AXIOMTEK

GOT3177T-834-FR

All-in-One
17" SXGA 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.

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 GOT3177T-834-FR 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 GOT3177T-834-FR 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.

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Chapter 1
Introduction

This chapter contains general information and detailed specifications of the GOT3177T-834-FR. Chapter 1 includes the following sections:

- General Description
- Specifications
- Dimensions and outlines
- I/O Outlets
- Package List

1.1   General Description

The GOT3177T-834-FR adopts a 17-inch SXGA TFT LCD with 350-nit brightness and an Intel® Celeron® Processor J1900 (2M Cache, up to 2.42 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 GOT3177T-834-FR surely a most robust and cost-effective solution.

Wide Operating Temperature Range

GOT3177T-834-FR 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® Celeron® Processor J1900 (2M Cache, up to 2.42 GHz), making the platform a power-efficient solution.

Reliable and Stable Design

The GOT3177T-834-FR 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, GOT3177T-834-FR can work under 2.0G (10 ~ 500Hz, random for CFast™) in operation mode with a patent of anti-vibration design. The patent improves the system reliability and sustainability.

WLAN Antenna Supported (optional)

GOT3177T-834-FR has 2 PCI Express Mini Card slots for optional add-on such as wireless LAN card for 802.11 a/b/g/n connections, 3G/GPRS application, and more. These slots also provide 3 optional fixed rotational WLAN/3G antennas for wireless network connection.

More Features

GOT3177T-834-FR utilizes one 204-pin DDR3L SODIMM system memory max. up to 8GB, one SATA HDD and one CFast™ or mSATA. It provides over-current protection-fuse and a full set of I/O including RS-232/422/485, USB 2.0, USB 3.0, 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® Celeron® Processor J1900 (2M Cache, up to 2.42 GHz) onboard

- **System Memory**
  - One 204-pin DDR3L SO-DIMM socket
  - Maximum memory up to 8GB

- **BIOS**
  - America Megatrends BIOS

I/O System

- **Standard I/O**
  - 2 x RS-232/422/485
  - 2 x USB 2.0
  - 2 x USB 3.0

- **Ethernet**
  - 2 x RJ45 for Giga Ethernet (Intel i210IT)

- **Audio**
  - 1x Line-out

- **Expansion**
  - 1 x Mini-card slot (w/SIM slot)
  - 1 x Mini-card slot (supports mSATA, optional)

- **Storage**
  - 1 x 2.5" SATA
  - 1 x CFast™ slot or mSATA

- **Power connector**
  - Phoenix power connector or
  - Screw power connector

System Specification

● **17" SXGA(1280x1024) LCD with LED backlight**

● **Flat resistive touch**

● **Fanless Heat Dispensing Design**

● **IP65 front bezel**

● **Disk drive housing:**
  ■ One 2.5" SATA drive

● **Net Weight**
  ■ 4.8 Kgs

● **Dimension (Main Body Size)**
  ■ 389.02 x 59.9 x 330.44 mm

● **Operation Temperature**
  ■ -10℃ to 50℃

● **Relative Humidity**
  ■ 20% to 90% @ 40℃, Non-Condensing

● **System Power input**
  ■ DC power input : 9~36VDC with phoenix power connector
  ■ AC power input : 12VDC, 60W power adapter

NOTE: *All specifications and images are subject to change without notice.*
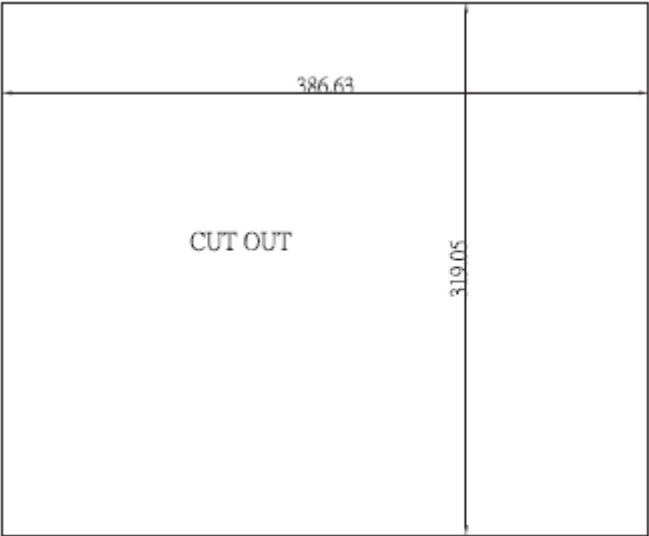
If the operation temperature is higher than 40℃, the wide temperature HDD/ CFast^{TM} *are recommended to be used on the device.*

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 GOT3177T-834-FR
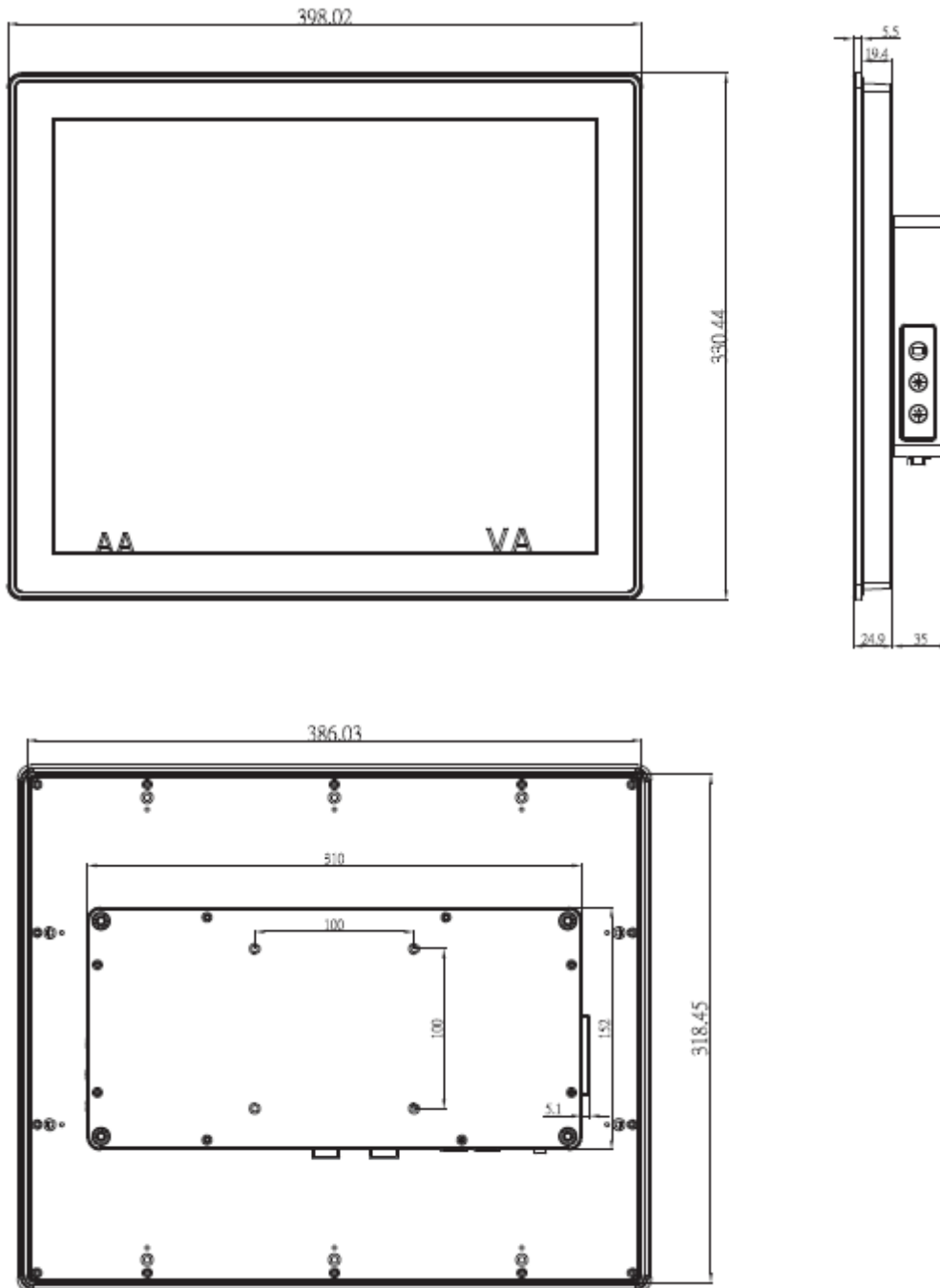
1.4 I/O Outlets

Please refer to the following illustration for I/O locations of the GOT3177T-834-FR.
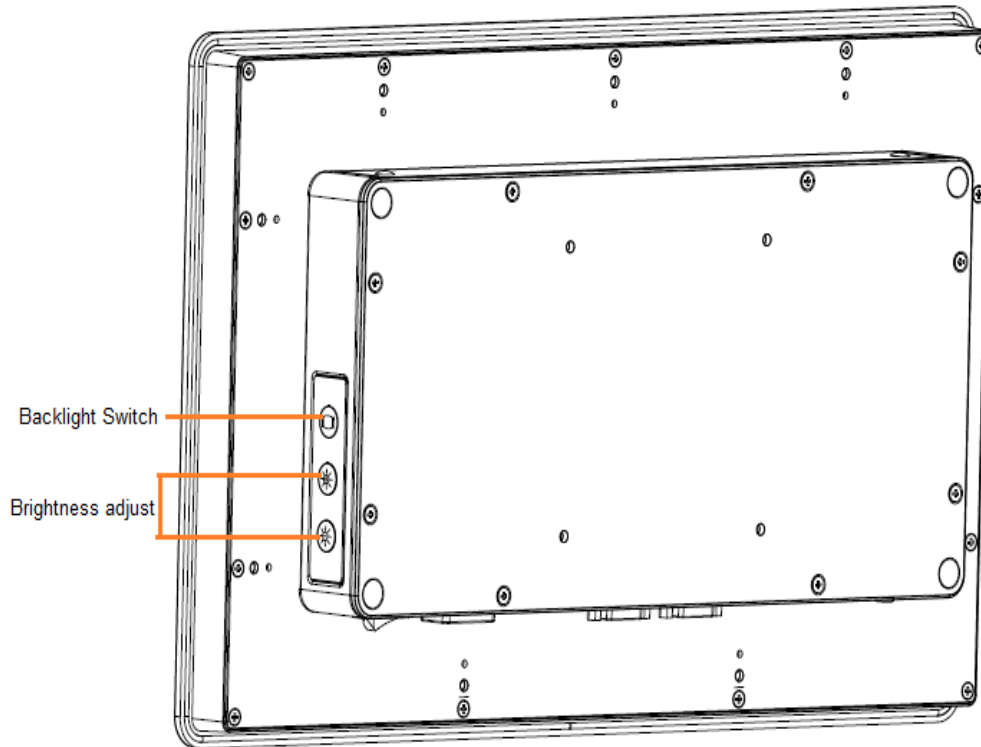
No	Function	No	Function
1	POWER SWITCH (ATX)	6	COM2 (RS-232/422/485)
2	Power Input connector (Phoenix)	7	Ethernet
3	Power Input connector (Screw)	8	USB 3.0
4	USB 2.0	9	Line-out (Audio)
5	COM1 (RS-232/422/485)		

1.5   Packing List

When you receive the GOT3177T-834-FR, the bundled package should contain the following items:

- **GOT3177T-834-FR unit x 1**
- **Driver CD x1**
- **Phoenix connector   x 1**
- **Panel mount kit x 10**
- **Screws for HDD x 4**

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

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Chapter 2
Hardware and Installation

The GOT3177T-834-FR 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:

- **CFast™ Card**
- **Open Back Cover**
- **Jumper and Switch Setting**
- **Ethernet**
- **Mounting Method**
- **Hard disk**
- **DRAM**
- **Wireless LAN Card**
- **Power Input**

2.1 CFast^{TM} card Installation

The GOT3177T-834-FR provides one CFast^{TM} slot for users to install CFast^{TM} card. Please refer to the following instructions for installation:

Step 1 **Open the cover, unscrew 2 screws on the chassis.**
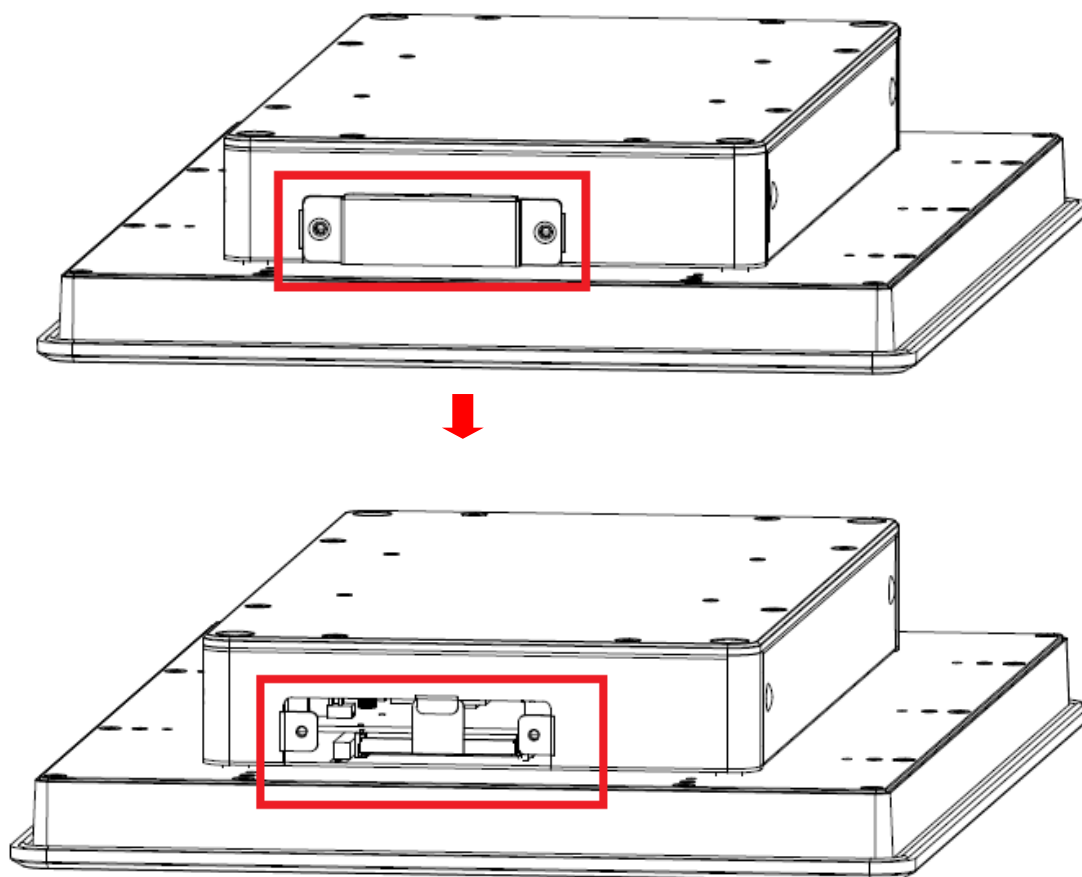
Step 2 **Stick the mylar on the CFast^{TM} card bottom side.**

Step 3   Insert the CFast™ card to the CFast™ card slot, then finding the CFast™ cover from the system package and screw it.
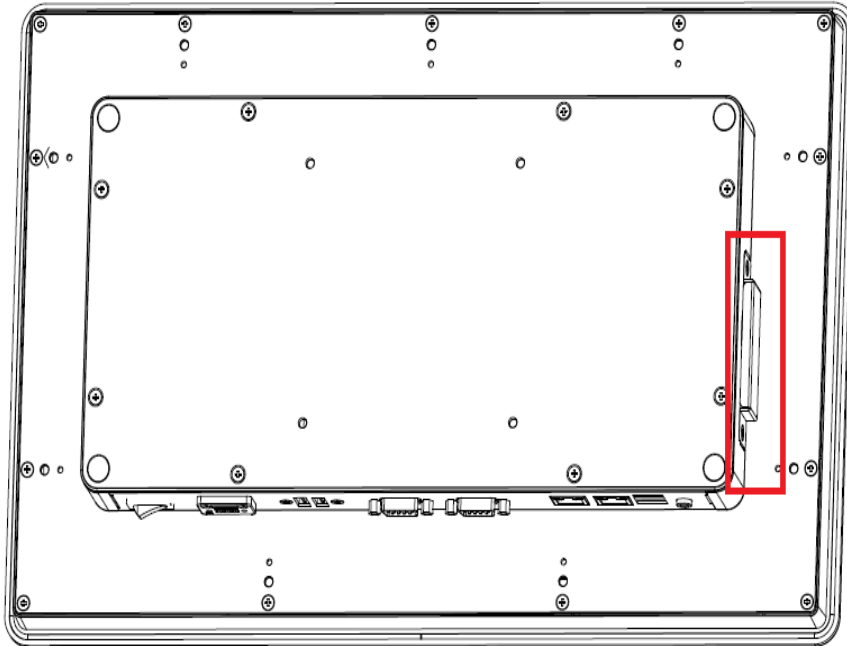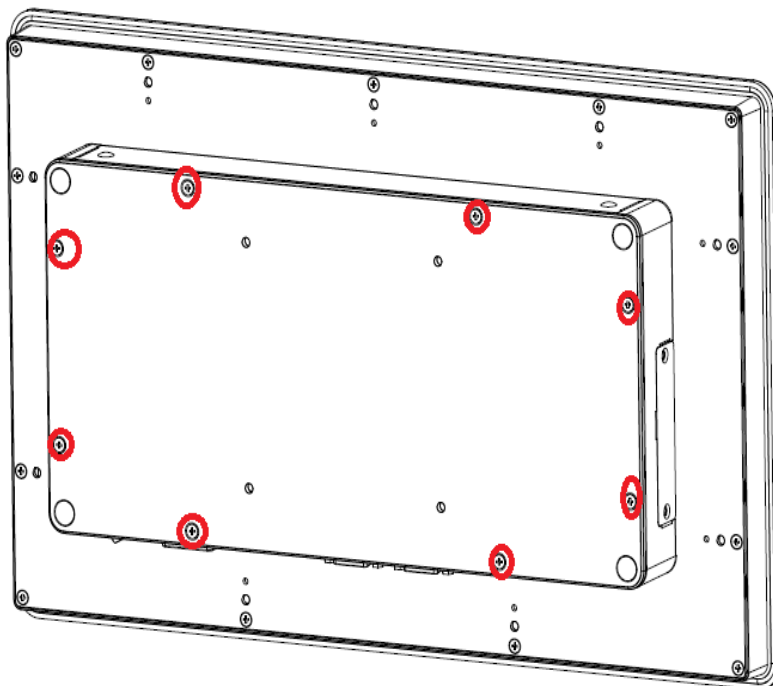
2.2   Open back cover

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   Jumper and Switch Setting

Jumper is a small component consisting of jumper clip and jumper pins. Install jumper clip on 2 jumper pins to close. And remove jumper clip from 2 jumper pins to open. The following illustration shows how to set up jumper.
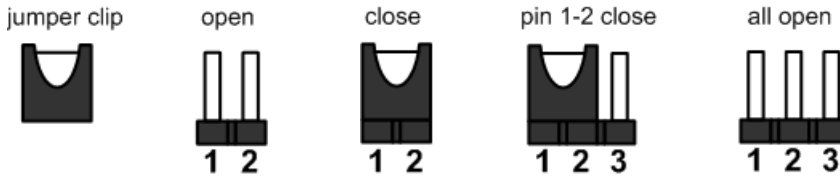
Before applying power to GOT3177T-834-FR, please make sure all of the jumpers and switch are in factory default position. Below you can find a summary table and onboard default settings.

Jumper	Description	Setting
JP7	Auto Power On Default: Disable	2-3 close
JP8	Restore BIOS Optimal Defaults (Clear CMOS) Default: Normal Operation	1-2 close
JP6	Switches mSATA or CFast™ setting. Default: 1-2 = CFast™, 2-3 = mSATA	1-2 close

2.3.1 Auto Power On (JP7)

If JP7 is enabled for power input, the system will be automatically power on without pressing soft power button. If JP7 is disabled for power input, it is necessary to manually press soft power button to power on the system.

Function	Setting
Enable auto power on	1-2 close
Disable auto power on (Default)	2-3 close
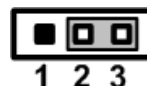
2.3.2 Restore BIOS Optimal Defaults (JP8)

Put jumper clip to pin 2-3 for a few seconds then move it back to pin 1-2. Doing this procedure can restore BIOS optimal defaults.

Function	Setting
Normal operation (Default)	1-2 close
Restore BIOS optimal defaults	2-3 close
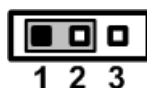
2.3.3 COM port Connector

The pin assignment of RS-232/RS-422/RS-485 is listed on the following table.

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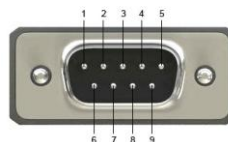
2.4   Ethernet

The GOT3177T-834-FR 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
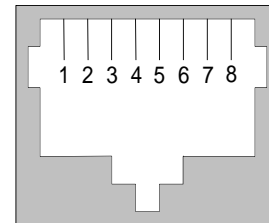
RJ-45

2.5   Mountings: Panel / Wall / Desktop / VESA

There are 4 application options for the GOT3177T-834-FR, Panel/Wall/Desktop/VESA mountings.

2.5.1 VESA-ARM/Wall-Mount

The GOT3177T-834-FR provides VESA mount: 100x100 mm. Screw four screws to fix the kit in the back chassis.

Wall mount:
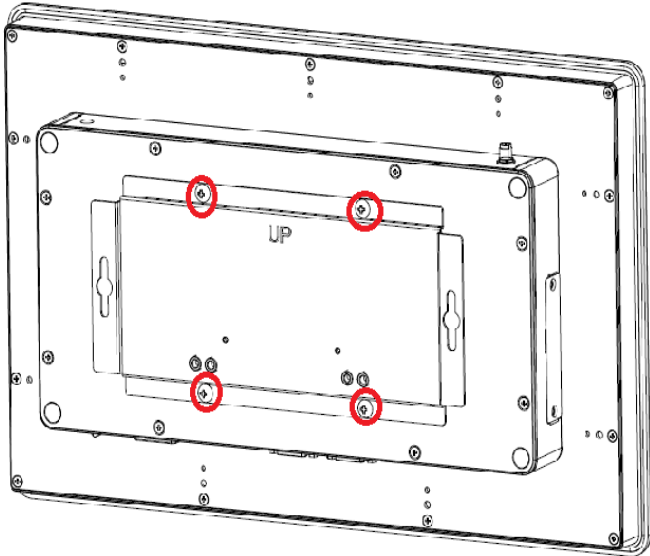
VESA mount:
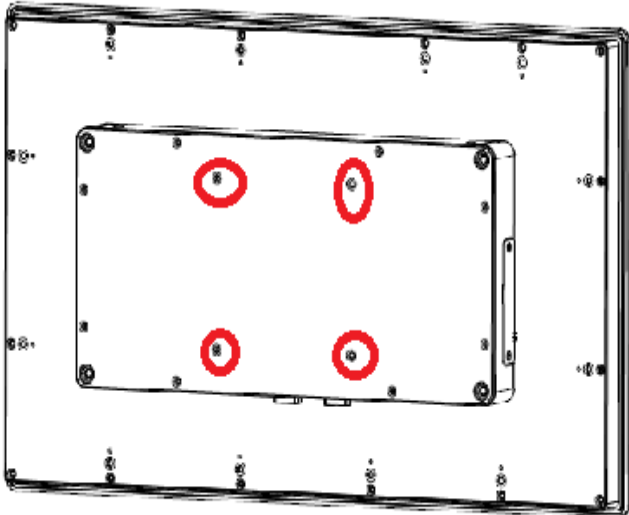
2.5.2 Panel-mount Kit Assembly

The GOT3177T-834-FR is designed for panel mount application. To mount the GOT3177T-834-FR, the standard set of mounting kit (included in the system packaging) is needed.
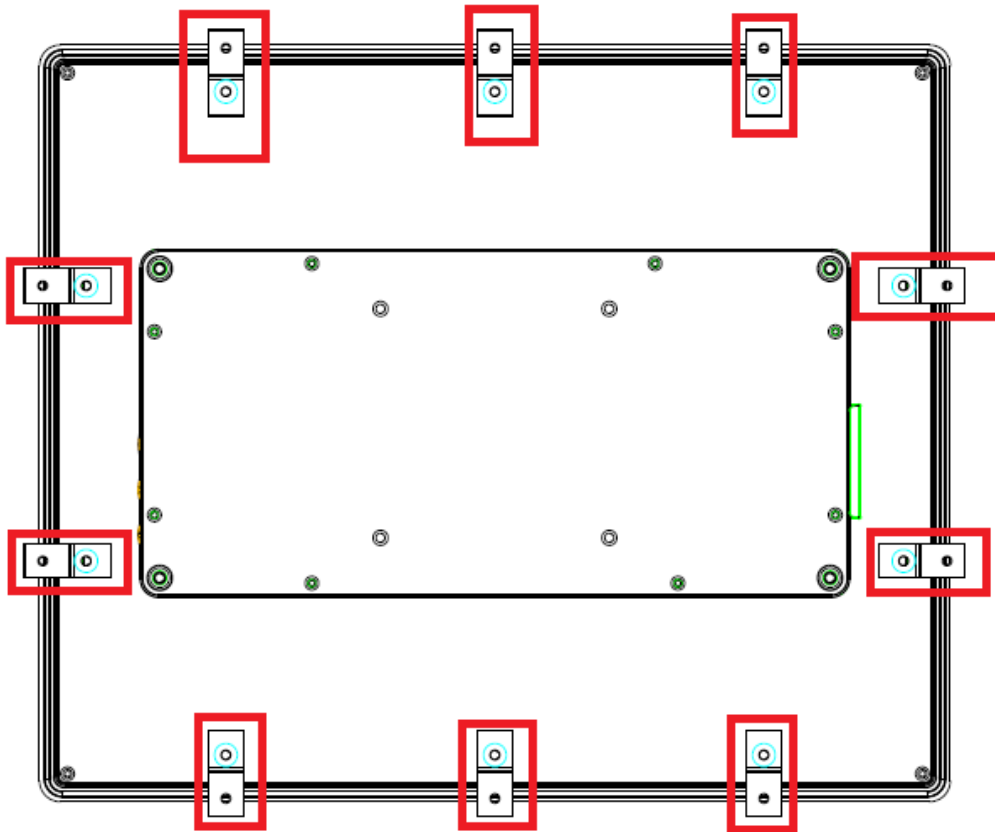
2.6   HDD Installation

The GOT3177T-834-FR 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 GOT3177T-834-FR provides one 204-pin DDR3L SODIMM socket that supports system memory up to 8GB. 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 (SBC87834).

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 GOT3177T-834-FR 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.
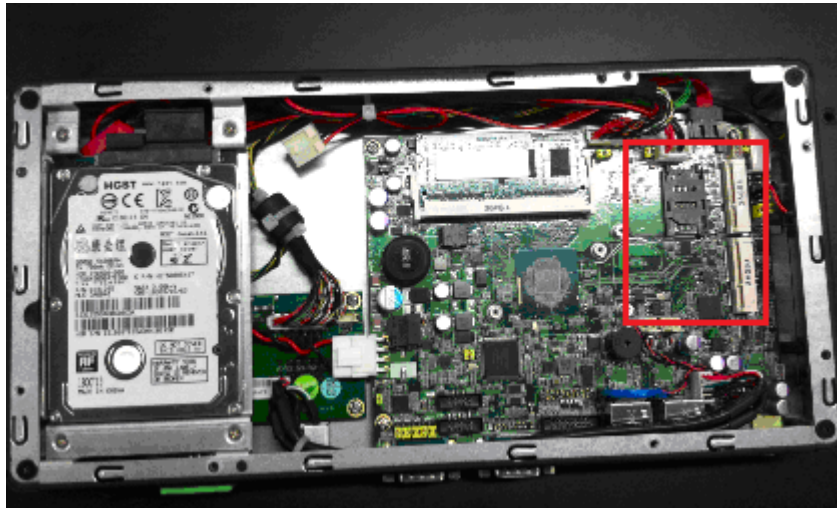
Step 2   Insert the wireless LAN card to the slot. Push it down firmly until it is clipped by the slot.
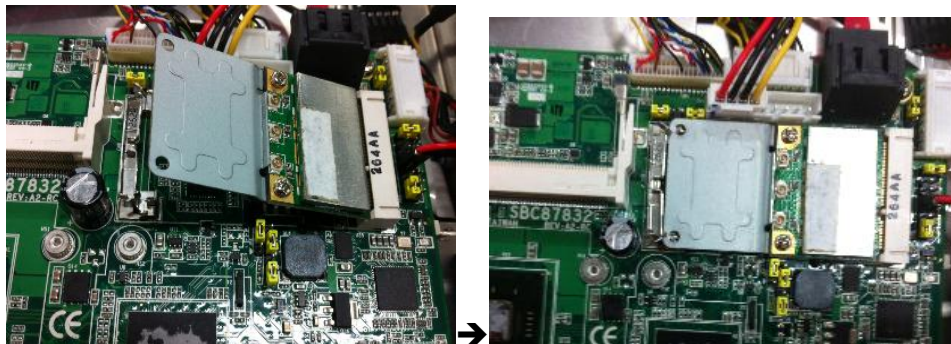
Step 3   **Find the Antenna cable and connect it on wireless LAN card.**

Step 4   **Remove the antenna plug from the top of back cover, and then install the antenna on the antenna connector**

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

2.9   Power Input

GOT3177T-834-FR equips with a phoenix type power connector. It adopts 9VDC to 36VDC. Please follow the signs on power connector to connect DC power source.

+: Power positive   G: Safety ground   －:Power negative

NOTE: The safety ground must be connected to ensure the unit 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   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>, <F3>, <F4>, <Enter>, <ESC>, <Arrow> keys, and so on.

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

← 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 value
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.

3.2   Main Menu

```
              Aptio Setup Utility - Copyright (C) 2013 American Megatrends, Inc.
     Main  Advanced  Chipset  Security  Boot  Save & Exit

     BIOS Information                                        Set the Date. Use Tab to
     BIOS Version                 SBC87834 XA003             switch between Date elements.
     Build Date                   06/06/2014

     TXE FW Version               01.00.04.1089


     System Date                  [Tue 00/00/2000]
     System Time                  [00:00:00]

     Access Level                 Administrator

                                                            →←: Select Screen
                                                            ↑↓: Select Item
                                                            Enter: Select
                                                            +/-: Change Opt.
                                                            F1: General Help
                                                            F2: Previous Values
                                                            F3: Optimized Defaults
                                                            F4: Save & Exit
                                                            ESC: Exit

              Version 2.16.1242. Copyright (C) 2013 American Megatrends, Inc.
```

System Time/Date

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.

3.3   Advanced Menu

```
              Aptio Setup Utility - Copyright (C) 2013 American Megatrends, Inc.
       Main  Advanced  Chipset  Security  Boot  Save & Exit

      ▶ ACPI Settings                                       System ACPI Parameters.
      ▶ NCT6106D Super IO Configuration
      ▶ NCT6106D HW Monitor
      ▶ CPU Configuration
      ▶ IDE Configuration
      ▶ LPSS & SCC Configuration
      ▶ Security Configuration




                                                            ↔: Select Screen
                                                            ↑↓: Select Item
                                                            Enter: Select
                                                            +/-: Change Opt.
                                                            F1: General Help
                                                            F2: Previous Values
                                                            F3: Optimized Defaults
                                                            F4: Save & Exit
                                                            ESC: Exit



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```

The Advanced menu 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
■   NCT6106D Super IO Configuration
■   NCT6106D H/W Monitor
■   CPU Configuration
■   IDE Configuration

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.
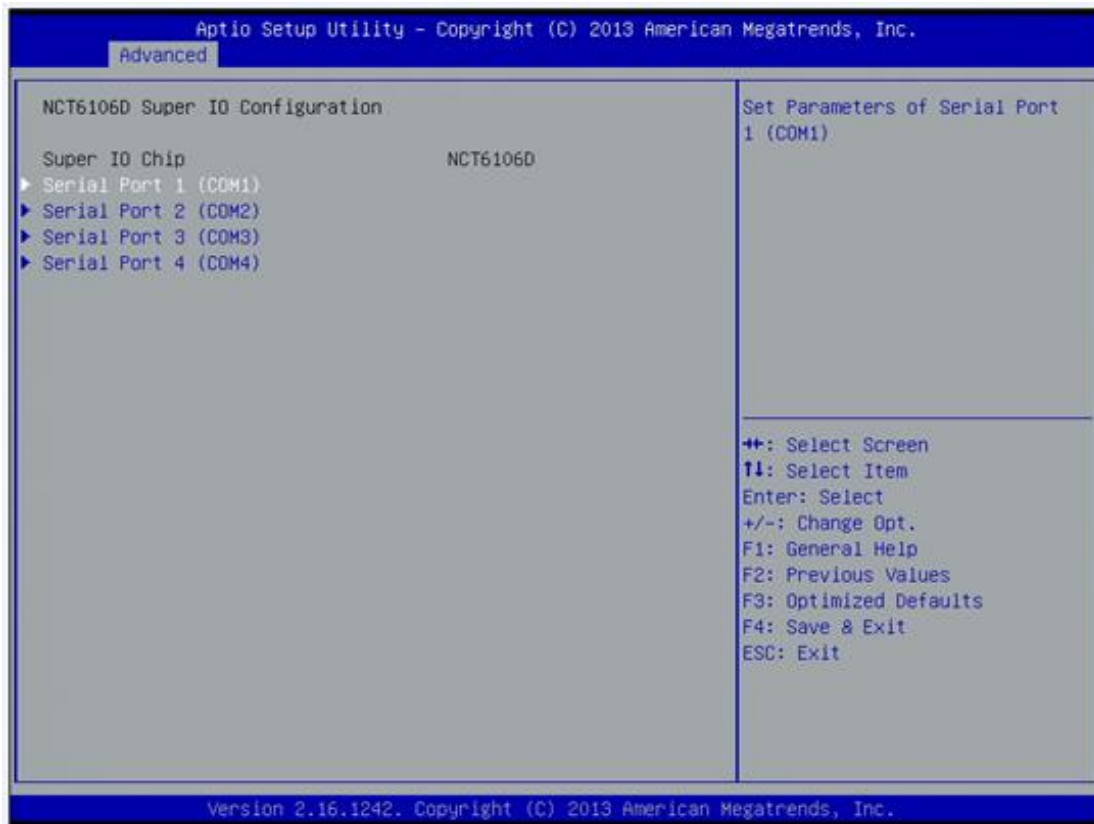
ACPI Sleep State
Allow you to select the Advanced Configuration and Power Interface (ACPI) state to be used for system suspend. Here are the options for your selection, Suspend disable and S3 (Suspend to RAM).

NCT6106D Super IO Configuration

Use this screen to select options for the Super IO Configuration, and change the value of the selected option

Serial Port 1-4 configuration

Serial port:
This option used to enable or disable the serial port.

Device Setting:
This item specifies the base I/O port address and Interrupt Request address of serial port.
The port 0 Optimal setting is *3F8/IRQ4.*
The port 1 Optimal setting is *2F8/IRQ3.*
The port 2 Optimal setting is *3E8/IRQ7*
The port 3 Optimal setting is *2E8/IRQ5*.

Serial type:

This option used to select RS232/422/485 function.
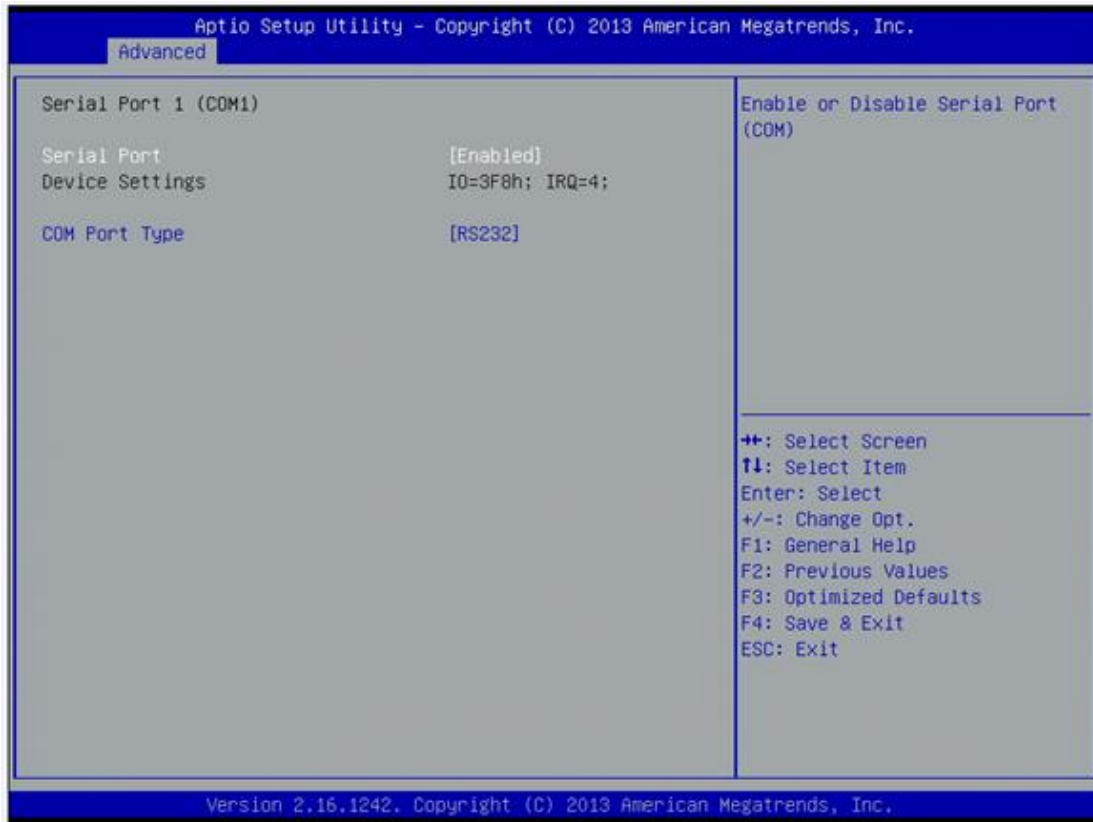
NCT6106D H/W Monitor

This screen shows the Hardware Health Configuration.
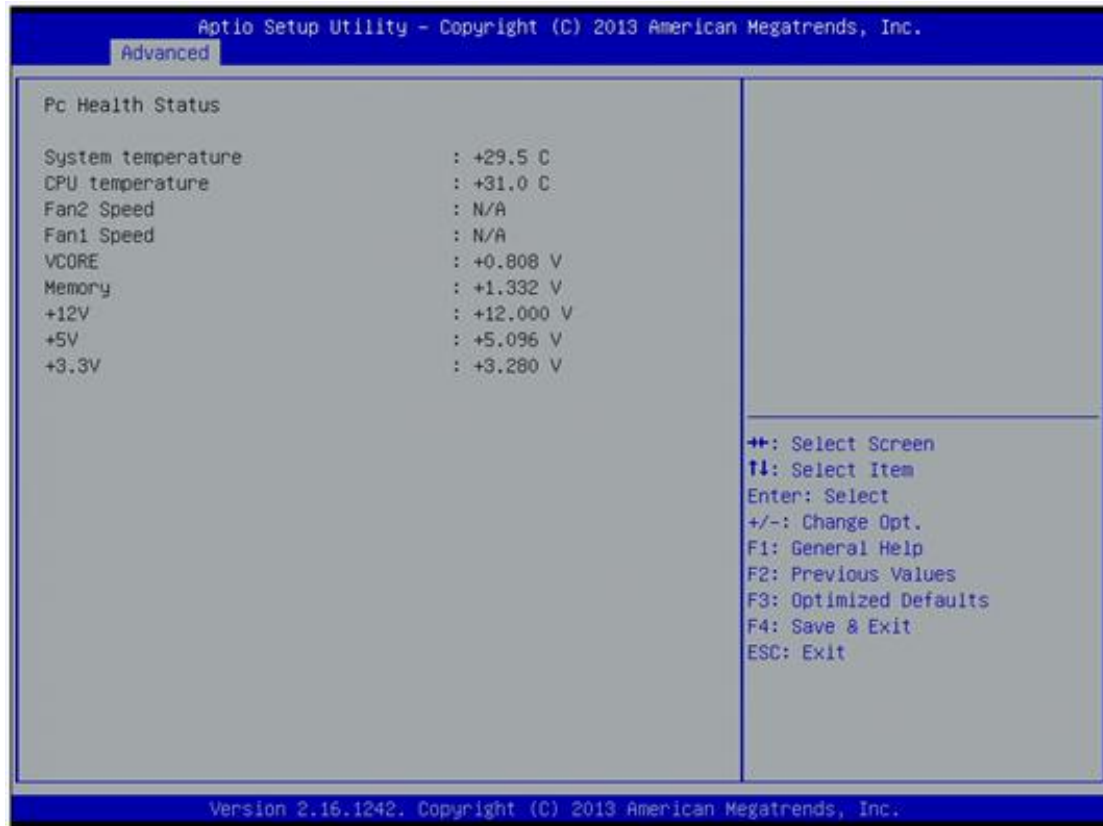
CPU Configuration

This screen shows the CPU Configuration and Intel virtualization technology enable/disable selected
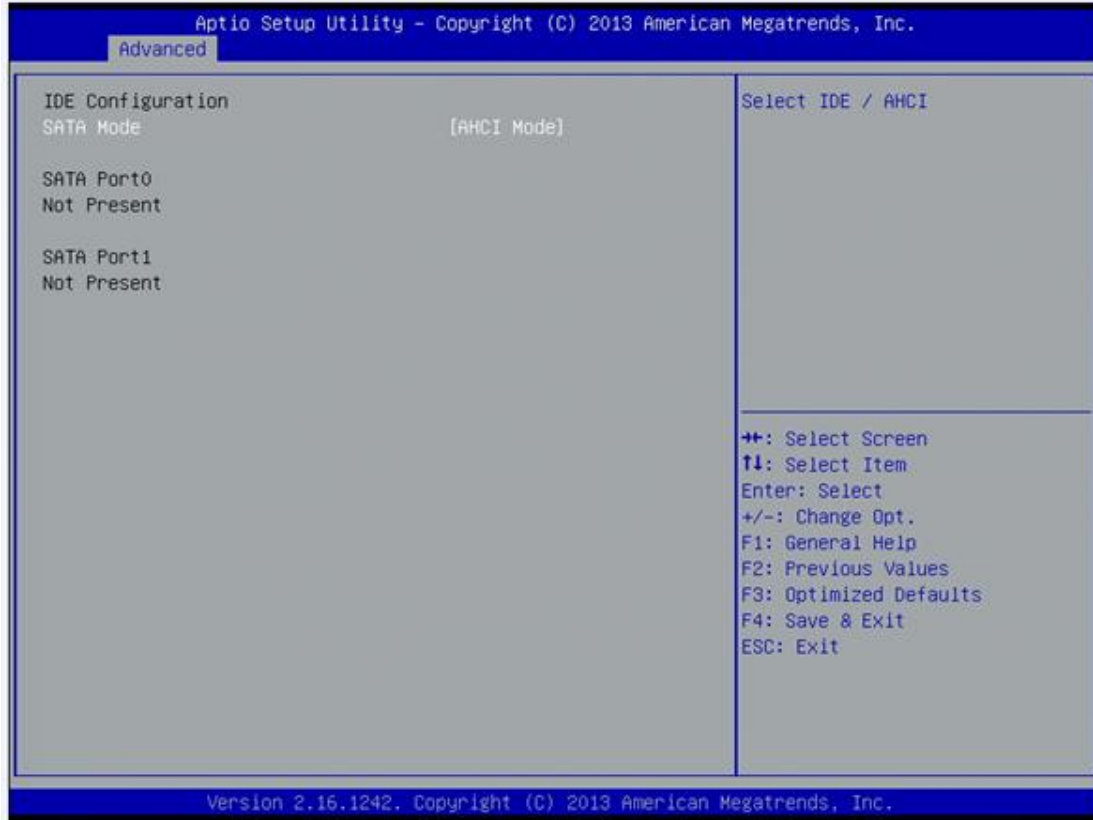
IDE Configuration

You can use this screen to select options for the SATA Configuration, and change the value of the selected option.

SATA Mode

Use this item to choose the SATA operation mode. Here are the options for your selection, IDE Mode, AHCI Mode.

Intel TXE Configuration

The Advanced menu allows users to update the TXE firmware.

LPSS & SCC Configuration

You can select any of the items in the frame of the screen to change the OS, the default setting is Win 7.

Please be informed to select the Windows 8.x when installing Win 8 or Win 8.1.
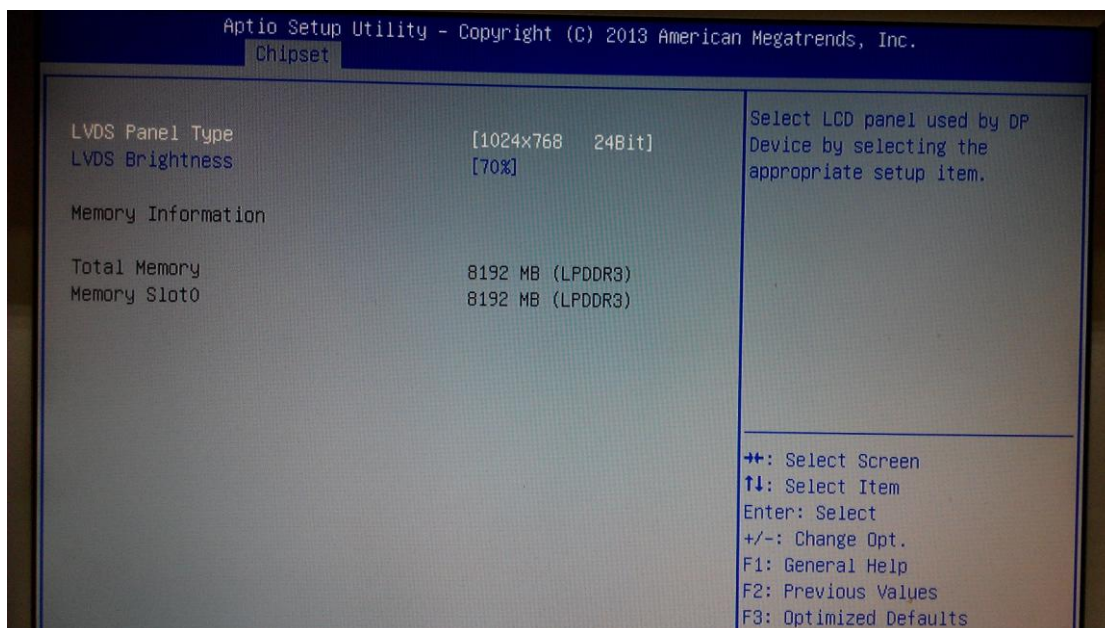
If using the Android OS, please refer to https://01.org/android-ia**.**

3.4   Chipset Menu

The Chipset menu allows users to change the advanced chipset settings.
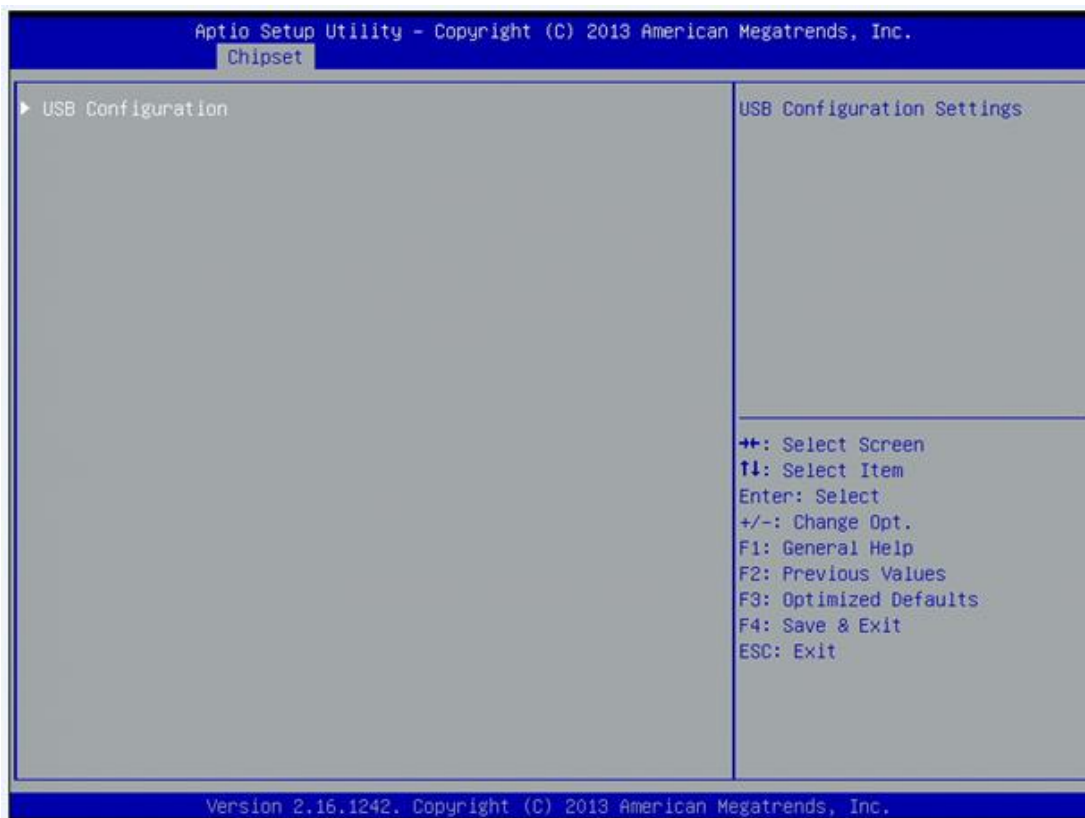

AMI BIOS Setup Utility

● **North Bridge**

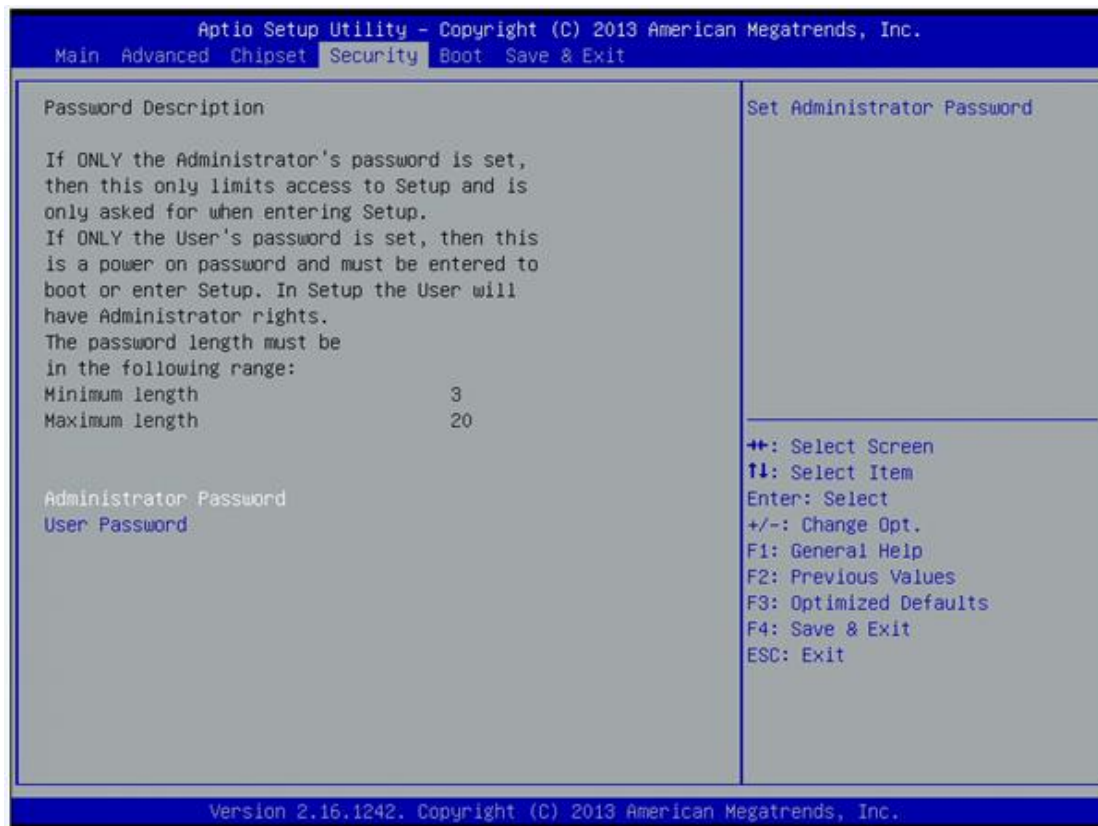This screen shows the North Bridge memory information.

● **South Bridge**

● **USB Configuration**

You can use this screen to select options for the USB Configuration,
If USB3.0 function used, XHCI Mode must enable and EHCI must disable.
**XHCI default is Auto.

```
         Aptio Setup Utility - Copyright (C) 2013 American Megatrends, Inc.
          Chipset

   USB Configuration                                    Mode of operation of xHCI
                                                        controller
   XHCI Mode                      [Auto]

   USB 2.0(EHCI) Support          [Disabled]






                                                        →←: Select Screen
                                                        ↑↓: Select Item
                                                        Enter: Select
                                                        +/-: Change Opt.
                                                        F1: General Help
                                                        F2: Previous Values
                                                        F3: Optimized Defaults
                                                        F4: Save & Exit
                                                        ESC: Exit




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```

3.5　Security

3.6   Boot Menu

The Boot menu allows users to change boot options of the system. You can select any of the items in the left frame of the screen to go to the sub menus:

Setup Prompt Timeout

Set the Timeout for wait press key to enter Setup Menu.

Bootup NumLock State

Use this item to select the power-on state for the NumLock. The default setting is on.

Quiet Boot

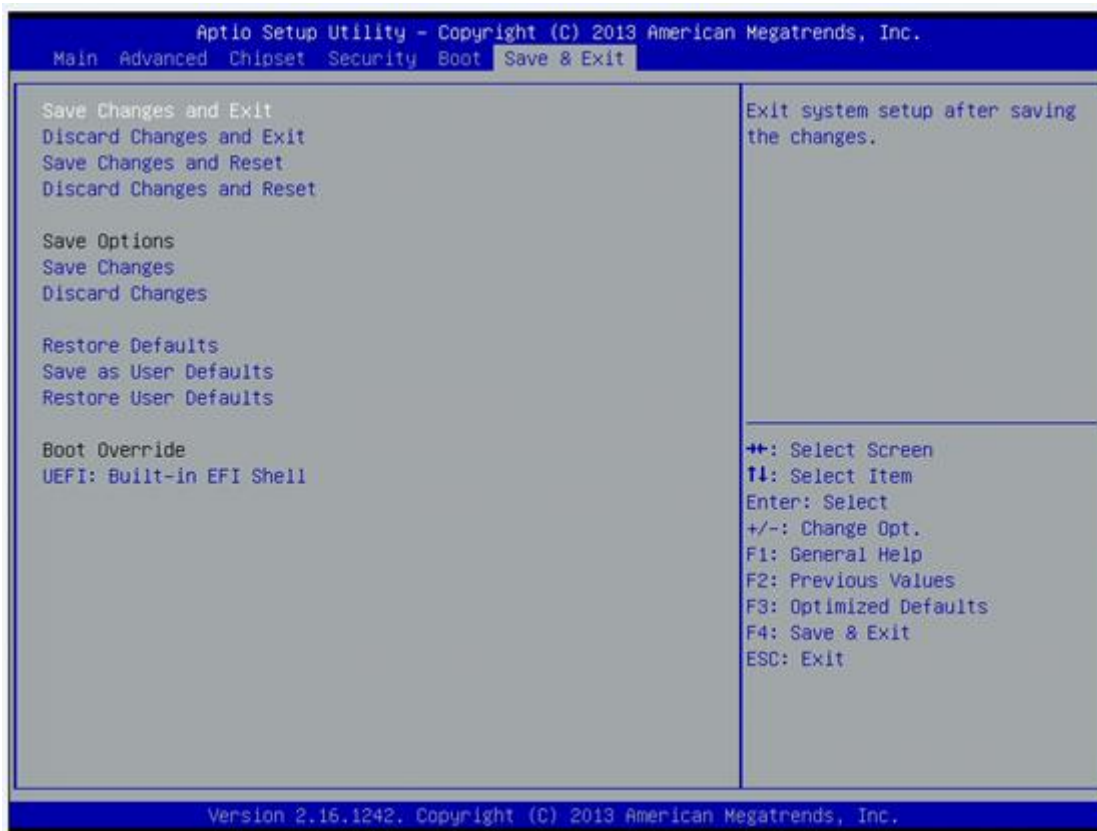Use this item to enable or disable the Quite Boot state. The default setting is disable.

Legacy Pxe OPROM

Use this item to enable or disable the Preboot Execution Environment. The default setting is disable.

Boot Option Priorities

Specifies the overall boot order from the available devices.

3.7   Save&Exit

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Chapter 4
Drivers Installation

4.1 System

GOT3177T-832-FR supports Windows 7, Windows 8/8.1 ,WES 7 and WE8S. To facilitate the installation of system driver, please carefully read the instructions in this chapter before start installing.

4.1.1 Win 7

1.   Insert Driver CD and select the "\Drivers".
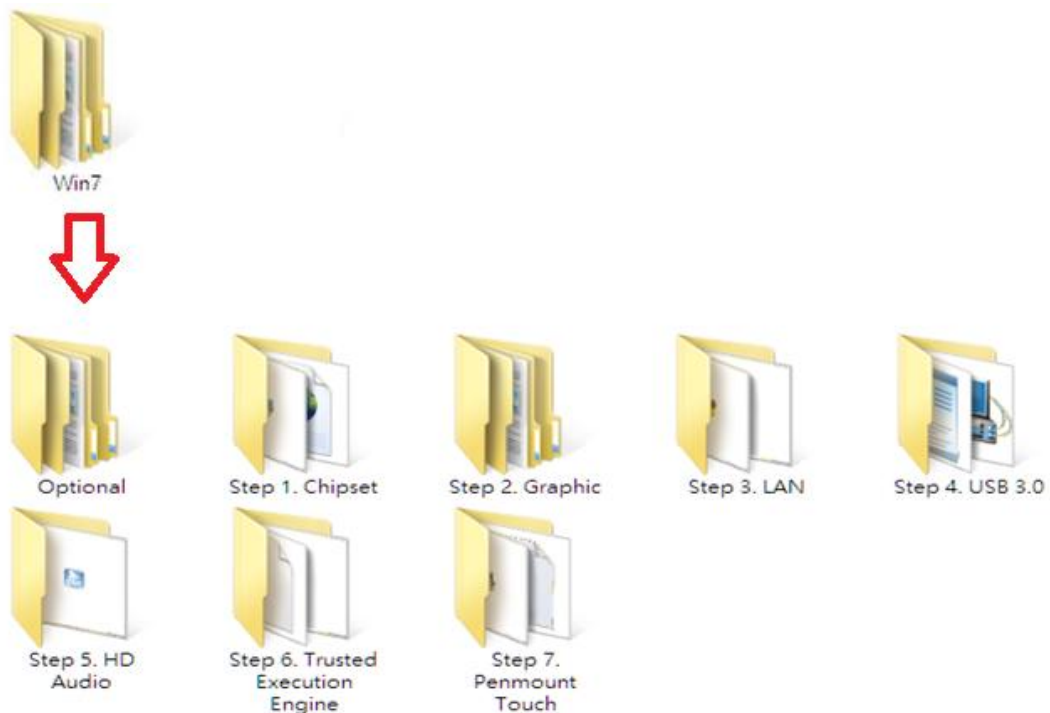
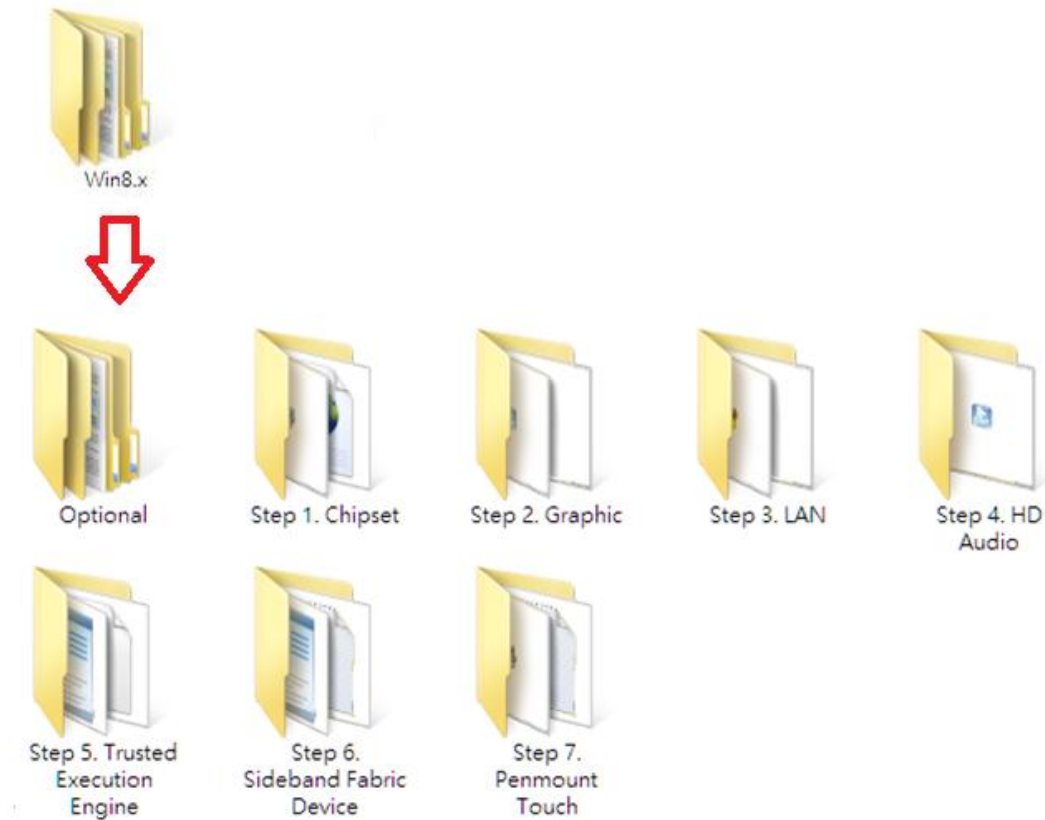2.   Select all files and follow the installing procedure.

NOTE: **Please install Microsoft KB2685811 before TXE installation under Windows 7, then installing the drivers.**

NOTE: **Don't run "Step 4. USB3.0" driver's installer (Setup.exe) from a USB storage device (ie. external USB hard drive or USB thumb drive). For proper installation, please copy driver files to a local hard drive folder and run from there.**

NOTE: **If you set your system in "Hibernate mode" before you install "Step 2. Graphic" driver, the monitor can't display when you awake your system. Reboot your system and the monitor will display. Please install graphic driver, and there is no display problem with "Hibernate mode".**

4.1.2 Win 8/8.x

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

3.   Select all files and follow the installing procedure.

NOTE: If you set your system in "Hibernate mode" before you install "Step 2. Graphic" driver, the monitor can't display when you awake your system. Reboot your system and the monitor will display. Please install graphic driver, and there is no display problem with "Hibernate mode"..

4.2   Touch Screen

The GOT3177T-834-FR uses the 5-wire analog resistive (flat front bezel type). There are the specification and driver installation which are listed below.

4.2.1 Specification

| Touch Screen	5-wire Analog Resistive type
Touch Screen Controller	PenMount 6000 USB Touch Screen Controller IC
Communications	USB interface
Resolution	1024 x 1024
Power Input	5V
Power Consumption	Active: 24.6mA / Idle Mode: 13.4mA

4.2.2 Driver Installation- Windows 7/8.x

The GOT3177T-834-FR provides a touch screen driver that users can install it under the operating system Windows 7/8.x. To facilitate installation of the touch screen driver, you should read the instructions in this chapter carefully before you attempt installation.
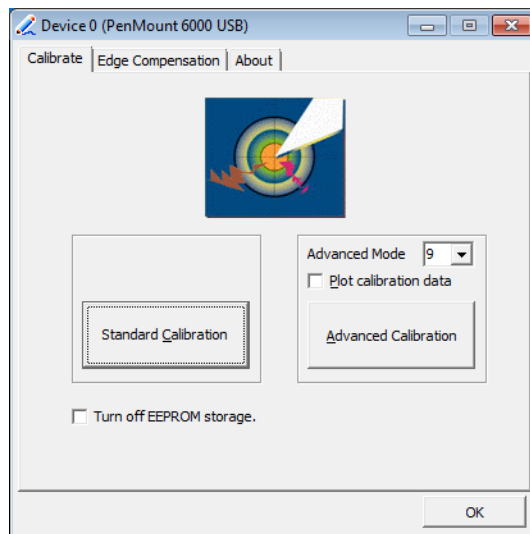
1.   Insert Driver CD and follow the path to select the "\Drivers\Step 7 - Touch".
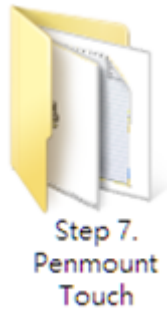
2.   Follow the installing procedure and press OK.

3.   Click Start menu and select "PenMount Utilities"; and then, a "PenMount Control Panel" pops out.
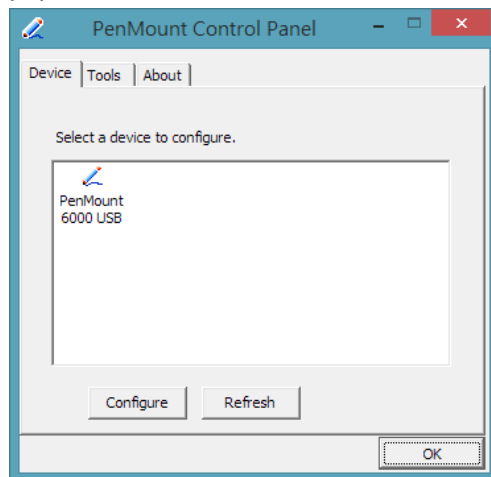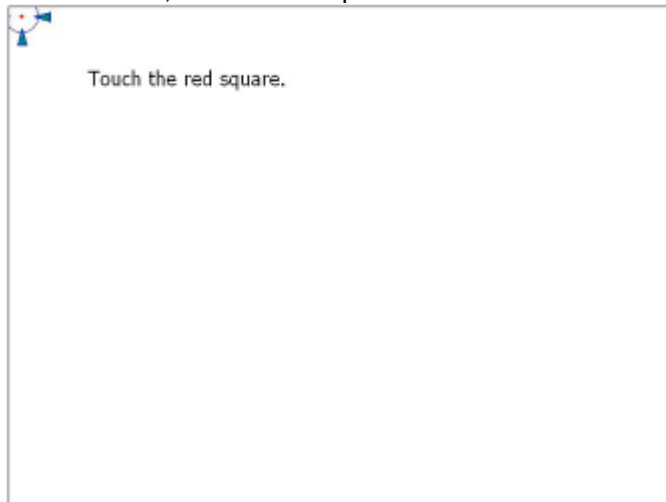
4.   Select the "Standard Calibrate" tab.

5.   Calibration:

To adjust the display with touch panel, click "Calibration" and follow the calibrate point to do calibration; there are five points on screen for calibration.

6.   Press OK.

4.3   Embedded O.S.

The GOT3177T-834-FR provides the WES 7 and WE8S Embedded. The O.S. is supported devices which are listed below.

4.3.1 WES 7 & WE8S

Here are supported onboard devices:
- Onboard Multi I/O
- SATA HDD
- USB
- CRT/LCD display
- 10/100/1000 base-T Ethernet
- CFast^{TM} or mSATA
- Onboard Audio
- Touch Screen

PenMount Touch screen

Before you can use and calibrate it, here is what you should do:
1.   Set up Penmount touch device driver by executing C:\Penmount\ Windows 2000-XP V5.0\setup.exe. When the installation is finished, an icon "PM" appears on the Taskbar.
2.   Calibrate Penmount touch by clicking on the "PM" icon, and the go on the calibration.
3.   Restart the computer.

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