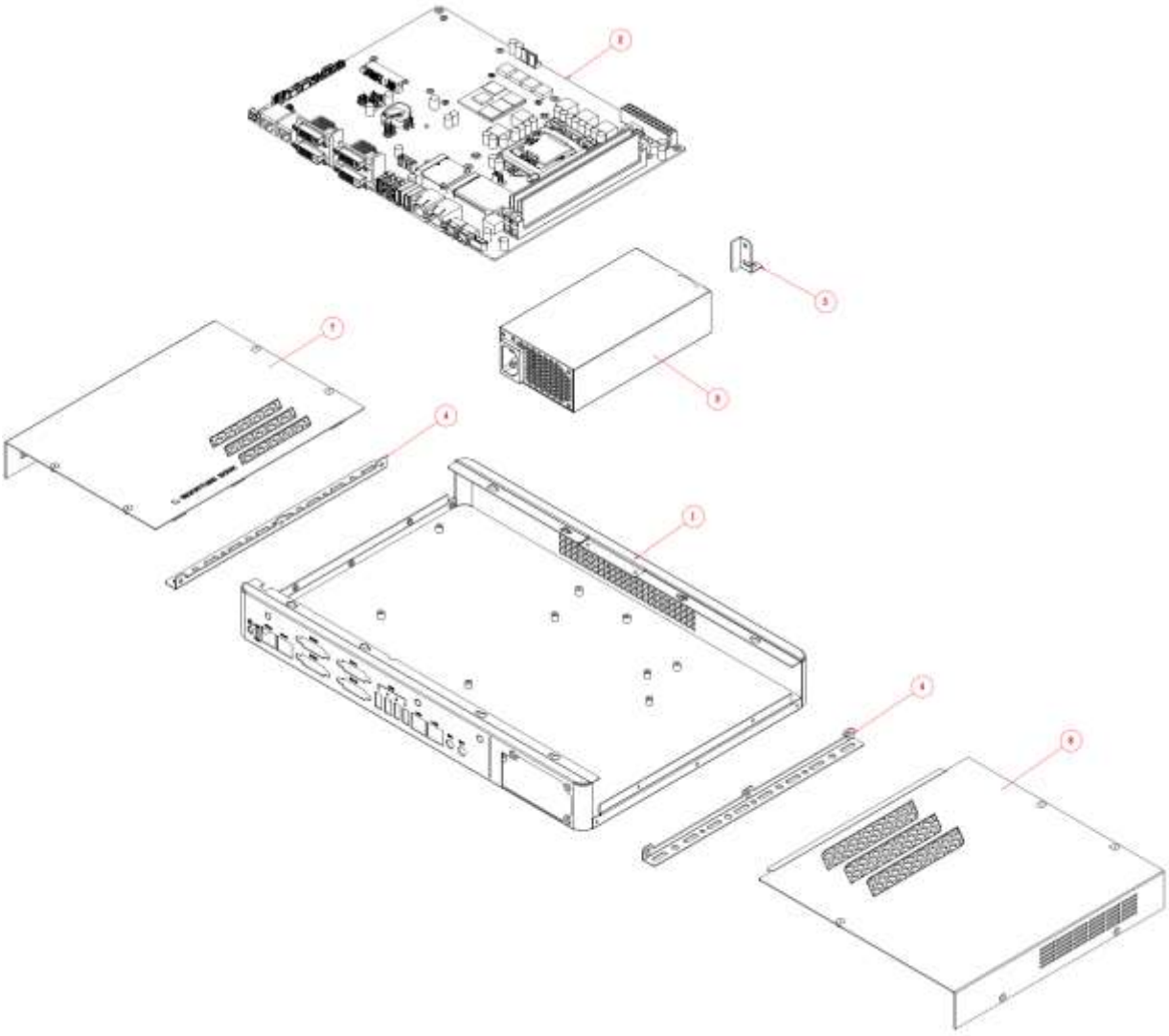


1.2.3 I/O View



Item	Connector	Item	Connector
1	Power button	5	4x USB ports
2	Power/HDD LED Indicator	6	2x RJ45 for LAN
3	2x RJ45 for RS-232	7	Line-in/Line-out
4	3x DVI, 1 x Hybrid DVI	8	AC Inlet

1.3 Exploded View of the SI-64 Assembly



1.3.1 Parts Description

Part No.	Description	Part No.	Description
1	SI-64 Base	2	IB964 motherboard
3	Power module	4	SI-64 side bracket
5	SI-64 fix bracket		
7	SI-64 L-cover	8	SI-64 R-cover

1.4 Packing List

Item No.	Description	Qty
1	Driver CD	1
2	Screw; B30	6
3	Wall Mount Kits	2
4	Power Cord	1

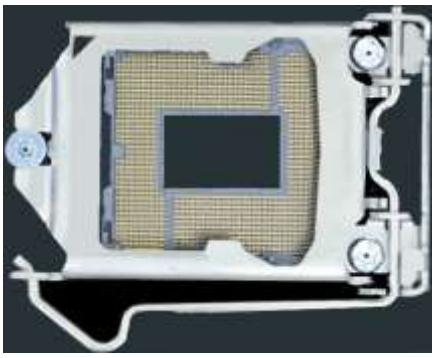
1.4.1 Optional Items

WiFi Solution	Description	
QCOM WiFi module	Wireless LAN Card; 802.11 B/G/N+BT HALF Card [Q802XKN3B] RoHS (A008WIRELESS00700P)	
External Antenna	Wifi Antenna (A055RFA02C2M20800P)	
Internal cable-1/2	From Wifi module to Rear/Front panel (A055RFA0000021000P/A055RFA0000032000P)	 
Bracket	MPCIE-EXT V-B1 Bracket, RoHS; Extend Half to Full size. (SC2MPCIEEXT0B1100P)	
3G Solution	**Description**	
ZU 202	Wireless; 3.75G UMTS/HSPA [ZU202] RoHS (A008WIRELESS00520P)	
ZU 200	Wireless; 3.75G UMTS/HSPA & GPS Module [ZU200] RoHS (A008WIRELESS00510P)	
Cable	Cable; Antenna-2 30CM P 2pcs (C501ANT0200300000P)	
Antenna	Antenna; 3G, P, 2pcs (A055ANT0921Q2P000P)	
COM Port Cable	**Description**	
EXT-311	Cable; EXT-311 2-HD 10C, 150CM; DSUB-9F => RJ45-10M RoHS (C501EXT3110A12000P)	
EXT-312	Cable; EXT-312 2-HD 10C, 150CM; DSUB-9M => RJ45-10M RoHS (C501EXT3120A12000P)	
Display Cable	**Description**	
DVI-22	DVI-22 3-HD, 10CM; DVI => DVI, VGA-15 RoHS (C501DVI2200103000P)	

2 HARDWARE INSTALLATION

2.1 Installing the CPU

To install the CPU, unlock first the socket by pressing the lever sideways, then lift it up to a 90-degree. Then, position the CPU above the socket such that the CPU corner aligns with the gold triangle matching the socket corner with a small triangle. Carefully insert the CPU into the socket and push down the lever to secure the CPU. Then, install the heat sink and fan.



***NOTE**: Ensure that the CPU heat sink and the CPU top surface are in total contact to avoid CPU overheating problem that would cause your system to hang or be unstable.*

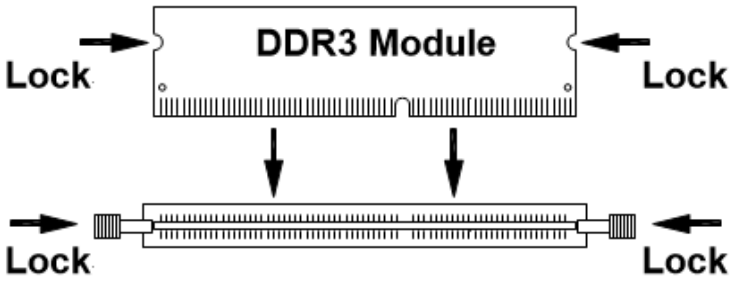
2.2 Installing the Memory

The IB964 board supports four DDR3 memory socket for a maximum total memory of 32GB in DDR3 DIMM memory type.

Installing and Removing Memory Modules

To install the DDR3 modules, locate the memory slot on the board and perform the following steps:

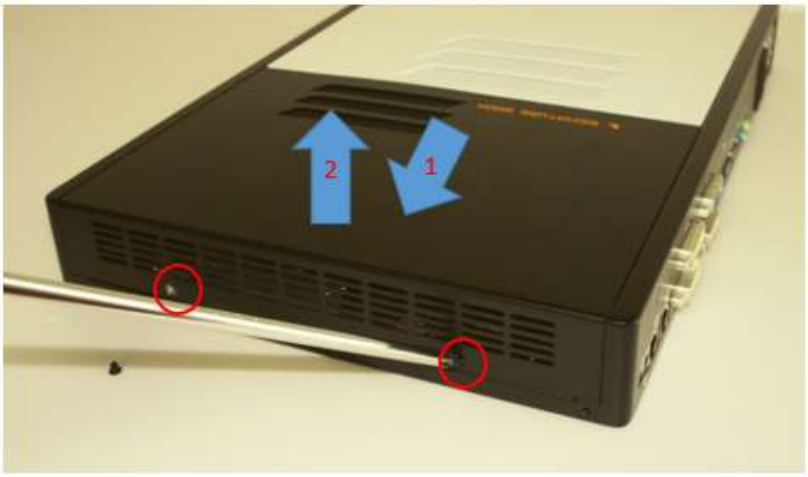
1. Hold the DDR3 module so that the key of the DDR3 module aligned with that on the memory slot.
2. Gently push the DDR3 module in an upright position until the clips of the slot close to hold the DDR3 module in place when the DDR3 module touches the bottom of the slot.
3. To remove the DDR3 module, press the clips with both hands.



2.3 Installing the HDD/mSATA Module

HDD Module:

1. Remove the two screws on the sides that are used to secure the black top cover to the chassis. Once all the screws are removed, from the side, push the cover forward to remove it. See steps1 and 2 in the picture.



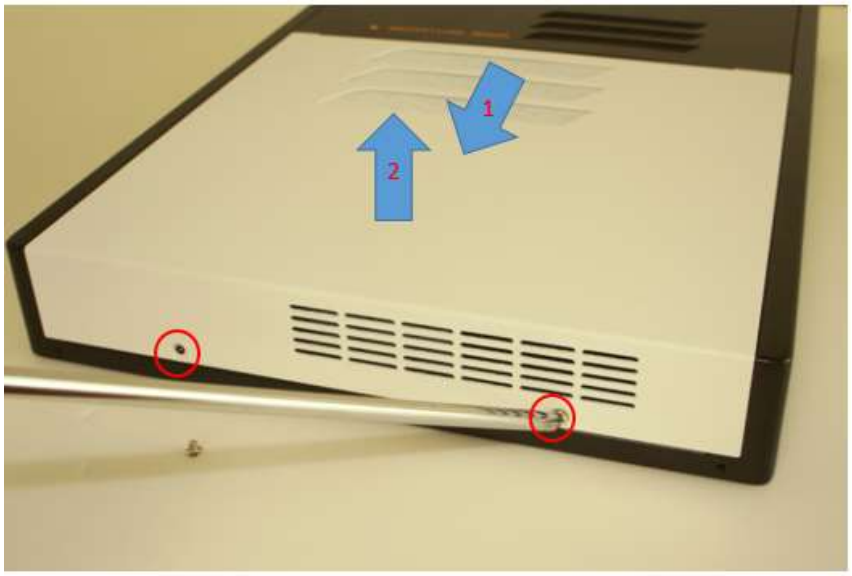
2. Loosen the mounting screws that secure the HDD to the bracket.

3. Following the picture's arrowed direction, push out the HDD module.

4. Loosen the four screws and then replace the HDD module.

mSATA Module:

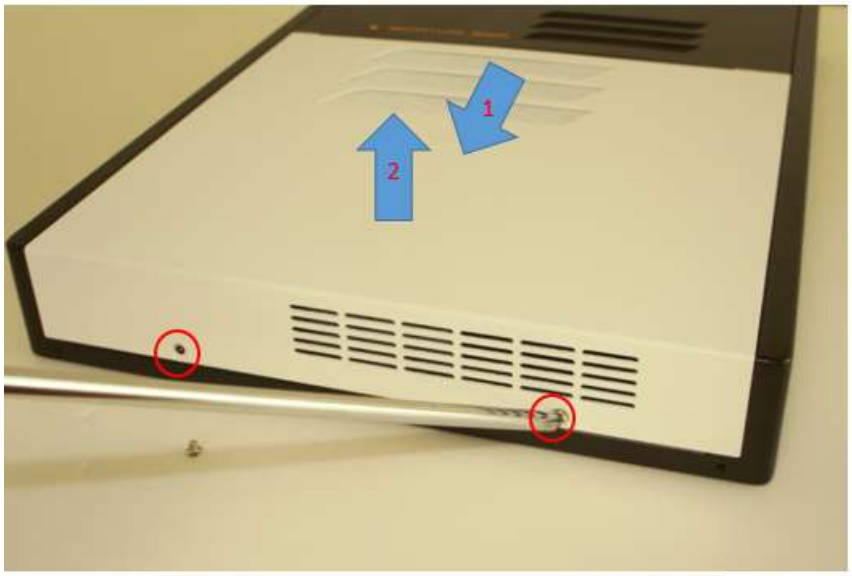
1. Remove the two screws on the sides that are used to secure the white top cover to the chassis. Once all the screws are removed, from the side, push the cover forward to remove it. See steps1 and 2 in the picture.



2. Push the mSATA module into the slot. And screw two screws to secure the module to the slot.

2.4 Installing the Wireless Module

1. Remove the two screws on the sides that are used to secure the white top cover to the chassis. Once all the screws are removed, from the side, push the cover forward to remove it. See steps1 and 2 as in the picture.



2. Push the WIFI module into the slot. Screw one screw to secure the module to the slot.

CHAPTER 3 MOTHERBOARD INTRODUCTION

3.1 Introduction

The IB964 ATX motherboard is based on the latest Intel@ Q77 chipset. The platform supports 3rd generation Intel@ Core processor family with LGA1155 packing and features an integrated dual-channel DDR3 memory controller as well as a graphics core.

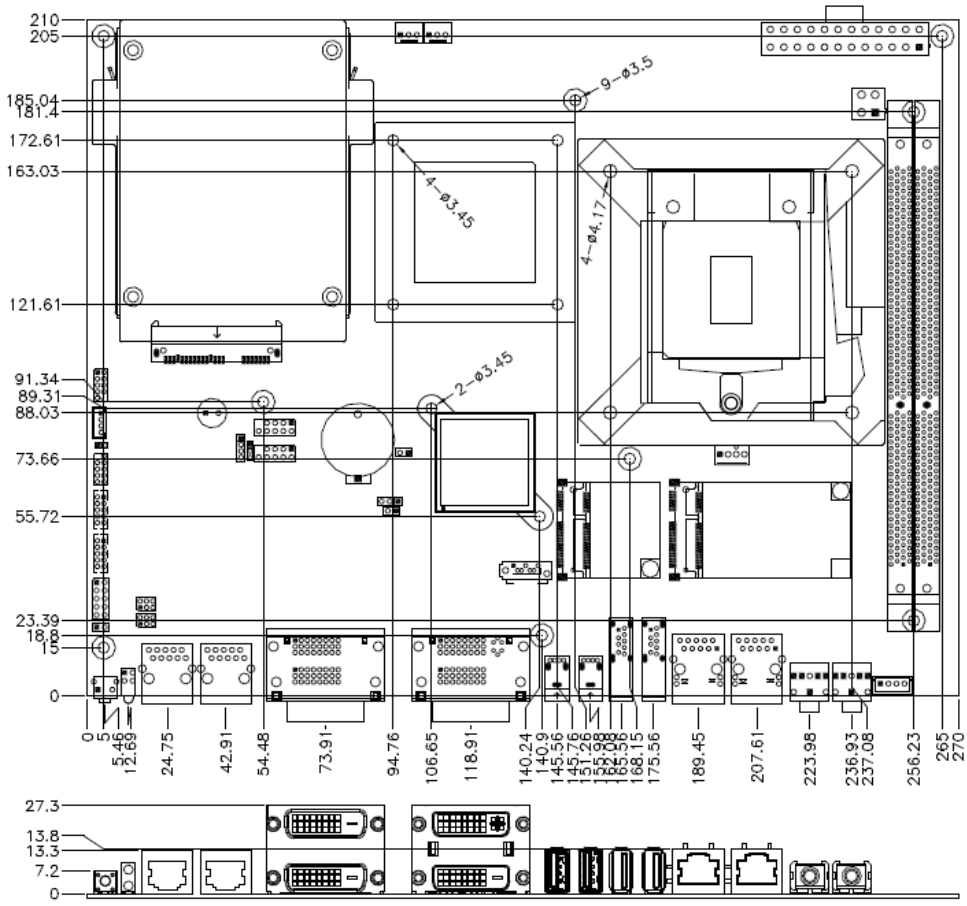
The latest Intel@ processors provide advanced performance in both computing and graphics quality. This meets the requirement of customers in the gaming, POS, digital signage and server market segment.

The Q77 platform is made with 22 nanometer technology that supports Intel's first processor architecture to unite the CPU and the graphics core on the transistor level. The IB964 ATX board utilizes the dramatic increase in performance provided this Intel's latest cutting-edge technology. Measuring 305mm x 244mm, the IB964 offers fast 6Gbps SATA support (2 ports), USB3.0 (2 ports) and interfaces for DVI-D, DVI-I and DP displays. IB964VF features Intel Active Management Technology 8.0.

Specification – Mainboard	
Model	IB964
Form Factor	Customized
CPU	
Model	Intel® 3rd Generation Core™ I7 / I5 / I3 and Pentium® QC/DC processors, Up to 3.5GHz I7-3770
Speed	3.4GHz
Cache	8M
Socket	LGA1155
TDP	77W
Chipset	
Model	Intel® Q77 PCH
BIOS	
Model	AMI BIOS, support ACPI Function
Memory	
Configuration	8GB(1.5V +-3%)
Max. Support	DDR3 sockets X2 Up to 16GB 1066/1333/1600 MHz SDRAM, w/o ECC

Edge I/O	
Display	1x Hybrid-DVI (DVI/ HDMI/ VGA) + DVI 1x DVI-D + DVI-D From AMD E6760 GPU (480 Cores @ 600 MHz; 31W) w/ 1024MB GDDR5-1600 (57.6 GB/s)
LAN / PHY	Intel 82579LM Gigabit LAN PHY + Intel 82583V PCI-Gigabit LAN
Audio	Intel® Q77 PCH built-in HD audio + Realtek ALC269QHD Codec
USB	2x USB 2.0 ports; 2 x USB 3.0 ports
LPC I / O	Fintek F81866 2x RJ45 for COM1 / COM2 (RS232)
Expansion slot	1x mPCIe(x1) (half size) 1x mPCIe(x1) (mPCIe & mSATA support SATA 3.0) (full size)
Digital IO	4 in & 4 out
Internal I/O	
Audio	Header for speaker out (w/ amplifier)
SATA / eSATA	1x SATA 3.0 2.5” HDD Dock 1x SATA 2.0 Header
LPC I / O	Fintek F81866AD-I Monitor (2 thermal inputs, 2 voltage monitor inputs & 1 Fan headers) 4-pin PWM Fan header (CPU fan) 3-pin Fan Header x 2 (SYS Fan Control) 1x10 pins pin-header x 2 for COM3&4 ***DO NOT POPULATE FOR SI SYSTEM***
USB	2x 10 pins pin-header for two USB 2.0 ***DO NOT POPULATE FOR SI SYSTEM***
Expansion Slot	1x mPCIe(x1) 26.8 mm 1x mPCIe(x1) 51 mm (mPCIe & mSATA)
Fan	4-pin PWM fan header (CPU fan) 3-pin Fan Header x 2 (SYS Fan Control)
Add-On Feature	
Watchdog	Yes (256 segments, 0, 1, 2…255 sec/min)
H/W Monitor	Yes
iSMART	Yes
iAMT	Yes
Other	LAN Wakeup
Dimensions	
PCB	305mm x 243mm
Power Supply	
Power	250W PSU
Environmental	
Temperature	Operating: -10°C~60°C
Humidity	10%~90% (non-condensing)
Shock	IBASE Standard Test
Vibration	IBASE Standard Test
Certification	RoHS
Other	CE/FCC Class B

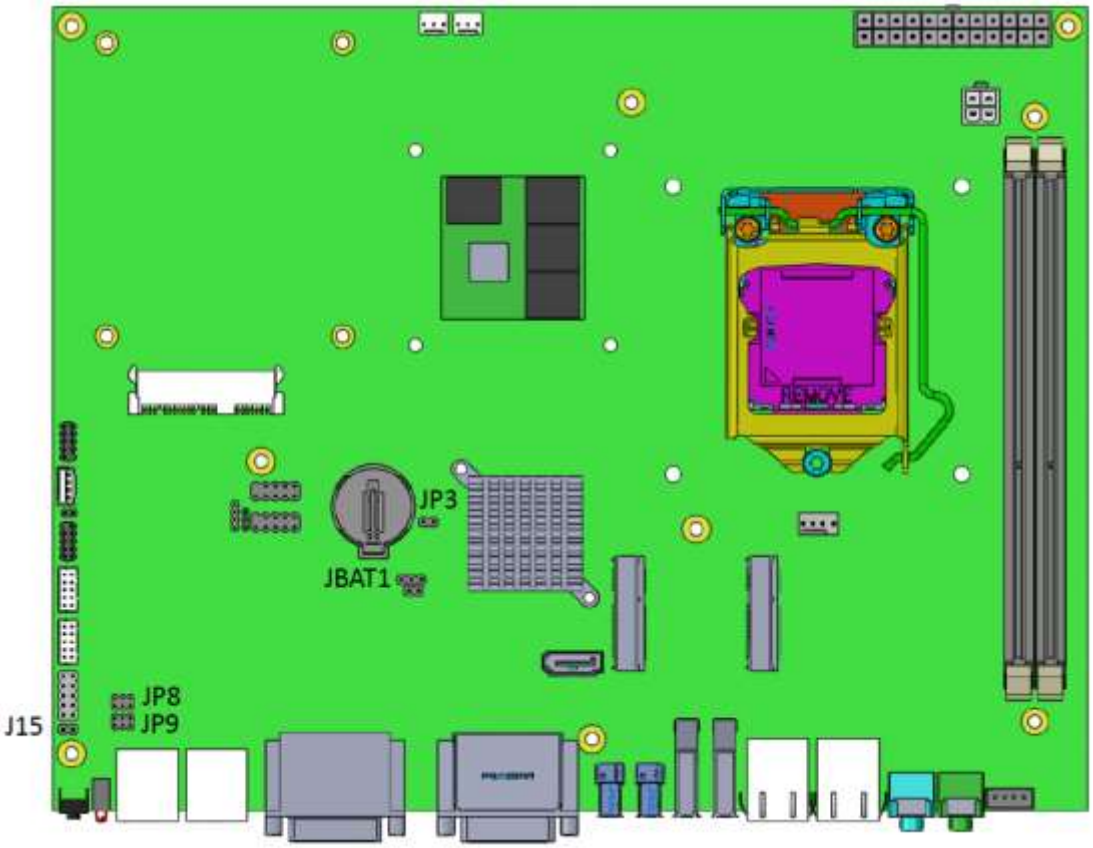
Board Dimensions



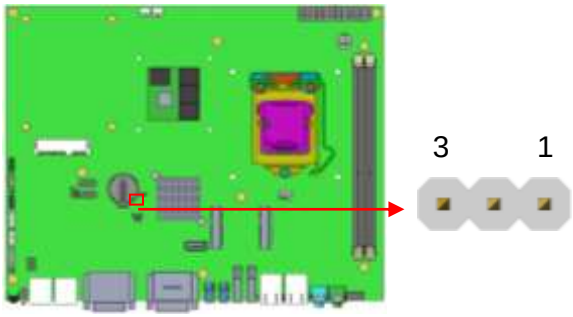
3.2 Setting the Jumpers

Jumpers are used on IB964 to select various settings and features according to your needs and applications. Contact your supplier if you have doubts about the best configuration for your needs. The following lists the connectors on IB964 and their respective functions.

Jumper Locations on IB964

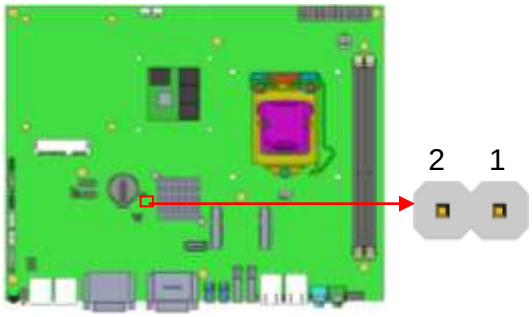


JBAT1: Clear CMOS Contents



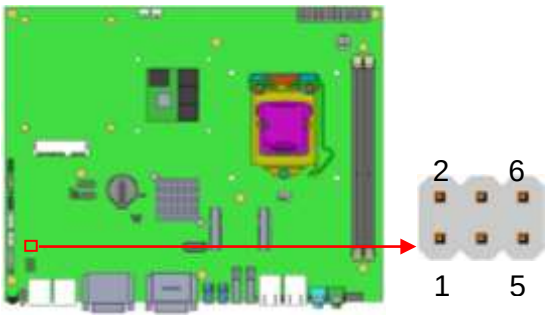
JBAT1	Setting	Function
	Pin 1-2 Short/Closed	Normal
	Pin 2-3 Short/Closed	Clear CMOS

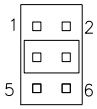
JP3: Flash Descriptor Security Override (Factory use only)



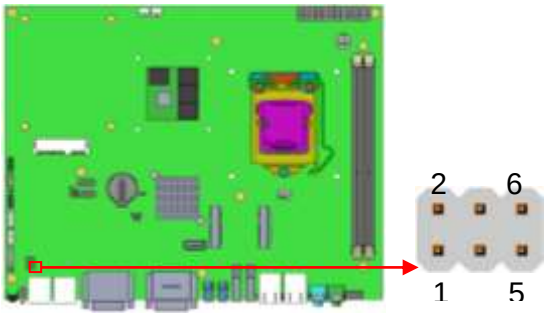
JP3	Flash Descriptor Security Override
Open	Disabled (Default)
Close	Enabled

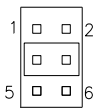
JP8: COM1 RS232 RI/+5V/+12V Power Setting



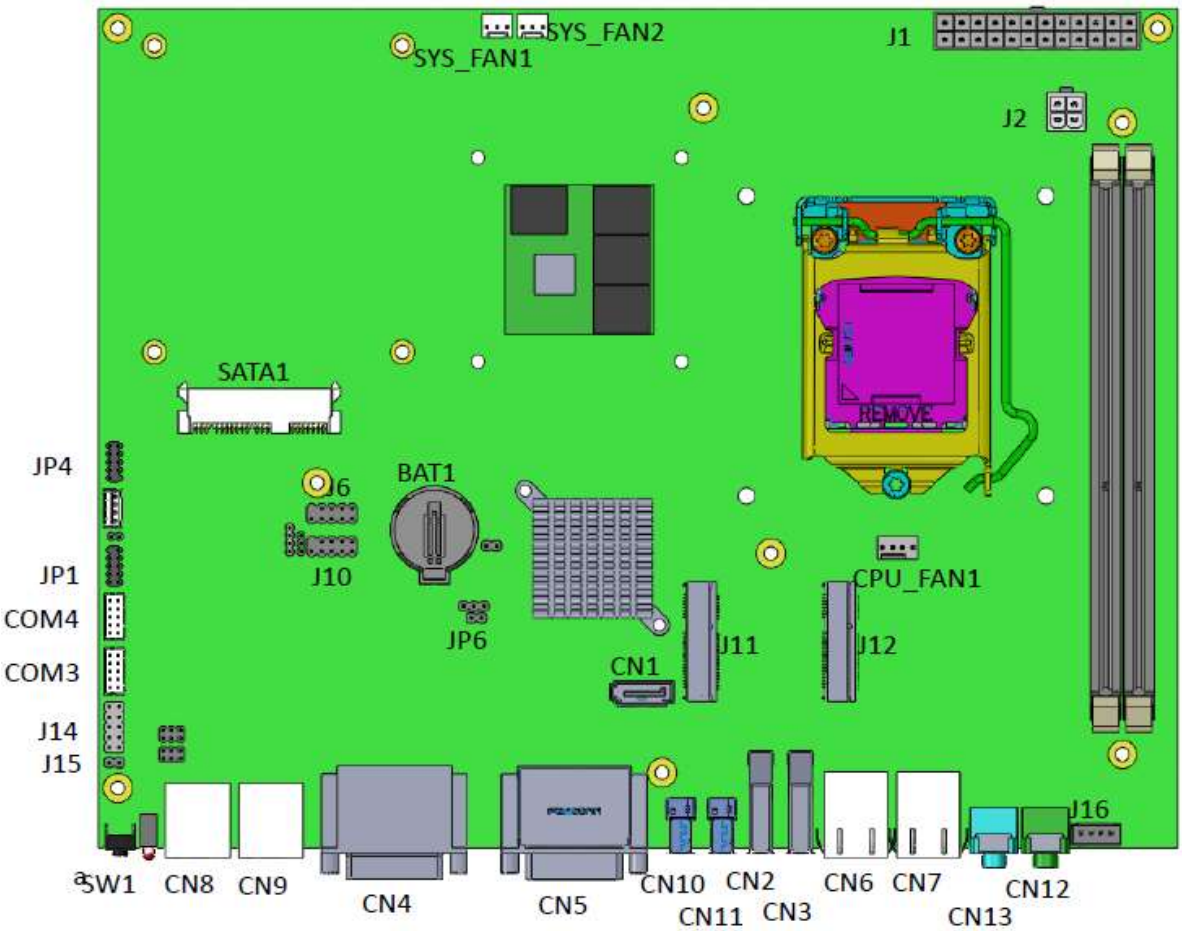
JP8	Setting	Function
	Pin 1-3 Short/Closed	+12V
	Pin 3-4 Short/Closed	RI
	Pin 3-5 Short/Closed	+5V

JP9: COM2 RS232 RI/+5V/+12V Power Setting



JP9	Setting	Function
	Pin 1-3 Short/Closed	+12V
	Pin 3-4 Short/Closed	RI
	Pin 3-5 Short/Closed	+5V

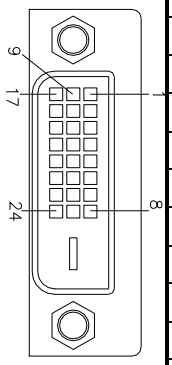
3.3 Connectors on IB964



CN1: SATA2 Connectors

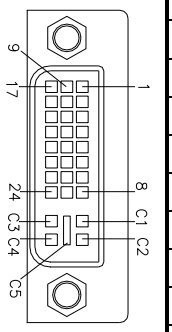
CN2, CN3: USB3.0 Connectors

CN4: Dual DVI-D Connector

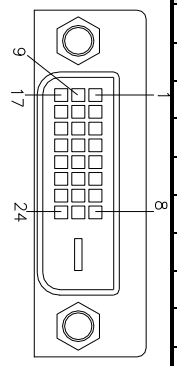


Signal Name	Pin #	Pin #	Signal Name
DATA 2-	1	16	HOT POWER
DATA 2+	2	17	DATA 0-
Shield 2/4	3	18	DATA 0+
DATA 4-	4	19	SHIELD 0/5
DATA 4+	5	20	DATA 5-
DDC CLOCK	6	21	DATA 5+
DDC DATA	7	22	SHIELD CLK
N.C	8	23	CLOCK -
DATA 1-	9	24	CLOCK +
DATA 1+	10	C1	N.C.
SHIELD 1/3	11	C2	N.C.
DATA 3-	12	C3	N.C.
DATA 3+	13	C4	N.C.
DDC POWER	14	C5	N.C.
A GROUND 1	15	C6	N.C.

CN5: DVI-D and DVI-I Connector



Signal Name	Pin #	Pin #	Signal Name
DATA 2-	1	16	HOT POWER
DATA 2+	2	17	DATA 0-
Shield 2/4	3	18	DATA 0+
DATA 4-	4	19	SHIELD 0/5
DATA 4+	5	20	DATA 5-
DDC CLOCK	6	21	DATA 5+
DDC DATA	7	22	SHIELD CLK
VSYNC	8	23	CLOCK -
DATA 1-	9	24	CLOCK +
DATA 1+	10	C1	Red
SHIELD 1/3	11	C2	Green
DATA 3-	12	C3	Blue
DATA 3+	13	C4	HSYNC
DDC POWER	14	C5	A GROUND2
A GROUND 1	15	C6	A GROUND3

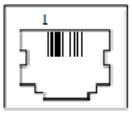


Signal Name	Pin #	Pin #	Signal Name
DATA 2-	1	16	HOT POWER
DATA 2+	2	17	DATA 0-
Shield 2/4	3	18	DATA 0+
DATA 4-	4	19	SHIELD 0/5
DATA 4+	5	20	DATA 5-
DDC CLOCK	6	21	DATA 5+
DDC DATA	7	22	SHIELD CLK
N.C	8	23	CLOCK -
DATA 1-	9	24	CLOCK +
DATA 1+	10	C1	N.C.
SHIELD 1/3	11	C2	N.C.
DATA 3-	12	C3	N.C.
DATA 3+	13	C4	N.C.
DDC POWER	14	C5	N.C.
A GROUND 1	15	C6	N.C.

CN6: Gigabit LAN (Intel 82579LM)

CN7: Gigabit LAN (Intel 82583V)

CN8, CN9: RJ45 For COM Port



Pin #	Signal Name
1	DSR, Data set ready
2	GND, ground
3	GND, ground
4	TXD, Transmit data
5	RXD, Receive data
6	DCD, Data carrier detect
7	DTR, Data terminal ready
8	CTS, Clear to send
9	RTS, Request to send
10	RI, Ring indicator

CN12, CN13: HD Audio Connector

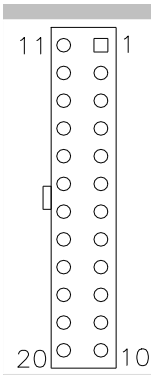
COM3, COM4: RS232 Serial Ports

Signal Name	Pin #	Pin #	Signal Name
DCD#	1	6	DSR#
SIN#	2	7	RTS#
SOUT	3	8	CTS#
DTR#	4	9	RI#
GND	5	X	KEY

SATA1: SATA3.0 Connectors

JP1: Compact Flash Connector

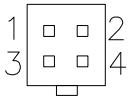
J1: ATX Power Supply Connector



Signal Name	Pin #	Pin #	Signal Name
3.3V	11	1	3.3V
-12V	12	2	3.3V
Ground	13	3	Ground
PS-ON	14	4	+5V
Ground	15	5	Ground
Ground	16	6	+5V
Ground	17	7	Ground
-5V	18	8	Power good
+5V	19	9	5VSB
+5V	20	10	+12V

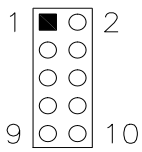
J2: ATX 12V Power Connector

This connector supplies the CPU operating voltage.



Pin #	Signal Name
1	Ground
2	Ground
3	+12V
4	+12V

J6, J10: USB Connectors

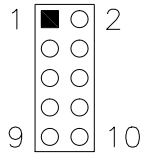


Signal Name	Pin #	Pin #	Signal Name
VCC	1	2	VCC
D0-	3	4	D1-
D0+	5	6	D1+
GND	7	8	GND
KEY	9	10	NC

J11: Mini-PCIE Connector

J12: Mini-PCIE Connector and mSATA/share with SATA3.0

J14: Digital I/O

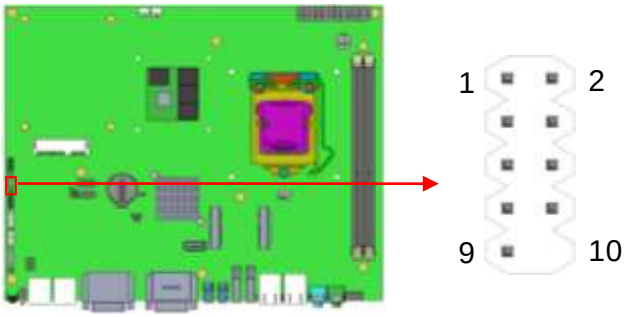


Signal Name	Pin#	Pin#	Signal Name
GND	1	2	VCC
OUT3	3	4	OUT1
OUT2	5	6	OUT0
IN3	7	8	IN1
IN2	9	10	IN0

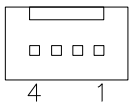
J19, J20: COM3, COM4 RS232 Serial Ports

Signal Name	Pin #	Pin #	Signal Name
DCD#	1	6	DSR#
SIN#	2	7	RTS#
SOUT	3	8	CTS#
DTR#	4	9	RI#
GND	5	X	KEY

JP4: LPC debug Connector (Factory use only)

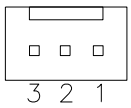


CPU_FAN1: CPU Fan Power Connector



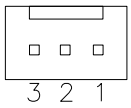
Pin #	Signal Name
1	Ground
2	+12V
3	Rotation detection
4	Control

SYS_FAN1: System Fan1 Power Connector



Pin #	Signal Name
1	Ground
2	+12V
3	Rotation detection

SYS_FAN2: System Fan2 Power Connector



Pin #	Signal Name
1	Ground
2	+12V
3	NC

CHAPTER 4 BIOS SETUP

This chapter describes the different settings available in the AMI BIOS that comes with the board. The topics covered in this chapter are as follows:

BIOS Introduction

The BIOS (Basic Input/Output System) installed in your computer system's ROM supports Intel processors. The BIOS provides critical low-level support for a standard device such as disk drives, serial ports and parallel ports. It also password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system.

BIOS Setup

The BIOS provides a Setup utility program for specifying the system configurations and settings. The BIOS ROM of the system stores the Setup utility. When you turn on the computer, the BIOS is immediately activated. Pressing the <Del> key immediately allows you to enter the Setup utility. If you are a little bit late pressing the <Del> key, POST (Power On Self Test) will continue with its test routines, thus preventing you from invoking the Setup. If you still wish to enter Setup, restart the system by pressing the "Reset" button or simultaneously pressing the <Ctrl>, <Alt> and <Delete> keys. You can also restart by turning the system Off and back On again. The following message will appear on the screen:

```
Press <DEL> to Enter Setup
```

In general, you press the arrow keys to highlight items, <Enter> to select, the <PgUp> and <PgDn> keys to change entries, <F1> for help and <Esc> to quit.

When you enter the Setup utility, the Main Menu screen will appear on the screen. The Main Menu allows you to select from various setup functions and exit choices.

Warning: *It is strongly recommended that you avoid making any changes to the chipset defaults. These defaults have been carefully chosen by both AMI and your system manufacturer to provide the absolute maximum performance and reliability. Changing the defaults could cause the system to become unstable and crash in some cases.*

Main Settings

Aptio Setup Utility – Copyright © 2011 American Megatrends, Inc.

Main	Advanced	Chipset	Boot	Security	Save & Exit
BIOS Information				Choose the system default language	
System Language		[English]			
System Date		[Tue 01/20/2009]		→ ←Select Screen	
Access Level		Administrator		↑ ↓ Select Item	
				Enter: Select	
				+- Change Field	
				F1:General Help	
				F2:Previous Values	
				F3: Optimized Default	
				F4: Save ESC: Exit	

System Language

Choose the system default language.

System Date

Set the Date. Use Tab to switch between Data elements.

System Time

Set the Time. Use Tab to switch between Data elements.

Advanced Settings

This section allows you to configure and improve your system and allows you to set up some system features according to your preference.

Aptio Setup Utility

Main	**Advanced**	Chipset	Boot	Security	Save & Exit
► PCI Subsystem Settings					
► ACPI Settings					
► Wake up event setting					
► Trusted Computing					
► CPU Configuration					
► SATA Configuration					
► Shutdown Temperature Configuration					
► iSmart Controller				→ ← Select Screen	
► AMT Configuration				↑ ↓ Select Item	
► Acoustic Management Configuration				Enter: Select	
► USB Configuration				+- Change Field	
► F81866 Super IO Configuration				F1:General Help	
► F81866 H/W Monitor				F2:Previous Values	
► CPU PPM Configuration				F3: Optimized Default	
				F4: Save ESC: Exit	

PCI Subsystem Settings

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
PCI Bus Driver Version			V 2.0502		
PCI 64bit Resources Handing					
Above 4G Decoding			Disabled		
PCI Common Settings					
PCI Latency Timer			32 PCI Bus Clocks		
VGA Palette Snoop			Disabled		
PERR# Generation			Disabled		
SERR# Generation			Disabled		
► PCI Express Settings					

→ ← Select Screen
↑ ↓ Select Item
Enter: Select
+- Change Field
F1:General Help
F2:Previous Values
F3: Optimized Default
F4: Save ESC: Exit

Above 4G Decoding

Enables or Disables 64bit capable devices to be decoded in above 4G address space (only if system supports 64 bit PCI decoding).

PCI Latency Timer

Value to be programmed into PCI Latency Timer Register.

VGA Palette Snoop

Enables or disables VGA Palette Registers Snooping.

PERR# Generation

Enables or disables PCI device to generate PERR#.

SERR# Generation

Enables or disables PCI device to generate SERR#.

PCI Express Settings

Change PCI Express devices settings.

PCI Express Settings

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
PCI Express Device Register Settings					
Relaxed Ordering			Disabled		
Extended Tag			Disabled		
No Snoop			Enabled		
Maximum Payload			Auto		
Maximum Read Request			Auto		
PCI Express Link Register Settings					
ASPM Support			Disabled		
WARNING: Enabling ASPM may cause some PCI-E devices to fail			Disabled		
Extended Synch			Disabled		
Link Training Retry			5		
Link Training Timeout (uS)			100		
Unpopulated Links			Keep Link ON		

→ ← Select Screen
↑ ↓ Select Item
Enter: Select
+- Change Field
F1: General Help
F2: Previous Values
F3: Optimized Default
F4: Save ESC: Exit

Relaxed Ordering

Enables or disables PCI Express Device Relaxed Ordering.

Extended Tag

If ENABLED allows device to use 8-bit Tag field as a requester.

No Snoop

Enables or disables PCI Express Device No Snoop option.

Maximum Payload

Set Maximum Payload of PCI Express Device or allow System BIOS to select the value.

Maximum Read Request

Set Maximum Read Request Size of PCI Express Device or allow System BIOS to select the value.

ASPM Support

Set the ASPM Level: Force L0s – Force all links to L0s State:

AUTO – BIOS auto configure : DISABLE – Disables ASPM.

Extended Synch

If ENABLED allows generation of Extended Synchronization patterns.

Link Training Retry

Defines number of Retry Attempts software will take to retrain the link if previous training attempt was unsuccessful.

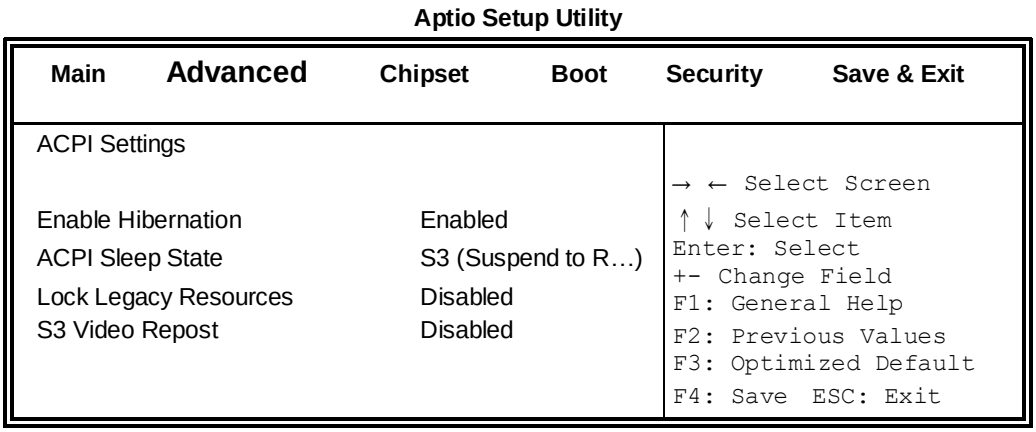
Link Training Timeout (uS)

Defines number of Microseconds software will wait before polling 'Link Training' bit in Link Status register. Value range from 10 to 1000 uS.

Unpopulated Links

In order to save power, software will disable unpopulated PCI Express links, if this option set to 'Disable Link'.

ACPI Settings



Enable Hibernation

Enables or Disables System ability to Hibernate (OS/S4 Sleep State). This option may be not effective with some OS.

ACPI Sleep State

Select ACPI sleep state the system will enter, when the SUSPEND button is pressed.

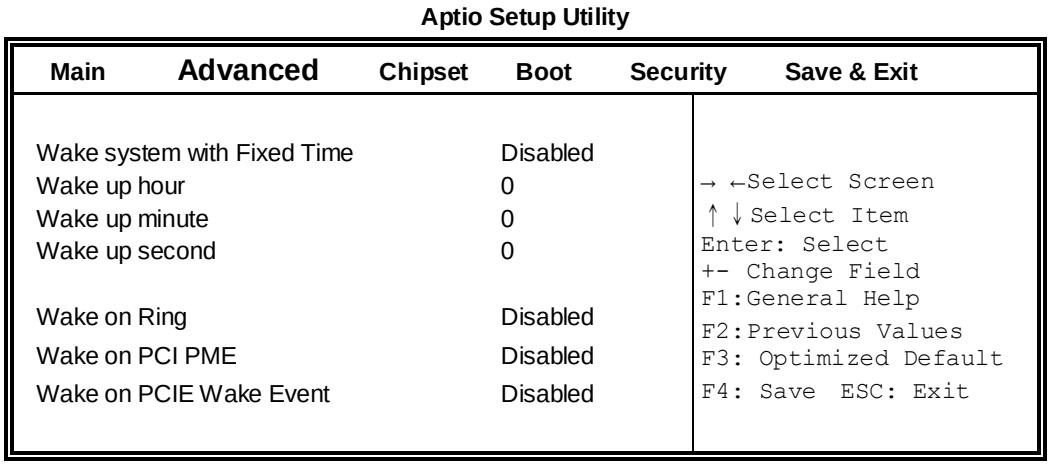
Lock Legacy Resources

Enabled or Disabled Lock of Legacy Resources.

S3 Video Repost

Enable or disable S3 Video Repost.

Wake up event settings



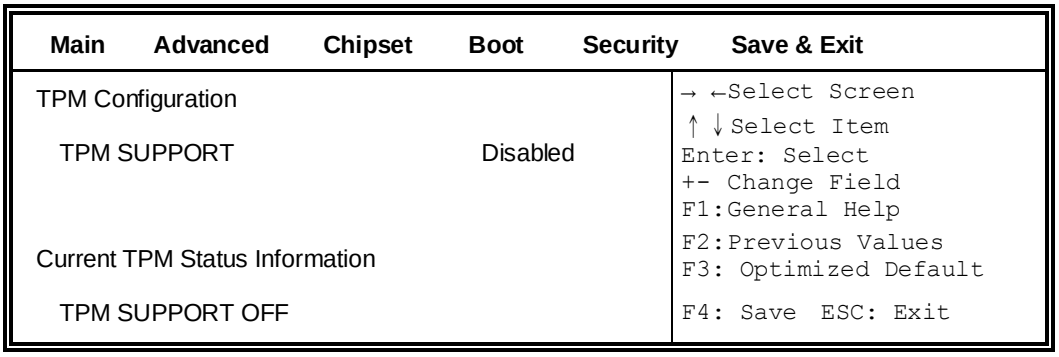
Wake system with Fixed Time

Enables or Disables System wake on alarm event. When enabled, System will wake on the hr::min:: sec specified.

Wake on PCIE PME Wake Event

The options are Disabled and Enabled.

Trusted Computing



TPM Support

This configuration is supported only with IB964VF. Enables or Disables TPM support. O.S. will not show TPM. Reset of platform is required.

Security Device Support

Enables or disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be available.

CPU Configuration

This section shows the CPU configuration parameters.

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
CPU Configuration					
Intel® Core ™ i7-3770 CPU @ 3.40GHz					
Processor Stepping			306a8		
Microcode Revision			c		
Max CPU Speed			3400 MHz		
Min CPU Speed			1600 MHz		
CPU Speed			3400 MHz		
Processor Cores			4		
Intel HT Technology			Supported		
Intel VT-x Technology			Supported		
Intel SMX Technology			Supported		
64-bit			Supported		
Hyper-threading			Enabled		
Active Processor Cores			All		
Limit CPUID Maximum			Disabled		
Execute Disable Bit			Enabled		
Intel Virtualization Technology			Disabled		
Hardware Prefetcher			Disabled		
Adjacent Cache Line Prefetch			Enabled		

→ ← Select Screen
↑ ↓ Select Item
Enter: Select
+- Change Field
F1:General Help
F2:Previous Values
F3: Optimized Default
F4: Save ESC: Exit

Hyper-threading

Enabled for Windows XP and Linux (OS optimized for Hyper-Threading Technology) and Disabled for other OS (OS not optimized for Hyper-Threading Technology). When Disabled, only one thread per enabled core is enabled.

Active Processor Cores

Number of cores to enable in each processor package.

Limit CPUID Maximum

Disabled for Windows XP.

Execute Disable Bit

XD can prevent certain classes of malicious buffer overflow attacks when combined with a supporting OS (Windows Server 2003 SP1, Windows XP SP2, SuSE Linux 9.2, Re33dHat Enterprise 3 Update 3.)

Intel Virtualization Technology

When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology.

Hardware Prefetcher

To turn on/off the Mid level Cache (L2) streamer Prefetcher.

Adjacent Cache Line Prefetch

To turn on/off prefetching of adjacent cache lines.

SATA Configuration

SATA Devices Configuration.

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit

SATA Controller(s)	Enabled
SATA Mode Selection	AHCI
Aggressive LPM Support	Enabled
SATA Controller Speed	Gen3
SATA Port0	Empty
Software Preserve	Unknown
SATA Port1	Empty
Software Preserve	Unknown
SATA Port2	Empty
Software Preserve	Unknown
SATA Port3	Empty
Software Preserve	Unknown
SATA Port4	Empty
Software Preserve	Unknown
SATA Port5	Empty
Software Preserve	Unknown

→ ←Select Screen
↑ ↓Select Item
Enter: Select
+- Change Field
F1:General Help
F2:Previous Values
F3: Optimized Default
F4: Save ESC: Exit

SATA Controller(s)

Enable / Disable Serial ATA Controller.

SATA Mode Selection

(1) IDE Mode.
(2) AHCI Mode.
(3) RAID Mode.

Shutdown Temperature Configuration

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
APCI Shutdown Temperature			Disabled		→ ← Select Screen ↑ ↓ Select Item Enter: Select +- Change Field F1:General Help F2:Previous Values F3: Optimized Default F4: Save ESC: Exit

ACPI Shutdown Temperature

The default setting is Disabled.

iSmart Controller

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
iSmart Controller					
Power-On after Power failure			Disable		
Schedule Slot 1			None		
Schedule Slot 2			None		

ISmart Controller

Setup the power on time for the system.

Schedule Slot 1 / 2

Setup the hour/minute for system power on.

AMT Configuration

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
Intel AMT			Enabled		
BIOS Hotkey Pressed			Disabled		
MEBx Selection Screen			Disabled		
Hide Un-Configure ME Confirmation			Disabled		
Un-Configure ME			Disabled		
Amt Wait Timer			0		
Activate Remote Assistance Process			Disabled		
USB Configure			Enabled		
PET Progress			Enabled		
AMT CIRA Timeout			0		
Watchdog			Disabled		
OS Timer			0		
BIOS Timer			0		

→ ← Select Screen
↑ ↓ Select Item
Enter: Select
+- Change Field
F1:General Help
F2:Previous Values
F3: Optimized Default
F4: Save ESC: Exit

AMT Configuration

This configuration is supported only with IB964VF (with iAMT function). Options are Enabled and Disabled.

Note: iAMT H/W is always enabled. This option just controls the BIOS extension execution. If enabled, this requires additional firmware in the SPI device.

Unconfigure ME

This configuration is supported only with IB964VF (with iAMT function). Perform AMT/ME unconfigure without password operation.

Amt Wait Timer

Set timer to wait before sending ASF_GET_BOOT_OPTIONS.

Activate Remote Assistance Process

Trigger CIRA boot.

PET Progress

User can Enable/Disable PET Events progress to receive PET events or not.

Watchdog Timer

This configuration is supported only with IB964VF (with iAMT function). Enable/Disable Watchdog Timer.

Acoustic Management Configuration

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
Acoustic Management Configuration					
Acoustic Management			Disabled		

USB Configuration

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
USB Configuration					
USB Devices:					
2 Hubs					
Legacy USB Support			Enabled		
USB3.0 Support			Enabled		
XHCI Hand-off			Enabled		
EHCI Hand-off			Enabled		→ ←Select Screen
Port 60/64 Emulation			Enabled		↑ ↓ Select Item
USB hardware delays and time-outs:					Enter: Select
USB Transfer time-out			20 sec		+- Change Field
Device reset tine-out			20 sec		F1:General Help
Device power-up delay			Auto		F2:Previous Values
					F3: Optimized Default
					F4: Save ESC: Exit

Legacy USB Support

Enables Legacy USB support.
AUTO option disables legacy support if no USB devices are connected.
DISABLE option will keep USB devices available only for EFI applications.

USB3.0 Support

Enable/Disable USB3.0 (XHCI) Controller support.

XHCI Hand-off

This is a workaround for OSes without XHCI hand-off support. The XHCI ownership change should be claimed by XHCI driver.

EHCI Hand-off

Enabled/Disabled. This is a workaround for OSes without EHCI hand-off support. The EHCI ownership change should be claimed by EHCI driver.

Port 64/60 Emulation

Enables I/O port 60h/64h emulation support. This should be enabled for the complete USB keyboard legacy support for non-USB aware OSes.

USB Transfer time-out

The time-out value for Control, Bulk, and Interrupt transfers.

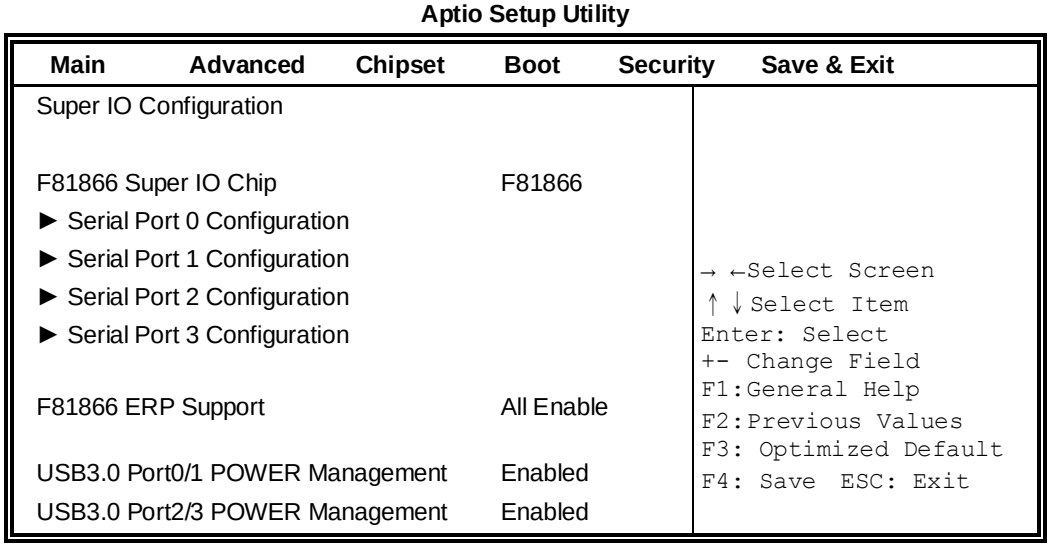
Device reset tine-out

USB mass Storage device start Unit command time-out.

Device power-up delay

Maximum time the device will take before it properly reports itself to the Host Controller. 'Auto' uses default value: for a Root port it is 100ms, for a Hub port the delay is taken from Hub descriptor.

F81866 Super IO Configuration



Serial Port Configuration

Set Parameters of Serial Ports. User can Enable/Disable the serial port and Select an optimal settings for the Super IO Device.

F81866 H/W Monitor

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit

PC Health Status	
CPU_Fan1 smart fan control	Disabled
SYS_Fan1 smart fan control	Disabled
SYS_Fan2 smart fan control	Disabled
CPU temperature	+41 C
SYS temperature	+35 C
CPU_FAN1 Speed	2115 RPM
SYS_FAN1 Speed	N/A
SYS_FAN2 Speed	N/A
Vcore	+1.000 V
+5V	+5.213 V
+12V	+12.408 V
1.5V	+1.544 V
+3.3V	+3.424 V

→ ←Select Screen
↑ ↓Select Item
Enter: Select
+- Change Field
F1:General Help
F2:Previous Values
F3: Optimized Default
F4: Save ESC: Exit

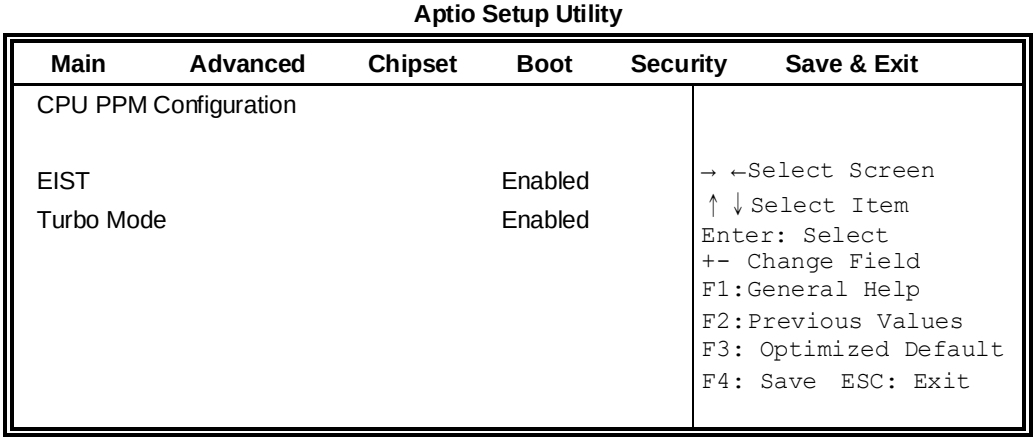
Temperatures/Voltages

These fields are the parameters of the hardware monitoring function feature of the motherboard. The values are read-only values as monitored by the system and show the PC health status.

Fan1/Fan2 Smart Fan Control

This field enables or disables the smart fan feature. At a certain temperature, the fan starts turning. Once the temperature drops to a certain level, it stops turning again.

CPU PPM Configuration

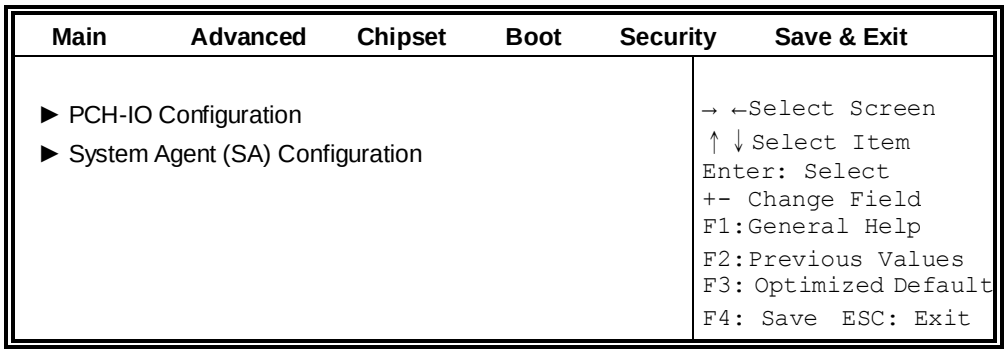


EIST

Enable/Disable Intel SpeedStep.

Chipset Settings

This section allows you to configure and improve your system and allows you to set up some system features according to your preference.



PCH-IO Configuration

This section allows you to configure the North Bridge Chipset.

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
Intel PCH RC Version			1.1.0.0		
Intel PCH SKU Name			Q77		
Intel PCH Rev ID			O4/C1		
► PCI Express Configuration					
► USB Configuration					
► PCH Azalia Configuration					
PCH LAN Controller			Enabled		
Wake on LAN			Enabled		
High Precision Event Timer Configuration					
High Precision Timer			Enabled		
SLP_S4 Assertion Width			4-5 Seconds		
Restore AC Power Loss			Power On		

→ ← Select Screen
↑ ↓ Select Item
Enter: Select
+- Change Field
F1:General Help
F2:Previous Values
F3: Optimized Default
F4: Save ESC: Exit

PCH LAN Controller

Enable or disable onboard NIC.

Wake on LAN

Enable or disable integrated LAN to wake the system. (The Wake On LAN cannot be disabled if ME is on at Sx state.)

SLP_S4 Assertion Width

Select a minimum assertion width of the SLP_S4# signal.

Restore AC Power Loss

Select AC power state when power is re-applied after a power failure.

PCI Express Configuration

Main	Advanced	Chipset	Boot	Security	Save & Exit

PCI Express Configuration

PCI Express Clock Gating	Enabled
DMI Link ASPM Control	Enabled
DMI Link Extended Synch Control	Disabled
PCIe-USB Glitch W/A	Disabled
Subtractive Decode	Disabled

► PCI Express Root Port 1
► PCI Express Root Port 2
► PCI Express Root Port 3
► PCI Express Root Port 4
► PCI Express Root Port 5
PCI-E Port 6 is assigned to LAN
► PCI Express Root Port 7
► PCI Express Root Port 8

→ ← Select Screen
↑ ↓ Select Item
Enter: Select
+- Change Field
F1: General Help
F2: Previous Values
F3: Optimized Default
F4: Save ESC: Exit

PCI Express Clock Gating

Enable or disable PCI Express Clock Gating for each root port.

DMI Link ASPM Control

The control of Active State Power Management on both NB side and SB side of the DMI link.

PCIe-USB Glitch W/A

PCIe-USB Glitch W/A for bad USB device(s) connected behind PCIE/PEG port.

USB Configuration

Main	Advanced	Chipset	Boot	Security	Save & Exit
USB Configuration					
XHCI Pre-Boot Driver			Enabled		
xHCI Mode			Smart Auto		
HS Port #1 Switchable			Enabled		
HS Port #2 Switchable			Enabled		
HS Port #3 Switchable			Enabled		
HS Port #4 Switchable			Enabled		
xHCI Streams			Enabled		
EHCI1			Enabled		
EHCI2			Enabled		
USB Ports Per-Port Disable Control			Disabled		

→ ← Select Screen
↑ ↓ Select Item
Enter: Select
+- Change Field
F1:General Help
F2:Previous Values
F3: Optimized Default
F4: Save ESC: Exit

HS Port #1/2/3/4 Switchable

Allows for HS port switching between xHCI and EHCI. If disabled, port is routed to EHCI. If HS port is routed to xHCI, the corresponding SS port is enabled.

xHCI Streams

Enable or disable xHCI Maximum Primary Stream Array Size.

EHCI1/2

Control the USAB EHCI (USB 2.0) functions. One EHCI controller must always be enabled.

USB Ports Per-Port Disable Control

Control each of the USB ports (0~13) disabling.

PCH Azalia Configuration

Main	Advanced	Chipset	Boot	Security	Save & Exit
PCH Azalia Configuration					
Azalia			Auto		

Azalia

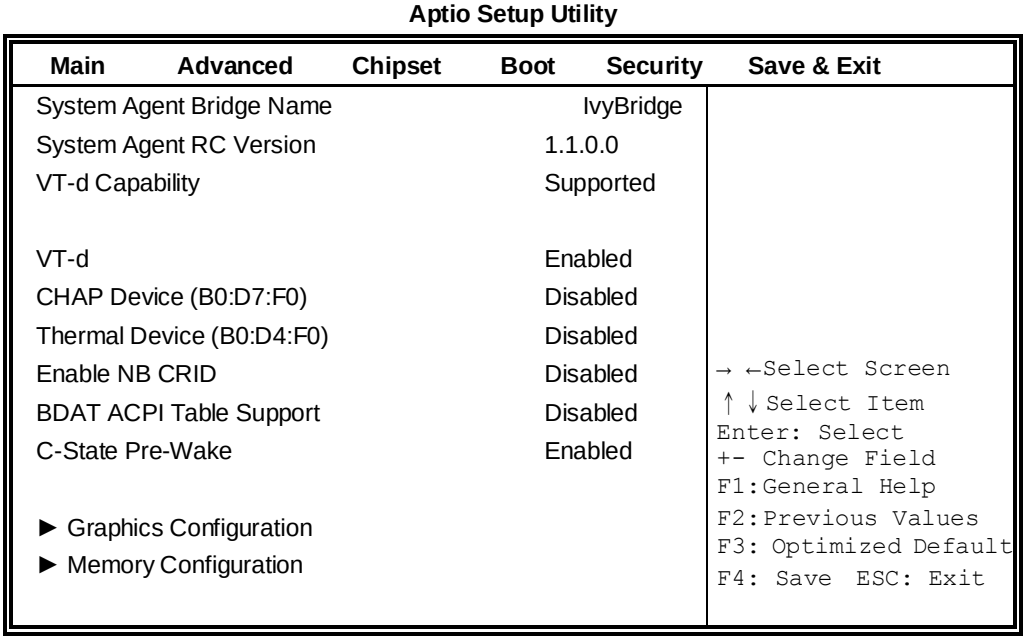
Control Detection of the Azalia device.

Disabled = Azalia will unconditionally disabled.

Enabled Azalia will be unconditionally enabled.

Auto = Azalia will be enabled if present, disabled otherwise.

System Agent (SA) Configuration



VT-d

Check to enable VT-d function on MCH.

Enable NB CRID

Enable or disable NB CRID WorkAround.

C-State Pre-Wake

Controls C-State Pre-Wake feature for ARAT, in SSKPD[57].

Graphics Configuration

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
Graphics Configuration					
IGFX VBIOS Version			2132		
IGfx Frequency			350 MHz		
Primary Display			Auto		
Internal Graphics			Auto		
GTT Size			2MB		
Aperture Size			256MB		
DVMT Pre-Allocated			64M		
DVMT Total Gfx Mode			Disabled		
► LCD Control					

→ ←Select Screen
↑ ↓
Select Item
Enter: Select
+- Change Field
F1:General Help
F2:Previous Values
F3: Optimized Default
F4: Save ESC: Exit

Primary Display

Select which of IGFX/PEG/PCI graphics device should be primary display or select SG for switchable Gfx.

Internal Graphics

Keep IGD enabled based on the setup options.

DVMT Pre-Allocated

Select DVMT 5.0 Pre-Allocated (Fixed) graphics memory size used by the internal graphics device.

DVMT Total Gfx Mem

Select DVMT 5.0 total graphics memory size used by the internal graphics device.

Gfx Low Power Mode

This option is applicable for SFF only.

Primary IGFX Boot Display (LCD Control)

Select the Video Device that will be activated during POST. This has no effect if external graphics present. Secondary booty display selection will appear based on your selection. VGA modes will be supported only on primary display.

Memory Configuration

Aptio Setup Utility

Main	Advanced	Chipse	Boot	Security	Save & Exit
Memory Information					
Memory Frequency			1333 MHz		
Total Memory			8192 MB (DDR3)		
DIMM#0			2048 MB (DDR3)		
DIMM#1			2048 MB (DDR3)		
DIMM#2			2048 MB (DDR3)		→ ←Select Screen
DIMM#3			2048 MB (DDR3)		↑ ↓Select Item
CAS Latency (tCL)			9		Enter: Select
Minimum delay time					+- Change Field
	CAS to RAS (tRCDmin)		9		F1:General Help
	Row Precharge (tRPmin)		9		F2:Previous Values
	Active to Precharge (tRASmin)		24		F3: Optimized Default
					F4: Save ESC: Exit

Boot Settings

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
Boot Configuration					
Setup Prompt Timeout			1		
Bootup NumLock State			On		
Quiet Boot			Disabled		
Fast Boot			Disabled		
CSM16 Module Version			07.69		
GateA20 Active			Upon Request		
Option ROM Messages			Force BIOS		
INT19 Trap Response			Immediate		
Boot Option Priorities					
► CSM parameters					

→ ← Select Screen
↑ ↓ Select Item
Enter: Select
+- Change Field
F1: General Help
F2: Previous Values
F3: Optimized Default
F4: Save ESC: Exit

Setup Prompt Timeout

Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.

Bootup NumLock State

Select the keyboard NumLock state.

Quiet Boot

Enables/Disables Quiet Boot option.

Fast Boot

Enables/Disables boot with initialization of a minimal set of devices required to launch active boot option. Has no effect for BBS boot options.

GateA20 Active

UPON REQUEST – GA20 can be disabled using BIOS services.

ALWAYS – do not allow disabling GA20; this option is useful when any RT code is executed above 1MB.

Option ROM Messages

Set display mode for Option ROM. Options are Force BIOS and Keep Current.

INT19 Trap Response

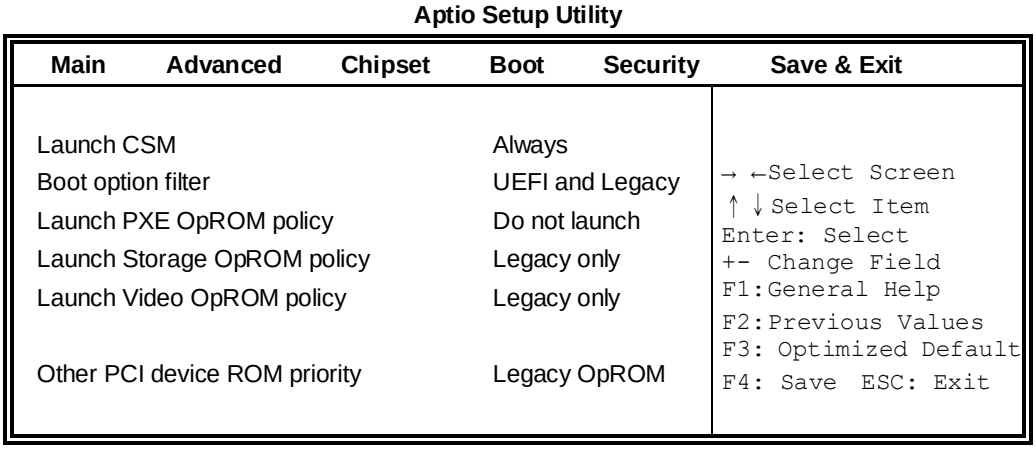
Enable: Allows Option ROMs to trap Int 19.

Boot Option Priorities

Sets the system boot order.

CSM parameters

This section allows you to configure the boot settings.



Boot option filter

This option controls what devices system can boot to.

Launch PXE OpROM policy

Controls the execution of UEFI and Legacy PXE OpROM.

Launch Storatge OpROM policy

Controls the execution of UEFI and Legacy Storage OpROM.

Launch Video OpROM policy

Controls the execution of UEFI and Legacy Video OpROM.

Other PCI device ROM priority

For PCI devices other than Network, Mass storage or Video defines which OpROM to launch.

Security Settings

This section allows you to configure and improve your system and allows you to set up some system features according to your preference.

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit

Password Description

If ONLY the Administrator's password is set, then this only limit access to Setup and is only asked for when entering Setup.
If ONLY the User's password is set, then this is a power on password and must be entered to boot or enter Setup. In Setup the User will have Administrator rights

The password length must be

in the following range:

Minimum length 3

Maximum length 20

Administrator Password

User Password

→ ←Select Screen
↑ ↓
Select Item
Enter: Select
+- Change Field
F1:General Help
F2:Previous Values
F3: Optimized Default
F4: Save ESC: Exit

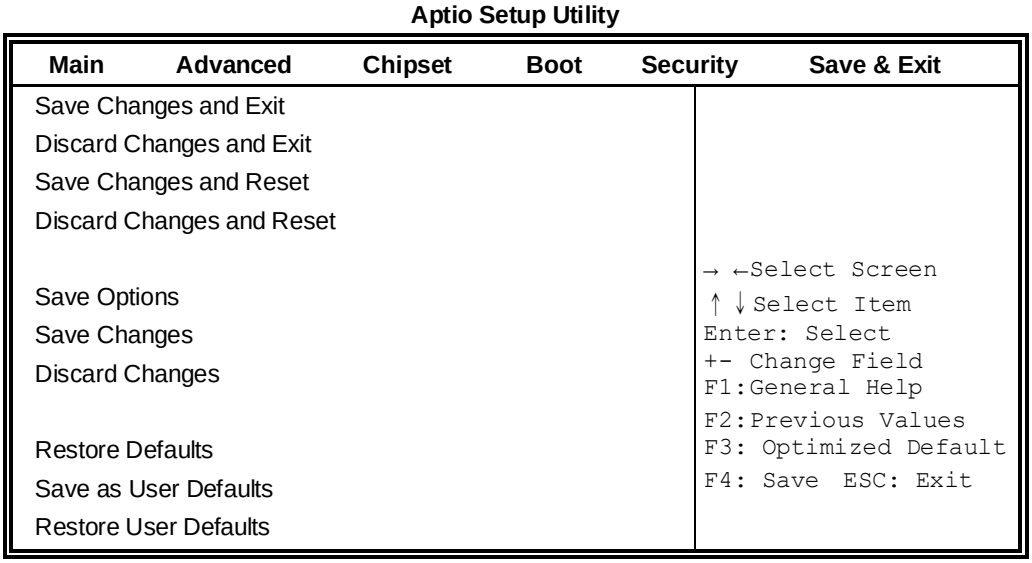
Administrator Password

Set Setup Administrator Password.

User Password

Set User Password.

Save & Exit Settings



Save Changes and Exit

Exit system setup after saving the changes.

Discard Changes and Exit

Exit system setup without saving any changes.

Save Changes and Reset

Reset the system after saving the changes.

Discard Changes and Reset

Reset system setup without saving any changes.

Save Changes

Save Changes done so far to any of the setup options.

Discard Changes

Discard Changes done so far to any of the setup options.

Restore Defaults

Restore/Load Defaults values for all the setup options.

Save as User Defaults

Save the changes done so far as User Defaults.

Restore User Defaults

Restore the User Defaults to all the setup options.

CHAPTER 5 DRIVERS INSTALLATION

This section describes the installation procedures for software and drivers. The software and drivers are included with the motherboard. If you find the items missing, please contact the vendor where you made the purchase

IMPORTANT NOTE:

After installing your Windows operating system, you must install first the Intel Chipset Software Installation Utility before proceeding with the drivers installation.

5.1 Intel Chipset Software Installation Utility

The Intel Chipset Drivers should be installed first before the software drivers to enable Plug & Play INF support for Intel chipset components. Follow the instructions below to complete the installation.

1. Insert the CD that comes with the board. Click ***Intel*** and then ***Intel(R) 7 Series Chipset Drivers***.

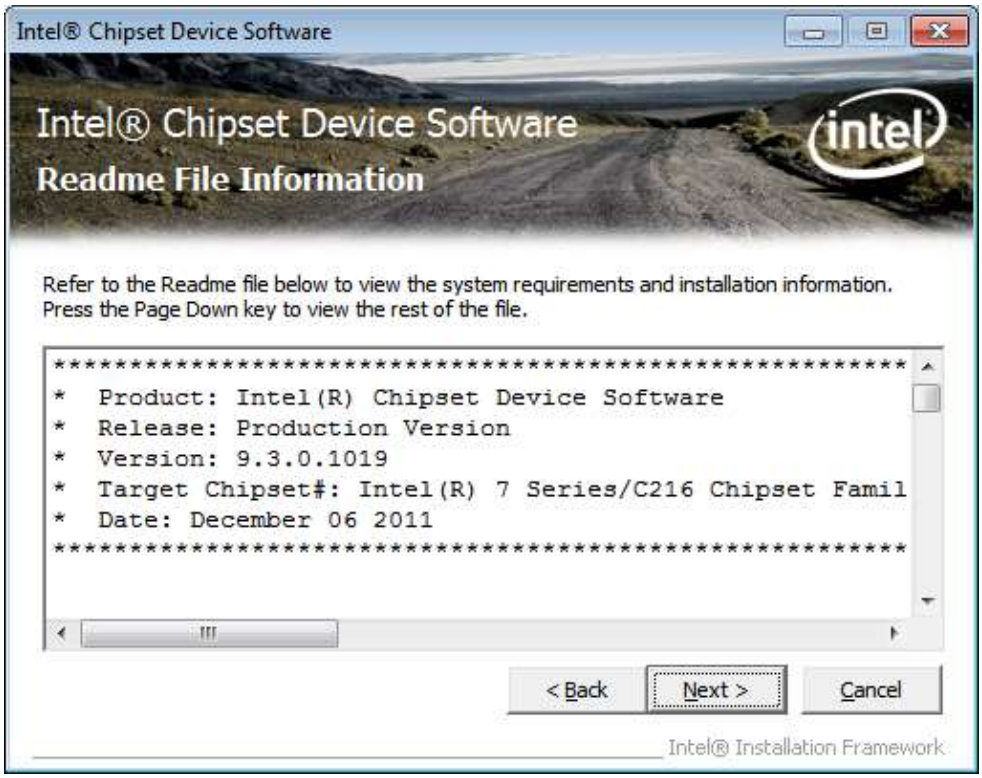
[

2. Click ***Intel(R) Chipset Software Installation Utility***.

3. When the Welcome screen to the Intel® Chipset Device Software appears, click ***Next*** to continue.

4. Click ***Yes*** to accept the software license agreement and proceed with the installation process.

5. On the Readme File Information screen, click ***Next*** to continue the installation.



6. The Setup process is now complete. Click ***Finish*** to restart the computer and for changes to take effect.

5.2 VGA Drivers Installation

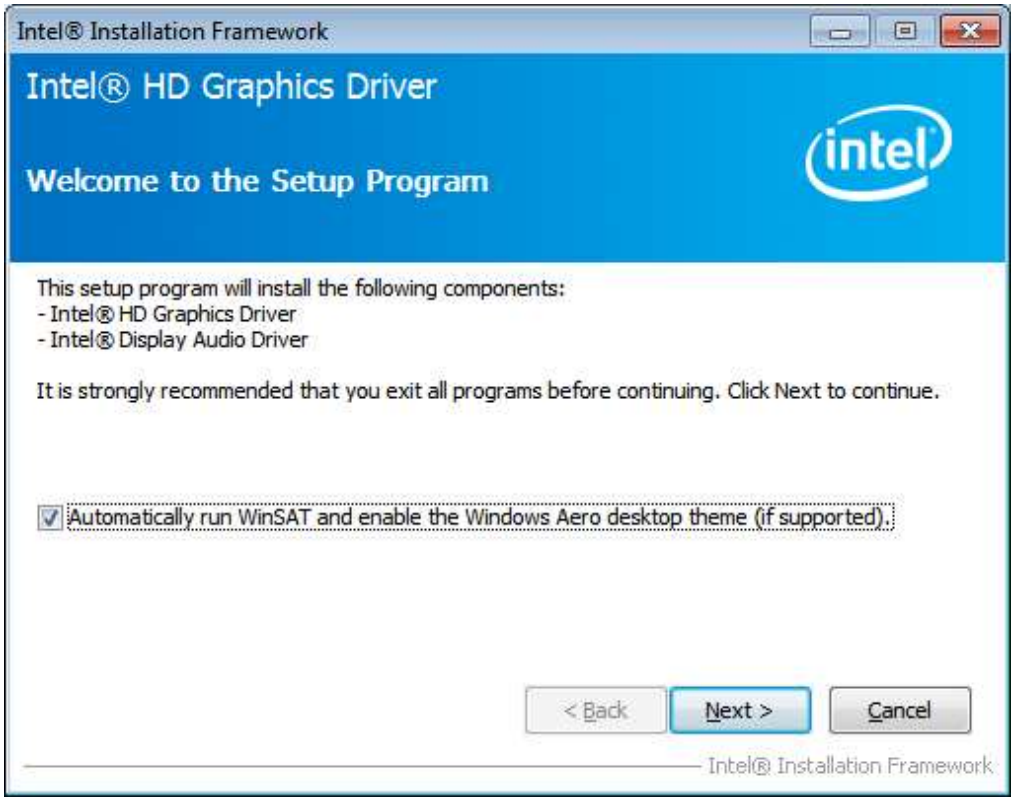
NOTE: Before installing the Intel(R) Q77 Chipset Family Graphics Driver, the Microsoft .NET Framework 3.5 SPI should be first installed.

To install the VGA drivers, follow the steps below.

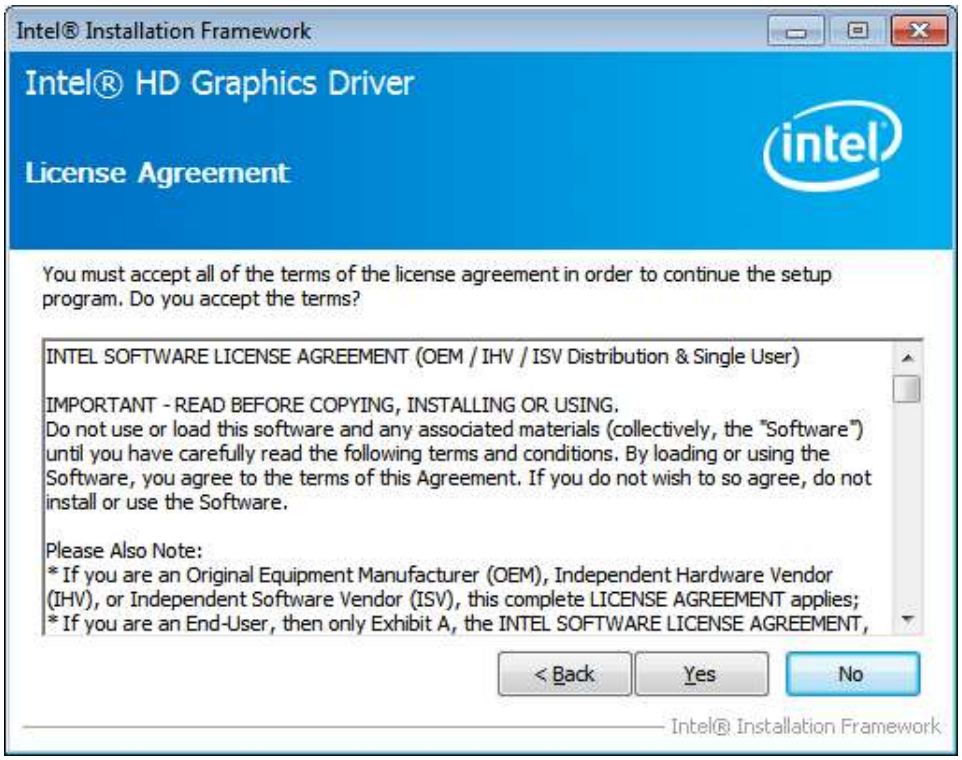
1. Insert the CD that comes with the board. Click ***Intel*** and then ***Intel(R) Q7 Series Chipset Drivers***.

2. Click ***Intel(R) Q77 Chipset Family Graphics Driver.***

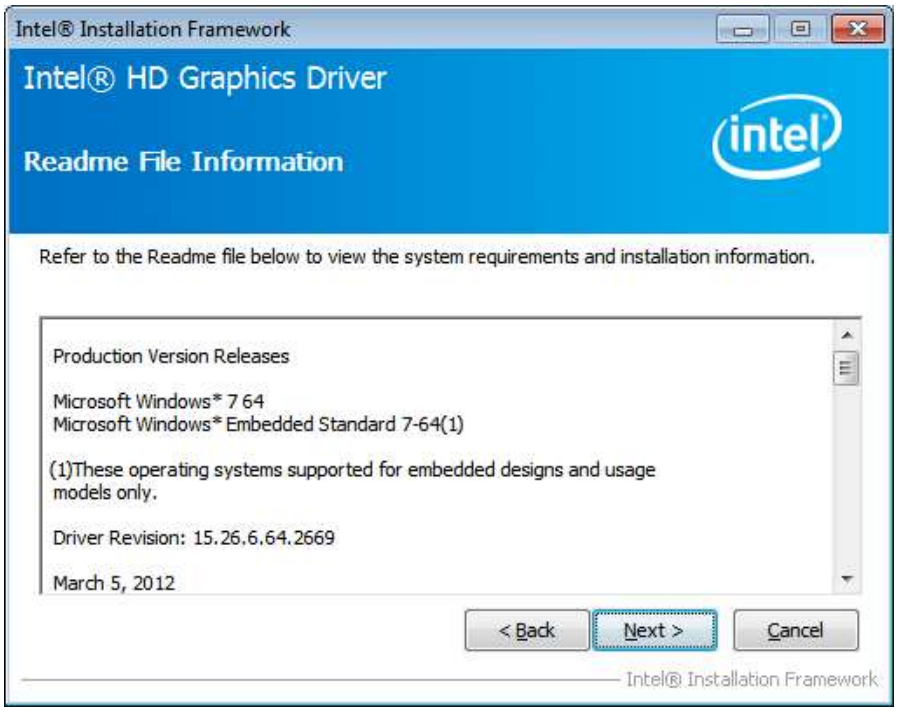
3. When the Welcome screen appears, click ***Next*** to continue.



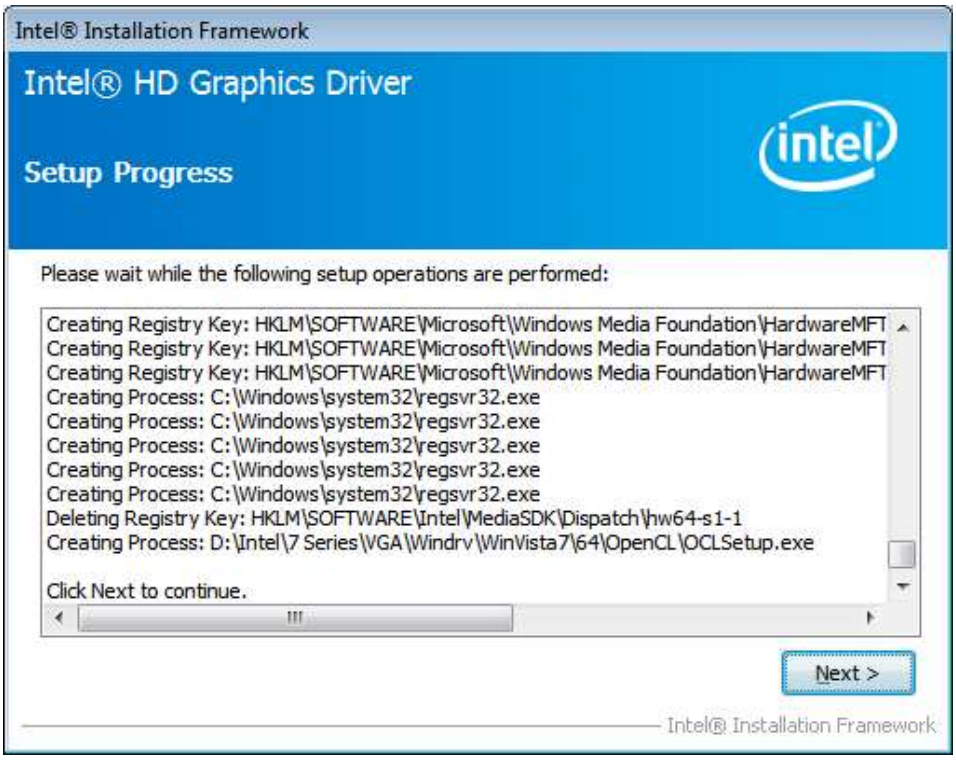
4. Click ***Yes*** to agree with the license agreement and continue the installation.



5. On the Readme File Information screen, click ***Next*** to continue the installation of the Intel® Graphics Media Accelerator Driver.



6. On Setup Progress screen, click ***Next*** to continue.



7. Setup complete. Click ***Finish*** to restart the computer and for changes to take effect.

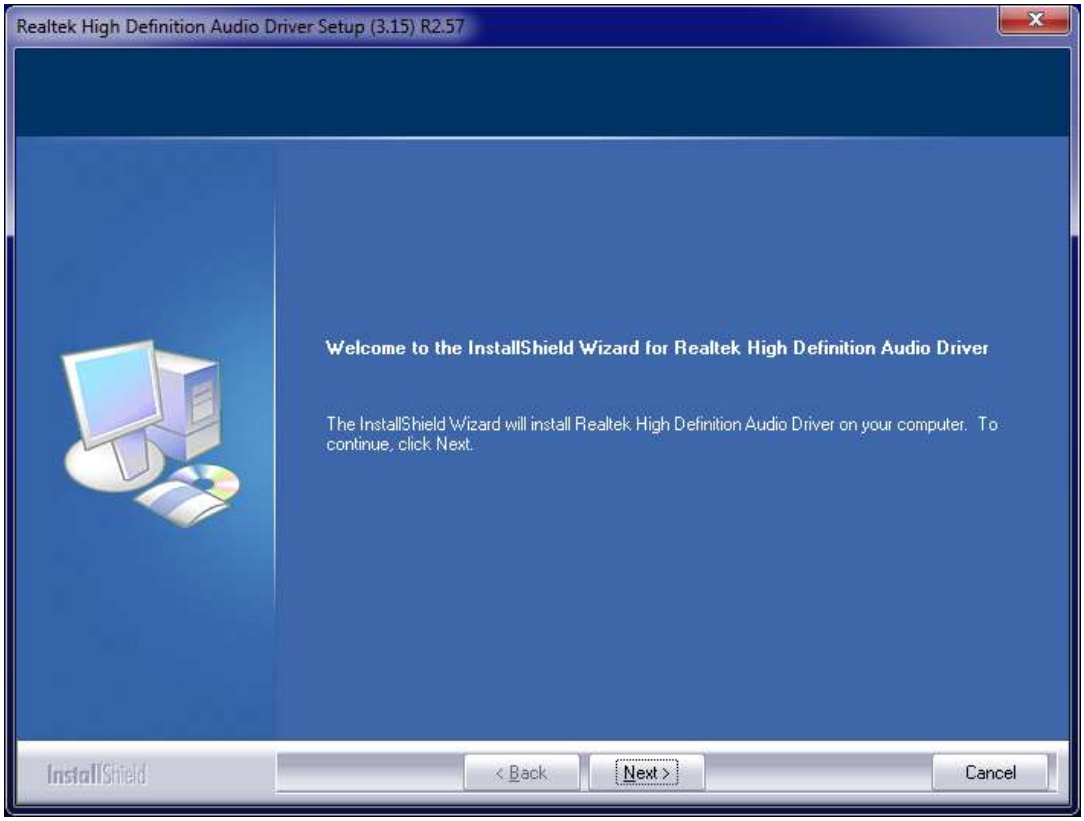
5.3 Realtek HD Audio Driver Installation

Follow the steps below to install the Realtek HD Audio Drivers.

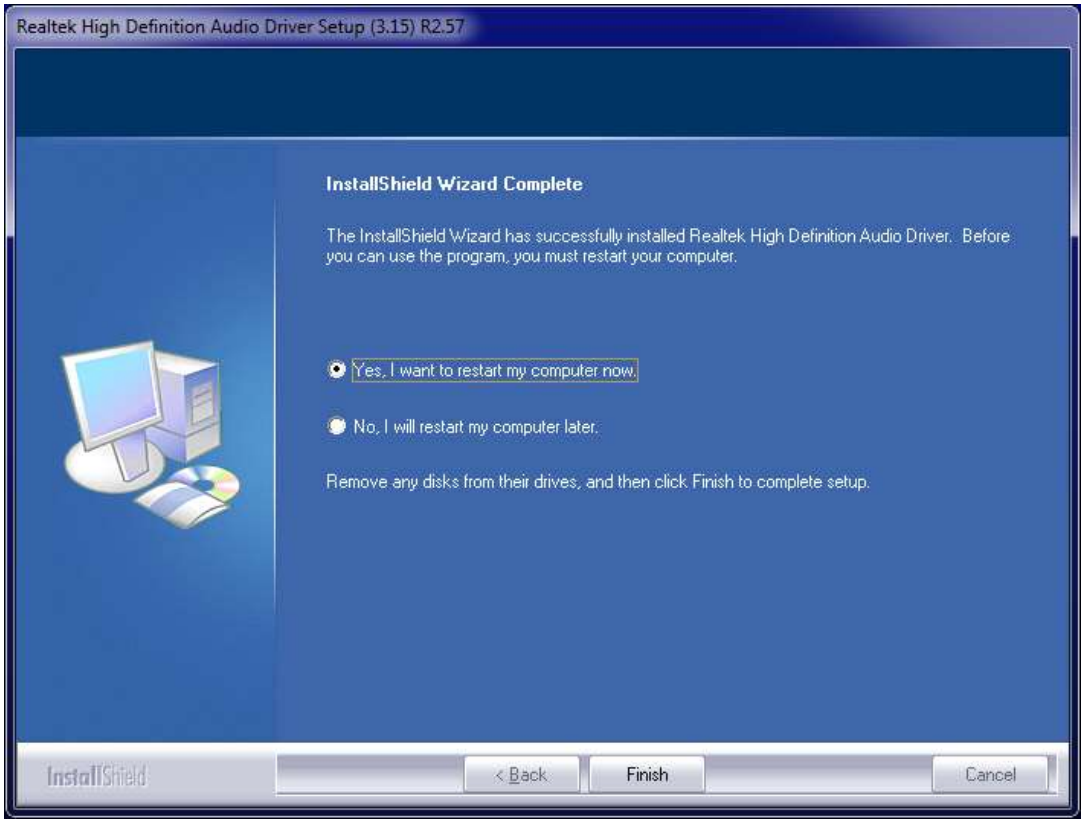
1. Insert the CD that comes with the board. Click ***Intel*** and then ***Intel(R) Q7 Series Chipset Drivers***.

2. Click ***Realtek High Definition Audio Driver.***

3. On the Welcome to the InstallShield Wizard screen, click ***Next*** to proceed with and complete the installation process.



4. The InstallShield Wizard Complete. Click ***Finish*** to restart the computer and for changes to take effect.

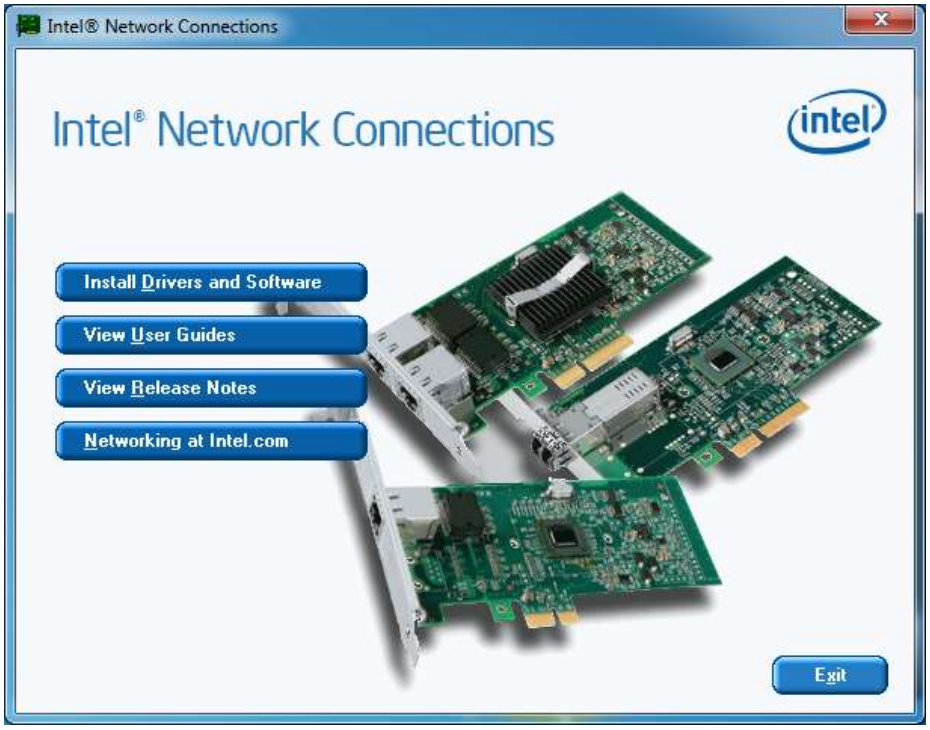


5.4 LAN Drivers Installation

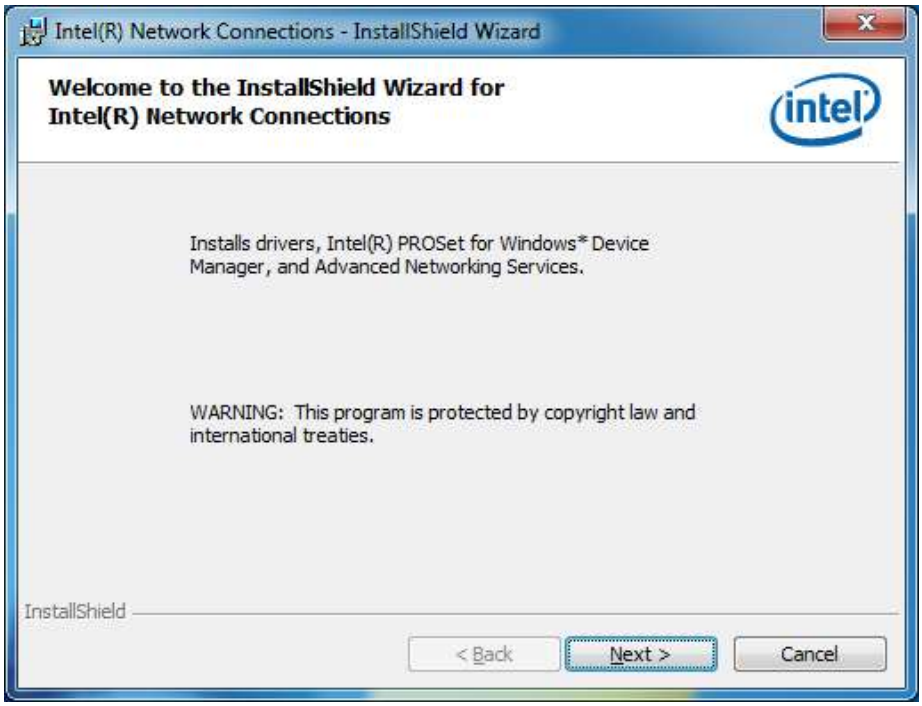
1. Insert the CD that comes with the board. Click ***Intel*** and then ***Intel(R) Q7 Series Chipset Drivers***.

2. Click ***Intel(R) PRO LAN Network Driver.***

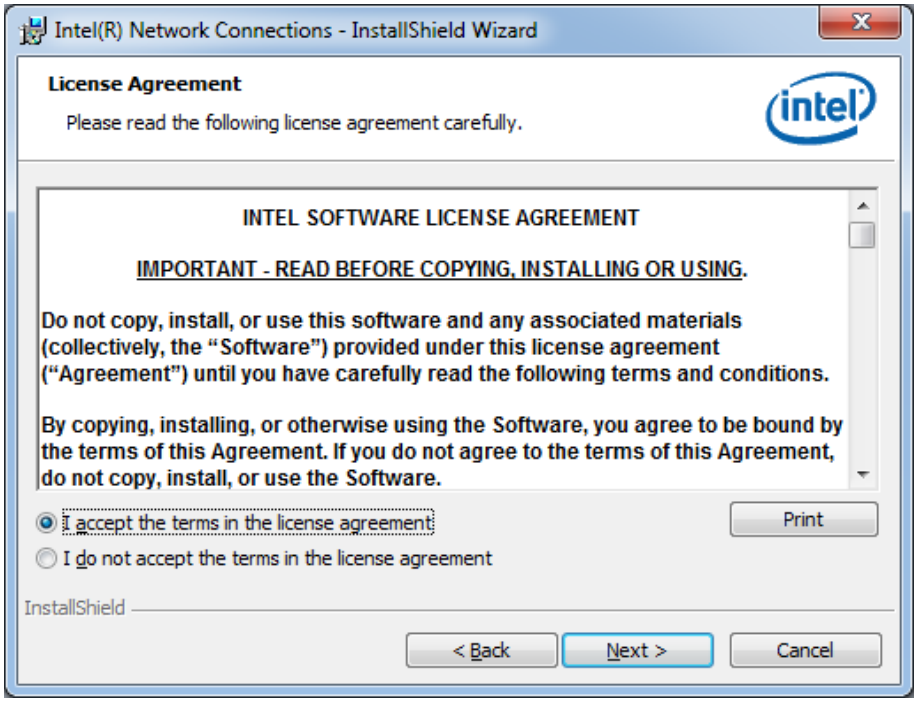
3. Click ***Install Drivers and Software.***



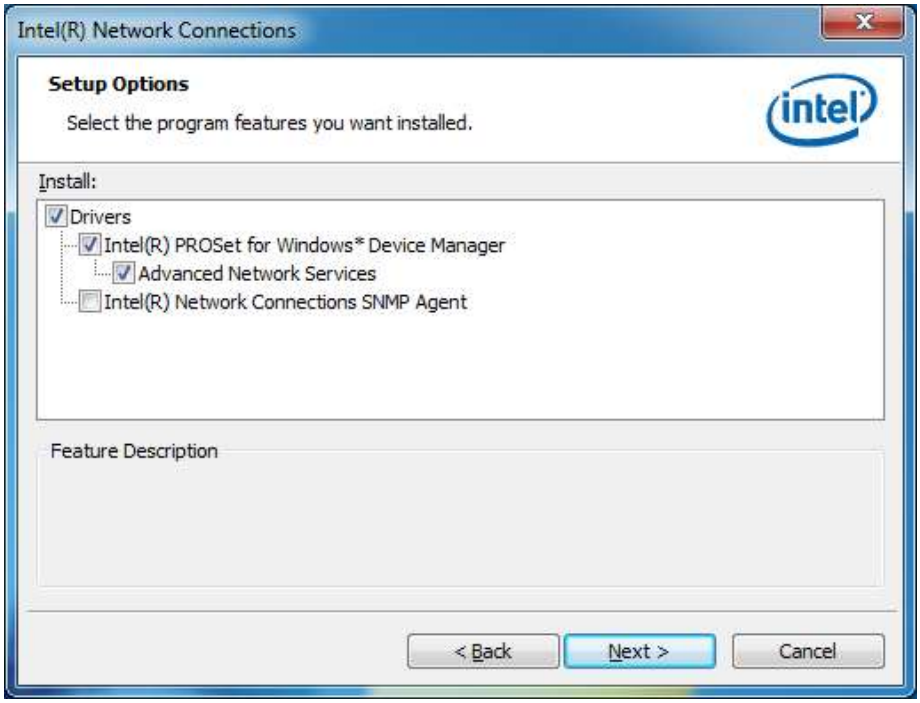
4. When the Welcome screen appears, click ***Next***.



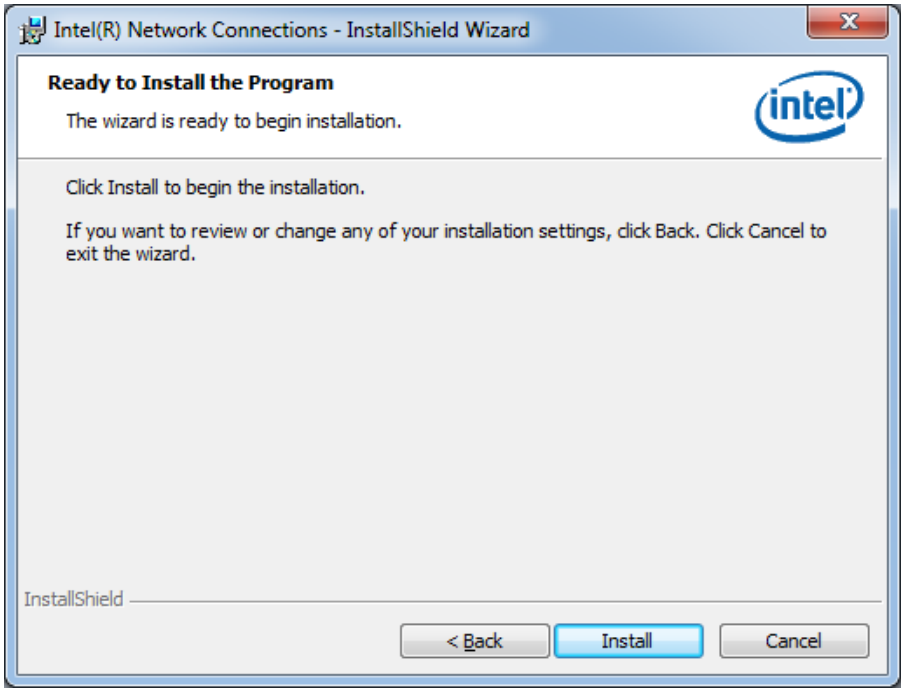
5. Click ***Next*** to to agree with the license agreement.



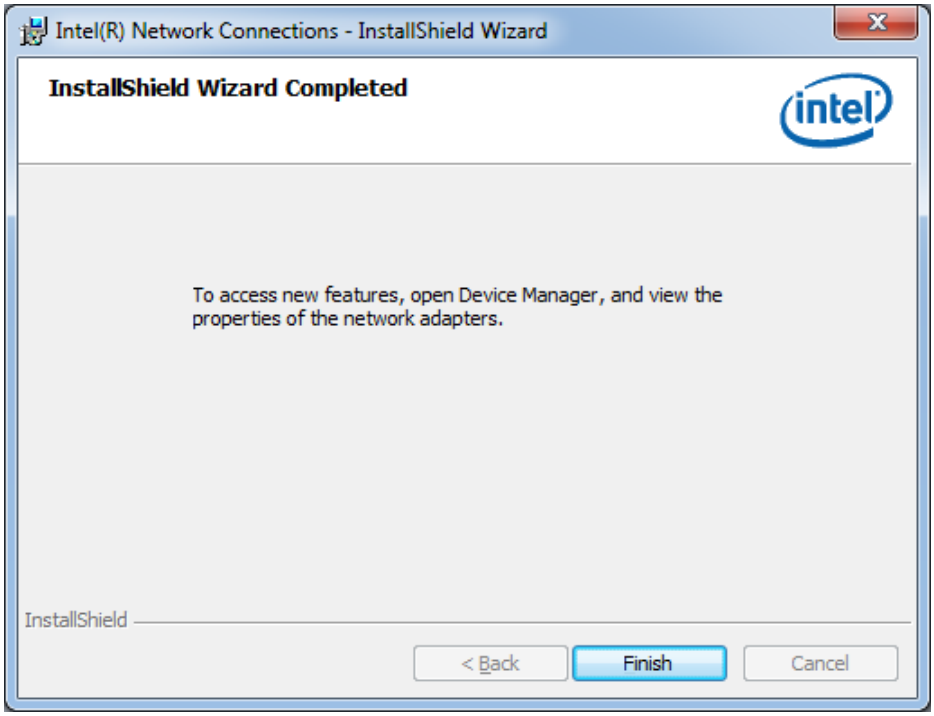
6. Click the checkbox for **Drivers** in the Setup Options screen to select it and click **Next** to continue.



7. The wizard is ready to begin installation. Click ***Install*** to begin the installation.



8. When InstallShield Wizard is complete, click ***Finish***.

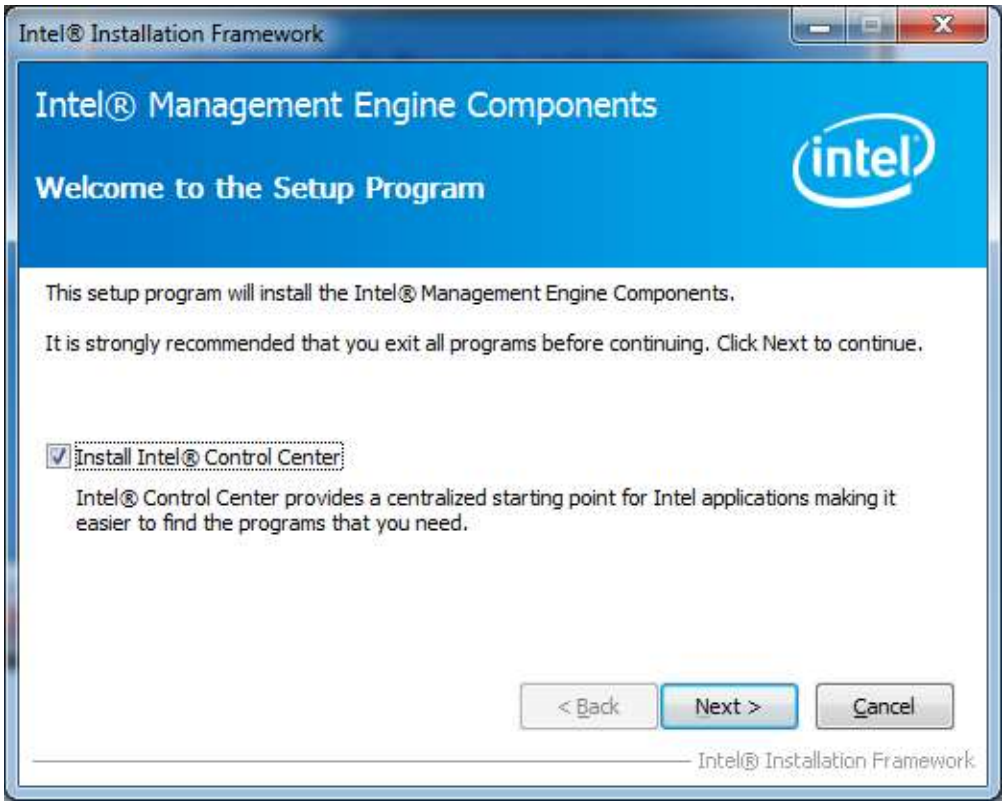


5.5 Intel® Management Engine Interface

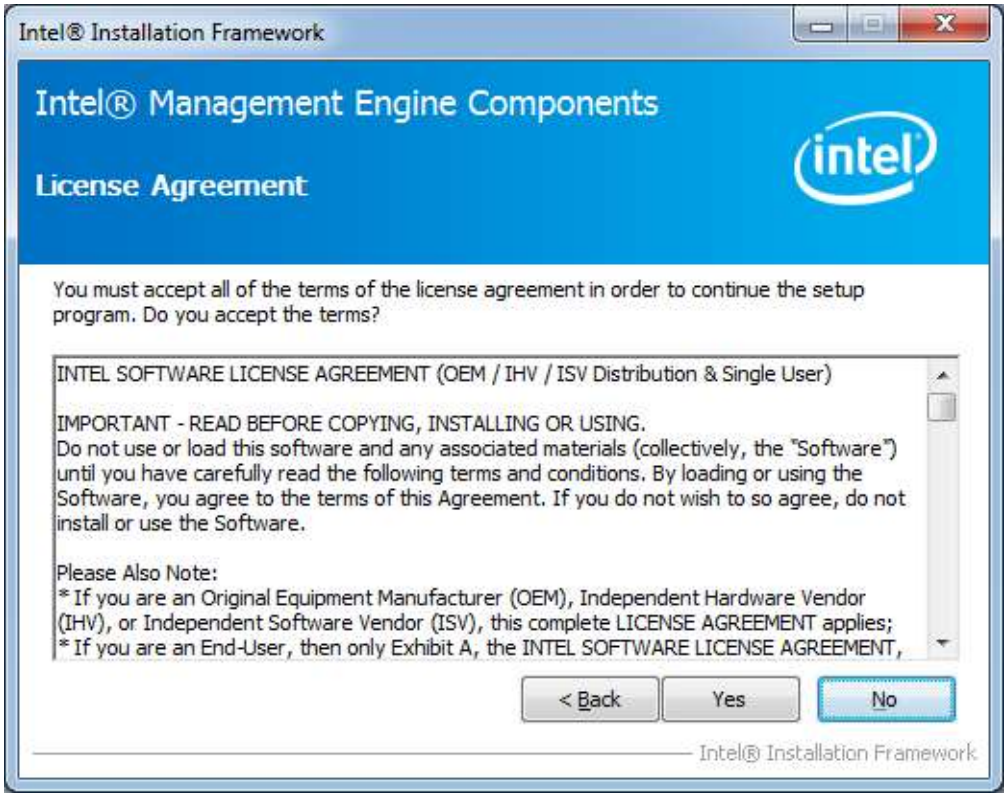
Follow the steps below to install the Intel Management Engine.

1. Insert the CD that comes with the board. Click ***Intel*** and then ***Intel(R) AMT 8.0 Drivers***.

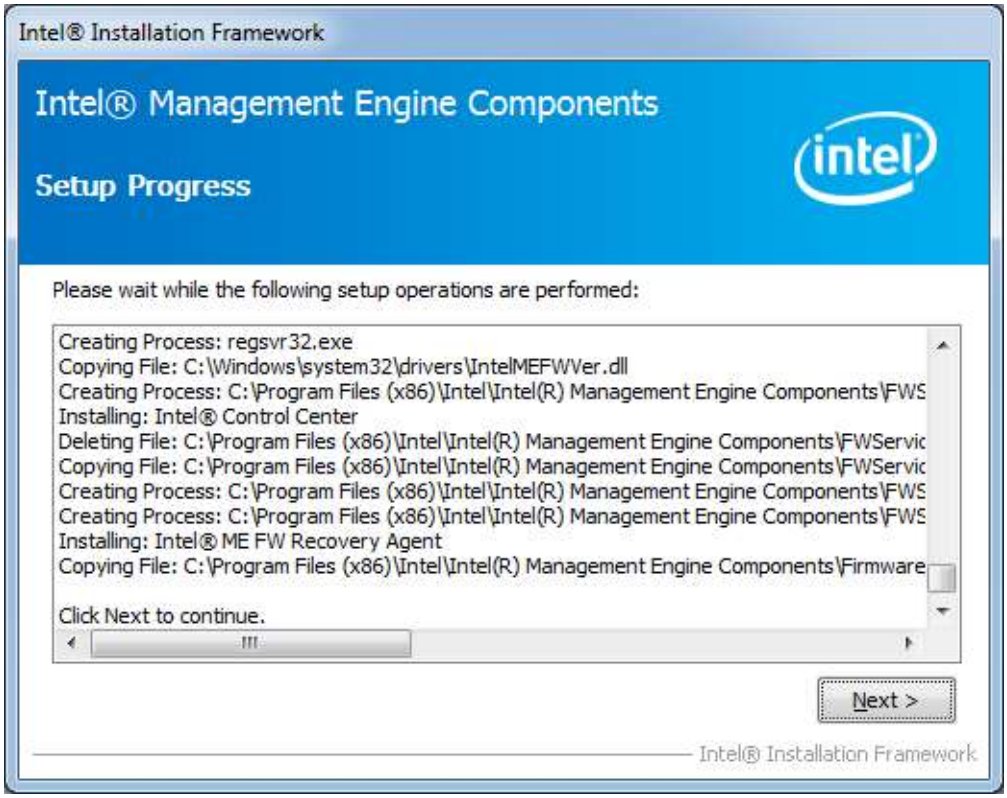
2. When the Welcome screen for Intel® Management Engine Components, click the checkbox for **Install Intel® Control Center** & click ***Next***.

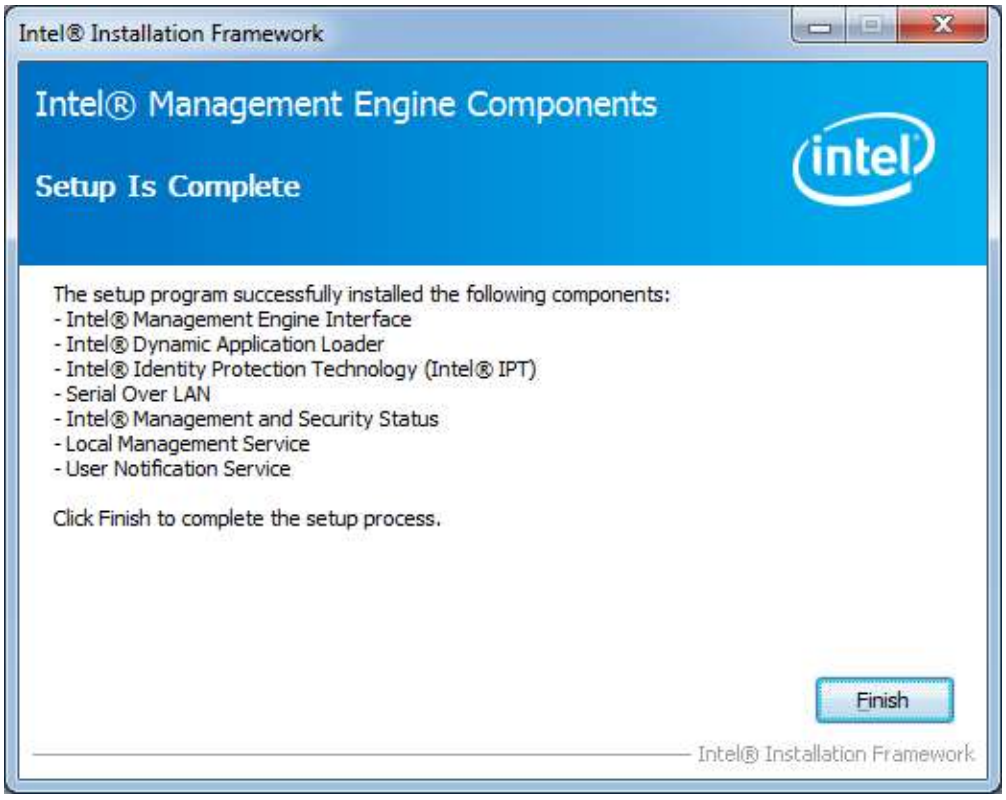


3. Click ***Yes*** to to agree with the license agreement.



4. When the Setup Progress screen appears, click ***Next***. Then, click ***Finish*** when the setup progress has been successfully installed.



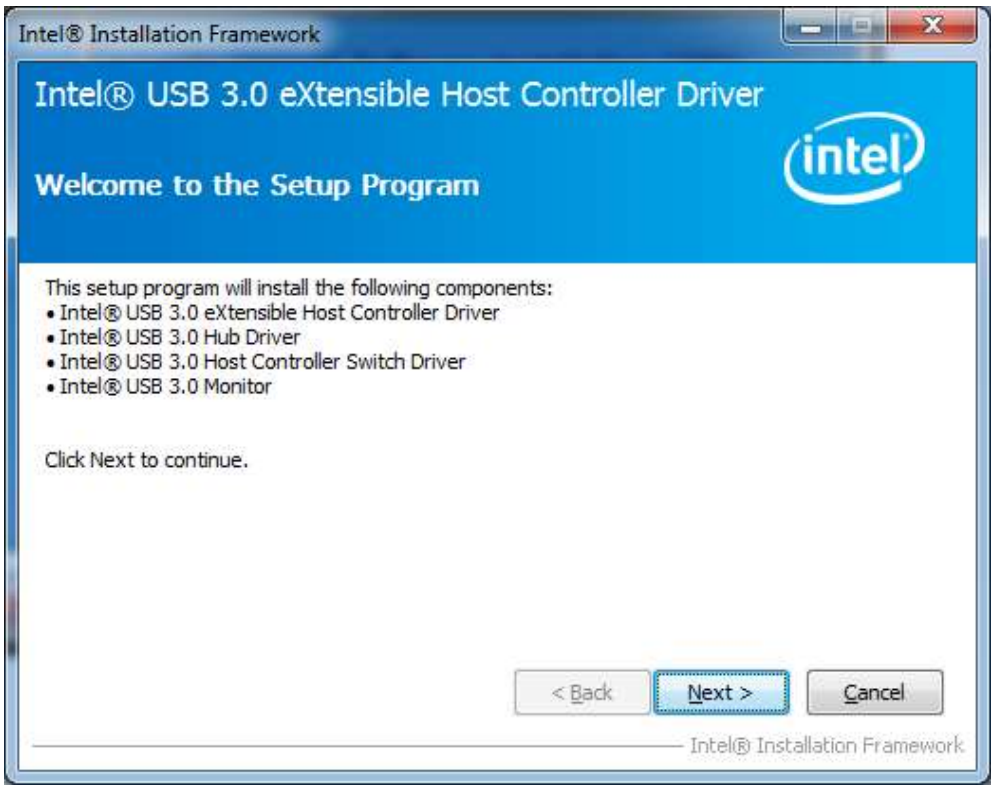


5.6 Intel® USB 3.0 Drivers

1. Insert the CD that comes with the board. Click ***Intel*** and then ***Intel(R) Q7 Series Chipset Drivers***.

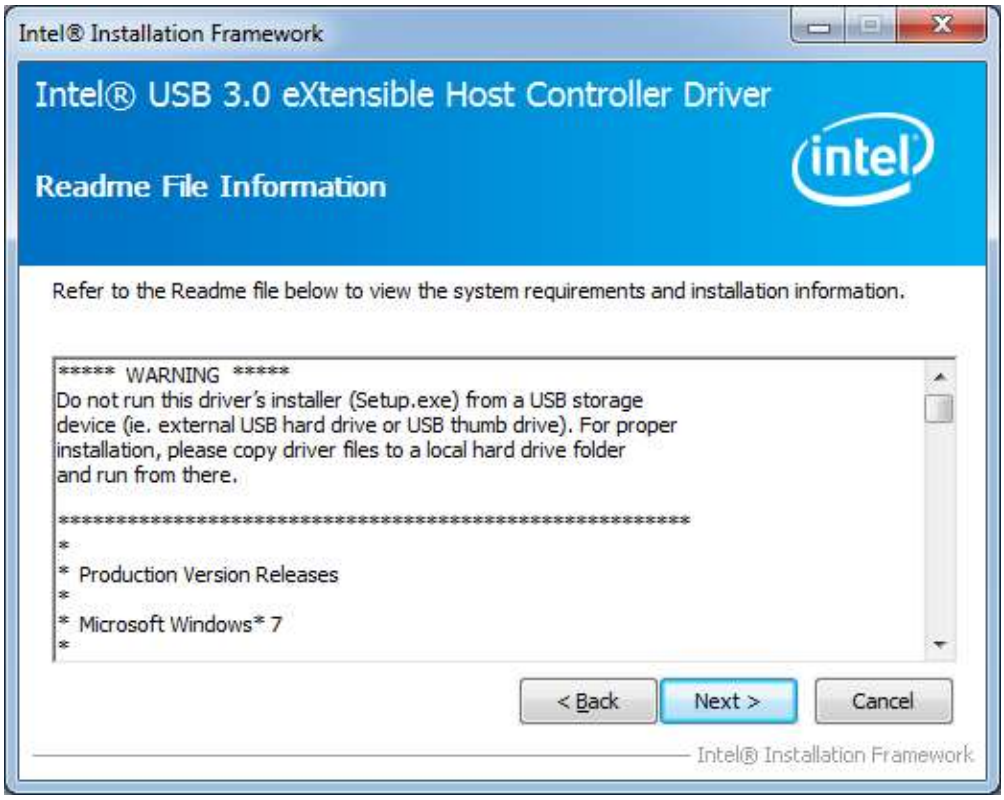
2. Click ***Intel(R) USB 3.0 Drivers.***

3. When the Welcome screen to the InstallShield Wizard for Intel® USB 3.0 eXtensible Host Controller Driver, click ***Next***.



4. Click ***Yes*** to to agree with the license agreement and continue the installation.

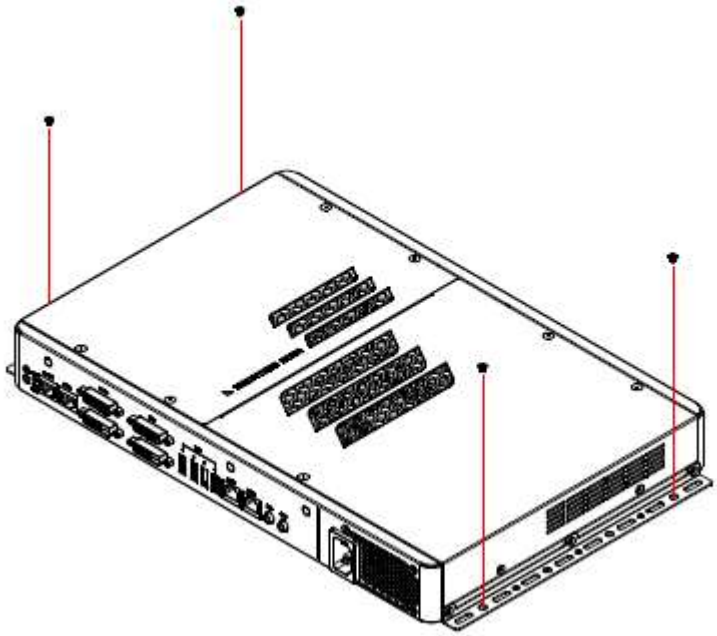
5. On the Readme File Information screen, click ***Next*** to continue the installation of the Intel® USB 3.0 eXtensible Host Controller Driver.



6. Setup complete. Click ***Finish*** to restart the computer and for changes to take effect.

Appendix

A. Mounting SI-64 to the Wall



You can install SI-64 on plastic (LCD monitor), wood, drywall surface over studs, or a solid concrete or metal plane directly. Ensure the installer uses at least four M3 length 6mm screws to secure the system on wall. ***Four M3 length 6mm screws are recommended to secure the system on wall.***

Fasteners are not included with the unit, and must be supplied by the installer. The types of fasteners required are dependent on the type of wall construction. Choose fasteners that are rated either ”Medium Duty“ or ”Heavy Duty.“ To assure proper fastener selection and installation, follow the fastener manufacturer’s recommendations.

Wall Mounting Requirements

Note: *Before mounting the system on wall, ensure that you are following all applicable building and electric codes.*

When mounting, ensure that you have enough room for power and signal cable routing. And have good ventilation for power adapter. The method of mounting must

be able to support weight of the SI-38N plus the suspend weight of all the cables to be attached to the system. Use the following methods for mounting your system:

Mounting to hollow walls

- **Method 1: Wood surface** – A minimum wood thickness – 38mm (1.5in.) by 25.4 cm (10in.) – of high, construction – grade wood is recommended.
  Note: This method provides the most reliable attachment of the unit with little risk that the unit will come loose or require ongoing maintenance.
- **Method 2: Drywall walls** - Drywall over wood studs is acceptable.

Mounting to a solid concrete or brick wall - Mounts on a flat smooth surface.

Selecting the Location

Plan the mounting location thoroughly. Locations such as walkway areas, hallways, and crowded areas are not recommended. Mount the unit to a flat, sturdy, structurally sound column or wall surface.

The best mounting surface is a standard countertop, cabinet, table, or other structure that is minimally the width and length of the unit. This recommendation reduces the risk that someone may accidentally walk into and damage the device. Local laws governing the safety of individuals might require this type of consideration.

B. ATI Eyefinity Setting

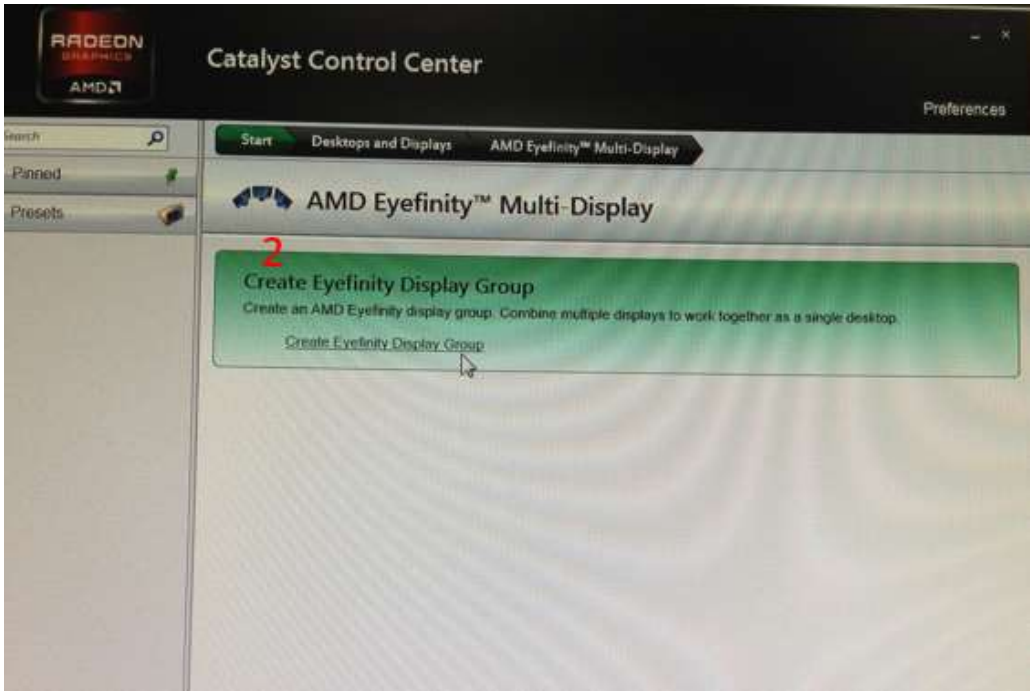
IBASE offers user-friendly and powerful video solution in the form of SI-64 (Signature Book) with AMD Eyefinity function. Each IBASE SI-64 (Signature Book) with Eyefinity function can drive up to 4 displays with different display configuration.

Driver Installation

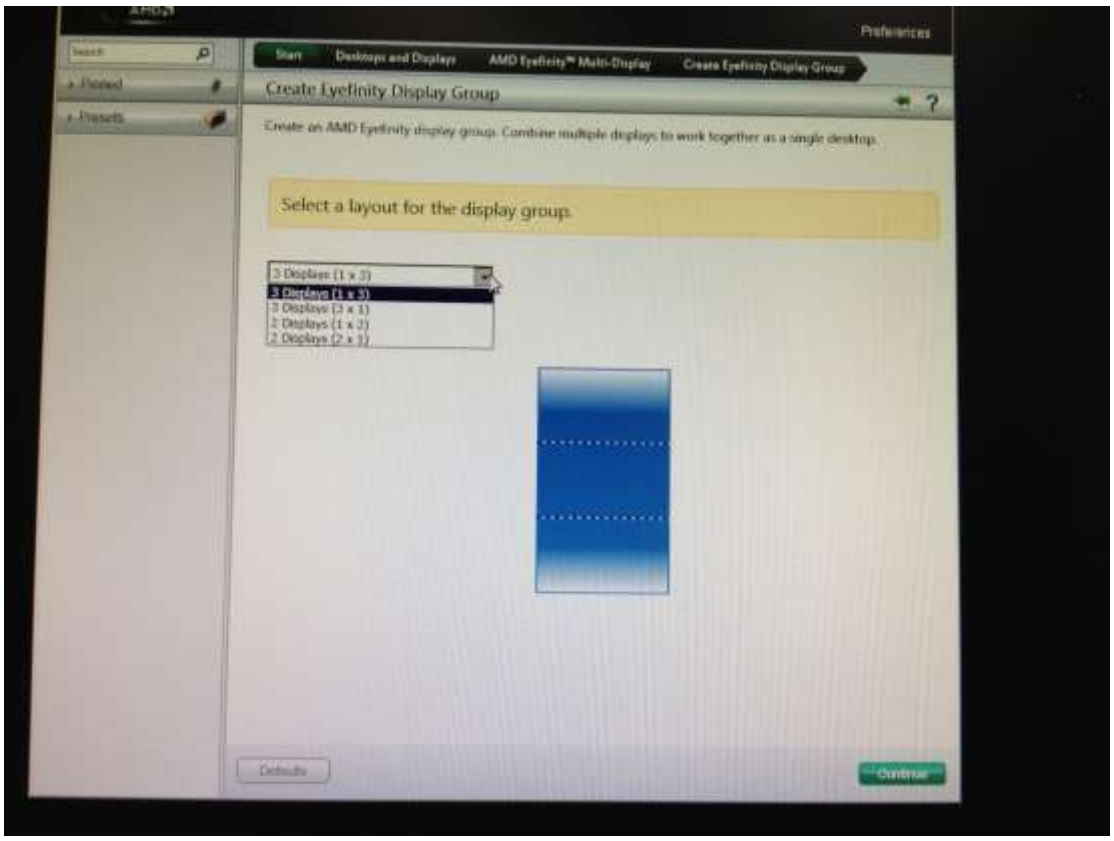
Before using SI-64 (Signature Book)'s AMD Eyefinity function, the user must install Both **AMD Catalyst™ Display Driver 13.151.**

Display Group Grid Configurations

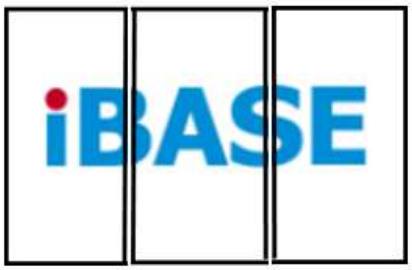
1. Please chose Select "**AMD Eyefinity Multi-Display**"



SI-64 with ATI Eyefinity for 3 displays output:

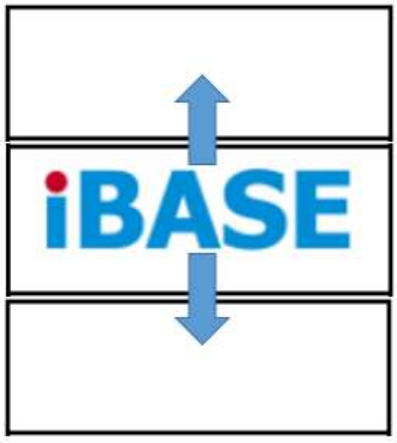


3x1 Landscape Display Group



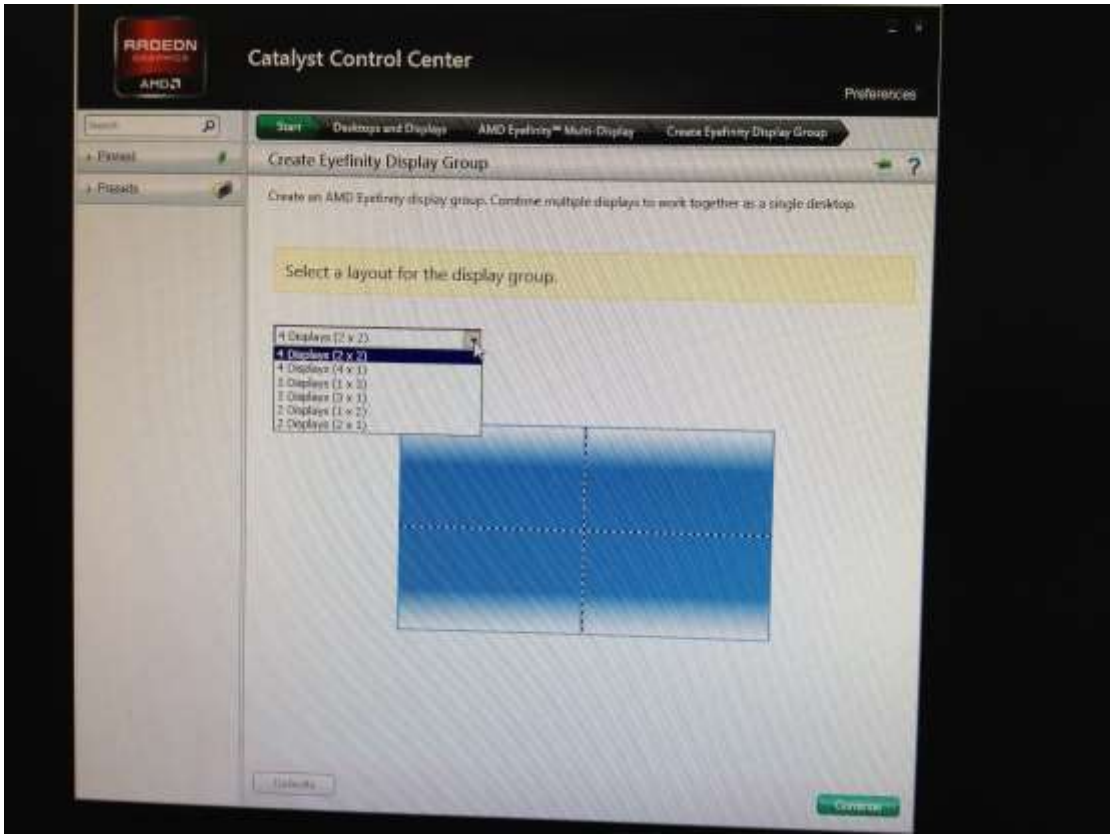
3x1 Portrait Display Group

1x3 Portrait Display Group



1x3 Landscape Display Group

SI-64 with ATI Eyefinity for 4 displays output:



1x4 Landscape Display Group

1x4 Portrait Display Group

2x2 Portrait Display Group

2x2 Landscape Display Group