

AGP-3175

Intel® Core™ i7/i5 Processor
Rugged Touch Panel Computer
With 17" TFT LCD &
Two PCI/PCIe expansion slots

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Packing List

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

- 1 AGP-3175
- 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 CD-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。

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Chapter

1

**General
Information**

1.1 Introduction

AGP-3175 is first product of the Rugged Expandable Touch Panel Solution series. It adopts Intel® Core™ i7/i5 processor with two DDR3 800/1066 MHz SODIMM up to 8 GB.

Best performance for multimedia solution

AAEON's AGP-3175 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 Keyboard/Mouse, and one VGA. Therefore, AGP-3175 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-3175 integrates 17" 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-3175 is an ideal solution for your applications.

1.2 Feature

- 17" SXGA (1280 x 1024) 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
- 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, DVI 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/ Rack
- Dimension 16.53" x 13.95" x 4.65" (420mm x 355mm x 118mm)
- 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°F ~122°F (0°C~50°C) (Ambient with airflow)
- Storage Temperature -4°F ~140°F (-20°C~60°C)
- Storage Humidity 10%~95% @ 40°C, non-condensing
- Vibration 1 g rms/ 5~500 Hz/ Random operation (HDD)
- Shock 20 G peak acceleration (11 msec. duration)
- EMC CE/FCC Class A

Power Supply

- AC input 250W 110/230V AC power

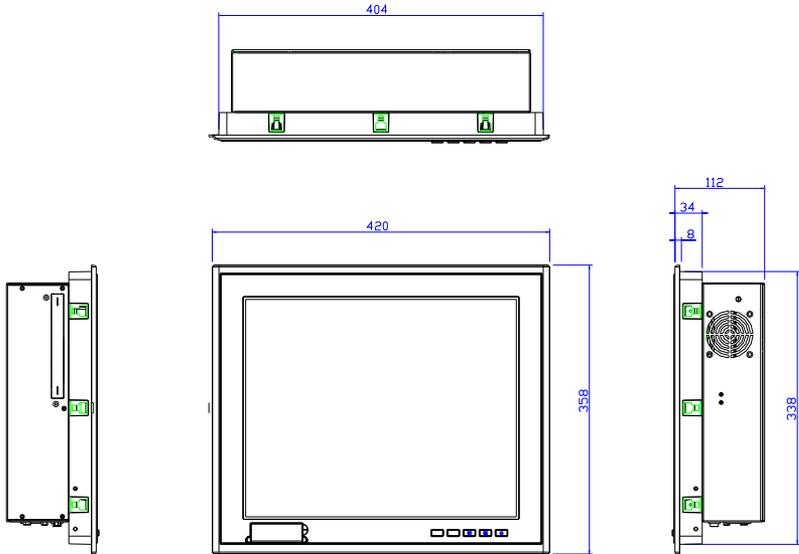
LCD

- Display Type 17" Color TFT LCD
- Max. Resolution 1280 x 1024
- Max. Colors 16.7 M colors (6/8-bit for R,G,B)
- Luminance 380 cd/m²
- Viewing Angle 170°(H)
160°(V)
- Back Light MTBF 50,000
(Hrs)

Touch Screen

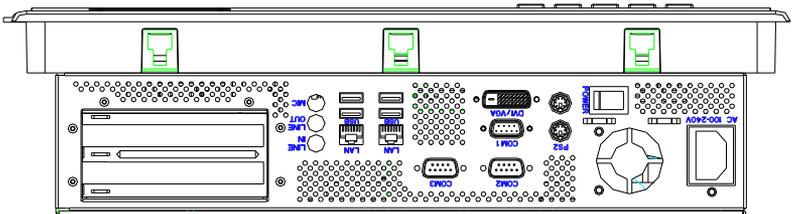
- Type 5-wire resistive
- Light transmission 80%
- Lifetime 35 million activations

1.4 Dimension



SCALE 1:2

Cut size: 407 x 341 cm



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.

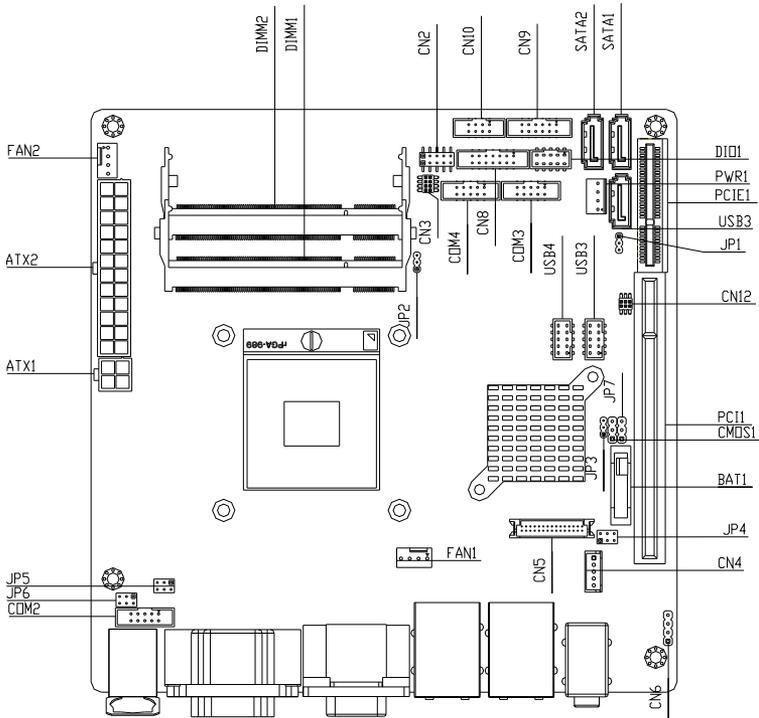
Caution!



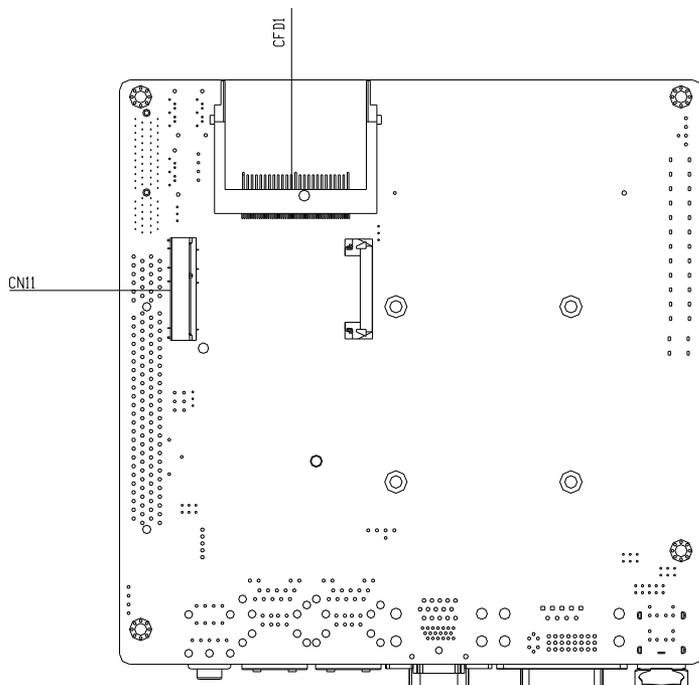
Always ground yourself to remove any static charge before touching the board. Modern electronic devices are very sensitive to static electric charges. Use a grounding wrist strap at all times. Place all electronic components on a static-dissipative surface or in a static-shielded bag when they are not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

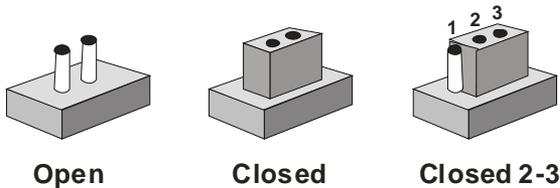
There are a number of connectors in the board that allow you to configure your system to suit your application. The table below shows the function of each connector in the board:

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.



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

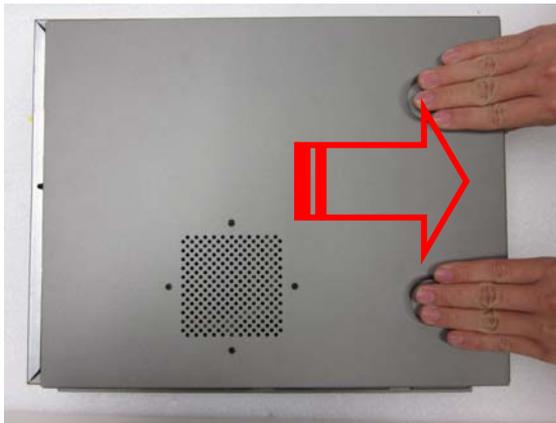
2.19 Hard Disk Drive Installation

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: Loosen the five screws on the back chassis of AGP-3175



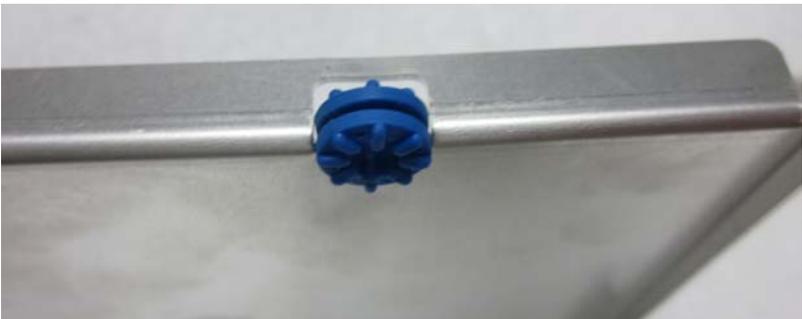
Step 2: Open the back cover of the AGP-3175



Step 3: Get the accessories of anti-vibration rubbers and screws ready



Step 4: Get the screws from the rubbers and insert the anti-vibration rubbers into the fillister of the HDD bracket first



Step 5: Insert the screws to the anti-vibration rubbers





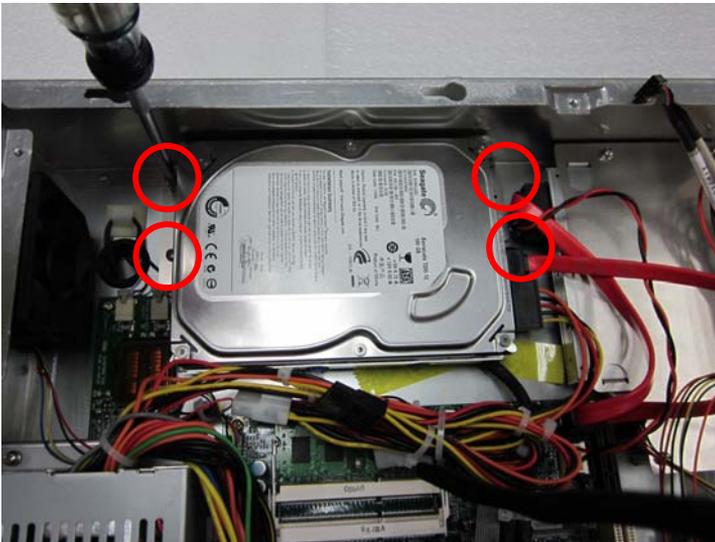
Step 6: Put the HDD to the HDD bracket



Step 7: Connect the SATA and Power Cables to the HDD



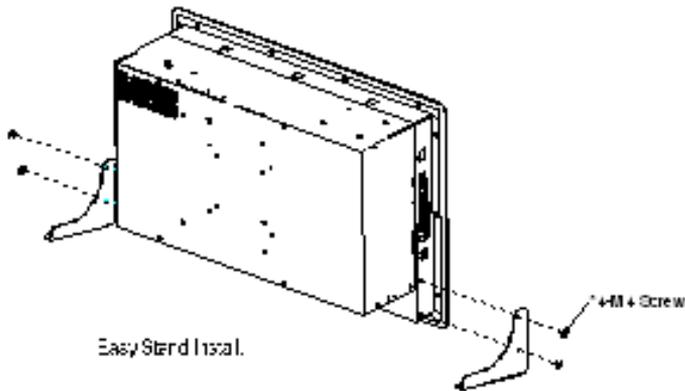
Step 8: Fasten the HDD bracket to the chassis



2.20 Easy Stand Installation

There're two L-shaped easy stands come with the product. Refer to the following illustration to install it.

1. Fix the L-shaped easy stands with the screws on both sides of the AGP-3175. See the illustration below:



2.21 Panel Mount Kit Installation

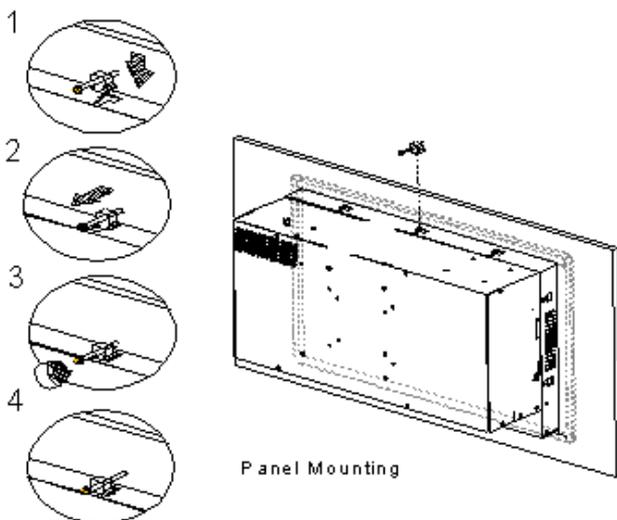
Some screw sets will come with the product for user to mount the AGP-3175 on the wall. See the steps below along with the illustration.

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



2.22 Waterproof Protection

Step 1: Remove the non-sticky aspect of the double sided tape from the waterproof rubber border.



Step 2: 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-3175 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 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/disables quiet boot option.

Security

Set setup administrator password.

Save&Exit

Exit system setup after saving the changes.

Chapter

4

**Driver
Installation**

The AGP-3175 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-3175 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