AXIOMTEK

GOT3187W-832-PCT

All-in-One
18.5” WXGA TFT Fanless
Compact-Size
PANEL PC

User’s Manual

RoHS

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CAUTION

If you replace wrong batteries, it causes the danger of explosion. It is recommended by the manufacturer that you follow the manufacturer's instructions to only replace the same or equivalent type of battery, and dispose of used ones.

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Safety Precautions

Before getting started, read the following important cautions.

1. Be sure to ground yourself to prevent static charge when installing the internal components. Use a grounding wrist strap and place all electronic components in any static-shielded devices. Most electronic components are sensitive to static electrical charge.

2. Disconnect the power cords from the GOT3187W-832-PCT Series before making any installation. Be sure both the system and the external devices are turned OFF. Sudden surge of power could ruin sensitive components. Make sure the GOT3187W-832-PCT Series is properly grounded.

3. Do not open the system's top cover. If opening the cover for maintenance is a must, only a trained technician is allowed to do so. Integrated circuits on computer boards are sensitive to static electricity. To avoid damaging chips from electrostatic discharge, observe the following precautions:

   - Before handling a board or integrated circuit, touch an unpainted portion of the system unit chassis for a few seconds. This will help to discharge any static electricity on your body.

   - When handling boards and components, wear a wrist-grounding strap, available from most electronic component stores.

Trademarks Acknowledgments

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Chapter 1
Introduction

This chapter contains general information and detailed specifications of the GOT3187W-832-PCT. Chapter 1 includes the following sections:

- General Description
- Specification
- Dimensions
- I/O Outlets
- Package List

1.1 General Description

The GOT3187W-832-PCT adopts a 18.5-inch WXGA TFT LCD with 300-nit brightness and an Intel® Atom™ processor D2550 1.86 GHz to provide excellent computing performance and thermal resistance. This fanless platform is especially designed for operating under heavy-duty environment including steel refinery, oil pipe, ship, machine maker operating systems and many more. Having below abilities makes GOT3187W-832-PCT surely a most robust and cost-effective solution.

Wide Operating Temperature Range

GOT3187W-832-PCT features a technology of wide operating temperature range which allows it to work between -10°C to +50°C. It incorporates compact ID and fanless cooling system with a low power Intel® Atom™ processor D2550 1.86 GHz, making the platform a power-efficient solution.

Reliable and Stable Design

The GOT3187W-832-PCT adopts a fan-less cooling system, which makes it especially suitable for vibration-heavy environments, best for the transportation, ship, and industrial machinery markets. For high capacity storage requirement, GOT3187W-832-PCT can work under 2.0G (5 ~ 500Hz, random for CompactFlash) in operation mode with a patent of anti-vibration design. The patent improves the system reliability and sustainability.

WLAN Antenna Supported (optional)

GOT3187W-832-PCT has a PCI Express Mini Card slot for optional add-ons such as wireless LAN card for 802.11 b/g connections & 3G/GPRS application, and more. It also provides an optional fixed rotational WLAN antenna for wireless network connection.

More Features

GOT3187W-832-PCT utilizes one 204-pin DDR3 1066 SODIMM system memory max. up to 4GB, one SATA HDD and one CF. It provides over-current protection-fuse and a full set of I/O including RS-232, RS-232/422/485, USB 2.0, audio (line-out), and Gigabit Ethernet. Additionally, this slim unit supports panel mount, wall mount (optional), VESA mount (optional) and desktop stand (optional).

1.2 Specifications

Main CPU Board

- **CPU**
  - Intel® Atom™ D2550 1.86GHz processor onboard
- **System Chipset**
  - Intel® NM10 Express
- **System Memory**
  - One 204-pin DDR3 1066MHz SO-DIMM socket
  - Maximum memory up to 4GB
- **BIOS**
  - America Megatrends BIOS

I/O System

- **Standard I/O**
  - 1 x RS-232/422/485, 1 x RS232
  - 4 x USB 2.0
- **Ethernet**
  - 2 x RJ45 for Giga Ethernet
- **Audio**
  - 1x Line-out
- **Expansion**
  - 1 x Mini-card slot
- **Storage**
  - 1 x 2.5" SATA HDD
  - 1 x CompactFlash™ Type II(optional)
- **Power connector**
  - Phoenix power connector

System Specification

- **18.5" WXVGA(1366x768) LCD with LED backlight**
- **PCT touch**
- **Fanless Heat Dispensing Design**
- **IP65 aluminum front bezel**
- **Disk drive housing:**
  - One 2.5" SATA drive
- **Net Weight**
  - 5.8 Kgs (11.02 lb)
- **Dimension (Main Body Size)**
  - 460.8x 58.5x 285 mm
- **Operation Temperature**
  - -10℃ to 50℃
- **Relative Humidity**
  - 20% to 90% @ 40℃, Non-Condensing
- **Power input**
  - 10~30VDC with phoenix power connector

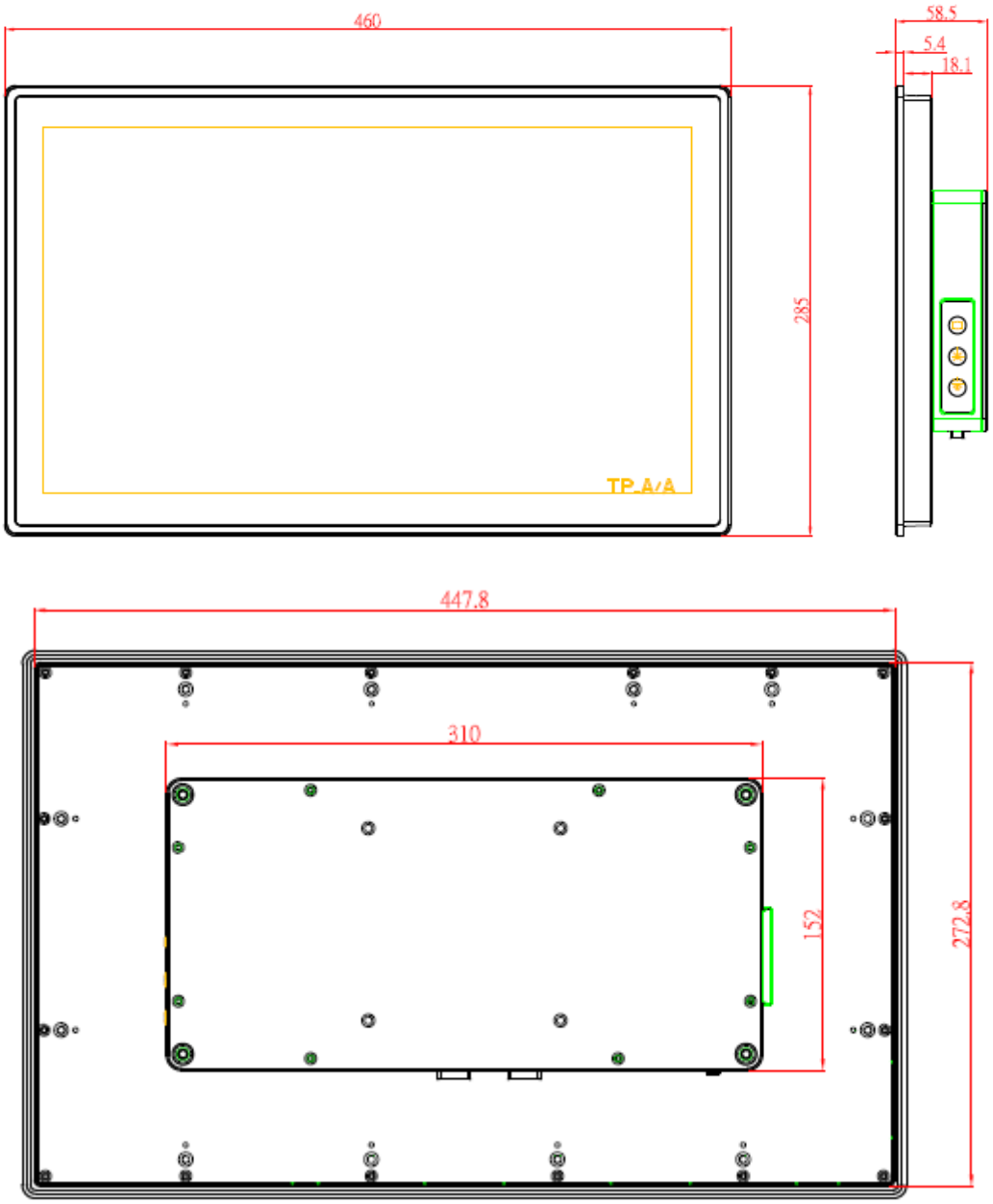
NOTE All specifications and images are subject to change without notice.

NOTE If the operation temperature is higher than 40℃, the wide temperature HDD/CF are recommended to be used on the device.

NOTE If the operation temperature is higher than 45℃, the wide temperature DRAM is recommended to be used on the device.

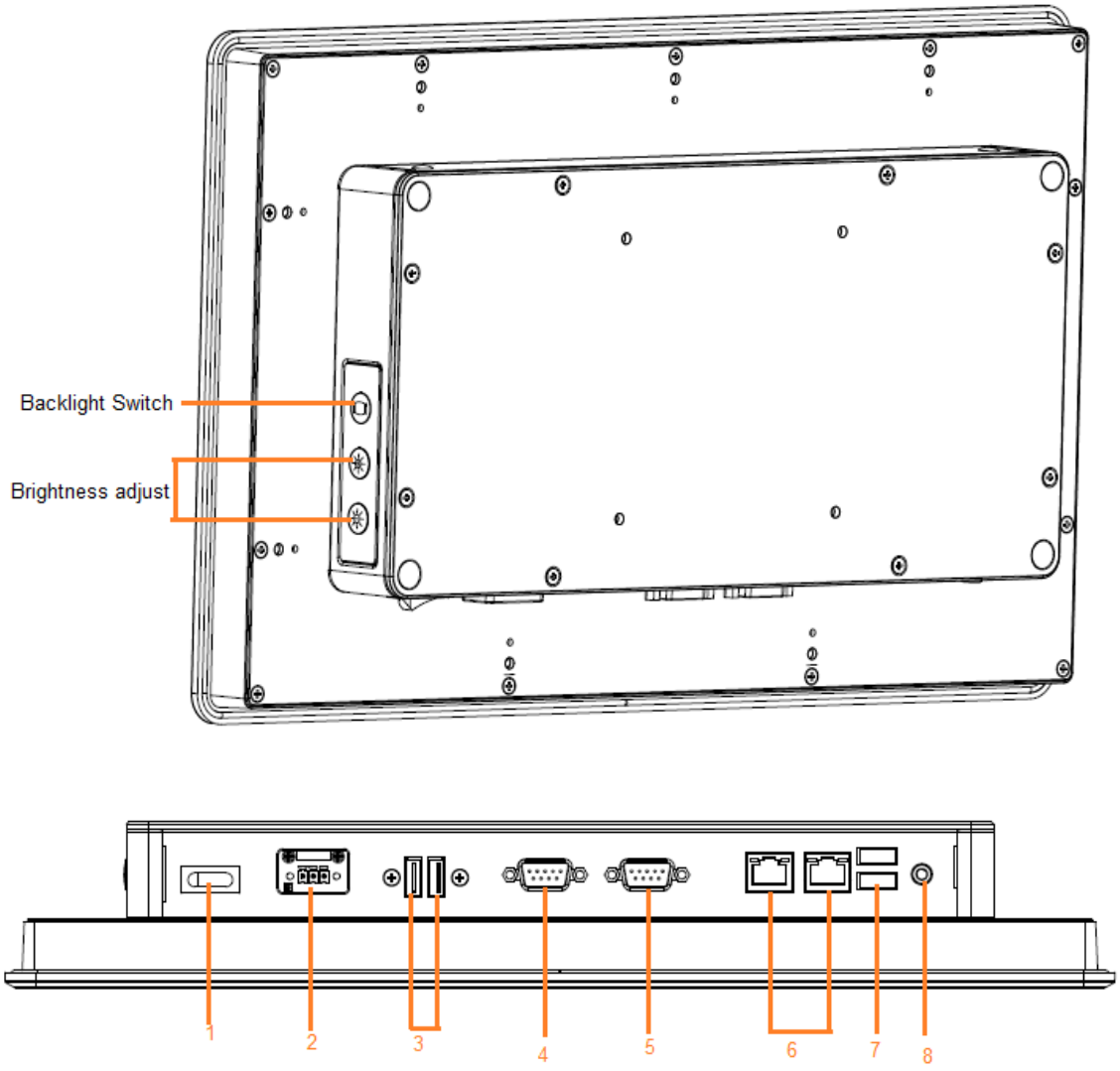
1.3 Dimensions and Outlines

The following diagrams show the dimensions and outlines of GOT3187W-832-PCT



1.4 I/O Outlets

Please refer to the following illustration for I/O locations of the GOT3187W-832-PCT.



No	Function
1	POWER SWITCH (ATX)
2	Terminal Block for DC Power Input
3	2xUSB 2.0
4	COM 1(RS-232/422/485)
5	COM 2(RS-232)
6	2xETHERNET
7	2xUSB2.0
8	Audio(Line-Out)

1.5 Packing List

When you receive the GOT3187W-832-PCT, the bundled package should contain the following items:

- **GOT3187W-832-PCT unit x 1**
- **Driver CD x1**
- **Phoenix connector x 1**
- **Panel mount kit x 12**
- **Screws for HDD x 4**

If you can not find the package or any items are missing, please contact Axiomtek distributors immediately.

Chapter 2
Hardware and Installation

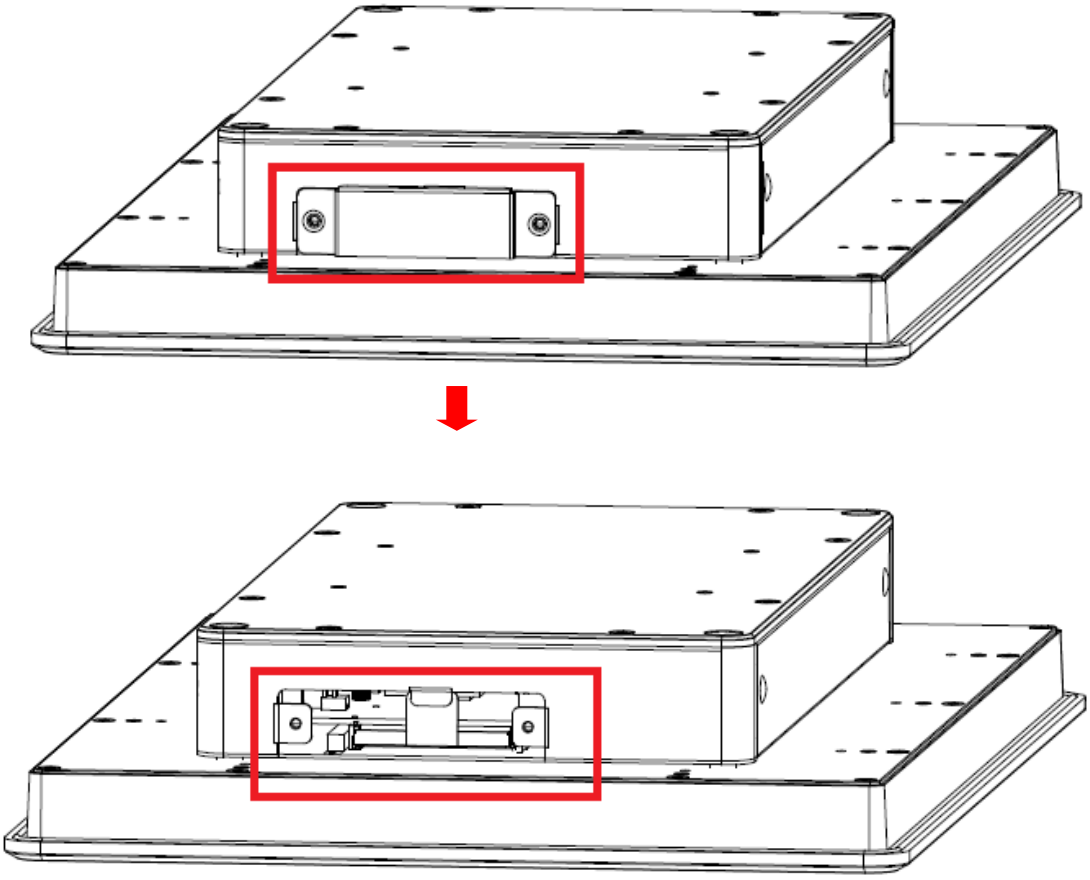
The GOT3187W-832-PCT provides rich I/O ports and flexible expansions for you to meet different demand, for example CF card. The chapter will show you how to install the hardware. It includes:

- **CompactFlash™ Card**
- **Serial Port**
- **Ethernet**
- **Mounting Method**
- **Hard disk**
- **DRAM**
- **Wireless LAN Card**
- **Power**

2.1 CF card Installation

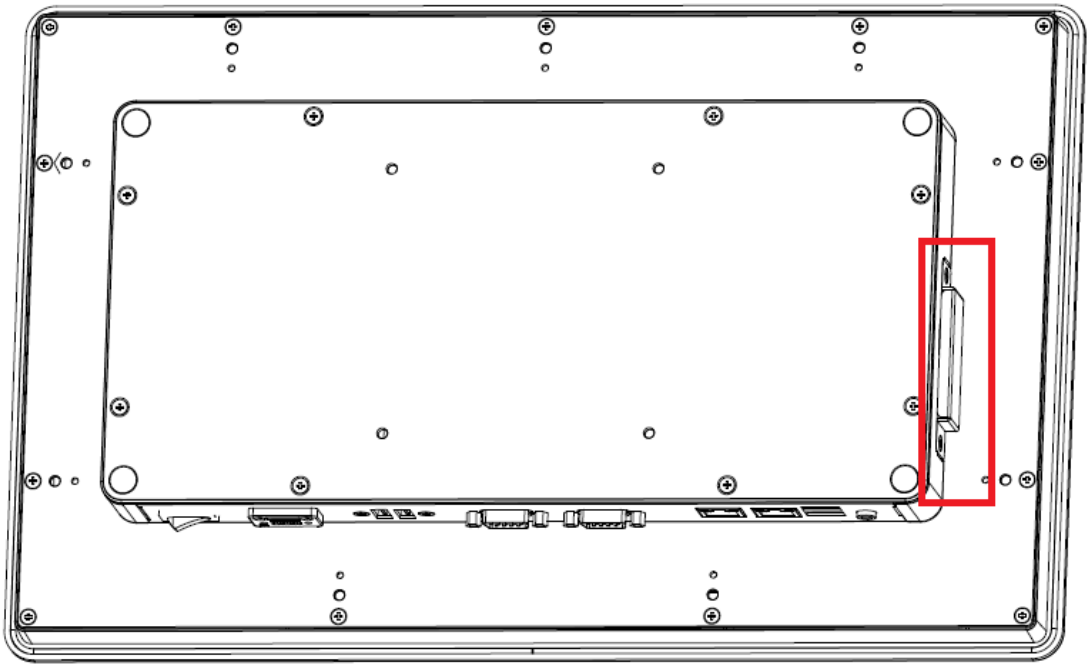
The GOT3187W-832-PCT provides one CF slot for users to install CompactFlash™ card. Please refer to the following instructions for installation:

Step 1 Open the cover, unscrew 2 screws on the chassis.



Step 2 Stick the mylar on the CF card bottom side.

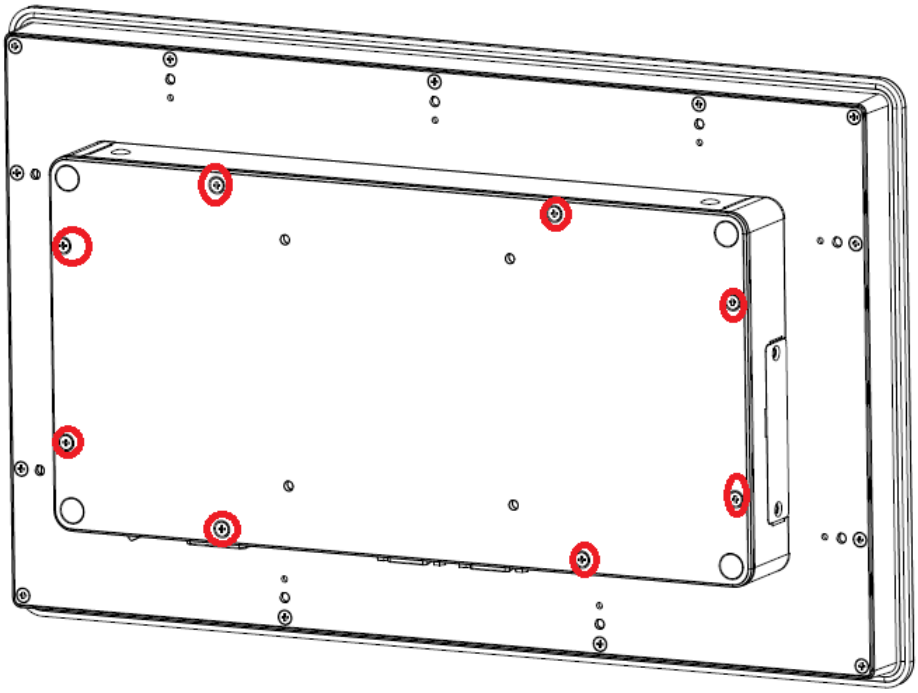
Step 3 **Insert the CF card to the CF card slot, then finding the CF cover from the system package and screw it.**



2.2 Open back cover

This section tells users how to open back cover. Please follow the steps below.

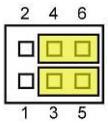
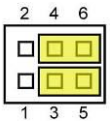
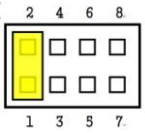
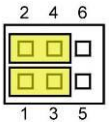
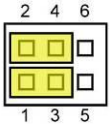
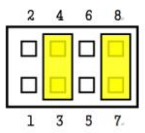
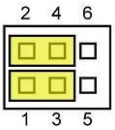
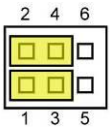
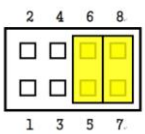
Step 1 **Unscrew 8 screws on the back cover. Please refer the photo below.**



Step 2 Remove the back cover.

2.3 Serial Ports Interface

The GOT3187W-832-PCT has four serial ports. COM1 is RS-232/422/485 and COM2 is RS-232. The following table shows you the pin assignments of this connector:

Jumper	Description	Jumper Setting		
COM 1	RS-232 (Default)	JP8 	JP7 	JP9 
	RS-422	JP8 	JP7 	JP9 
	RS-485	JP8 	JP7 	JP9 

2.3.1 COM1&COM2 Connector

The COM1 and COM2 is a standard DB-9 connector. This connector is equipped with +5V level power capability on DCD and +12V level on RI by setting JP10 and JP11.

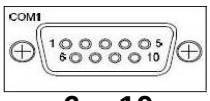
Jumper	Description	Default Jumper Setting
JP10	COM1 Port W/O Power: (3-5, 4-6) With Power: (1-3) DCD_+5V (2-4) RI_+12V	(3-5, 4-6)
JP11	COM2 Port W/O Power: (3-5, 4-6)(Default) With Power: (1-3) DCD_+5V (2-4) RI_+12V	(3-5, 4-6)

The pin assignment of RS-232/RS-422/RS-485 is listed on the following table. If you need COM1 port to support RS-422 or RS-485 mode, please refer to Jumper Settings

Pin	RS-232	RS-422	RS-485
1	DCD	TX-	Data-
2	RXD	TX+	Data+
3	TXD	RX+	N.C
4	DTR	RX-	N.C.
5	GND	No use	No use
6	DSR	No use	No use
7	RTS	No use	No use
8	CTS	No use	No use
9	RI	No use	No use

COM1 (SBC87832)

1 5



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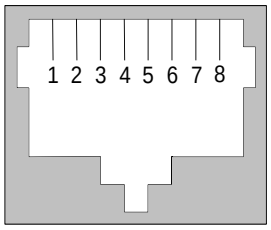
2.4 Ethernet

The GOT3187W-832-PCT is equipped with a high performance Plug and Play Ethernet interface, full compliant with IEEE 802.3 standard, and can be connected with a RJ-45 LAN connector.
Please refer to detailed pin assignment list below:

Pin	Signal
1	TX+ (Data transmission positive
2	TX- (Data transmission negative)
3	Rx+(Data reception positive)
4	RJ45 termination
5	RJ45 termination
6	Rx- (Data reception negative)
7	RJ45 termination
8	RJ45 termination



RJ-45

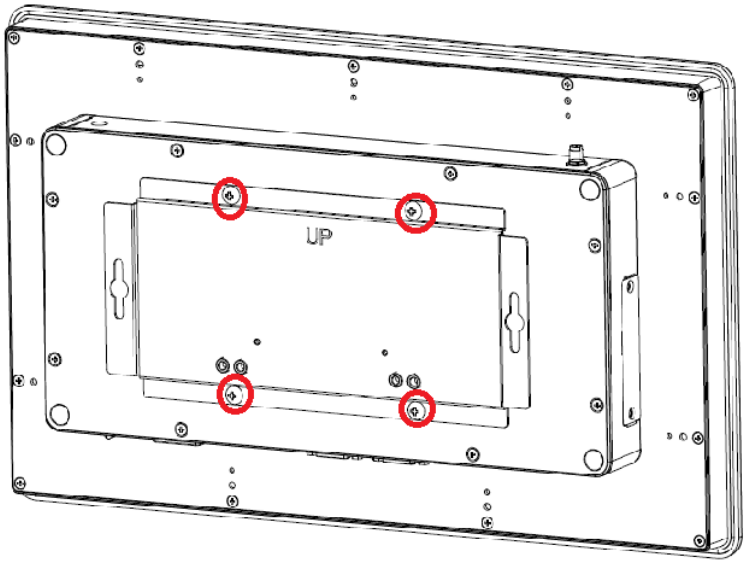
2.5 Mountings: Panel / Wall / Desktop / VESA

There are 4 application options for the GOT3187W-832-PCT, Panel/Wall/Desktop/VESA mountings.

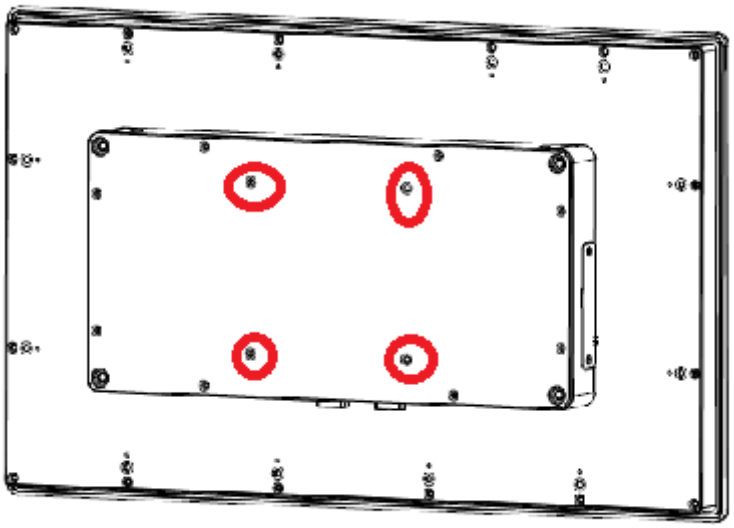
2.5.1 VESA-ARM/Wall-Mount

The GOT3187W-832-PCT provides VESA mount: 100x100 mm. Screw four screws to fix the kit in the back chassis.

Wall mount:

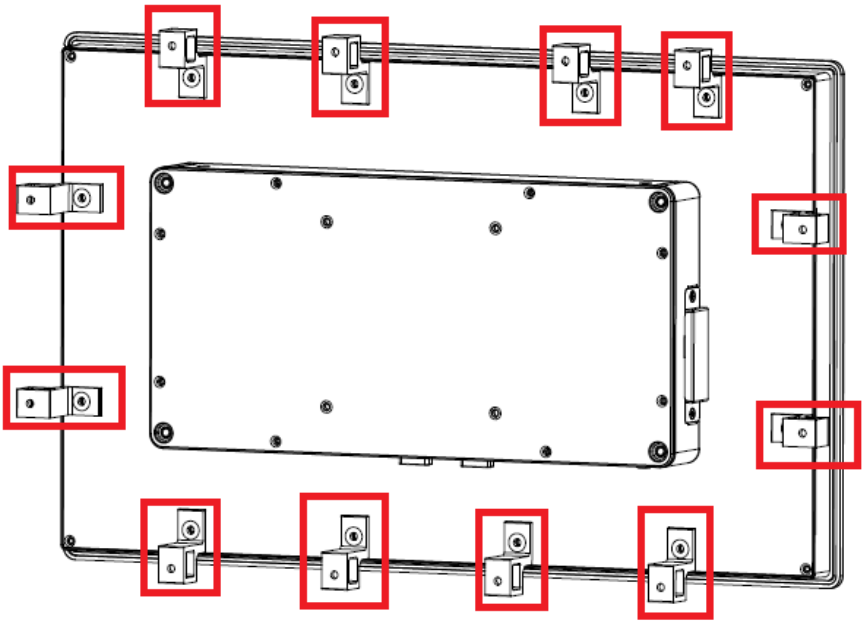


VESA mount:



2.5.2 Panel-mount Kit Assembly

The GOT3187W-832-PCT is designed for panel mount application. To mount the GOT3187W-832-PCT, the standard set of mounting kit (included in the system packaging) is needed.



2.6 HDD Installation

The GOT3187W-832-PCT provides a convenient Hard Disk Drive (HDD) bracket for users to install 2.5" SATA HDD. Please follow the steps:

Step 1 Refer section 2.2 to open the back cover.

Step 2 Fix the HDD on the HDD tray by 4 screws.

Step 3 **Plug the cables to connectors and screw the HDD tray on the bracket. Installation completes.**

2.7 DRAM Installation

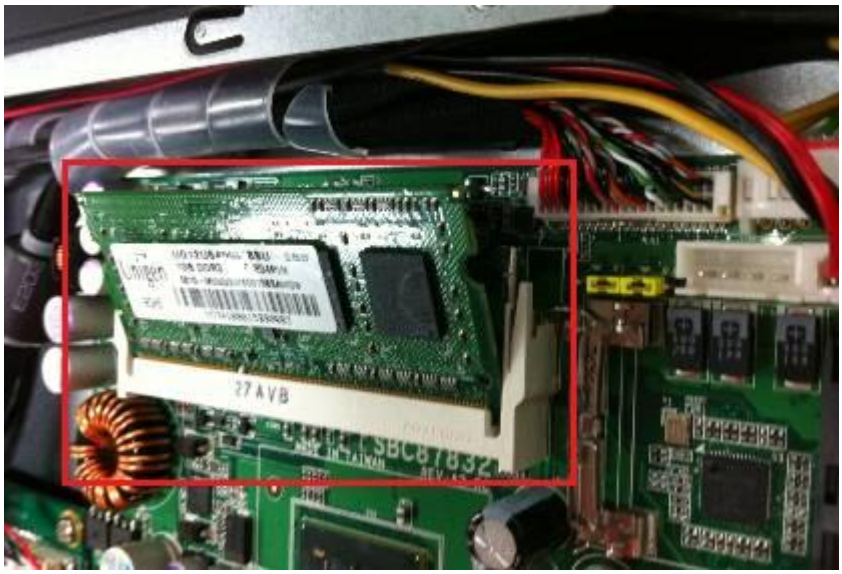
The GOT3187W-832-PCT provides one 204-pin DDR3 SODIMM socket that supports system memory up to 4GB. Please follow steps below to install the memory modules:

Step 1 **Refer to section 2.2 to open the back cover.**

Step 2 **Find the DIMM heatsink on the back cover. Stick the thermal pad on it and rip the red mylar from it.**

Step 3 **Find out DIMM socket on mainboard (SBC87832).**

Step 4 **Insert the DRAM to the DIMM socket, and then push it down firmly until it is clipped by the socket.**



Installation completed

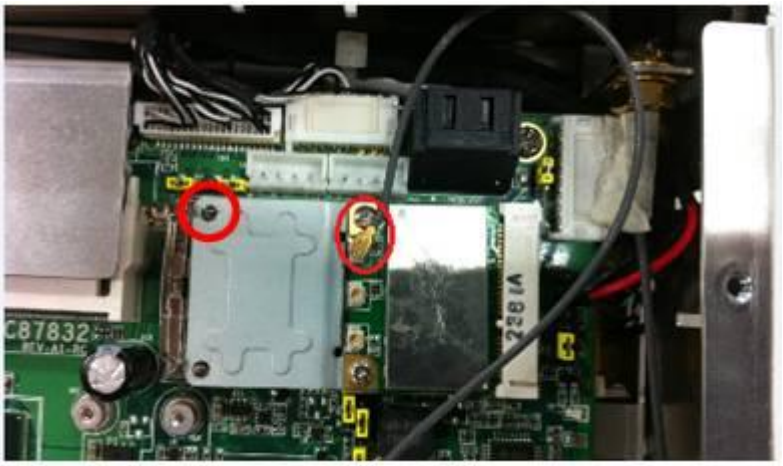
2.8 Wireless LAN Card Installation

The GOT3187W-832-PCT provides one Mini card slot for user to install one wireless LAN card. When installing the wireless LAN card, refer to the following instructions and illustration:

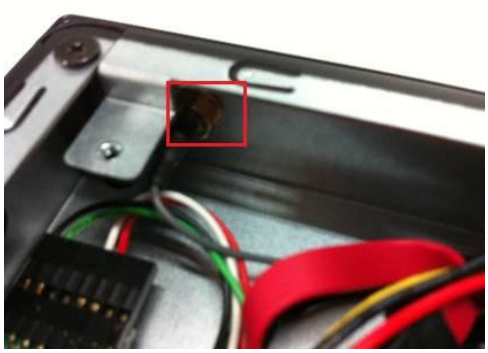
Step 1 **Refer to section 2.2 to open the back cover and find out mini-card slot on mainboard.**

Step 2 **Insert the wireless LAN card to the slot. Push it down firmly until it is clipped by the slot.**

Step 3 **Find the Antenna cable and connect it on wireless LAN card.**



Step 4 **Lift the rubber stopper from the top of back cover and screw the antenna cable.**



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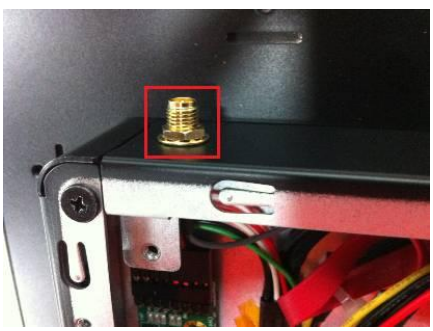

Step 5 Install the antenna on the antenna connector.

NOTE: Please have the extented bracket when using half-size mini card.

2.9 Power

GOT3187W-832-PCT equips with a phoenix type power connector. It adopts 10VDC to 30VDC. Please follow the signs on power connector to connect DC power source.

+: Power positive G: Safty ground —:Power negative

NOTE: The safty ground must be connected to ensure the uiit working appropriately.

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Chapter 3
AMI BIOS Setup Utility

This chapter provides users with detailed description how to set up basic system configuration through the AMIBIOS8 BIOS setup utility.

3.1 Starting

To enter the setup screens, follow the steps below:
Turn on the computer and press the <Del> key immediately.
After you press the <Delete> key, the main BIOS setup menu displays. You can access the other setup screens from the main BIOS setup menu, such as the Chipset and Power menus.

3.2 Navigation Keys

The BIOS setup/utility uses a key-based navigation system called hot keys. Most of the BIOS setup utility hot keys can be used at any time during the setup navigation process. These keys include <F1>, <F2>, <Enter>, <ESC>, <Arrow> keys, and so on.

 ***NOTE: Some of the navigation keys differ from one screen to another.***

Hot Keys	Description
→← **Left/Right**	The Left and Right <Arrow> keys allow you to select a setup screen.
↑↓ **Up/Down**	The Up and Down <Arrow> keys allow you to select a setup screen or sub-screen.
+– Plus/Minus	The Plus and Minus <Arrow> keys allow you to change the field value of a particular setup item.
Tab	The <Tab> key allows you to select setup fields.
F1	The <F1> key allows you to display the general help screen.
F2	The <F2> key allows you to load previous values.
F3	The <F3> key allows you to load optimized defaults.
F4	The <F4> key allows you to save any changes you have made and exit setup. Press the <F4> key to save your changes.
Esc	The <Esc> key allows you to discard any changes you have made and exit the setup. Press the <Esc> key to exit the setup without saving your changes.
Enter	The <Enter> key allows you to display or change the setup option listed for a particular setup item. The <Enter> key can also allow you to display the setup sub- screens.

3.3 Main Menu

When you first enter the Setup Utility, you will enter the Main setup screen. You can always return to the Main setup screen by selecting the Main tab. There are two Main Setup options. They are described in this section. The Main BIOS Setup screen is shown below

- **System Date/Time**
  Use this option to change the system time and date. Highlight System Time or System Date using the <Arrow> keys. Enter new values through the keyboard. Press the <Tab> key or the <Arrow> keys to move between fields. The date must be entered in MM/DD/YY format. The time is entered in HH:MM:SS format.

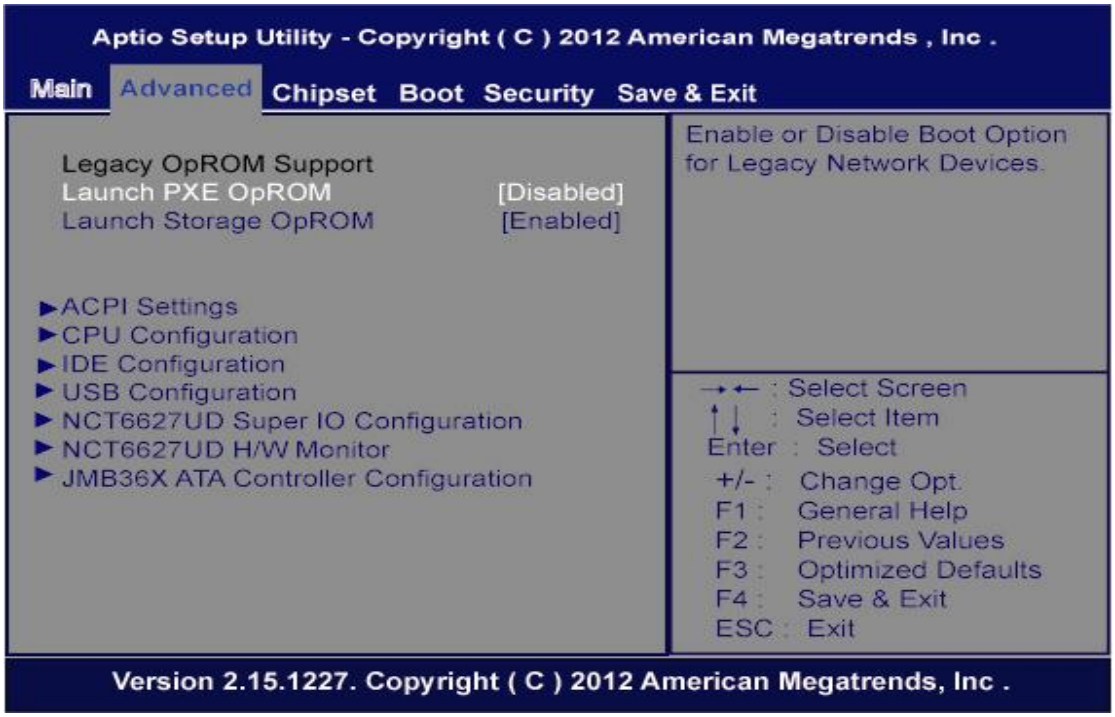
3.4 Advanced Menu

- **Launch Storage OpROM**
  This item can enable or disable boot option for legacy mass storage devices with option ROM.

The Advanced menu also allows users to set configuration of the CPU and other system devices. You can select any of the items in the left frame of the screen to go to the sub menus:

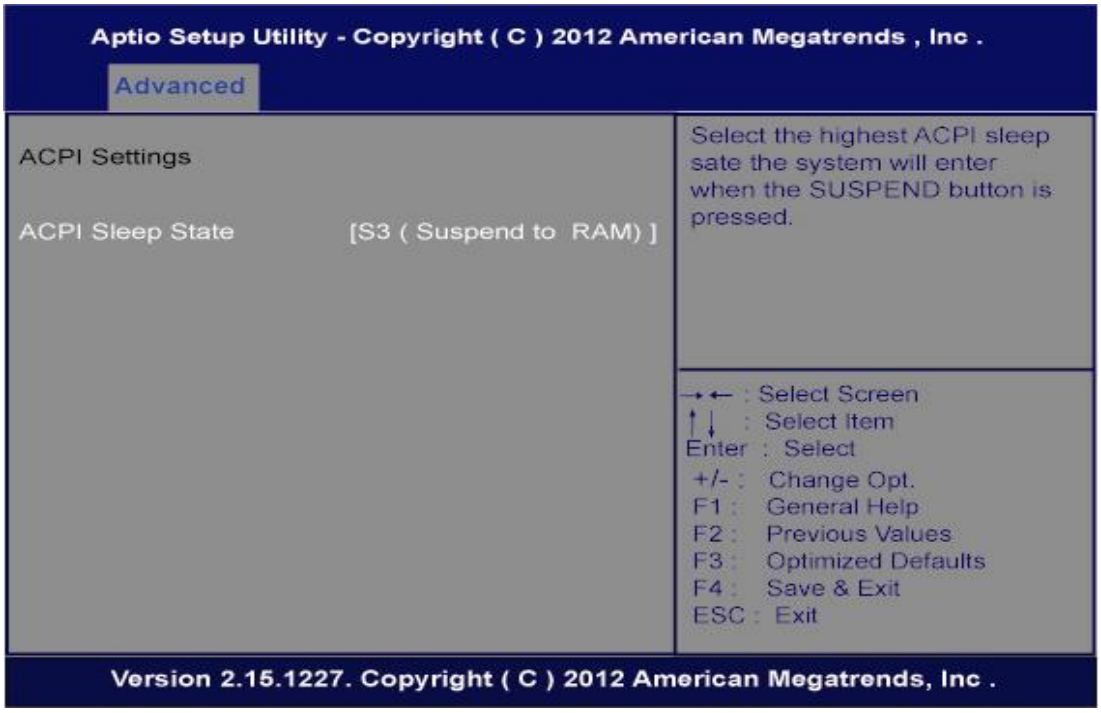
- ► ACPI Settings
- ► CPU Configuration
- ► IDE Configuration
- ► USB Configuration
- ► NCT6627UD Superior IO Configuration
- ► NCT6627UD HW Monitor

For items marked with "►", please press <Enter> for more options.



- **ACPI Settings**

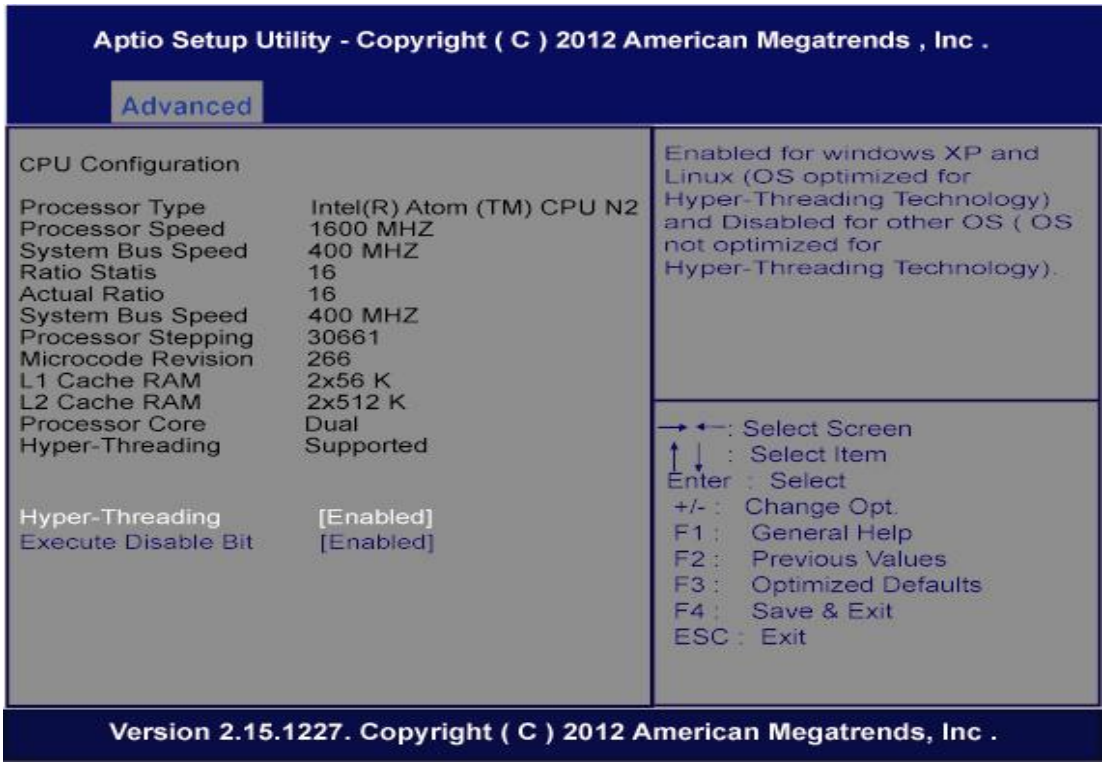
You can use this screen to select options for the ACPI Configuration, and change the value of the selected option. A description of the selected item appears on the right side of the screen.



ACPI Sleep State
Use this item to select the highest ACPI sleep state the system will enter.

- **CPU Configuration**

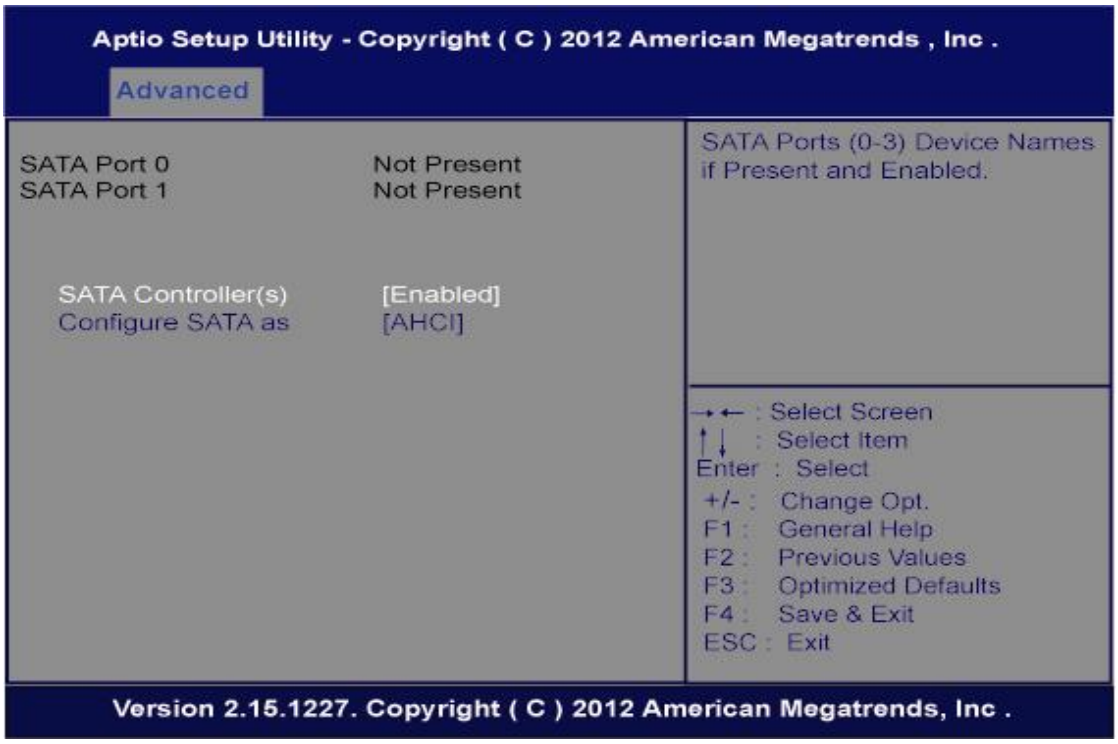
This screen shows the CPU Configuration, and you can change the value of the selected option.



Hyper-Threading
Use this item to enable or disable Hyper-Threading Technology, which makes a single physical processor perform multi-tasking function as two logical ones.

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, RedHat Enterprise 3 Update 3).

- **IDE Configuration**

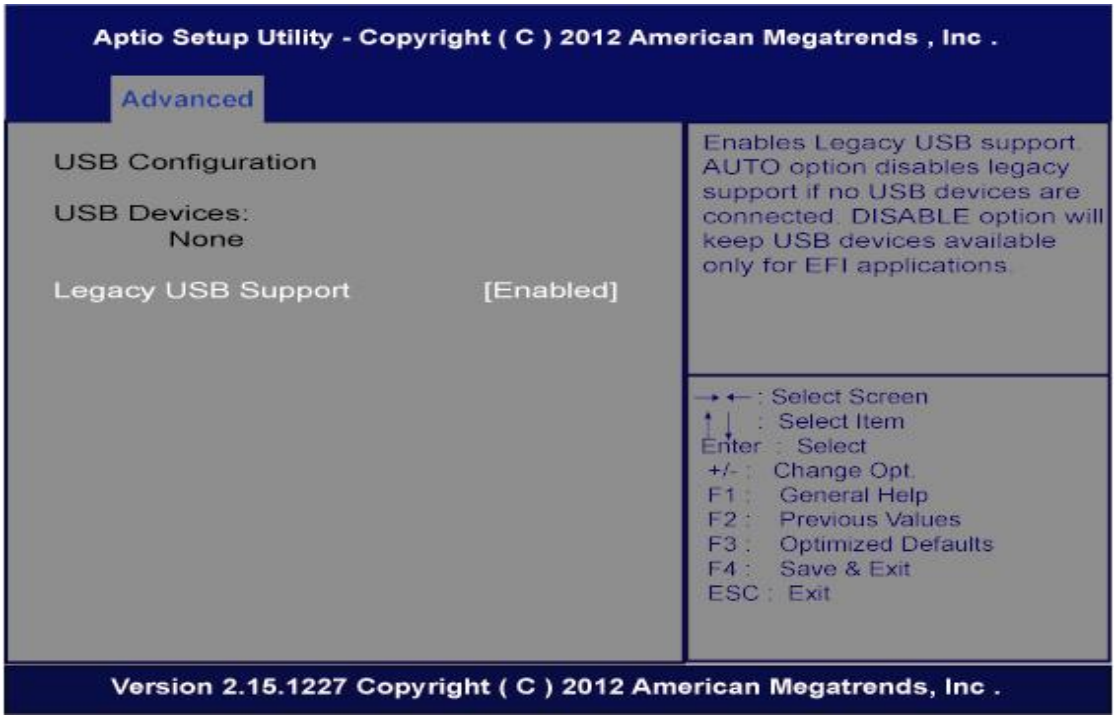


SATA Controller(s)
The optional settings are: [Disabled]; [Enabled].

Configure SATA as
The optional settings are: [IDE]; [AHCI].

- **USB Configuration**

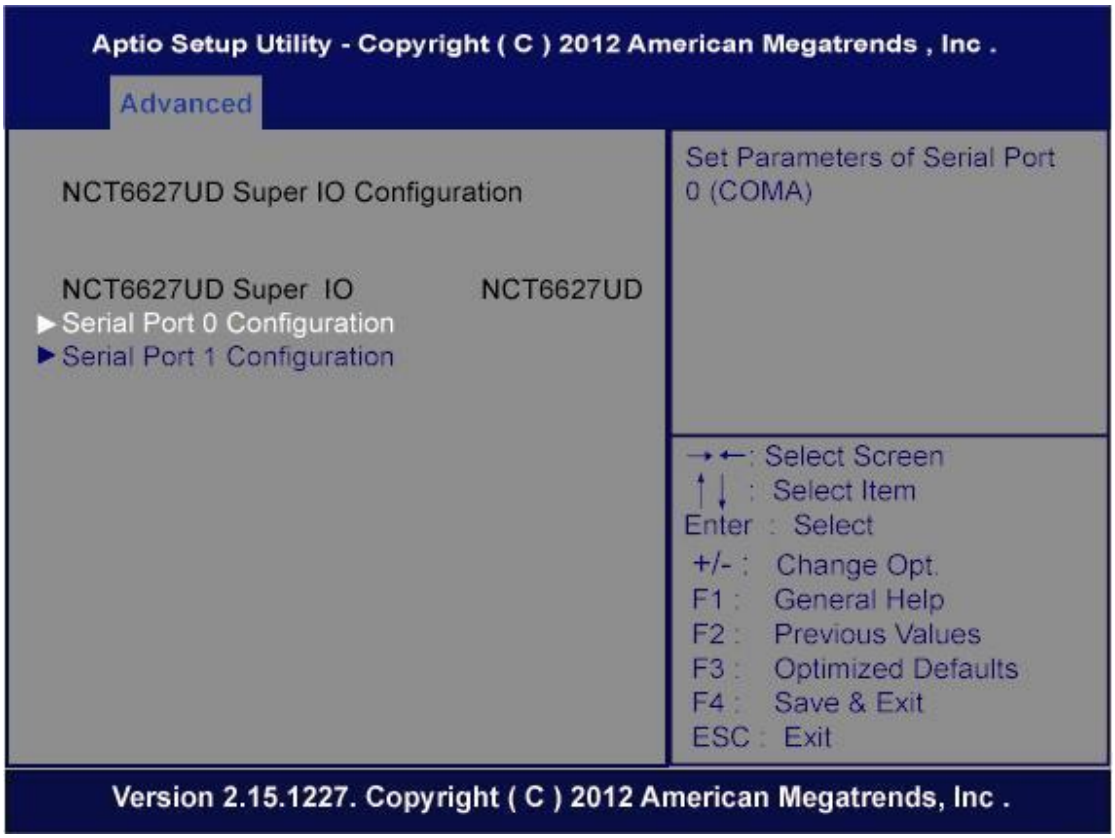
You can use this screen to select options for the USB Configuration, and change the value of the selected option. A description of the selected item appears on the right side of the screen.



Legacy USB Support
The optional settings are: [Auto]; [Disabled]; [Enabled].

- **NCT6627UD Super IO Configuration**

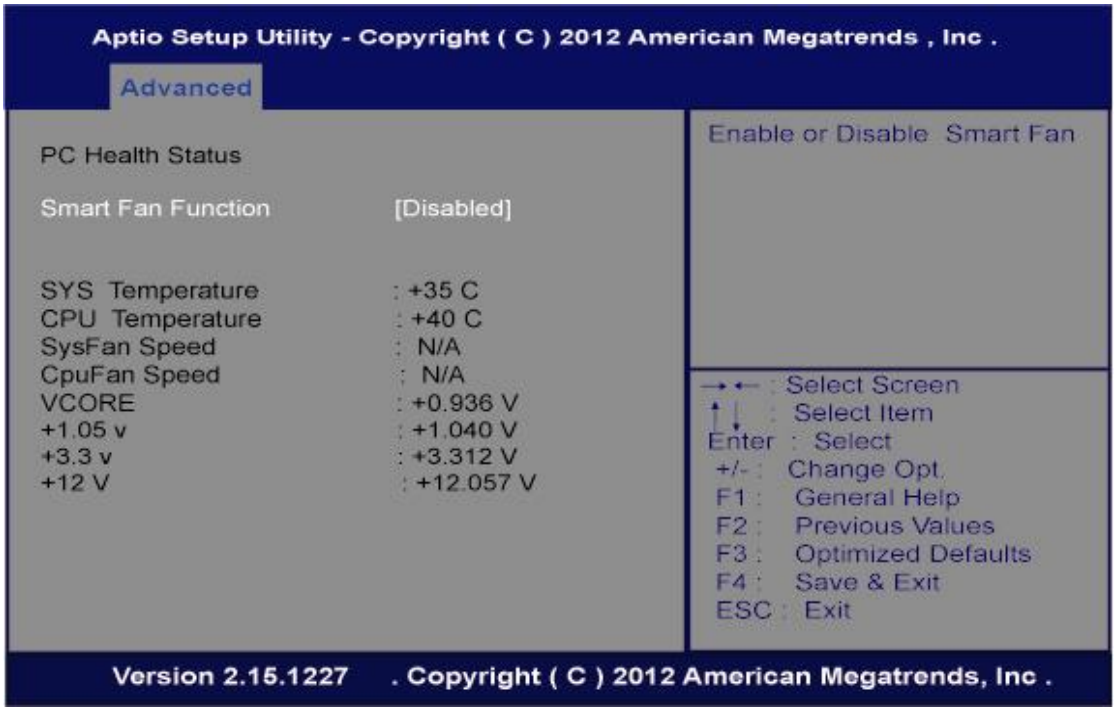
You can use this screen to select options for the Super IO Configuration, and change the value of the selected option. A description of the selected item appears on the right side of the screen



Serial Port Configuration
Use this item to set parameters of serial port 0~1

- **PC Health Status**

This screen shows the Hardware Health Configuration, and a description of the selected item appears on the right side of the screen.

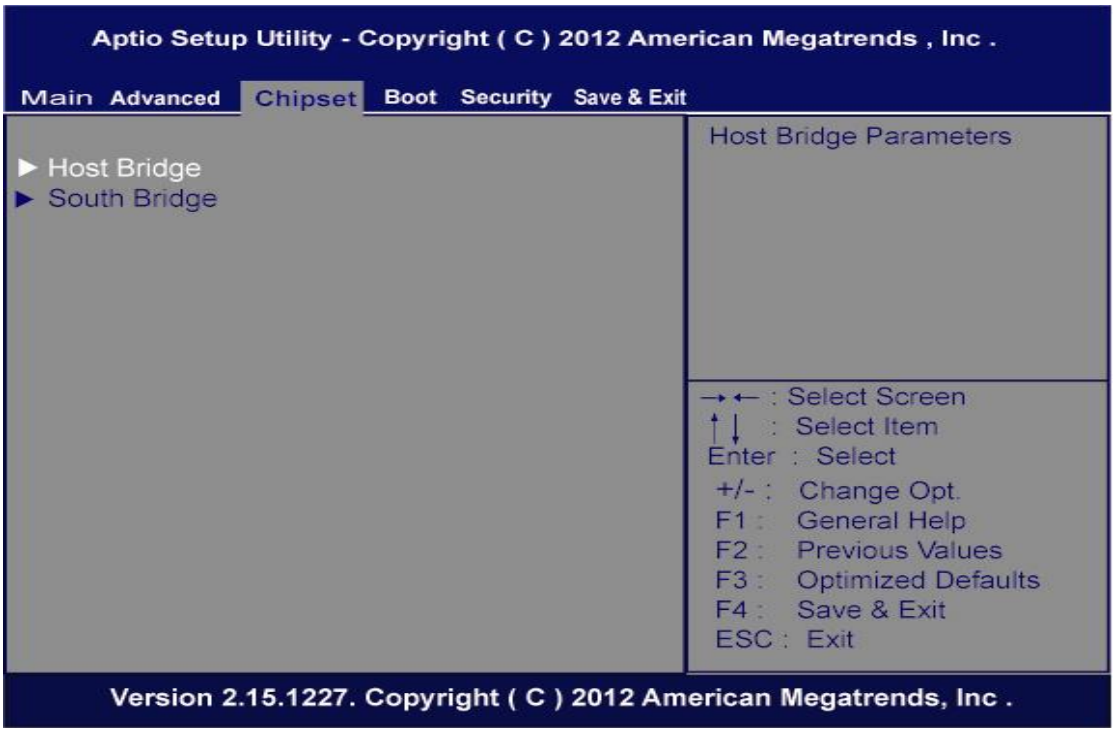


3.5 Chipset Menu

The Chipset menu allows users to change the advanced chipset settings. You can select any of the items in the left frame of the screen to go to the sub menus:

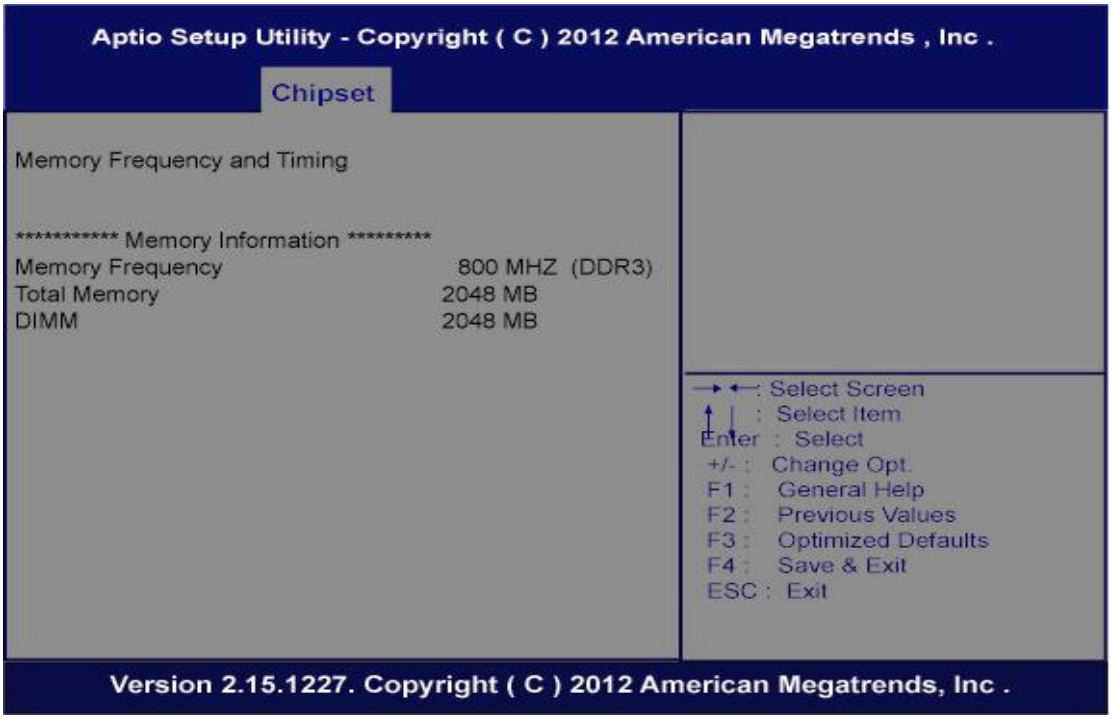
- **Host Bridge**
  Host Bridge For items marked with "►", please press <Enter> for more options.

- **South Bridge**
  South Bridge For items marked with "►", please press <Enter> for more options.



- **Memory Information**

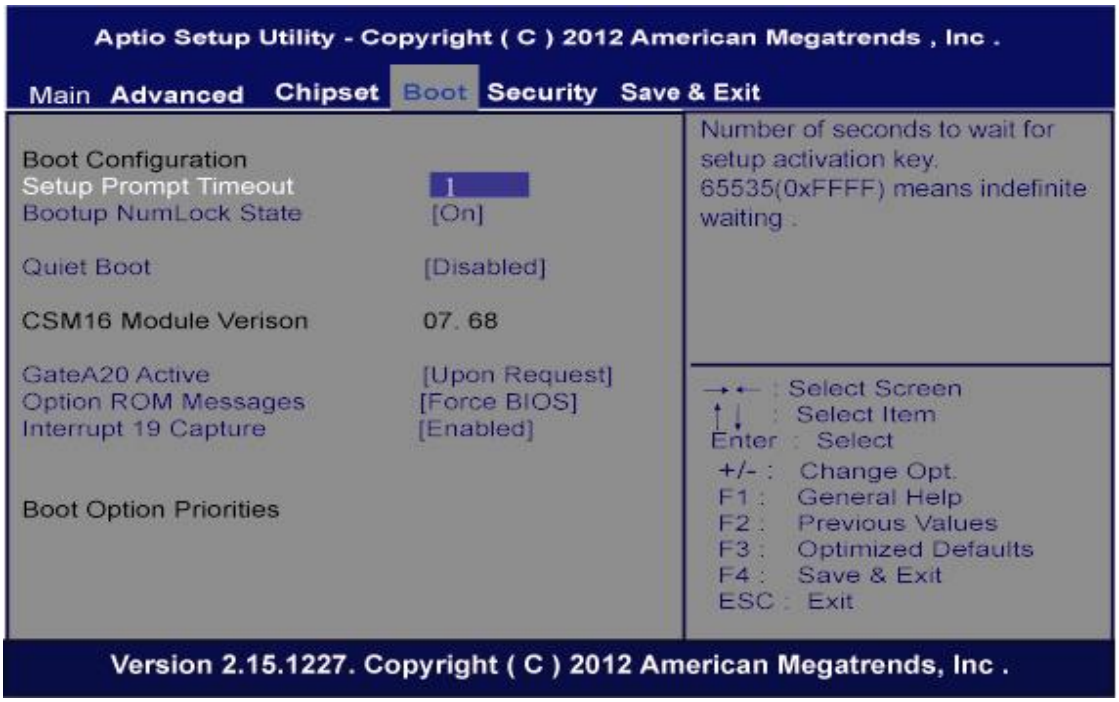
This item is for memory frequency and timing settings. Press <Enter> to go to the sub menu.



3.6 Boot Menu

The Boot menu allows users to change boot options of the system.

- **Boot Settings Configuration**



Setup Prompt Timeout
Use this item to set number of seconds to wait for setup activation key.

Bootup NumLock State
Use this item to select the power-on state for the NumLock.. The optional settings are: [On]; [Off].

GateA20 Active
If Upon Request is selected, GA20 can be disabled using BIOS services. If Always is selected, disabling G20 is not allowed; this option is useful when any RT code is executed above 1MB.

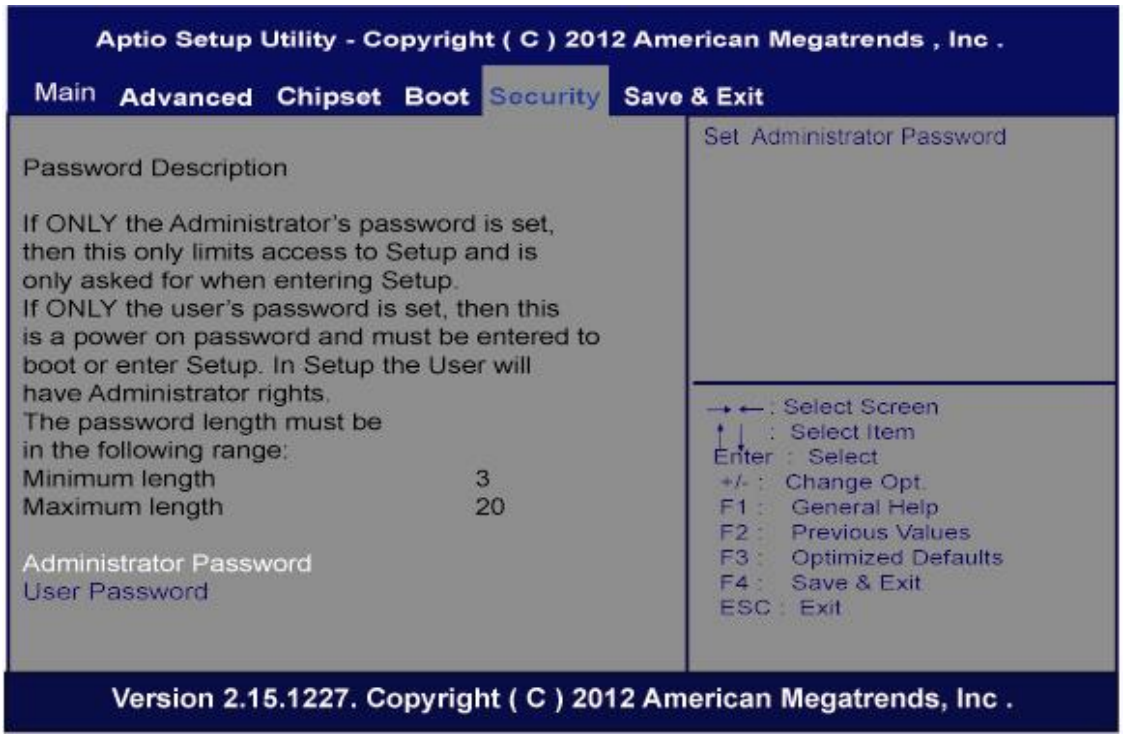
Option ROM Messages
Set display mode for option ROM. Configuration options are Force BIOS and Keep Current.

Interrupt 19 Capture
If this item is enabled, this function makes the option ROM to trap Interrupt 19.

Boot Option Priorities
These are settings for boot priority. Specify the boot device priority sequence from the available devices.

3.7 Security Menu

The Security menu allows users to change the security settings for the system.

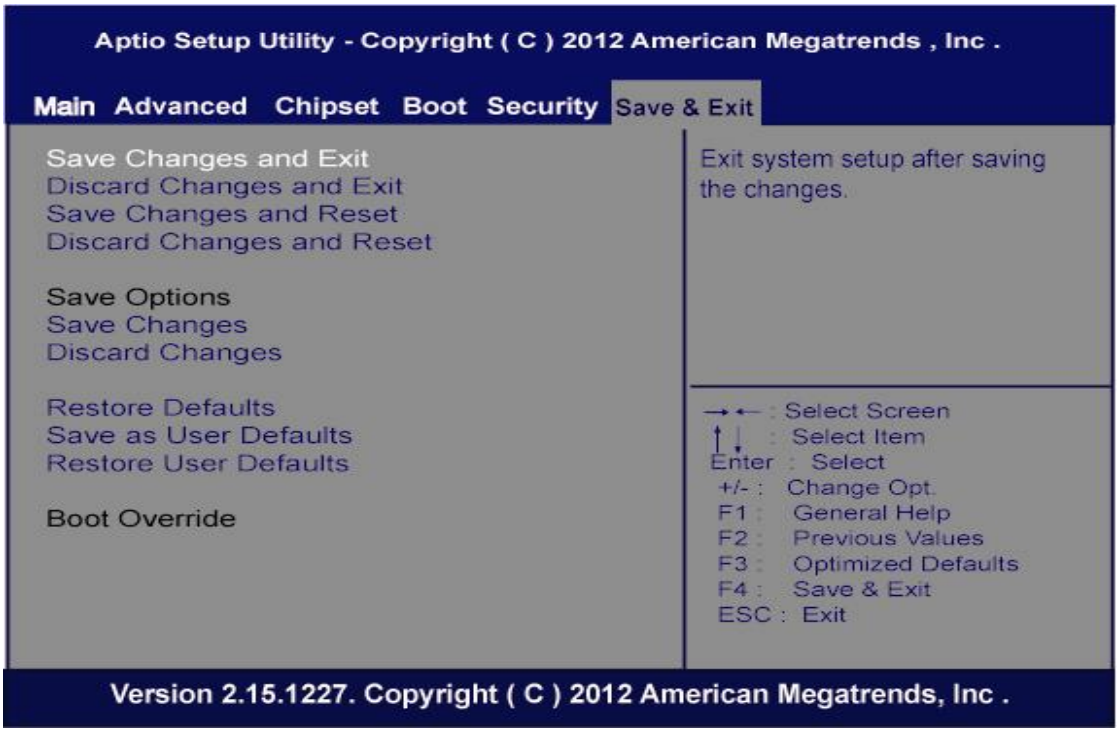


Administrator Password
This item indicates whether an administrator password has been set. If the password has been installed, Installed displays. If not, Not Installed displays.

User Password
This item indicates whether an user password has been set. If the password has been installed, Installed displays. If not, Not Installed displays.

3.8 Save & Exit Menu

The Save & Exit menu allows users to load your system configuration with optimal or fail-safe default values.



Save Changes and Exit
When you have completed the system configuration changes, select this option to leave Setup and reboot the computer so the new system configuration parameters can take effect. Select Save Changes and Exit from the Exit menu and press <Enter>. Select Ok to save changes and exit.

Discard Changes and Exit
Select this option to quit Setup without making any permanent changes to the system configuration. Select Discard Changes and Exit from the Exit menu and press <Enter>. Select Ok to discard changes and exit.

Save Changes and Reset
When you have completed the system configuration changes, select this option to leave Setup and reboot the computer so the new system configuration parameters can take effect. Select Save Changes and Reset from the Save & Exit menu and press <Enter>. Select Yes to save changes and reset.

Discard Changes and Reset
Select this option to quit Setup without making any permanent changes to the system configuration and reboot the computer. Select Discard Changes and Reset from the Save & Exit menu and press <Enter>. Select Yes to discard changes and reset.

Save Changes
When you have completed the system configuration changes, select this option to save changes. Select Save Changes from the Save & Exit menu and press <Enter>. Select yes to save changes.

Discard Changes
Select this option to quit Setup without making any permanent changes to the system configuration. Select Discard Changes from the Save & Exit menu and press <Enter>. Select Yes to discard changes.

Restore Defaults
It automatically sets all Setup options to a complete set of default settings when you select this option. Select Restore Defaults from the Save & Exit menu and press <Enter>.

Save as User Defaults
Select this option to save system configuration changes done so far as User Defaults. Select Save as User Defaults from the Save & Exit menu and press <Enter>.

Restore User Defaults
It automatically sets all Setup options to a complete set of User Defaults when you select this option. Select Restore User Defaults from the Save & Exit menu and press <Enter>.

Boot Override
Select a drive to immediately boot that device regardless of the current boot order.

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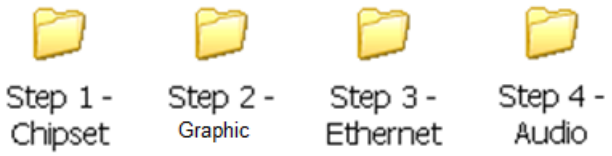
Chapter 4
Drivers Installation

4.1 System

GOT3187W-832-PCT supports Windows 7 32-bit. To facilitate the installation of system driver, please carefully read the instructions in this chapter before start installing.

Step 1 Insert Driver CD and select the "\Drivers".



Step 2 Select all files and follow the installing procedure.

4.2 Touch Screen

The GOT3187W-832-PCT uses the projected capacitive multi-touch. The specification is listed below.
It also can drive the touch panel to get two fingers touch function that based on the Windows 7 support.

- **Specification**

Touch Screen	projected capacitive multi-touch
Touch Screen Controller	Mastouch USB Touch Screen Controller IC
Communications	USB interface
Power Supply	5V
Power Consumption	40mA
Input Method	Finger or Cap.Stylus
Resoulation	25ppi(Min.) Note: Base on WIN7 definition, ppi(Pixcel per inch)
Win7 USB Driver	Non-Driver
Calibration	Non-Calibration

4.3 Embedded O.S.

The GOT3187W-832-PCT provides the WES 7E.

 ***NOTE: Causing of OS limitation, only single toucn function is supported under WES 7E.***