

ASUS® AGP-V2740
3D Multimedia Accelerator

USER'S MANUAL
Hardware & Video Drivers

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FCC & DOC COMPLIANCE

Federal Communications Commission Statement

This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING! The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

I. Introduction

Thank you for purchasing the ASUS AGP-V2740 Graphics & Video Accelerator. With the Intel740 built in, the ASUS AGP-V2740 provides you with fast acceleration in both 2D/3D graphics and high quality scalable video playback, which can fully support 3D Gaming and Multimedia Applications.

Item Checklist

- ASUS AGP-V2740
- This User's Manual
- ASUS Driver & Utility CD

Key Benefits

- Supports professional graphics design, gaming, learning, and business applications
- Flicker free, high refresh rates reduce eye strain
- Powerful 3D rendering
- Crisp, realistic images
- Striking cinema-quality video

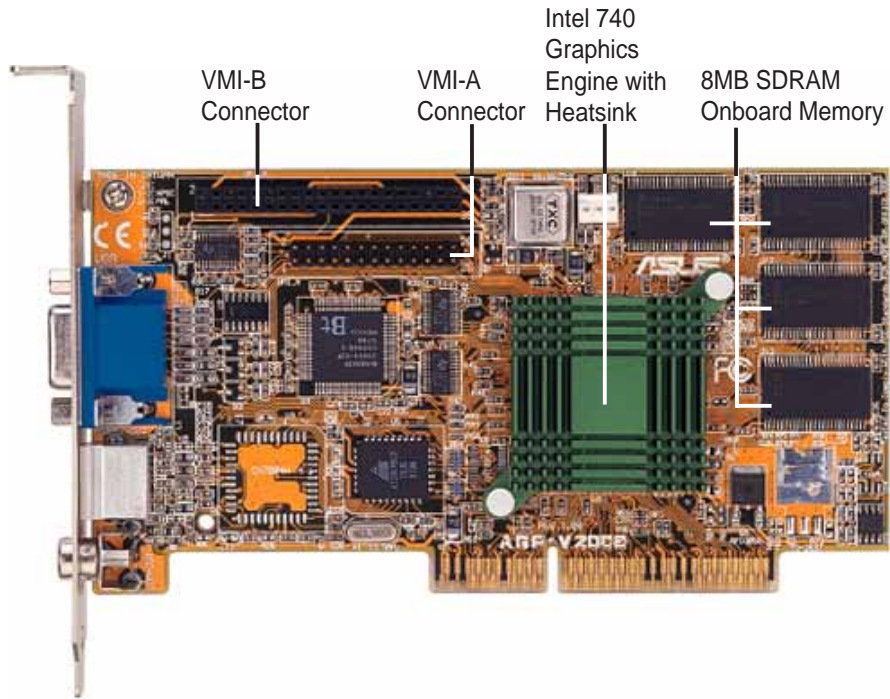
Features

- Built-in Intel740 64-bit 3D Multimedia Accelerator
- User-friendly Installation for Windows 95 and Windows 98.
- Built-in VMI Bus Connectors for TV Tuner, Video Capture, MPEG-1, and MPEG-II
- Acceleration for Windows 95 APIs, including Direct3D and DirectDraw (+ VPE)
- Acceleration for Windows NT APIs, including Direct3D, and DirectDraw
- 64-bit 2D/GUI/DirectDraw Acceleration
- Video Acceleration (including acceleration for MPEG-I, MPEG-II, and Indeo)
- X and Y up and down video scaling
- 205MHz Palette-DAC
- AGP 1.0 Interface (supports 2x mode, execute mode with sideband)
- 8MB 100MHz SDRAM frame buffer
- Excellent performance at high resolutions and color depths

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II. Hardware Installation

ASUS AGP-V2740 Layout



II. Installation
Layout

II. Hardware Installation

NOTE: The ASUS AGP-V2740 graphics card can only be installed in motherboards with an AGP slot.

WARNING! Computer boards and components contain very delicate Integrated Circuit (IC) chips. To protect the computer board and other components against damage from static electricity, you must follow some precautions.

1. Make sure that you unplug your power supply when adding or removing expansion cards or other system components. Failure to do so may cause severe damage to both your motherboard and expansion cards.
2. Keep all components such as the host adapter in its antistatic bag until you are ready to install it.
3. Use a grounded wrist strap before handling computer components. If you do not have one, touch both of your hands to a safely grounded object or to a metal object, such as the power supply case. Hold components by the edges and try not to touch the IC chips, leads, or circuitry.
4. Place components on a grounded antistatic pad or on the bag that came with the component whenever the components are separated from the system.

Installation Procedures

New Systems

1. Unplug all electrical cords on your computer.
2. Remove the system unit cover.
3. Locate the AGP bus expansion slot. Make sure this slot is unobstructed.
4. Remove the corresponding expansion slot cover from the computer chassis.
5. Ground yourself to an antistatic mat or other grounded source (see **WARNING!**).
6. Pick up the board (still in its sleeve) by grasping the edge bracket with one hand and then remove the plastic sleeve.
7. Position the card directly over the AGP slot and insert one end of the board in the slot first. Firmly but gently press the bus connector on the bottom of the card down into the slot. Be sure the metal contacts on the bottom of the host adapter are securely seated in the slot.
8. Anchor the board's mounting bracket to the computer chassis using the screw from the slot cover that you set aside previously.
9. Replace the cover on the system unit.
10. Connect your analog monitor's 15-pin VGA connector to the card and fasten the retaining screws (if any).
11. Connect other cables and devices if available - You are now ready to install the software drivers and utilities.

Systems with Existing VGA Card

1. Change your display driver to Standard VGA.
2. Shut down your computer and unplug all electrical cords.
3. Replace the existing VGA card with the ASUS AGP-V2740 graphics card.
4. Restart your computer.
5. Install the ASUS AGP-V2740 display driver.

III. Windows 95 OSR2.1

Operating System Requirements

IMPORTANT! The ASUS AGP-V2740 requires its own IRQ to work normally. If you have problems during installation, please check your BIOS setting or motherboard jumpers to make sure that “VGA IRQ” has been enabled.

Windows 95

Both Windows 95 and Windows 95 OSR2.0 support AGP cards, but to take advantage of all the AGP features, you must use Win95 OSR 2.1 or later and install the ASUS VGARTD driver (see **III. Windows 95 OSR2.1, Install VGARTD**).

To install Win95 OSR2.1, you must have OSR2.0 installed already. Otherwise, first install OSR2.0 and then use the USB support update (you must use the same update language of your Windows language) to upgrade to OSR2.1. On the April 1997 MSDN Disc-1 “Windows 95, SDKs, and Tools”, OSR2.0 is found in “\OSR2” while the USB support update is found in “\OSR2\USBSUPP”. To determine the installed version of the operating system, look in the registry at:

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Version
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\VersionNumber
OSR2.1 has Version “Windows 95” and VersionNumber “4.03.1212” or “4.03.1214”.

Windows 98

Only Windows98 **Beta3** or later supports full Direct3D and AGP features. If you are not using Beta3 or later, you must upgrade your Windows before installing the AGP display driver.

NOTE: This Manual assumes that your CD-ROM disc drive is drive **D:** and that Windows 95 is in **C:\Windows**. Replace either with the actual location, if necessary.

III. Windows 95 OSR2.1

Installation Procedures

“New hardware found” refers to the prompt for drivers when installing Windows 95 with the ASUS AGP-V2740 VGA card already installed.

When installing Windows 95, a **New Hardware Found** window will appear:

Select **Do not install a driver** and follow the steps on the next page.



When installing Windows 95 OSR2.1, the **Update Device Driver Wizard** window will appear:

This wizard will complete the installation of the Standard PCI Graphics Adapter (VGA). Click **Next >** to let Windows search for an updated driver.



WARNING! Only click **Next >**. The system will hang if you click **Cancel**.

Click **Finish** to install the VGA driver. You will then be asked for your Windows95 CD in order to complete the VGA driver installation. If you do not have your CD handy, direct the installation path to your **\Windows\System** directory. Windows will prompt you to restart your windows. Choose “**No**” and follow the steps on the next page.



III. Windows 95 OSR2.1

Install VGARTD

Insert the ASUS AGP-V2740 installation CD. The **ASUS AGP-V2740 Install Shell** will appear. If it does not appear, run **D:\setup.exe**. You will be presented with a list of install options.

Click **Install VGARTD**.

A message appears that the VGARTD driver is only required for AGP boards. Click **Yes** to proceed to install the VGARTD driver.

The **AGP VGARTD Driver Detection** dialog box appears displaying the chipset on your motherboard that the program detected.

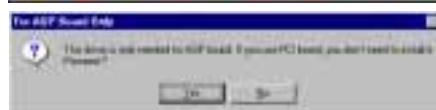
Click **OK** to install the driver for your chipset.

Installation dialogs are slightly different for each chipset. Follow the onscreen instructions to complete the VGARTD installation. The following steps are for Intel chipsets.

In you opted to select other drivers, you will be presented with a drop-down list of other drivers. In the driver selection list, click the VGARTD driver for your chipset and then click **Install**.

The VGARTD driver setup program **Welcome** dialog box appears. Click **Next** to continue.

When the setup program is finished installing the VGARTD driver for your chipset, the **Setup Complete** dialog box appears. Click **Finish** to complete the setup.



III. Windows 95
Install VGARTD

III. Windows 95 OSR2.1

Install DirectX 5

Install Microsoft DirectX5 with this feature. DirectX allows 3D hardware acceleration support in Windows 95. For Software MPEG support in Windows 95, you must first install the **Microsoft DirectX 5** libraries, then you may install the Video Player.

Insert your CD or double click on your CD drive icon in My Computer to bring up the autorun screen or run Setup.exe in the root directory of the CD. Click **Install DirectX 5**.



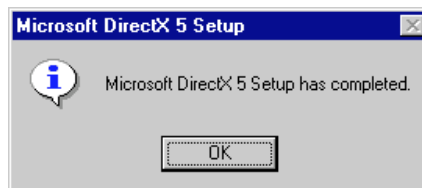
Click **Yes** to install Microsoft DirectX5.



Click **Yes** after reading the agreement.



Click **OK** after installing DirectX5.



III. Windows 95 OSR2.1

Install Display Driver

Insert your CD or double click on your CD drive icon in My Computer to bring up the autorun screen or run Setup.exe in the root directory of the CD. Click **Install Display Driver** for AGP display driver installation.

A welcome screen appears, click **Next**.

A features screen appears, click **Next**.

A notice will appear depending on whether you have installed Windows OSR2.1 or not. If your system is not OSR2.1 or later, you will be asked to upgrade. Otherwise, you will be asked to install VGARTD if you have not yet.

If your Windows is OSR2.1, the installation program will start copying files to your hard disk once you click **Next**.

When the driver installation is completed, you will be prompted to restart Windows. Click **Finish** to restart your computer.



III. Windows 95
Display Driver

III. Windows 95 OSR2.1

Install Video Player

Install “PowerPlayer” video player with this feature. A video player allows you to view Video CD (*.DAT) or MPEG (*.MPG) CD titles.

Insert your CD or double click on your CD drive icon in My Computer to bring up the autorun screen or run Setup.exe in the root directory of the CD.

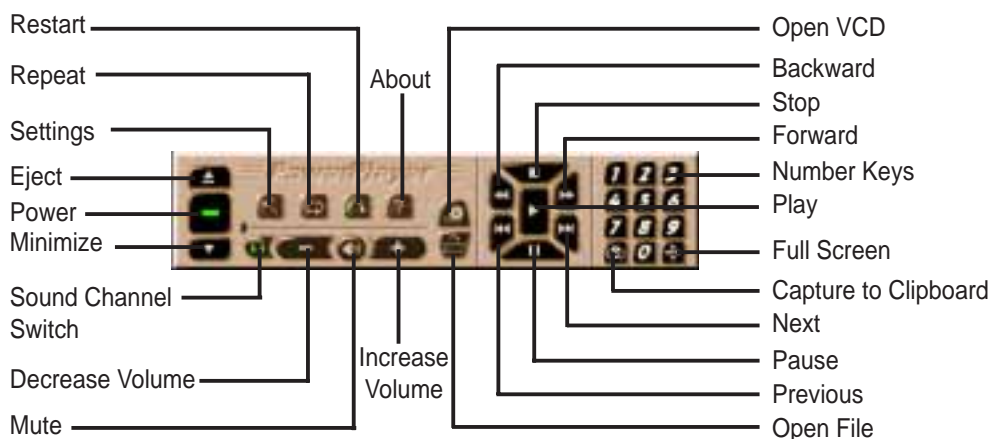


Follow the self-explanatory instructions to complete the installation.



Using the Video Player

Moving your cursor over the buttons will give the button name as shown.



NOTE: It is strongly recommended that you run PowerPlayer at low resolutions (1024x768 or lower) and refresh rates (below 85Hz). Higher resolutions or refresh rates result in poor quality and may cause problems.

III. Windows 95 OSR2.1

Change Resolution and Color

You can change your display settings with this feature.

Settings: This allows you to make display, resolution, color, desktop, and font settings. The maximum screen size allowed depends on the monitor specified.



Adjustment: This allows you to make monitor adjustments such as position, size, and refresh rate. Press ESC to restore the original settings.



Color Correction: This allows you to make color adjustments such as brightness, contrast, gamma for each RGB component.



Information: This allows you to see relevant information about your display card.



Hotkey: This allows you to assign hotkeys in the “value” box to move your screen or to zoom in and out in the virtual desktop.



III. Windows 95
Change Settings

III. Windows 95 OSR2.1

Remove Display Driver

If you want to install other graphics cards or if you no longer need the AGP-V2740 display drivers, you can use one of the following procedures to completely uninstall the drivers from Windows 95 to save disk space.

Using the Autorun Screen

Insert your CD or double click on your CD drive icon in My Computer to bring up the autorun screen or run Setup.exe in the root directory of the CD. Select **Remove Display Driver** and follow the directions.

Using Windows 95 Control Panel

1. Click **Start**, and then point to **Settings**.
2. Click **Control Panel**.
3. Double-click the **Add/Remove Programs** icon.
4. Click the **Install/Uninstall** tab.
5. Select ASUS VGA driver from the list.
6. Click **Add/Remove**.

You will be warned that files will be deleted. Click **Yes** to continue.

A **“Remove Shared File?”** dialog box will ask for confirmation on removing some shared files. Click **Yes To All** to remove the shared files.

You will be warned that shared files may be used by other devices. Click **Yes** to continue.

This progress screen will show the components that are being uninstalled.



IV. Microsoft Windows NT 4.0

Install Display Driver

WARNING! Before installing the ASUS AGP-V2740 display driver in Windows NT 4.0, make sure that you have installed **Windows NT 4.0 Service Pack3** (you must use the same update language of your Windows language available on the Internet at http://www.microsoft.com/isapi/support/bldqpage.idc? ProductPage=q_servpk). Otherwise, the system will hang and will not be able to start up!

NOTE: Procedures assume your CD-ROM drive letter is D. To have all the AGP features, you must be using Windows NT 5.0 (available in the near future).

Installation Procedures

1. Start Windows NT, switch display properties to VGA mode (16 colors, 640 x 480 pixels), then restart your computer to make the change.
2. After your computer restarts, right-click the desktop and click **Properties**.
3. Click the **Settings** tab.
4. Select **Change Display Type**.
5. Select **Adapter Type** and click **Change**.
6. Click **Have Disk**.
7. Insert the ASUS AGP-V2740 Installation CD.
8. Type **D:\NT40** or click **Browse** to select the path of the display driver for Windows NT. Click **OK**.
9. Select **ASUS AGP-V2740** and then click **OK**.
10. Windows NT will once again prompt for confirmation. All appropriate files are then copied to the hard disk. When all files are copied, go back to the **Display Properties** box by clicking **Close**. Click **Apply**.
11. The **System Settings Change** dialog box is displayed. Click **Yes** to restart Windows.
12. Windows NT will restart with the default settings. The Display applet will appear to allow for mode selection.

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V. Display Information

Resolution Table

8MB Video Memory

Resolution	Vertical Frequency	Horizontal Frequency	Supported Color Depth		
			8bpp = 256 colors Standard	16bpp = 65K colors High Color	24bpp = 16.7M colors True Color
640 x 480	60Hz	31.1KHz	yes	yes	yes
	72Hz	37.8KHz	yes	yes	yes
	75Hz	37.5KHz	yes	yes	yes
	85Hz	42.6KHz	yes	yes	yes
	100Hz	51.1KHz	yes	yes	yes
	120Hz	61.2KHz	----	yes	yes
	160Hz	81.7KHz	yes	----	----
800 x 600	60Hz	37.9KHz	yes	yes	yes
	72Hz	45.4KHz	yes	yes	yes
	75Hz	46.7KHz	yes	yes	yes
	85Hz	53.7KHz	yes	yes	yes
	100Hz	62.9KHz	yes	yes	yes
	120Hz	75.5KHz	----	yes	----
	150Hz	94.3KHz	yes	----	----
1024 x 768	60Hz	48.1KHz	yes	yes	yes
	75Hz	60.3KHz	yes	yes	yes
	85Hz	68.6KHz	yes	yes	yes
	100Hz	80.7KHz	yes	yes	yes
	120Hz	96.9KHz	yes	----	----
1280 x 1024	60Hz	64.1KHz	yes	yes	----
	75Hz	80.6KHz	yes	yes	----
	85Hz	90.8KHz	yes	----	----
1600 x 1200	60Hz	74.7KHz	yes	----	----
	75Hz	94.0KHz	yes	----	----

V. Display Info
Resolution Table

VI. Troubleshooting

Description	Recommended Action
<p><i>After installation and re-starting, Windows 95 informs me that the display setting is still incorrect.</i></p>	<p>There may be a conflict between a previous and the current display drivers. This is caused by the incomplete removal of the previous display driver. Try the following steps to remove it:</p> <ol style="list-style-type: none">1. Right-click My Computer on the desktop.2. Select Properties. The System Properties dialog box appears.3. Click the Device Manager tab. Be sure that View devices by type is selected.4. Double-click Display adapters.5. You will find two (or more) conflicting adapters.6. Disable all previous adapters by selecting them and clicking Remove.7. Close Device Manager and restart Windows 95.8. Your display driver should work correctly this time.
<p><i>My monitor is not capable of high resolution or refresh rate.</i></p>	<p>It depends on the display characteristics of your monitor. Consult your monitor documentation for the proper configuration.</p>
<p><i>DirectX or the other applications report no AGP memory available.</i></p>	<p>There may be several possible reasons:</p> <ol style="list-style-type: none">1. Windows 95 is not OSR2.1 or later.2. DirectX version is not 5.0 or later.3. You have not installed appropriate drivers for AGP chipset. (e.g. VGARTD.VXD for Intel 440LX which ASUS installation automatically installs)4. Incorrect BIOS setting. BIOS must support at least 32MB for AGP aperture size.