

SI-22 Series User Manual

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V0.1	2013/12/02
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Every effort has been made to ensure that the contents of this manual are correct and up to date. However, the manufacturer makes no guarantee regarding the accuracy of its contents, and reserves the right to make changes without prior notice.

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Safety Information

Your SI-22 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 45°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 THE STORAGE 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

The “Signature Book™” SI-22 is a professional fanless digital signage system powered by the new AMD Embedded new generation G-Series quad-core APU with DASH compliance for remote control, and compact & slim design. It supports 2x HDMI, 1x RJ45 for LAN, 1x RJ45 for RS232, 1x USB2.0 and 2x USB3.0 ports to give a wide selection for data communication in display applications.



IMPORTANT NOTE:

Only one of the two HDMI ports will have audio support.

The first HDMI port that was plugged into shall have audio support.

If two HDMI ports were plugged into at the same time, the right HDMI port, which is beside the COM port, shall have audio support.

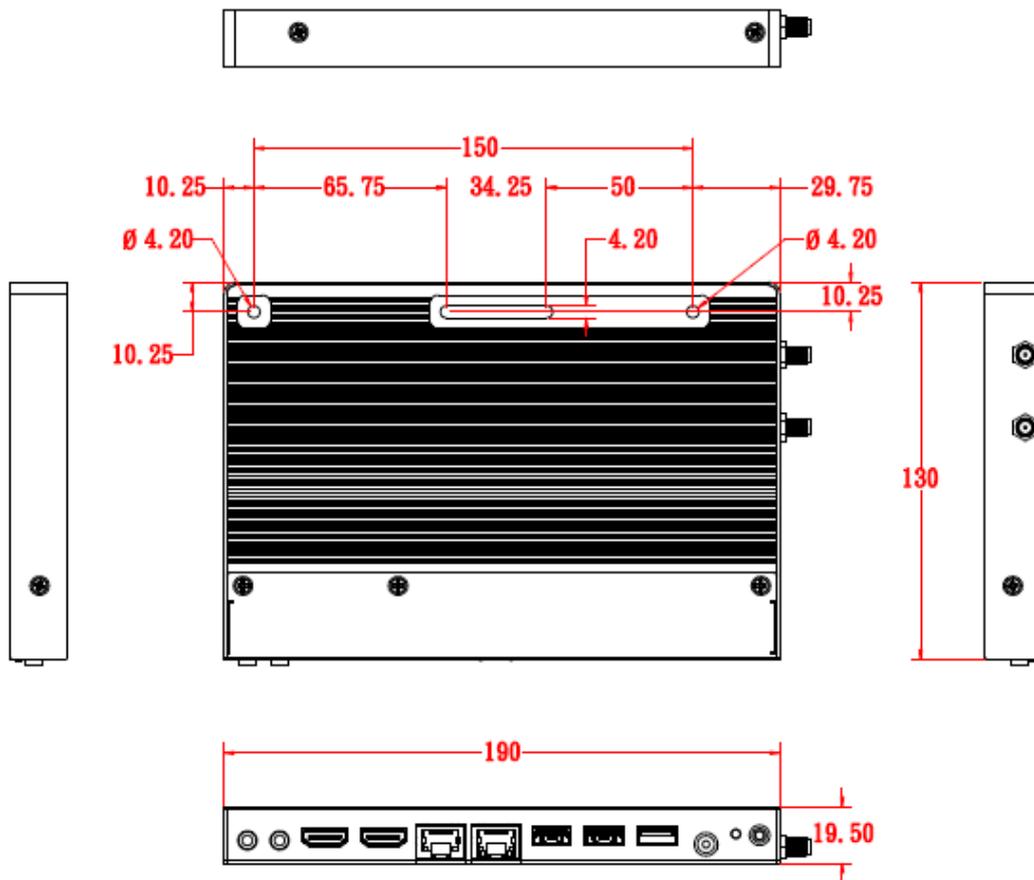
1.2 System Specifications

1.2.1 Hardware Specifications

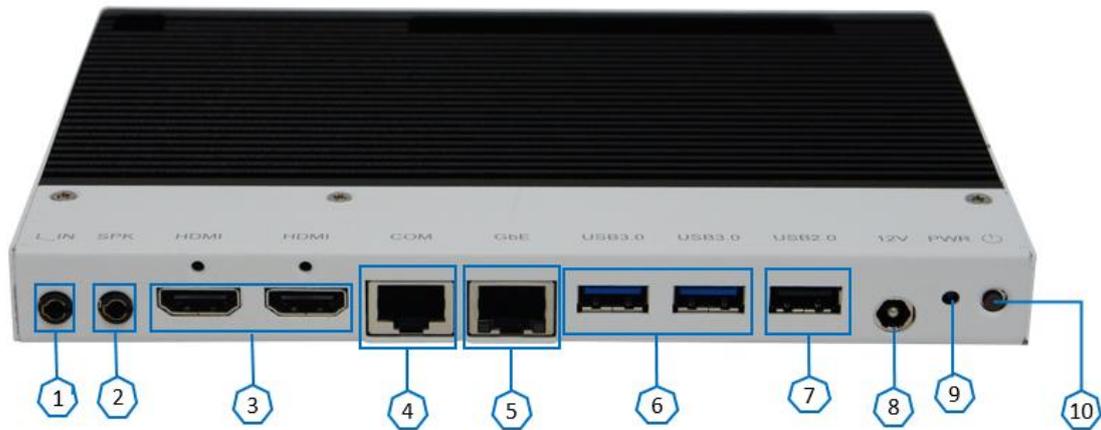
Model Name	SI-22
System Mainboard	IB922
CPU	AMD Embedded G-Series SoC; 4 Cores @ 1.5GHz APU FT3 BGA package
Chipset	SoC Integrated
Memory	1x DDR3 1600 MHz SO-DIMM, Max. 8GB (Non-ECC)
I/O Interface	2x HDMI 1.4a 2x USB 3.0 ports, 1x USB 2.0 port 1x RJ45 for LAN, 1x RJ45 for RS232 2x Microjack audio connectors for Line-in / Line-out Power LED, 1x power on/off button 1x DC jack
Storage	1 x mSATA
Expansion Slots	1x mPCIe(x1) for WiFi + Bluetooth, 3G, and TV tuner options 1x UIM/SIM card slot (for 3G/LTE adapter in mPCIe slot)
Power Supply	+12V DC-in with 60W power adaptor
Construction	Aluminum + SGCC
Chassis Color	Black & White
Mounting	STD system bracket
Dimensions	190mm(W) x 130mm(D) x 19.5mm(H) 7.5"(W) x 5.1"(D) x 0.77"(H)
Operating Temperature	0°C~ 45°C (32°F~113°F)
Storage Temperature	-20° ~ 80°C (-4°F~176°F)
Relative Humidity	5~90% @45°C (non-condensing)
Vibration	mSATA: 5 Grms/5~500Hz random operation
RoHS	Available
Certification	CE, FCC, UL, CCC

·This specification is subject to change without prior notice.

1.2.2 Dimensions

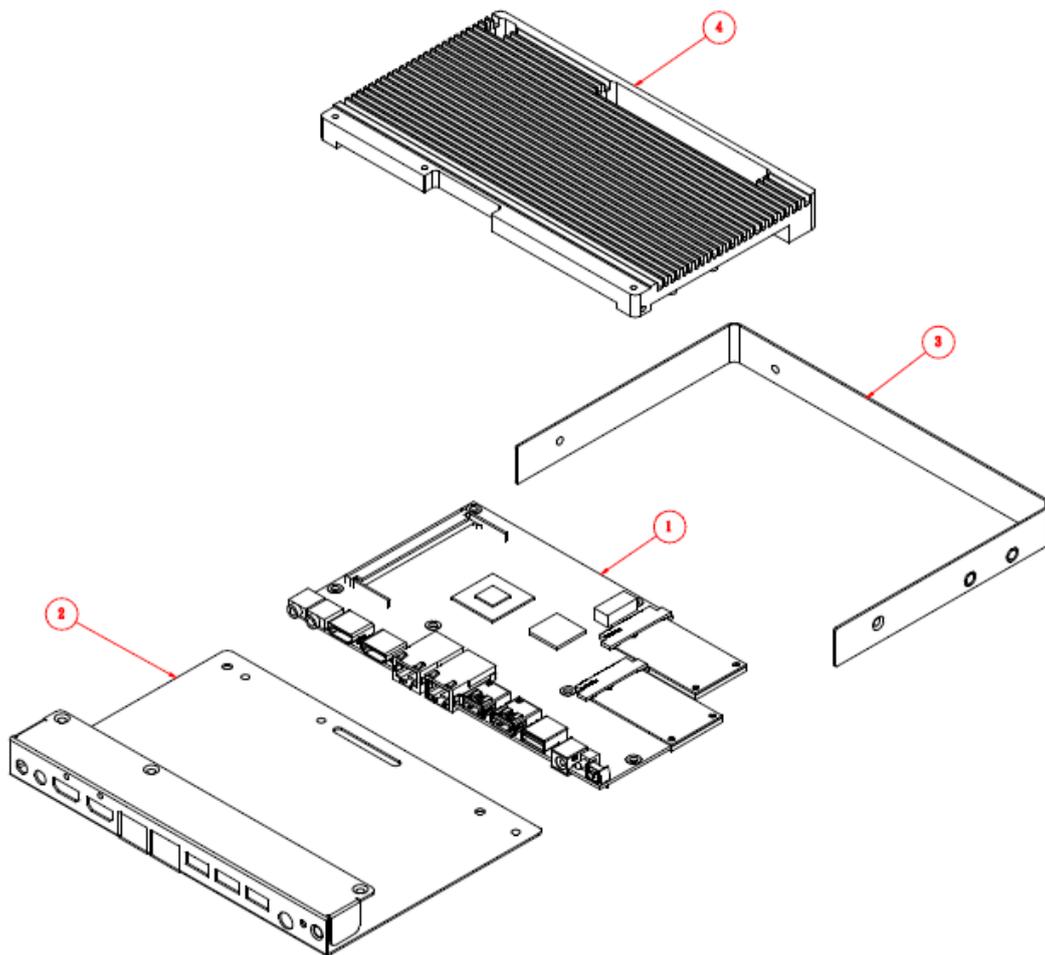


1.2.3 I/O View



Item	Connector	Item	Connector
1	Line-in	6	2x USB 3.0
2	Line-out	7	1x USB 2.0
3	2x HDMI 1.4a	8	DC jack
4	1x RJ45 for RS232	9	Power LED
5	1x RJ45 for LAN	10	Power on/off button

1.3 Exploded View of the SI-22 Assembly



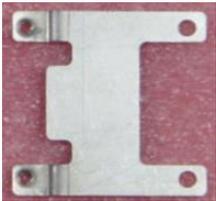
1.3.1 Parts Description

Part No.	Description	Part No.	Description
1	IB922 motherboard	2	SI-22 Base
3	SI-22 Cover	4	SI-22 heatsink

1.4 Packing List

Item No.	Description	Qty
1	Driver CD	1
2	Power adaptor	1
3	Power Cord	1

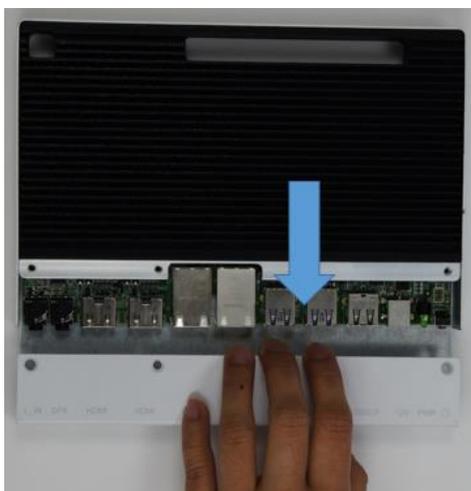
1.4.1 Optional Items

WiFi Solution	Description	
QCOM WiFi module	WIRELESS;PCI-E MINI CARD 802.11B/G/N [AW-NE238H] (A008WLAWNE238H000P)	 
External Antenna	WiFi Antenna (A055RFA02C2M20800P)	
Internal cable-2pcs	Internal Antenna 100mm [BTC130-1-70B-100]RoHS (A055RFA0000021000P)	
Bracket	COMPONENT BOM;MPCIE-EXT V-B2 BRACKET BOM RoHS (SC2MPCIEEXT0B2100P)	
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-222	Cable; EXT-222 2-HD 7C 150CM; JACK-8=>DSU-9F RoHS (C501EXT2227A12000P)	
EXT-424	Cable; EXT-424 2-HD 8C 90CM; RJ45 JACK-8M=>DSU-9F RoHS (C501EXT4240902000P)	
EDID Dongle	Description	
H8246JT021-001	EDID Emulator Dongle (HDMI), ADAPTER; HDMI 19P A/M TO A/F (A025HDMI001010000P)	
Mounting Kit	Description	
HDMI Cable Holder	Component BOM; SI-12 & SI-22 V-A1 HDMI Cable Holder with Screw RoHS (SC2SI12----0A1100P)	

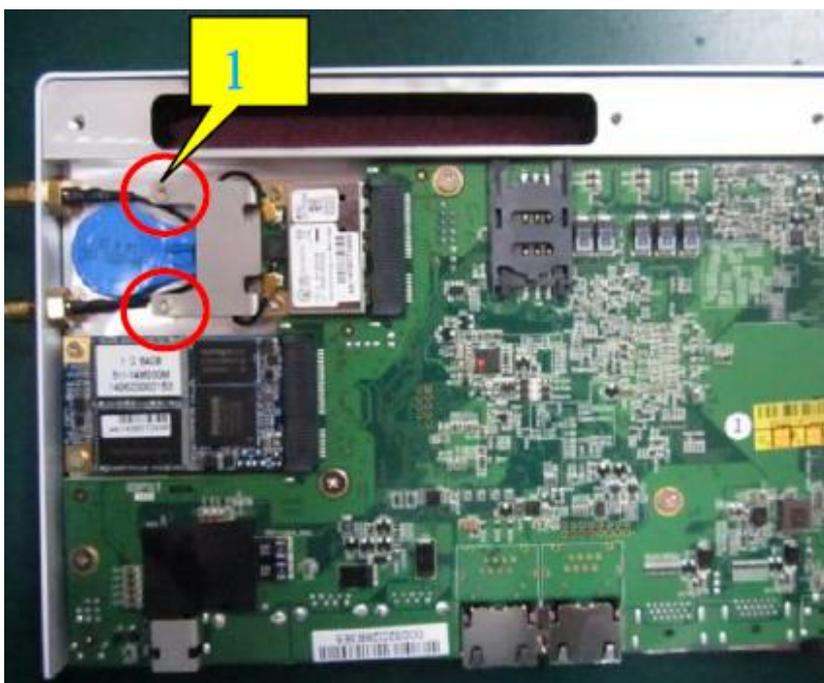
1.5 HARDWARE INSTALLATION

1.5.1 Installing the optional Wireless Module

1. Remove the six screws on the sides that are used to secure the white cover to the chassis. Once all the screws are removed, from the side, push the cover forward to remove it.

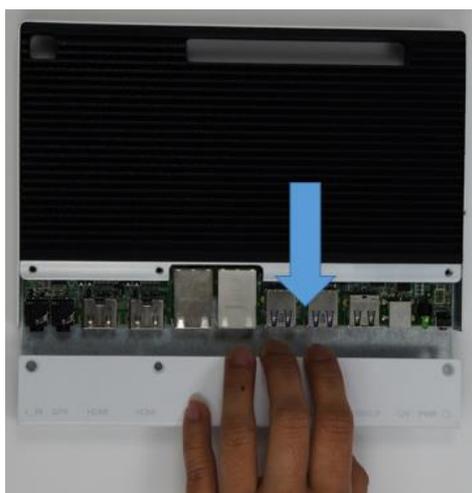


2. Push the WIFI module into the slot. Screw two screws to secure the module in the slot.

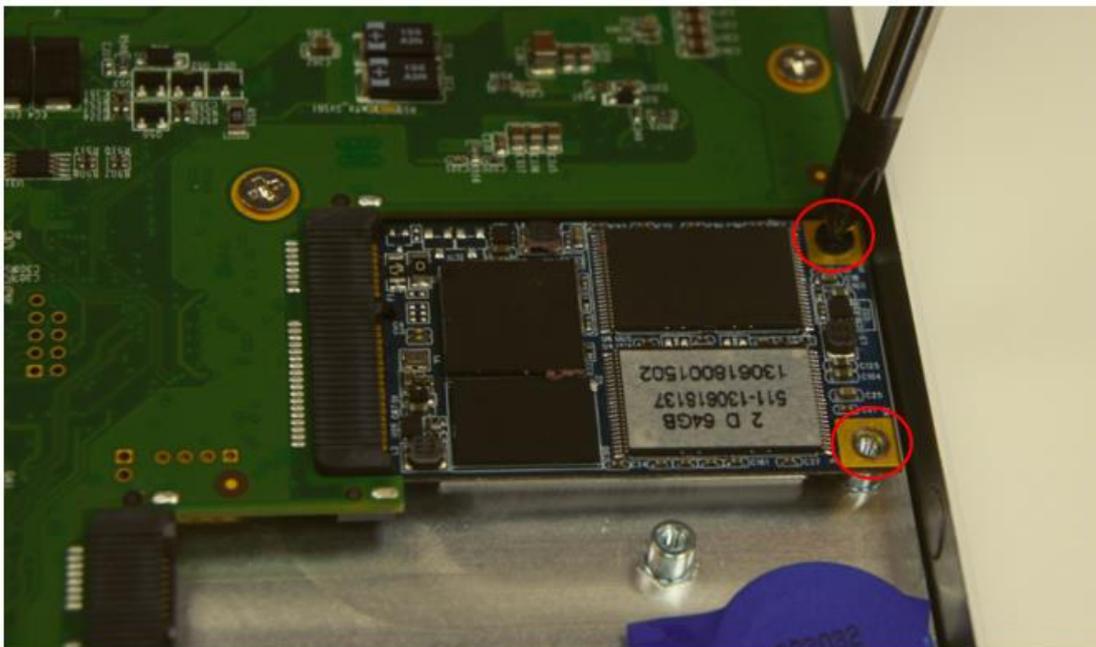
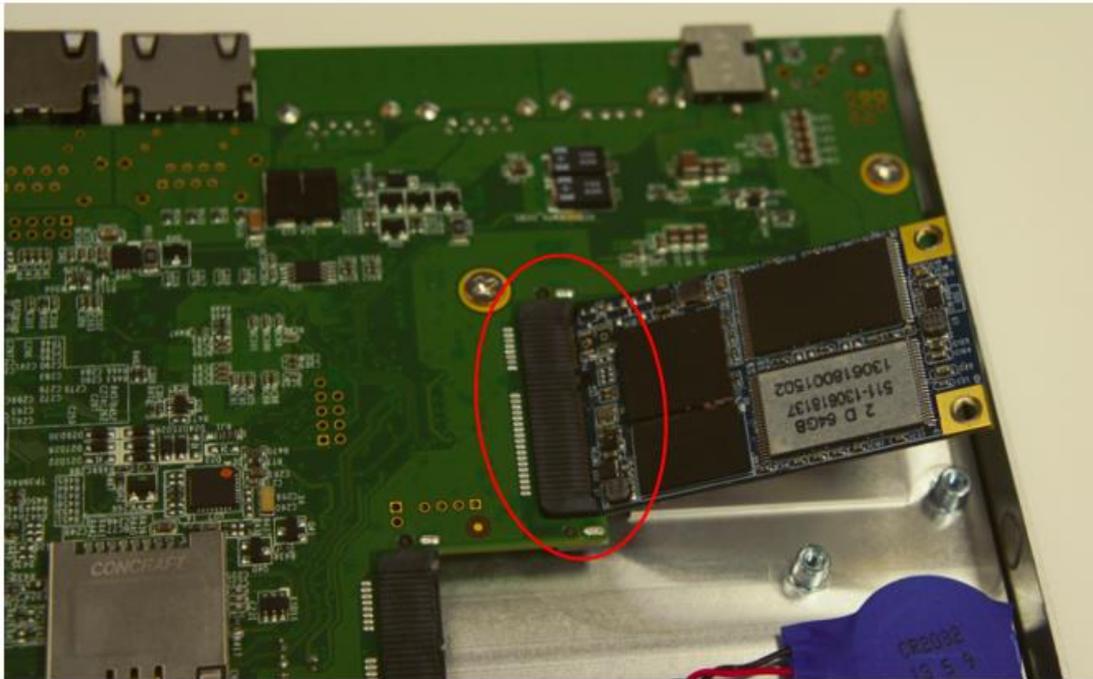


1.5.2 Installing the mSATA Module

1. Remove the six screws on the sides that are used to secure the white cover to the chassis. Once all the screws are removed, from the side, push the cover forward to remove it.

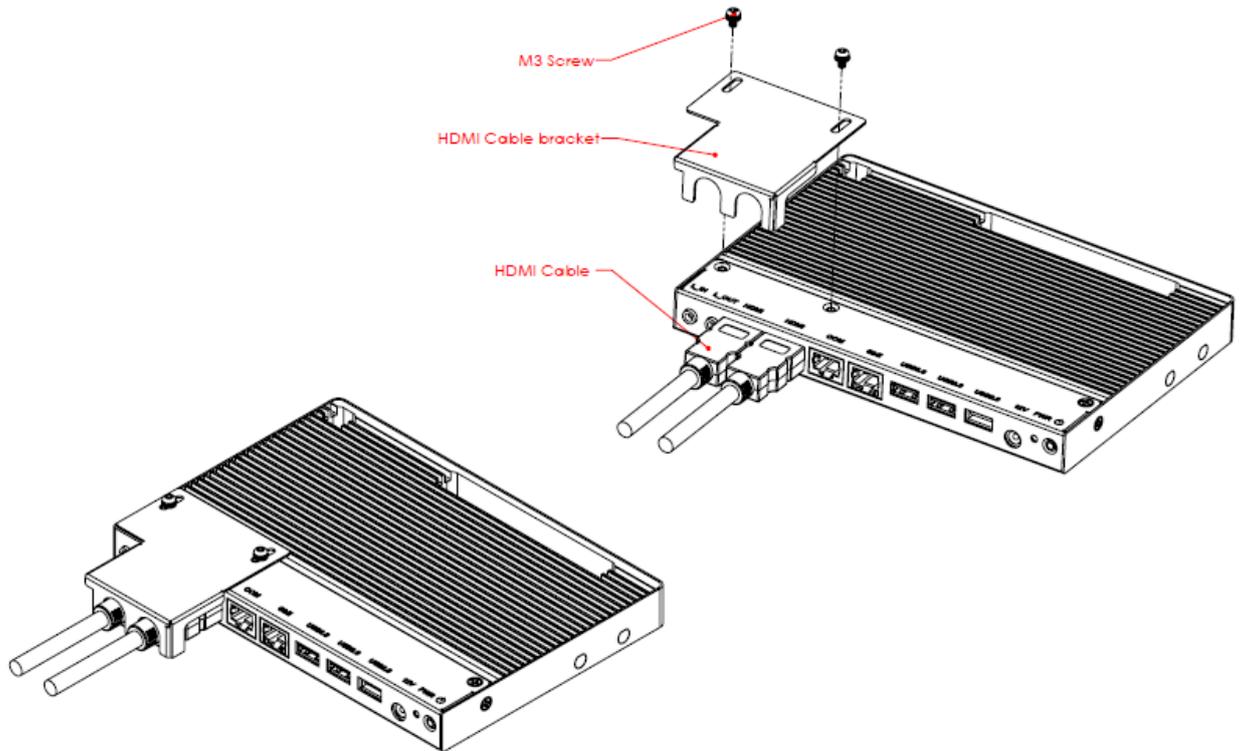


2. Push the mSATA module into the slot. Screw two screws to secure the module in the slot.



1.5.3 Installing the Optional HDMI cable holder

Install the HDMI cable holder and screw two M3 screws as shown.



CHAPTER 2 MOTHERBOARD INTRODUCTION

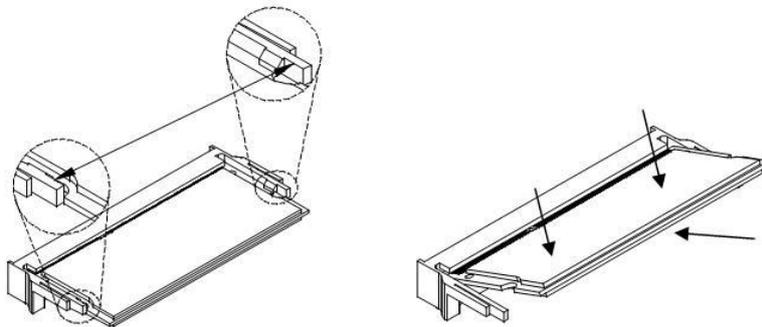
2.1 Installing the Memory

The IB922 board supports one DDR3 memory socket for a maximum total memory of 8GB.

Installing and Removing Memory Modules

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

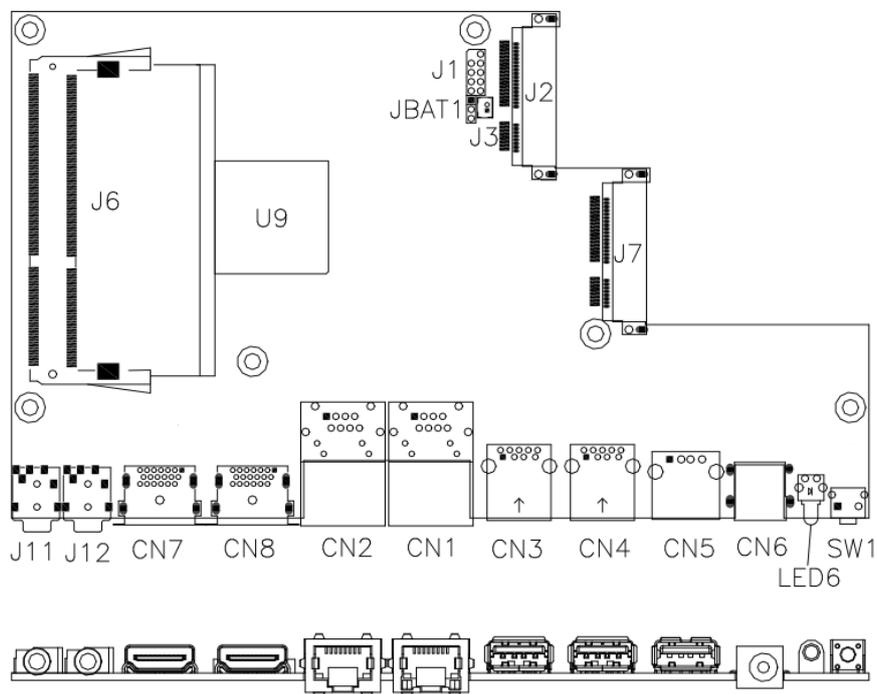
1. Hold the DDR3 module so that the key of the DDR3 module aligned with that on the memory slot.
2. Gently push the DDR3 module in an upright position until the clips of the slot close to hold the DDR3 module in place when the DDR3 module touches the bottom of the slot.
3. To remove the DDR3 module,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



2.2 Setting the Jumpers

Jumpers are used on IB922 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 jumper and connectors on IB922 and their respective functions.

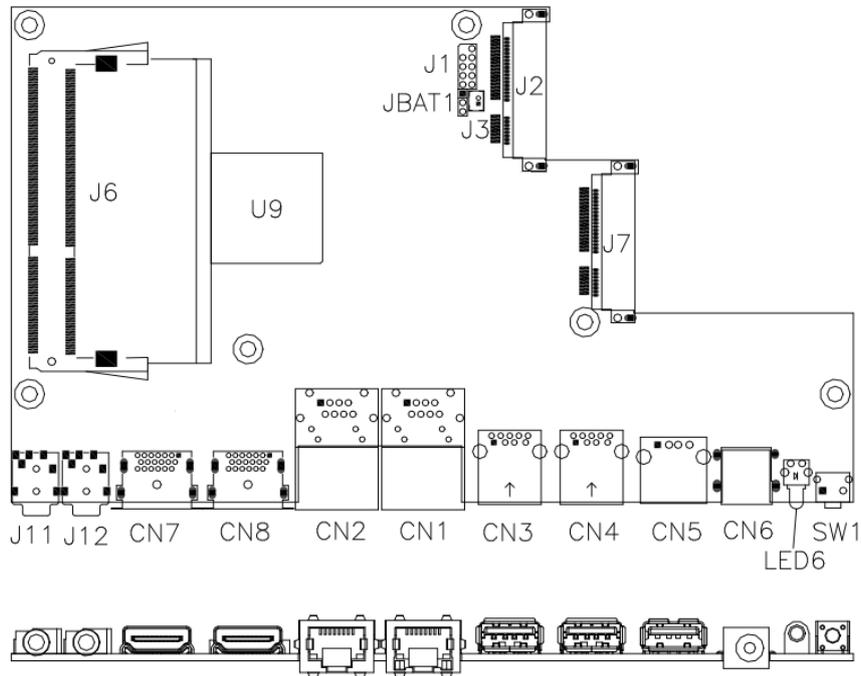
Jumper Locations on IB922



JBAT1: Clear CMOS Contents

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

2.3 Connectors on IB922



SW1: Power On Button

CN1: Gigabit LAN (RTL8111DP)

CN2: COM1/RS232 Serial Port (RJ45 TYPE)

Signal Name	Pin #	Pin #	Signal Name
RTS, Request to send	1	2	Data terminal ready
TXD, Transmit data	3	4	GND, ground
GND, ground	5	6	RXD, Receive data
DSR, Data set ready	7	8	CTS, Clear to send

CN3, CN4: USB 3.0 Connector

CN5: USB 2.0 Connector

CN6: Board Input Power Connector

CN7, CN8: HDMI Connector

J1: SPI Flash Connector (factory use only)

J2: Mini PCIE Connector (with *USB SIM support*)

J3: Battery Connector

J6: DDR3 SO-DIMM Socket

J7: Mini PCIE Connector (*w/ M-SATA support*)

J11: Audio LINE_IN Connector

J12: Audio LINE_OUT Connector

LED6: Power On LED

CHAPTER 3 BIOS SETUP

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

3.1 BIOS Introduction

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

3.2 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 key immediately allows you to enter the Setup utility. If you are a little bit late pressing the 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> or <ESC> 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.

Main Settings

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

Main	Advanced	Chipset	Boot	Security	Save & Exit
BIOS Information					Choose the system default language
Memory Information					
Total memory			8176 MB (DDR3)		→ ← Select Screen ↑ ↓ Select Item
System Date			[Tue 01/20/2009]		Enter: Select
System Time			[15:27:20]		+ - Change Field
Access Level			Administrator		F1: General Help
					F2: Previous Values
					F3: Optimized Default
					F4: Save ESC: Exit

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
<ul style="list-style-type: none"> ▶ PCI Subsystem Settings ▶ ACPI Settings ▶ CPU Configuration ▶ IDE Configuration ▶ Shutdown Temperature Configuration ▶ iSmart Controller ▶ USB Configuration ▶ F81866 Super IO Configuration ▶ F81866 H/W Monitor 					→ ← Select Screen ↑ ↓ Select Item Enter: Select + - Change Field F1: General Help F2: Previous Values 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 Common Settings				→ ← Select Screen
	PCI Latency Timer		32 PCI Bus Clocks		↑ ↓ Select Item
	VGA Palette Snoop		Disabled		Enter: Select
	PERR# Generation		Disabled		+ - Change Field
	SERR# Generation		Disabled		F1: General Help
	▶ PCI Express Settings				F2: Previous Values
					F3: Optimized Default
					F4: Save ESC: Exit

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

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		→ ← Select Screen
	WARNING: Enabling ASPM may cause PCI-E devices to fail		Disabled		↑ ↓ Select Item
	Extended Synch		Disabled		Enter: Select
	Link Training Retry		5		+ - Change Field
	Link Training Timeout (uS)		100		F1: General Help
	Unpopulated Links		Keep Link ON		F2: Previous Values
					F3: Optimized Default
					F4: Save ESC: Exit

ACPI Settings

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
ACPI Settings					
	Enable ACPI Auto Configuration		Disabled		→ ← Select Screen
	Enable Hibernation		Enabled		↑ ↓ Select Item
	ACPI Sleep State		S3 (Suspend to R...)		Enter: Select
	Lock Legacy Resources		Disabled		+ - Change Field
					F1: General Help
					F2: Previous Values
					F3: Optimized Default
					F4: Save ESC: Exit

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.

CPU Configuration

This section shows the CPU configuration parameters.

Aptio Setup Utility					
Main	Advanced	Chipset	Boot	Security	Save & Exit
CPU Configuration					
Module Version: 4.6.5.1 TrinityPI 012 AGESA Version: 1.0.0.3					
PSS Support			Enable		→ ← Select Screen
PSTATE Adjustment			Pstate 0		↑ ↓ Select Item
NX Mode			Enable		Enter: Select
SVM Mode			Enable		+ - Change Field
CPB Mode			Auto		F1: General Help
C6 Mode			Enable		F2: Previous Values
▶ Node 0 Information					F3: Optimized Default
					F4: Save ESC: Exit

PSS Support

Enable/disable the generation of ACPI _PPC, _PPC, _PSS, and _PCT objects.

PSTATE Adjustment

Provide to adjust startup P-state level.

PPC Adjustment

Provide to adjust _PPC object.

NX Mode

Enable/disable No-execute page protection function.

SVM Mode

Enable/disable CPU Virtualization.

CPB Mode

Enable/disable CPB.

C6 Mode

Auto/disable CPB.

Node 0 Information

View memory information related to Node 0.

IDE Configuration

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
IDE Configuration					→ ← Select Screen ↑ ↓ Select Item Enter: Select +- Change Field F1: General Help F2: Previous Values F3: Optimized Default F4: Save ESC: Exit
SATA Port0		InnoLite CFast (16.0GB)			
SATA Port2		Not Present			

Shutdown Temperature Configuration

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
ACPI 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					→ ← Select Screen ↑ ↓ Select Item Enter: Select +- Change Field F1: General Help F2: Previous Values F3: Optimized Default F4: Save ESC: Exit
Power-On after Power failure		Disable			
Schedule Slot 1		None			
Schedule Slot 2		None			

Power-On after Power failure

Enable or Disable.

Schedule Slot 1 / 2

Setup the hour/minute for system power on.

USB Configuration

Aptio Setup Utility					
Main	Advanced	Chipset	Boot	Security	Save & Exit
USB Configuration					
USB Devices: 1 Keyboard, 1 Mouse					
Legacy USB Support			Enabled		
USB3.0 Support			Enabled		
XHCI Hand-off			Enabled		
EHCI Hand-off			Enabled		
USB hardware delays and time-outs:					
USB Transfer time-out			20 sec		
Device reset time-out			20 sec		
Device power-up delay			Auto		
					→ ← Select Screen ↑ ↓ Select Item Enter: Select +- Change Field F1: General Help 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 keeps 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.

USB Transfer time-out

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

Device reset time-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

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
F81866 Super IO Configuration					→ ← Select Screen ↑ ↓ Select Item Enter: Select +- Change Field F1: General Help F2: Previous Values F3: Optimized Default F4: Save ESC: Exit
F81866 Super IO Chip			F81866		
▶ Serial Port 0 Configuration					
▶ Serial Port 1 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					
System Smart Fan Function			50 C		
CPU Smart Fan Function			50 C		
SYS_Fan2 smart fan control			50 C		
SYS Temp			+35 C		
CPU Temp			+52 C		
Vcore			+1.000 V		
+5V			+4.413 V		
+12V			+11.408 V		
+1.5V			+1.544 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 board. The values are read-only values as monitored by the system and show the PC health status.

Smart Fan Function

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.

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.

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
<ul style="list-style-type: none"> ▶ South Bridge ▶ North Bridge 					→ ← Select Screen ↑ ↓ Select Item Enter: Select +- Change Field F1: General Help F2: Previous Values F3: Optimized Default F4: Save ESC: Exit

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
AMD Reference code Version:			Trinity PI 1.0.0.3		→ ← Select Screen ↑ ↓ Select Item Enter: Select +- Change Field F1: General Help F2: Previous Values F3: Optimized Default F4: Save ESC: Exit
<ul style="list-style-type: none"> ▶ SB SATA Configuration ▶ SB USB Configuration 					

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
OnChip SATA Channel			Enabled		→ ←Select Screen ↑ ↓ Select Item Enter: Select +- Change Field F1: General Help F2: Previous Values F3: Optimized Default F4: Save ESC: Exit
OnChip SATA Type			Native iDE		
OnChip iDE mode			Legacy mode		
SATA IDE Combined Mode			Enabled		

OnChip SATA Channel

Enabled or Disabled.

OnChip SATA Type

Native IDE /n RAID /n AHCI /n AHCI /n Legacy IDE /n IDE->AHCI /n HyperFlash

OnChip IDE mode

Legacy mode or Native mode

SATA IDE Combined Mode

Enabled or Disabled.

SB USB Configuration Options:

Main	Advanced	Chipset	Boot	Security	Save & Exit
			XHCI Controller 0	Enabled	
			XHCI Controller 1	Enabled	
			DHCI HC(Bus 0 Dev 18 Fn 0)	Enabled	
			EHCI HC(Bus 0 Dev 18 Fn 2)	Enabled	
			DHCI HC(Bus 0 Dev 19 Fn 0)	Enabled	
			EDHCI HC(Bus 0 Dev 19 Fn 0)	Enabled	
			DHCI HC(Bus 0 Dev 20 Fn 5)	Enabled	
			USB Port 0	Enabled	
			USB Port	Enabled	
			USB Port	Enabled	
			USB Port	Enabled	
			USB Port	Enabled	
			USB Port	Enabled	
			USB Port	Enabled	
			USB Port	Enabled	
			USB Port	Enabled	
			USB Port	Enabled	
			USB Port	Enabled	
			XHCI0 Port 0	Enabled	
			XHCI0 Port 1	Enabled	
			XHCI1 Port 0	Enabled	
			XHCI1 Port 1	Enabled	

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

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
North Bridge Configuration				→ ← Select Screen ↑ ↓ Select Item Enter: Select +- Change Field F1: General Help F2: Previous Values F3: Optimized Default F4: Save ESC: Exit	
▶ GFX Configuration					
Memory Information					
Total memory: 8176 MB (DDR3)					
▶ Socket 0 Information					

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
GFX Configuration					
Integrated Graphics			Auto		

Integrated Graphics

Options are Auto Disabled and Force

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit
Socket 0 Information				→ ← Select Screen ↑ ↓ Select Item Enter: Select +- Change Field F1: General Help F2: Previous Values F3: Optimized Default F4: Save ESC: Exit	
Starting Address: 0KB					
Ending Address: 8388607 KB					
Dimm0: Not Present					
Dimm1: size=8192 MB, speed=667 MHz					

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		→ ← Select Screen	
INT19 Trap Response		Immediate		↑ ↓ Select Item	
CSM Support		Enabled		Enter: Select	
Boot Option Priorities				+- Change Field	
Boot Option #1		SATA PM: WDC WD80		F1: General Help	
▶ CSM parameters				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

OpROM execution, boot options, filter, etc.

Aptio Setup Utility					
Main	Advanced	Chipset	Boot	Security	Save & Exit
Launch CSM			Always		
Boot option filter			UEFI and Legacy		
Launch PXE OpROM policy			Do not launch		→ ← Select Screen
Launch Storage OpROM policy			Legacy only		↑ ↓ Select Item
Launch Video OpROM policy			Legacy only		Enter: Select
					+ - Change Field
					F1: General Help
					F2: Previous Values
					F3: Optimized Default
Other PCI device ROM priority			Legacy OpROM		F4: Save ESC: Exit

Launch CSM

This option controls if CSM will be launched.

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 Storage 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 UEFI Secure Boot Management Secure Boot control Enabled ► Secure Boot Policy ► Key Management					→ ← 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.

Secure Boot control

Secure Boot flow control.

Secure Boot is possible only if System runs in User Mode.

Secure Boot Policy

Select Secure Boot mode extended options: Internal FV, Option ROM, Removable Media, Fixed Media.

Administrator Password

Set Setup Administrator Password.

Save & Exit Settings

Aptio Setup Utility					
Main	Advanced	Chipset	Boot	Security	Save & Exit
Save Changes and Exit					→ ← Select Screen ↑ ↓ Select Item Enter: Select +- Change Field F1: General Help F2: Previous Values F3: Optimized Default F4: Save ESC: Exit
Discard Changes and Exit					
Save Changes and Reset					
Discard Changes and Reset					
Save Options					
Save Changes					
Discard Changes					
Restore Defaults					
Save as User Defaults					
Restore User Defaults					
Boot Override					
Launch EFI Shell from filesystem device					

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.

Launch EFI Shell from filesystem device

Attempts to launch EFI Shell application (Shellx64.efi) from one of the available filesystem devices.

CHAPTER 4 DRIVERS INSTALLATION

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

IMPORTANT NOTE:

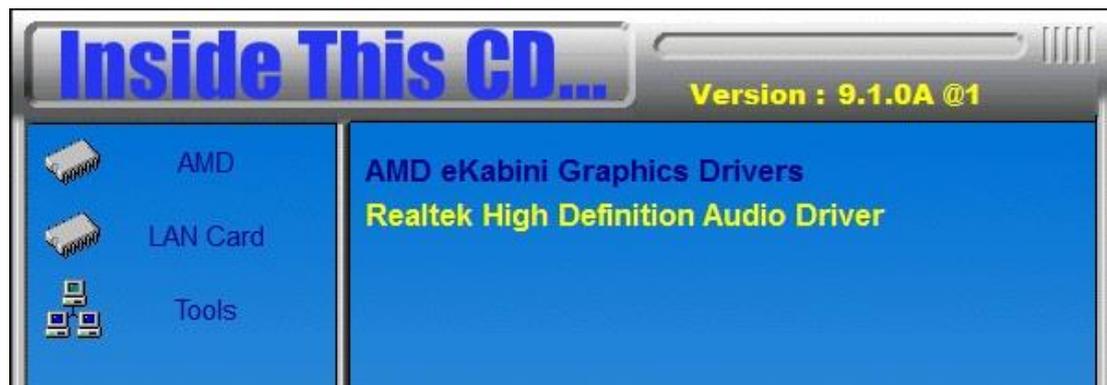
After installing your Windows operating system, you must install first the Intel Chipset Software Installation Utility before proceeding with the drivers installation.

4.1 VGA Drivers Installation

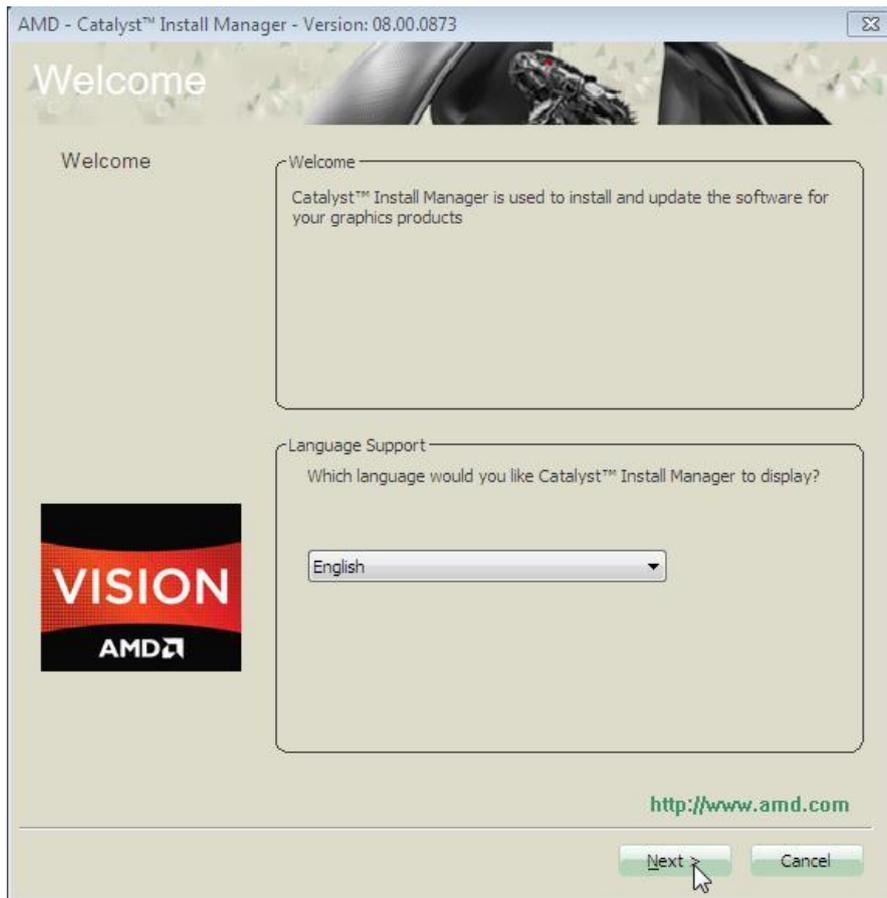
1. Insert the drivers DVD that comes with the board. Click **AMD**, then **AMD eKabini Chipset Drivers**.



2. Click **AMD eKabini Graphics Drivers**.

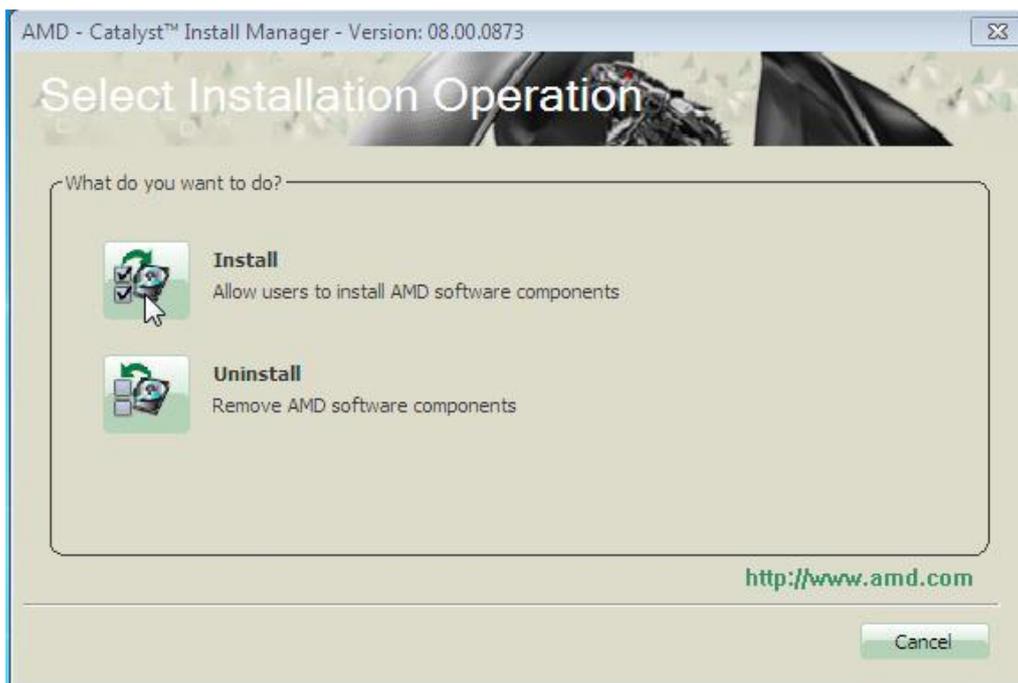


3. When the welcome screen appears, click **Next**.

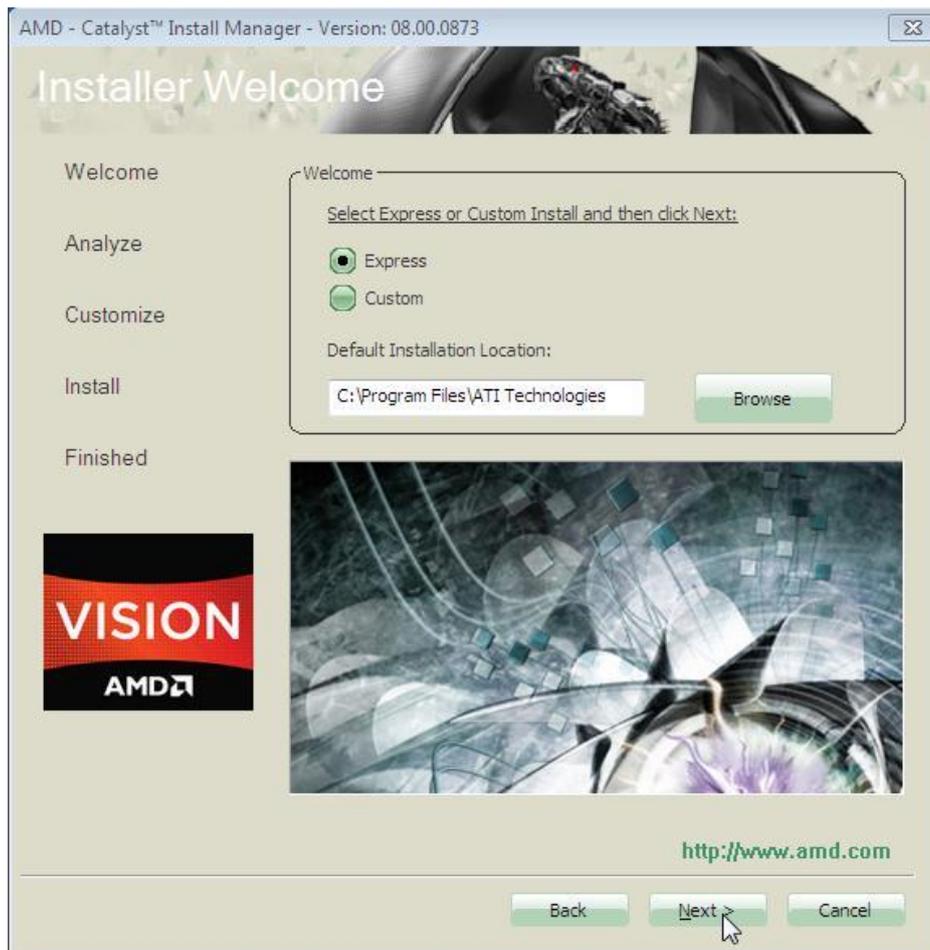


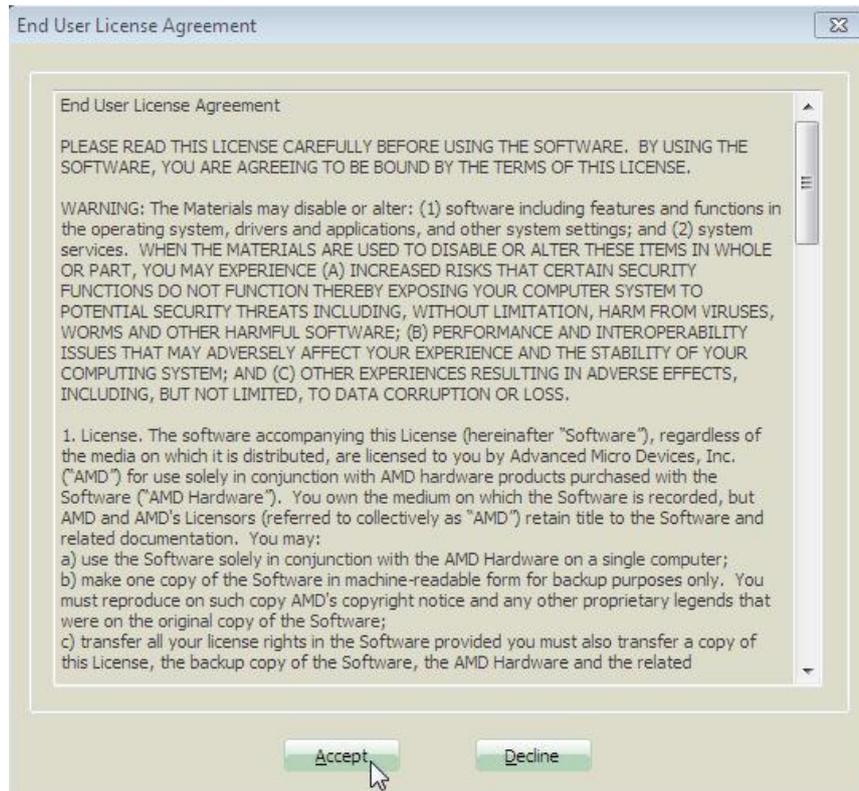
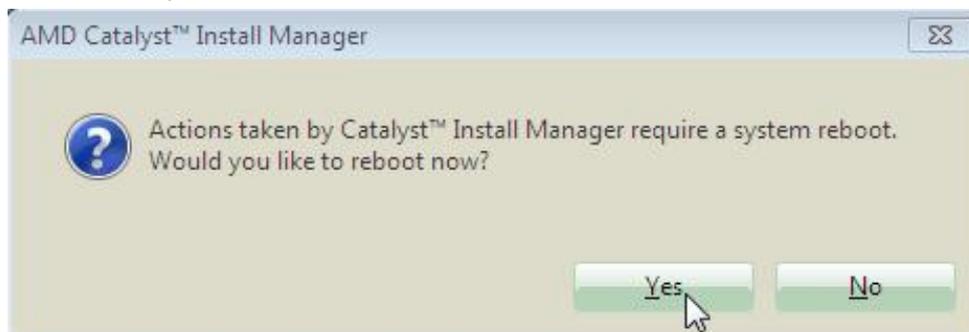
4. Select the language you would like to be displayed and click **Next**.

5. Click **Install** to continue the installation process.



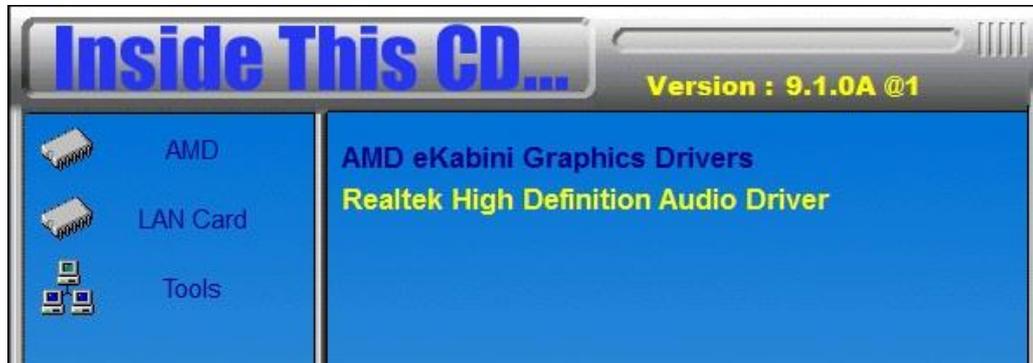
6. Select **Express** and the **installation location** and click **Next**.



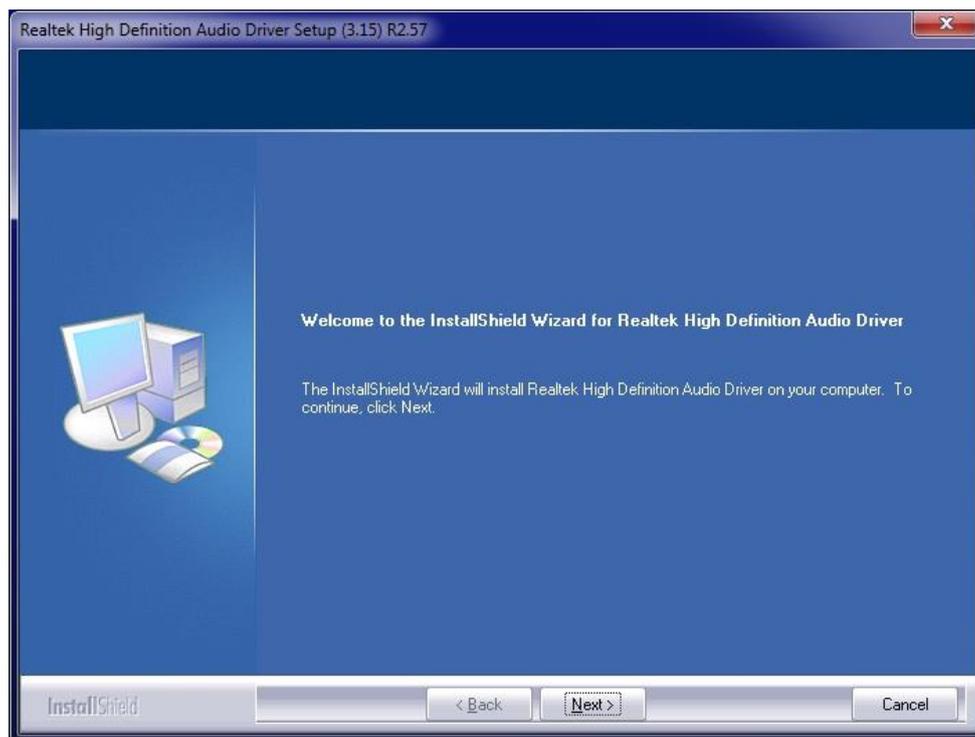
7. Click **Accept** to accept the End User License Agreement.8. To reboot the system, click **Yes**.

4.2 Realtek HD Audio Driver Installation

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



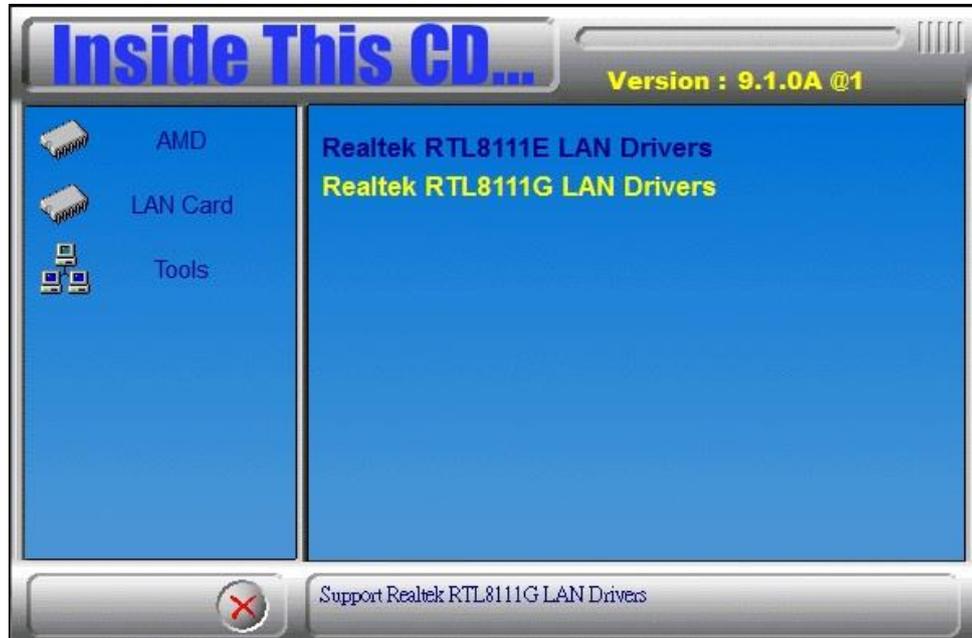
2. On the Welcome to the InstallShield Wizard screen, click **Next** to proceed with and complete the installation process.



3. Restart the computer when prompted.

4.3 LAN Drivers Installation

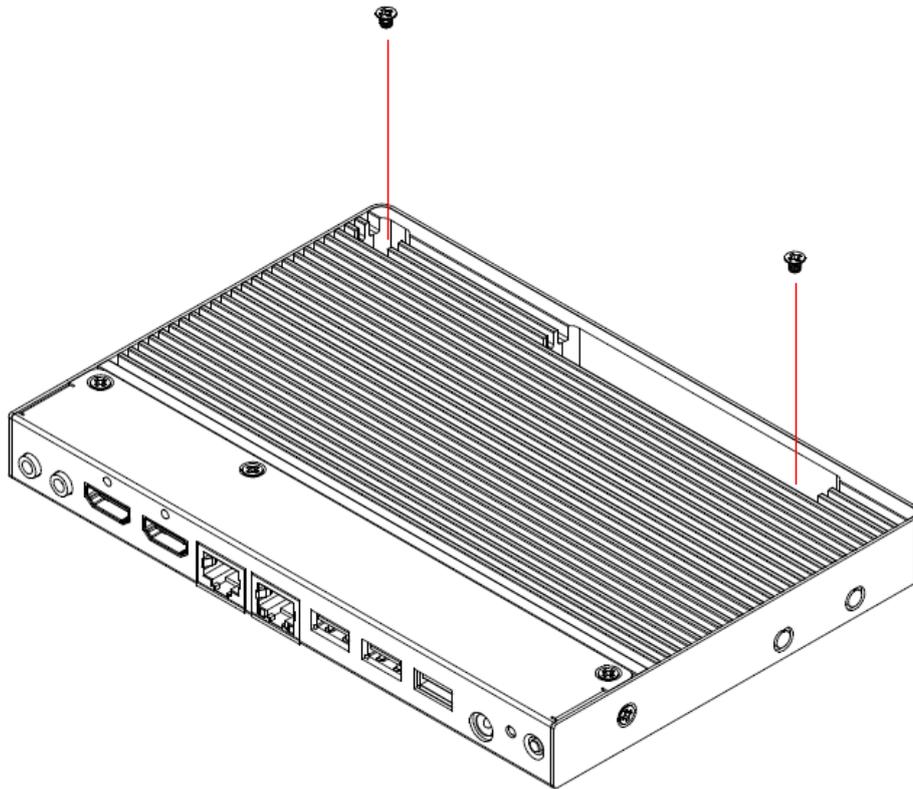
1. Insert the CD that comes with the board.
2. Click **LAN Card** and then **Realtek RTL8111G LAN Controller Drivers**.



3. In the Welcome screen, click **Next**.
4. In the License Agreement screen, click **I accept the terms in license agreement** and **Next** to accept the software license agreement and proceed with the installation process.
5. Click the checkbox for **Drivers** in the Setup Options screen to select it and click **Next** to continue.
6. When the Ready to Install the Program screen appears, click **Install** to continue.
7. When InstallShield Wizard is complete, click **Finish**.

Appendix

Mounting SI-22 to the Wall



You can install SI-22 on plastic (LCD monitor), wood, drywall surface over studs, or a solid concrete or metal plane directly. Ensure the installer uses at least two M3 length 6mm screws to secure the system on the wall. **Four M3 length 6mm screws are recommended to secure the system onto the 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 onto the 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 the weight of SI-22 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

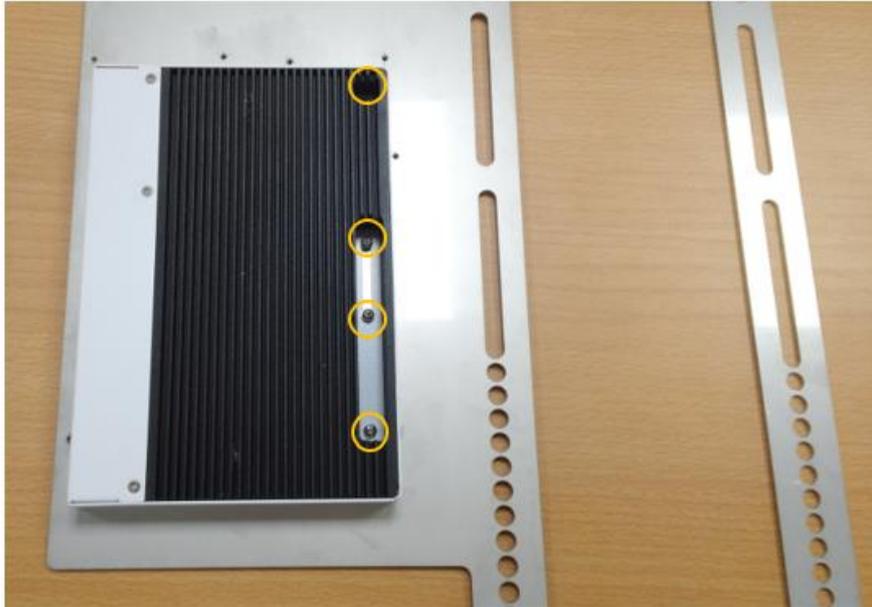
Plan the mounting location thoroughly. Locations such as walkway areas, hallways, and crowded areas are not recommended. Mount the unit to a flat, sturdy, structurally sound column or wall surface.

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.

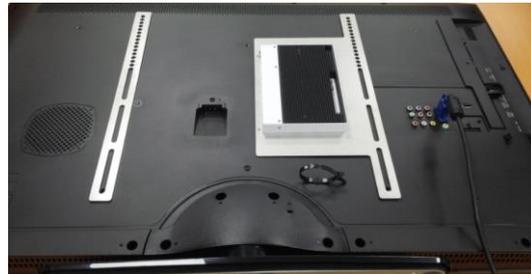
SI-22 Mounting Bracket Solution

SI-22 mounting bracket (IBASE) part number: SC2SIMK1---0A1100P

1. Please install SI-22 to the mounting bracket using 4 screws, as shown in the picture.



2. Please install mounting bracket to the mounting hole of display which you use.
Depending on the application, there are different orientations, as shown below.



3. Install the TV mounting black bracket on the SI-22 silver-color mounting bracket.



4. After completing the above steps, you can now put the display on the desired location.

