AGP-3155

Intel® Core™ i7/i5 Processor

Rugged Touch Panel Computer

With 15" TFT LCD &

Two PCI/PCIe expansion slots

Copyright Notice

This document is copyrighted, 2012. All rights are reserved. The original manufacturer reserves the right to make improvements to the products described in this manual at any time without notice.

No part of this manual may be reproduced, copied, translated, or transmitted in any form or by any means without the prior written permission of the original manufacturer. Information provided in this manual is intended to be accurate and reliable. However, the original manufacturer assumes no responsibility for its use, nor for any infringements upon the rights of third parties, which may result from its use.

The material in this document is for product information only and is subject to change without notice. While reasonable efforts have been made in the preparation of this document to assure its accuracy, AAEON, assumes no liabilities resulting from errors or omissions in this document, or from the use of the information contained herein.

AAEON reserves the right to make changes in the product design without notice to its users.

Acknowledgments

- Award is a trademark of Award Software International, Inc.
- IBM, PC/AT, PS/2 and VGA are trademarks of International Business Machines Corporation.
- Intel® and Core™ i7/i5 are trademarks of Intel® Corporation.
- Microsoft Windows® is a registered trademark of Microsoft Corporation.
- RTL is a trademark of Realtek Semi-Conductor Co., Ltd.
- ESS is a trademark of ESS Technology, Inc.
- UMC is a trademark of United Microelectronics Corporation.
- SMI is a trademark of Silicon Motion, Inc.
- Creative is a trademark of Creative Technology LTD.

All other product names or trademarks are properties of their respective owners.

Packing List

Before you begin installing your card, please make sure that the following materials have been shipped:

- 1   AGP-3155
- 1   Jumper Cap
- 2   Easy stand & 4 screws
- 12   Panel Mount clips & screws
- 1   HDD plate & 4 anti-vibration rubbers & 4 screws
- 1   Power Cord (optional)
- 1   DVD-ROM for manual (in PDF format) and drivers

If any of these items are missing or damaged, you should contact your distributor or sales representative immediately.

Safety & Warranty

1. Read these safety instructions carefully.

2. Keep this user's manual for later reference.

3. Disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.

4. For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.

5. Keep this equipment away from humidity.

6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.

7. The openings on the enclosure are for air convection. Protect the equipment from overheating. DO NOT COVER THE OPENINGS.

8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.

9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.

10. All cautions and warnings on the equipment should be noted.

11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.

12. Never pour any liquid into an opening. This could cause fire or electrical shock.

13. Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.

14. If any of the following situations arises, get the equipment checked by service personnel:

    a. The power cord or plug is damaged.

    b. Liquid has penetrated into the equipment.

    c. The equipment has been exposed to moisture.

d. The equipment does not work well, or you cannot get it to work according to the users manual.

e. The equipment has been dropped and damaged.

f. The equipment has obvious signs of breakage.

15. DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20° C (-4°F) OR ABOVE 60° C (140° F). IT MAY DAMAGE THE EQUIPMENT.

16. External equipment intended for connection to signal input/output or other connectors, shall comply with relevant UL / IEC standard (e.g. UL 60950 for IT equipment and UL 2601-1 / IEC 60601 series for medical electrical equipment). In addition, all such combinations – systems – shall comply with the standard IEC 60601-1-1, Safety requirements for medical electrical systems. Equipment not complying with UL 2601-1 shall be kept outside the patient environment, as defined in the standard.

FCC

Warning!

This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

Below Table for China RoHS Requirements
产品中有毒有害物质或元素名称及含量

AAEON Panel PC/ Workstation

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板 及其电子组件	×	○	○	○	○	○
外部信号 连接器及线材	×	○	○	○	○	○
外壳	×	○	○	○	○	○
中央处理器 与内存	×	○	○	○	○	○
硬盘	×	○	○	○	○	○
液晶模块	×	○	○	○	○	○
光驱	×	○	○	○	○	○
触控模块	×	○	○	○	○	○
电源	×	○	○	○	○	○

O：表示该有毒有害物质在该部件所有均质材料中的含量均在
SJ/T 11363-2006 标准规定的限量要求以下。

X：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出
SJ/T 11363-2006 标准规定的限量要求。

备注：
一、 此产品所标示之环保使用期限，系指在一般正常使用状况下。
二、 上述部件物质中央处理器、内存、硬盘、光驱、触控模块为选购品。

Contents

Chapter 1 General Information

Chapter 2 Hardware Installation

Chapter 3 AMI BIOS Setup

Chapter 4 Driver Installation

Chapter

1

General Information

1.1 Introduction

AGP-3155 is the series product of the Rugged Expandable Touch Panel Solution.　It adopts Intel® Core™ i7/i5 processor with two DDR3 800/1066 MHz SODIMM up to 8 GB.

Best performance for multimedia solution

AEON's AGP-3155 also supports Intel® Core™ i7/i5 + QM57 chipset and the LVD/CRT Controller has been integrated in QM57. In addition, it equips versatile I/O ports, such as two RS-232, one RS-232/422/485, six USB2.0, one Line-out/MIC-in/Line-in, one Keyboar/Mouse, and one VGA.　Therefore, AGP-3155 can be broadly implemented in several markets, such as Factory Control Center, Railway Control Center, and Transportation markets.

Multi-Function Intel® Core™ i7/i5 Platform

AGP-3155 integrates 15" color TFT LCD.　Moreover, the modular design for CPU board is easy for you to replace.　With flexible expansion, you get easy access to solutions ranging from Modem, Storage, Sound Card, SCSI card, Audio/Video capture card, Wireless LAN module, to Bluetooth module. Furthermore, you may choose one Mini Card, two PCI or two PCI-Express slots for necessary expansions.　If you are looking for powerful and robust Touch Panel Computer, AGP-3155 is an ideal solution for your applications.

1.2 Feature

- 15" XGA (1024 x 768) TFT LCD Display

- Intel® Core™ i7/i5 Processor

- Easy-To-Expand: Two PCI/PCIe Slots

- IP-65 Aluminum Die Cast Front Bezel

- Two Easy Access Front USB Ports

- 15" 250 Nits XGA CCFL Backlight; 15" 800 Nits XGA LED Backlight

- Modular Design For CPU Board

1.3 Specification

System

- Processor — Intel® Core™ i7/i5 Processor

- Memory — DDR3 800/1066 MHz SODIMM x 2, up to 8 GB

- Chipset — Intel® Core™ i7/i5 + QM57

- LCD / CRT — Integrated in QM57

- Ethernet — 10/100/1000Base-TX, RJ-45 x 2

- I/O Port — RS-232 x 2, RS-232/422/485 x 1, USB2.0 x 6 (2 on front, 4 on rear), Line-out/MIC-in/Line-in x 1, PS/2 x 1 for Keyboard/Mouse, VGA x 1

- Storage Disk Drive — 3.5" SATA Hard Disk Drive x 2, Slim DVD-Combo (optional)

- Expansion Slot — Mini Card x 1, PCI slot x 2 or PCIe x 2

- OS Support — Windows® XP, Windows® 7, Linux Fedora

Mechanical

- Construction — IP-65/ NEMA4 for Aluminum die cast front bezel & Aluminum chassis

- Mounting   Panel/ Desktop

- Dimension   15.36" x 12.76" x 4.91" (390mm x 324mm x 124.7mm)

- Carton Dimension   24.21"(L) x 20.47"(W) x 12.99" (H) (615mm x 520mm x 330mm)

- Gross Weight   24.2 lb (11 kg)

- Net Weight   20.9 lb (9.5 kg)

Environmental

- Operating Temperature 32^oF ~131^oF (0^oC~55^oC) (Ambient with airflow)

- Storage Tenoeratyre   -4^oF ~140^oF (-20^oC~60^oC)

- Storage Humidity   10%~95% @ 40^oC, non-condensing

- Vibration   1 g rms/ 5~500 Hz/ Random operation (HDD)

- Shock   15 G peak acceleration (11 msec. duration)

- EMC   CE/FCC Class A

Power Supply

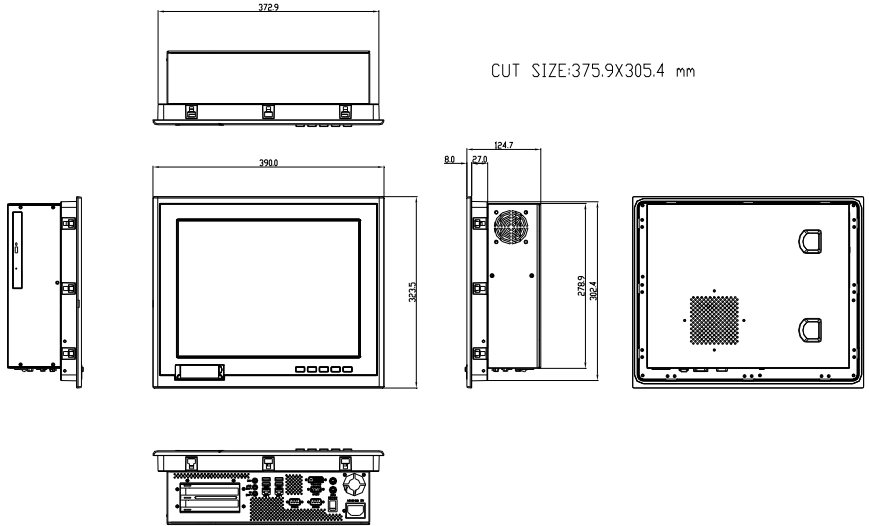- AC input 250W   110/230V AC power

LCD

● Display Type 15" Color TFT LCD

● Max. Resolution 1024 x 768

● Max. Colors 16.7 M colors (6/8-bit for R,G,B)

● Luminance HTT: 250, STT: 800

● Viewing Angle HTT: 170°(H)/ 160°(V)

STT: 160°(H)/ 140°(V)

● Back Light MTBF HTT: 30,000
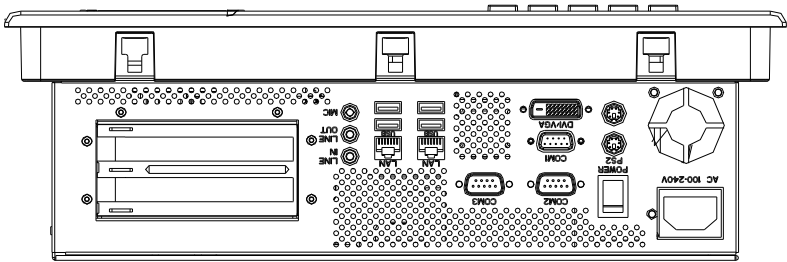(Hours) STT: 60,000

Touch Screen

● Type 5-wire resistive

● Light transmission 80%

● Lifetime 35 million activations

1.4 Dimension

CUT SIZE:375.9X305.4 mm

I/O interface

Chapter

2

Hardware Installation

2.1 Safety Precautions

Warning!

Always completely disconnect the power cord from your board whenever you are working on it. Do not make connections while the power is on, because a sudden rush of power can damage sensitive electronic components.

Caution!

Always ground yourself to remove any static charge before touching the board. Modern electronic devices are very sensitive to static electric charges. Use a grounding wrist strap at all times. Place all electronic components on a static-dissipative surface or in a static-shielded bag when they are not in the chassis

2.2 Location of Connectors and Jumpers of the Main Board

Component Side
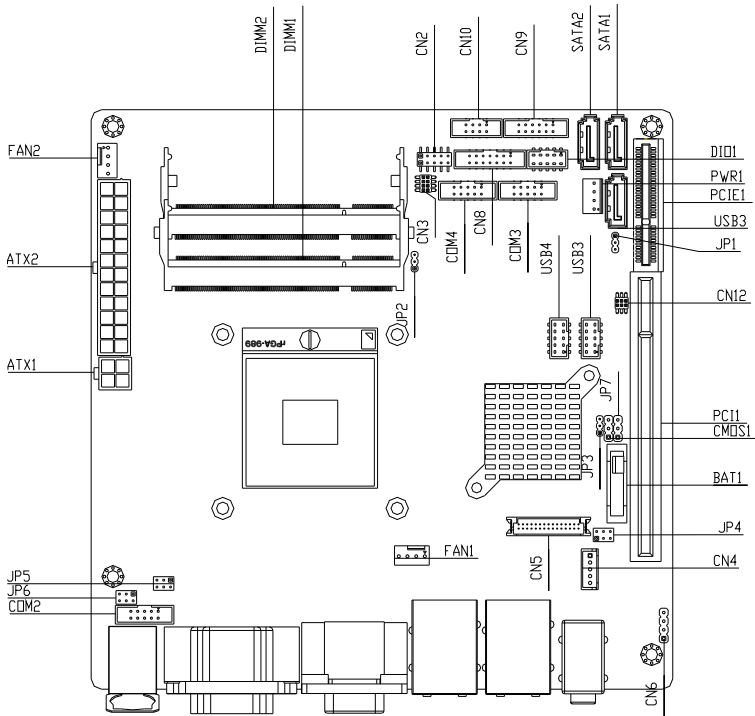
Solder Side
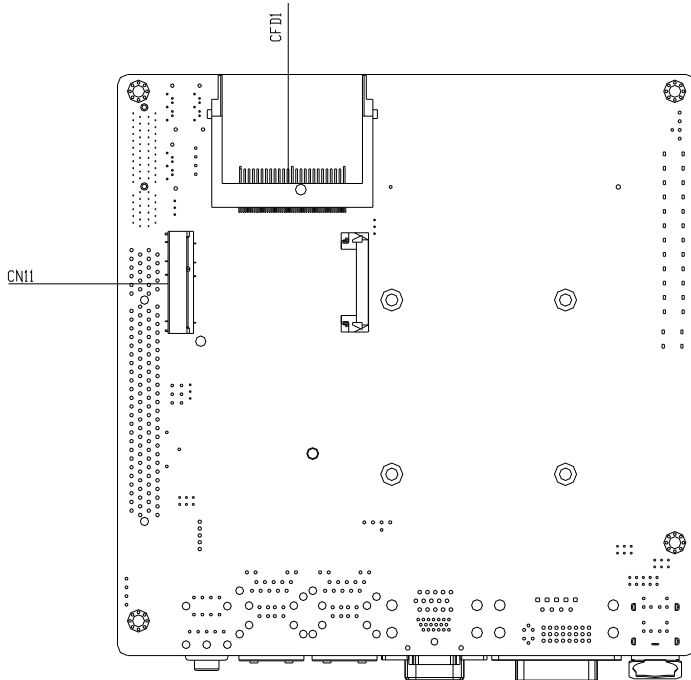
2.3 List of Jumpers

There are a number of jumpers in the board that allow you to configure your system to suit your application.

The table below shows the function of each jumper in the board:

| Label	Function
CMOS1	CMOS Setting Selection
JP1	Auto PWRBTN Selection
JP2	CFD Voltage 3.3V/5V Selection
JP3	TPM Setting Selection
JP5	COM1 +12V/+5V/RING Selection
JP6	COM2 +12V/+5V/RING Selection

2.4 List of Connectors

There are a number of connectors in the board that allow you to configure your system to suit your application. The table below shows the function of each connector in the board:

Label	Function
CN8	COM1~2 Port LED
CN9	COM3~4 Port LED
CN10	LAN Port LED
COM2	RS-232/422/485 Pin header
COM3~4	RS-232 Pin header
SATA1~SATA3	SATA Connector
PWR1	SATA Power Connector

2.5 Setting Jumpers

You configure your card to match the needs of your application by setting jumpers. A jumper is the simplest kind of electric switch. It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To "close" a jumper you connect the pins with the clip.

To "open" a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2 and 3. In this case you would connect either pins 1 and 2 or 2 and 3.

Open   Closed   Closed 2-3
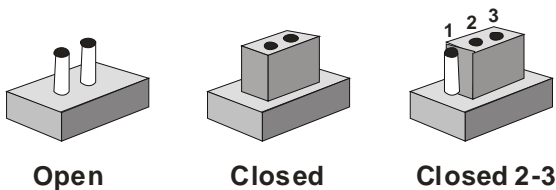
A pair of needle-nose pliers may be helpful when working with jumpers.

If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any change.

Generally, you simply need a standard cable to make most connections.

2.6 CMOS Setting (CMOS1)

JP1	Function
1-2	Normal (Default)
2-3	Clear CMOS

2.7 Auto PWRBTN Selection (JP1)

JP1	Function
1-2	Don't use Auto PWRBTN (Default)
2-3	Use Auto PWRBTN

2.8 CFD Voltage 3.3V/5V Selection (JP2)

JP2	Function
1-2	+3.3V
2-3	+5V (Default)

2.9 TPM Setting (JP3)

JP3	Function
1-2	Save ME RTC Register (Default)
2-3	Clear ME RTC Register

2.10 COM1 +12V/+5V/RING Selection (JP5)

JP5	Function
1-2	+12V
3-4	Ring (Default)
5-6	+5V

2.11 COM2 +12V/+5V/RING Selection (JP6)

JP6	Function
1-2	+12V
3-4	Ring (Default)
5-6	+5V

2.12 COM1~2 Port LED Connector (CN8)

Pin	Signal	Pin	Signal
1	COM1_RS232_PWR	2	GND
3	TX_LED_COM1	4	GND
5	RX_LED_COM1	6	GND
7	COM2_RS232_PWR	8	GND
9	TX_LED_COM2	10	GND
11	RX_LED_COM2	12	GND
13	COM2_RS485_PWR	14	COM2_RS422_PWR

2.13 COM3~4 Port LED Connector (CN9)

Pin	Signal	Pin	Signal
1	COM3_RS232_PWR	2	GND
3	TX_LED_COM3	4	GND
5	RX_LED_COM3	6	GND
7	COM4_RS232_PWR	8	GND
9	TX_LED_COM4	10	GND
11	RX_LED_COM4	12	GND

2.14 LAN Port LED Connector (CN10)

Pin	Signal	Pin	Signal
1	LAN1_LED_D2	2	LAN1_LED_LNK#_ACT
3	LAN1_LED_1000#	4	LAN1_LED_100#

5	LAN2_LED_D2	6	ACT_2_LED
7	SPD1K_2_LED	8	SPD100_2_LED

2.15 RS-232/422/485 Pin Header (COM2)

Pin	Signal	Pin	Signal
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI		

2.16 RS-232 Pin Header (COM3~4)

Pin	Signal	Pin	Signal
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI		

2.17 SATA Connector (SATA 1~3)

Pin	Signal	Pin	Signal
1	GND	2	TXP
3	TXN	4	GND
5	RXN	6	RXP
7	GND		

2.18 SATA Power Connector (PWR1)

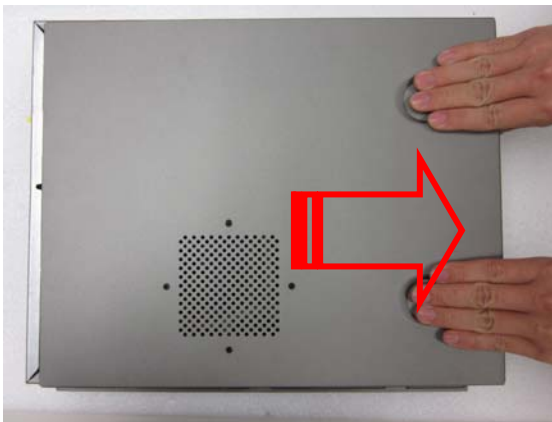| Pin	Signal	Pin	Signal
1	+12V	2	GND
3	GND	4	+5V

2.19 Hard Disk Drive Installation

In the following, we will guide you how to install Hard Disk Drive (HDD). Make sure that all parts are provided before you start the installation.
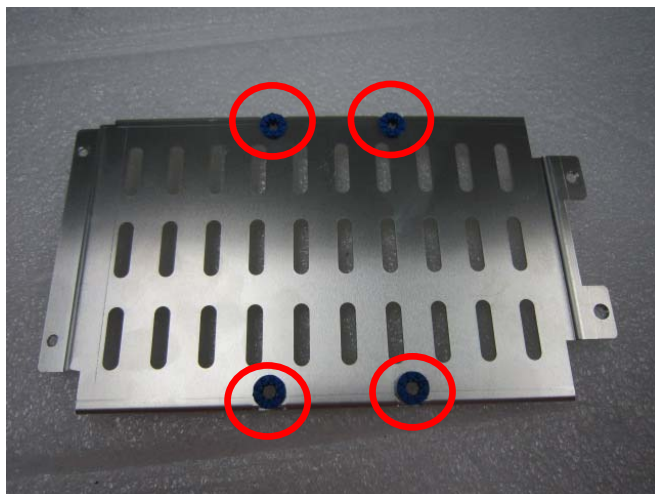
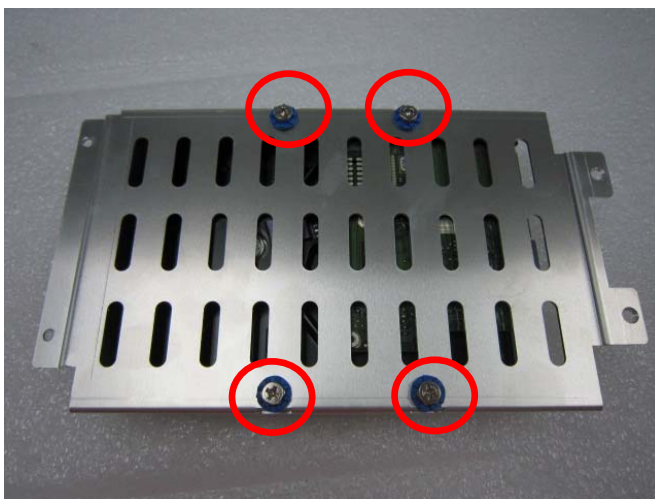Step 1: Loose the five screws on the back chassis of AGP-3155

Step 2: Open the back cover of the AGP-3155

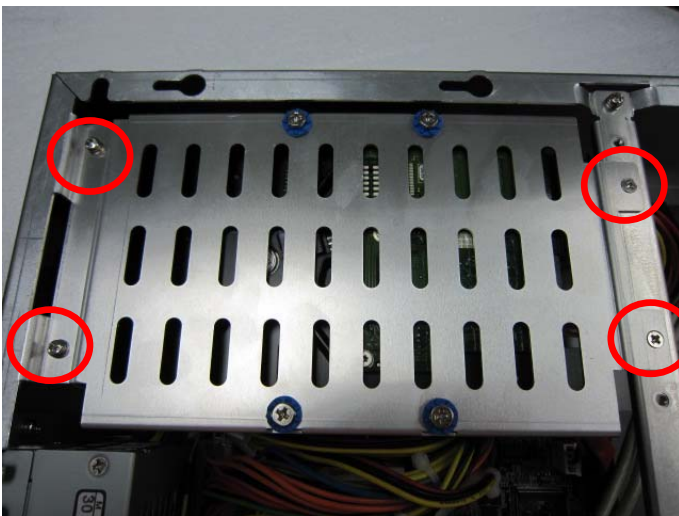Step 3**:** Install the four anti-shock dampers to the HDD bracket

Step 4**:** Fasten the four screws to fix the bracket and HDD

Step 5**:** Connect the SATA and Power Cables to the HDD

Step 6**:** Fasten the four screws to fix the HDD bracket and AGP-3155

Install the second HDD (Optional)

<u>Step 1</u>**:** Install the four anti-shock dampers to the HDD bracket

<u>Step 2</u>**:** Fasten the four screws to fix the bracket and HDD

Step 3**:** Connect the SATA and Power Cables to the HDD

Step 4**:** Connect the SATA cable to the main board

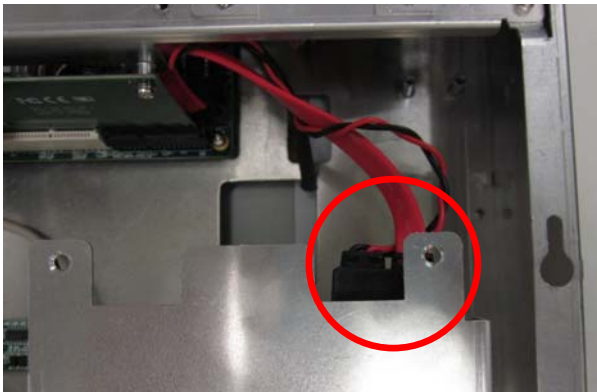Step 5**:** Fasten the four screws to fix the HDD bracket with

AGP-3155

2.20 DVD-ROM Installation
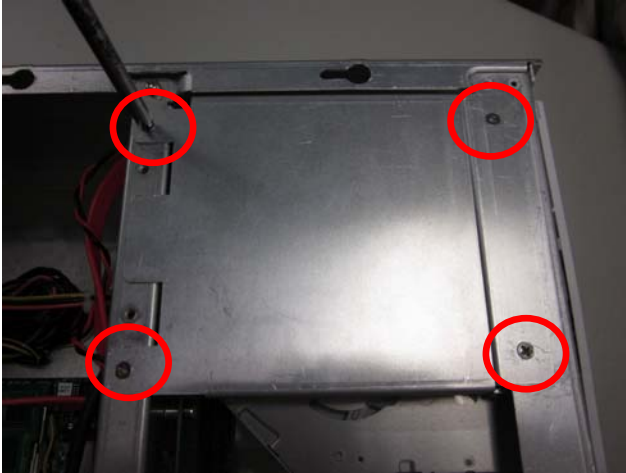
<u>Step 1</u>**:** Fasten the two screws to fix the DVD-ROM and bracket

<u>Step 2</u>**:** Connect the cables to the DVD-ROM

Step 3**:** Fasten the four screws to fix the DVD-ROM bracket with

AGP-3155

2.21 Easy Stand Installation

Fix two the L-shaped easy stands with the screws on both sides of the AGP-3155.

2.22 Panel Mount Kit Installation

Some screw sets will come with the product for user to mount the AGP-3155 on the wall. See the steps below along with the illustration.

Step 1**:** Bore the screw into the screw nut.

Step 2**:** Locate the screw set into the hole around the monitor as the right illustration and pull it back to lock the screw set on the hole.

Step 3**:** Turn the screw around to make it tight until it is closed to the wall.

Step 4**:** Lock the monitor to the wall with the screw set and finish the installation

Panel Mounting
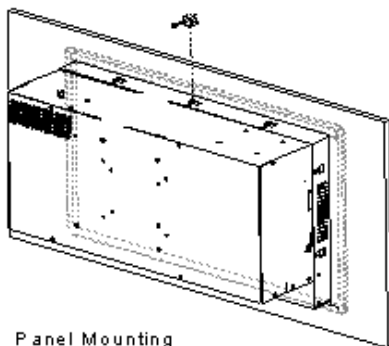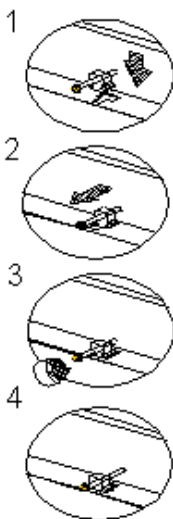
2.23 Waterproof Protection

<u>Step 1</u>: Remove the non-sticky aspect of the double sided tape from the

waterproof rubber border.

<u>Step 2</u>: Put the waterproof rubber border along the bracket of the

AGP-3125 chassis.

Chapter

3

AMI
BIOS Setup

3.1   System Test and Initialization

These routines test and initialize board hardware. If the routines encounter an error during the tests, you will either hear a few short beeps or see an error message on the screen. There are two kinds of errors: fatal and non-fatal. The system can usually continue the boot up sequence with non-fatal errors.

System configuration verification

These routines check the current system configuration against the values stored in the CMOS memory. If they do not match, the program outputs an error message. You will then need to run the BIOS setup program to set the configuration information in memory.

There are three situations in which you will need to change the CMOS settings:

1.   You are starting your system for the first time
2.   You have changed the hardware attached to your system
3.   The CMOS memory has lost power and the configuration information has been erased.

The AGP-3155 CMOS memory has an integral lithium battery backup for data retention. However, you will need to replace the complete unit when it finally runs down.

3.2   AMI BIOS Setup

AMI BIOS ROM has a built-in Setup program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM so that it retains the Setup information when the power is turned off.

Entering Setup
Power on the computer and press <Del> or <F2> immediately. This will allow you to enter Setup.

Main
Set the date, use tab to switch between date elements.

Advanced
Enable disable boot option for legacy network devices.

Chipset
Host bridge parameters.

Boot
Enables/disable quiet boot option.

Security
Set setup administrator password.

Save&Exit
Exit system setup after saving the changes.

Chapter

4

Driver
Installation

The AGP-3155 comes with a DVD-ROM that contains all drivers your need.

Follow the sequence below to install the drivers:

Step 1 – Install Chipset Driver

Step 2 – Install VGA Driver

Step 3 – Install LAN Driver

Step 4 – Install AUDIO Driver

Step 5 – Install ME Driver

Step 6 – Install Touch Panel Driver

Please read following instructions for detailed installations.

4.1 Installation:

Insert the AGP-3155 DVD-ROM into the DVD-ROM Drive. And install the drivers from Step 1 to Step 6 in order.

Step 1 – Install Chipset Driver

1. Click on the ***STEP1-CHIPSET*** folder and select the OS your system is

2. Double click on the ***Setup.exe*** file located in each OS folder

3. Follow the instructions that the window shows

4. The system will help you to install the driver automatically

Step 2 – Install VGA Driver

1. Click on the ***STEP2-VGA*** folder and select the OS your system is

2. Double click on ***Setup.exe*** file located in each OS folder

3. Follow the instructions that the window shows

4. The system will help you to install the driver automatically

Step 3 – Install LAN Driver

1. Click on the ***STEP3-LAN*** folder and select the OS your system is

2. Double click on ***Autorun.exe*** file located in each OS folder

3. Follow the instructions that the window shows

4. The system will help you to install the driver automatically

Step 4 – Install AUDIO Driver

1. Click on the *STEP4-AUDIO* folder and select the OS your system is

2. Double click on *.exe* file located in each OS folder

3. Follow the instructions that the window shows

4. The system will help you to install the driver automatically

Step 5 – Install ME Driver

1. Click on the *STEP5-ME* folder and select the OS your system is

2. Double click on *Setup.exe* file located in each OS folder

3. Follow the instructions that the window shows

4. The system will help you to install the driver automatically

Step 6 – Install Touch Panel Driver

1. Click on the *STEP6-Touch Panel Driver* folder and select the OS your system is

2. Double click on *setup.exe* file located in each OS folder

3. Follow the instructions that the window shows

4. The system will help you to install the driver automatically