



Graphics Card

Installation Guide

E1415

First Edition V1

September 2003

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Contents

Notices	iv
Safety information	v
About this guide	vi
ASUS contact information	vii
1. Support CD Information	1
1.1 Running the support CD	1
2. Display Driver Installation	2
2.1 Changing the Windows display driver	2
2.2 Install ASUS Enhanced Driver	4
2.2.1 Windows 2000/XP	4
Method 1: ASUS Quick Setup Program	4
Method 2: Plug and Play	5
2.3 ASUS WHQL Driver	7
2.4 DirectX driver	8
2.5 GART Driver	9
2.6 WDM capture driver	11
2.7 Update display driver	12
2.8 Uninstall Display Driver	14
2.8.1 Windows 98SE/ME	14
Using Control Panel	14
2.8.2 Windows 2000	15
Using Control Panel	15
3. Utilities	16
3.1 Install Smart Doctor	16
3.2 Install Video Security	17
3.3 Install ASUS Digital VCR	18
3.4 Install ASUS GameFace	19

Notices

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.



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 Communication 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.

This class B digital apparatus complies with Canadian ICES-003.

Safety information

Electrical safety

- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system.
- When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.
- Before connecting or removing signal cables from the motherboard, ensure that all power cables are unplugged.
- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.
- Make sure that your power supply is set to the correct voltage in your area. If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.

Operation safety

- Before installing the motherboard and adding devices on it, carefully read all the manuals that came with the package.
- Before using the product, make sure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.
- Place the product on a stable surface.
- If you encounter technical problems with the product, contact a qualified service technician or your retailer.

Macrovision Corporation Product Notice

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only *unless otherwise authorized by Macrovision Corporation*. Reverse engineering or disassembly is prohibited.

About this guide

Conventions used in this guide

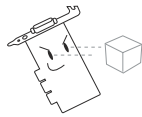
To make sure that you perform certain tasks properly, take note of the following symbols used throughout this manual.



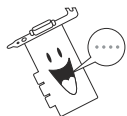
WARNING: Information to prevent injury to yourself when trying to complete a task.



CAUTION: Information to prevent damage to the components when trying to complete a task.



IMPORTANT: Information that you **MUST** follow to complete a task.



NOTE: Tips and additional information to aid in completing a task.

Typography

Bold Text	Indicates a menu, dialog box or an item to select.
Text input	Indicates a text or command that you have to type on the screen.

Where to find more information

Refer to the following sources for additional information and for product and software updates.

1. **ASUS Websites**

The ASUS websites worldwide provide updated information on ASUS hardware and software products. The ASUS websites are listed in the ASUS Contact Information on page vii.

2. **Optional Documentation**

Your product package may include optional documentation, such as warranty flyers, that may have been added by your dealer. These documents are not part of the standard package.

ASUS contact information

ASUSTeK COMPUTER INC. (Asia-Pacific)

Address: 150 Li-Te Road, Peitou, Taipei, Taiwan 112
General Tel: +886-2-2894-3447
General Fax: +886-2-2894-3449
Web Site: www.asus.com.tw

Technical Support

MB/Others (Tel): +886-2-2890-7121 (English)
Notebook (Tel): +886-2-2890-7122 (English)
Desktop/Server (Tel): +886-2-2890-7123 (English)
Support Fax: +886-2-2890-7698

ASUS COMPUTER INTERNATIONAL (America)

Address: 44370 Nobel Drive, Fremont, CA 94538, USA
General Fax: +1-502-933-8713
General Email: tmd1@asus.com
Web Site: usa.asus.com

Technical Support

Support Fax: +1-502-933-8713
General Support: +1-502-995-0883
Notebook Support: +1-510-739-3777 x5110
Support Email: tsd@asus.com

ASUS COMPUTER GmbH (Germany and Austria)

Address: Harkortstr. 25, 40880 Ratingen, BRD, Germany
General Email: sales@asuscom.de (for marketing requests only)
General Fax: +49-2102-9599-31
Web Site: www.asuscom.de

Technical Support

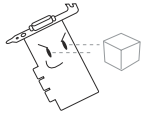
Components: +49-2102-9599-0
Notebook PC: +49-2102-9599-10
Support Fax: +49-2102-9599-11
Support Email: www.asuscom.de/support (for online support)

ASUSTeK COMPUTER (Middle East and North Africa)

Address: P.O. Box 64133, Dubai, U.A.E.
General Tel: +9714-283-1774
General Fax: +9714-283-1775
Web Site: www.ASUSarabia.com

1. Support CD information

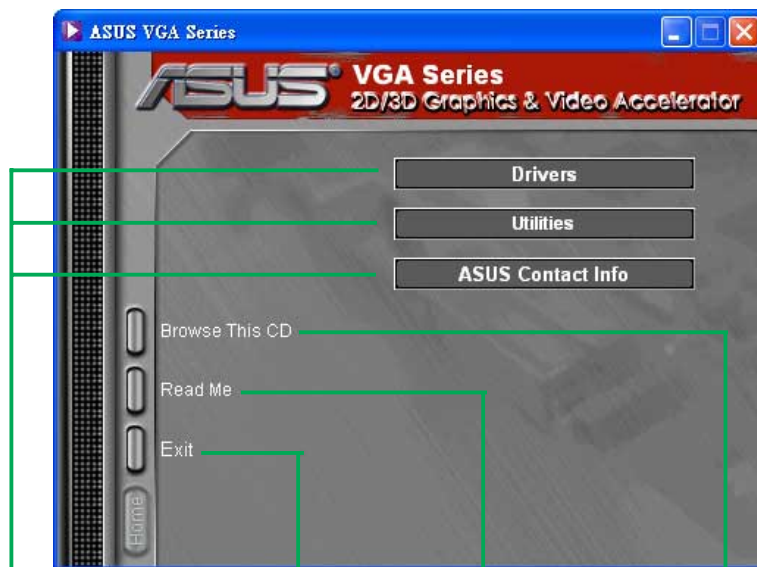
The support CD that came with the VGA card contains useful software and several utility drivers that enhance the video features.



- The screen displays in this manual may not exactly match the display on your screen.
- Some driver and utility items in the support CD apply only to specific ASUS VGA card models.
- The contents of the support CD are subject to change at any time without notice. Visit the ASUS website for updates.

1.1 Running the support CD

To begin using the support CD, simply insert the CD into your CD-ROM drive. The support CD automatically displays the **2D/3D Graphics & Video Accelerator** main menu if autorun is enabled in your computer.

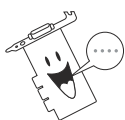


Click a menu item to open other installation menus

Click to exit application

Click to view readme file

Click to display CD information



If autorun is NOT enabled in your computer, browse the contents of the support CD to locate the file **SETUP.EXE**. Double-click the **SETUP.EXE** to run the support CD installation program.

2. Display driver installation

A display driver is the software program that makes the device work with your operating system. You can install the display drivers for your graphics card using any of the recommended methods in this section depending on your operating system.

If you are replacing an old graphics card with a new ASUS graphics card, make sure to change the Windows display driver setting to “Standard Display Adapter (VGA)” to avoid possible driver conflicts. Perform the steps in section “2.1 Changing the Windows display driver” to change your Windows display driver.

If you are installing an ASUS graphics card in a computer system without an existing graphics card, perform the steps in section “2.2 Install ASUS enhanced driver”.

2.1 Changing the Windows display driver

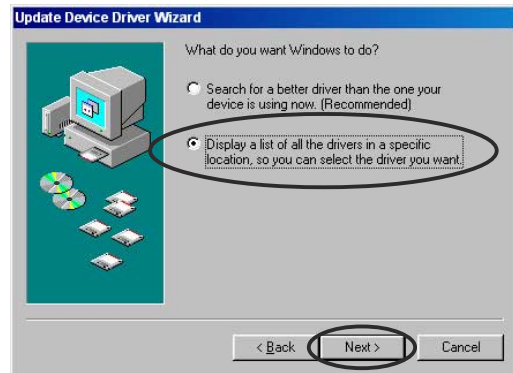
1. Boot your computer.
2. Click the **Start** button. Select **Settings**, then **Control Panel**.
3. Double-click the **System** icon in the Control Panel. Select the **Device Manager** tab.
4. Double-click on **Display Adapters**.
5. Select the current display adapter then click on **Properties**.
6. From the Properties dialog box, select the **Driver** tab then click on **Update Driver**.



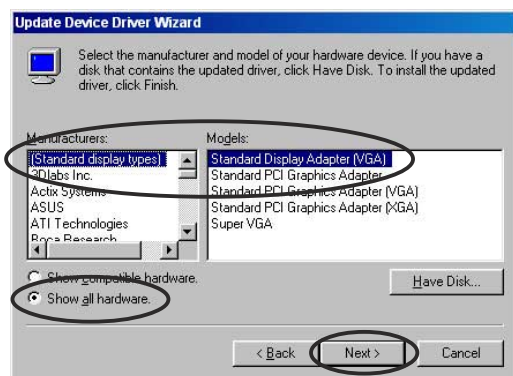
7. Click **Next** on the succeeding screen.



8. Select the **Display a list of all the drivers in a specific location, so you can select the driver you want** option, then click **Next**.



9. From the Update Device Driver Wizard dialog box, select **Show all hardware**. Select **(Standard display types)** from the Manufacturers list box and **Standard Display Adapter (VGA)** from the Models list box. Click **Next**.



10. When prompted to update the driver, click **Yes**.
11. Click **Next** on the succeeding screens.
12. When Setup has finished installing all the necessary files to your computer, it prompts you to restart your computer. Click **OK**.

2.2 Install ASUS enhanced driver

The ASUS fine-tuned enhanced driver delivers the best 3D performance on your video output. Use any of the recommended methods in this section to install the ASUS enhanced driver after booting your computer.

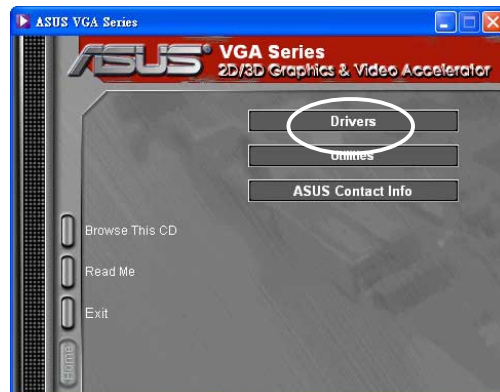
2.2.1 Windows 2000/XP

Method 1: ASUS Quick Setup Program

1. When Windows detects your ASUS graphics card, the **Found New Hardware Wizard** dialog box appears.
2. Click **Cancel** to enter the Windows desktop.
3. Insert the support CD into your CD-ROM drive.



4. If autorun is enabled, the 2D/3D Graphics & Video Accelerator appears automatically.
If autorun is disabled, run **Setup.exe** from the root directory of your support CD.



5. From the 2D/3D Graphics & Video Accelerator main menu, click **Drivers**.
6. Click the **ASUS Enhanced Driver Install** button from the **Drivers** menu to copy the necessary files to your computer.
7. Follow the succeeding screen instructions.
8. When Setup has finished installing all the necessary files to your computer, it prompts you to restart your computer. Click **OK**.

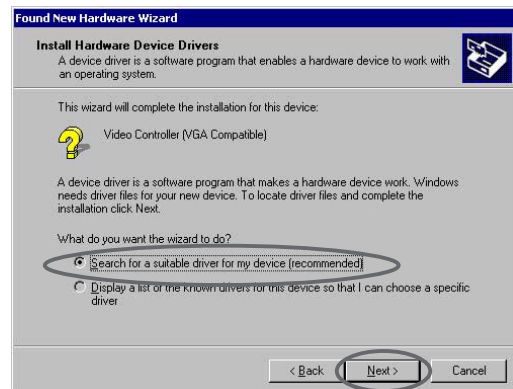


Method 2: Plug and Play

1. When Windows detects your ASUS graphics card, the **Found New Hardware Wizard** dialog box appears. Click **Next**.



2. From the **Found New Hardware Wizard** dialog box, select **Search for a suitable driver for my device (recommended)** then click **Next**.



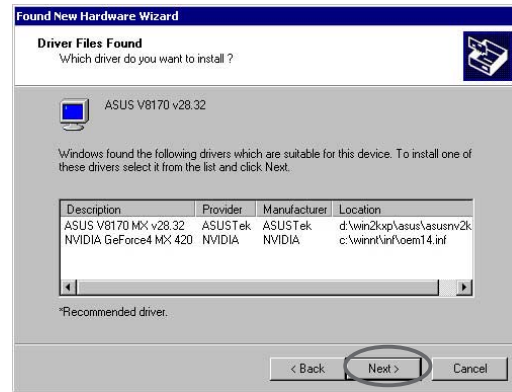
3. When the **Locate Driver Files** dialog box appears, insert the support CD into your CD-ROM drive.
4. Check **CD-ROM drives** and uncheck all other options. Click **Next** to search for the drivers of your graphics card.



5. When the wizard has finished searching for driver files for your graphics card, check **Install one of the other drivers** then click **Next**.



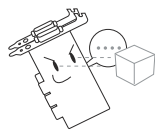
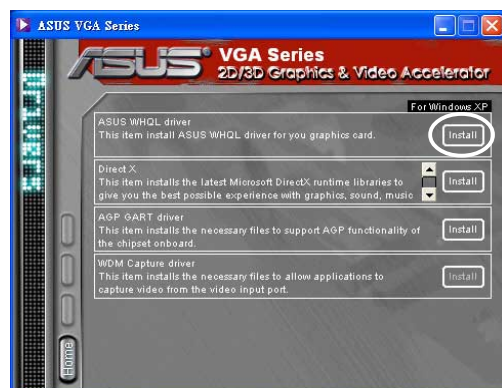
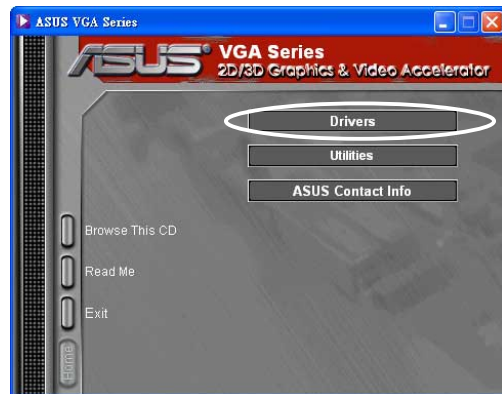
6. When prompted to select the display driver to install in your system, select the one that is located in the D:\WIN2KXP\ASUS and click **Next**.
7. Follow the succeeding onscreen instructions.
8. When Setup has finished installing all the necessary files to your computer, it prompts you to restart your computer. Click **OK**.



2.3 ASUS WHQL driver

The ASUS reference driver to Microsoft's Windows Hardware Quality Labs (WHQL) ensures that your video graphics card is compatible with the Windows operating system.

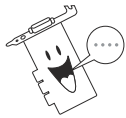
1. Insert the support CD into your CD-ROM drive.
2. If autorun is enabled, the 2D/3D Graphics & Video Accelerator appears automatically.
If autorun is disabled, run **Setup.exe** from the root directory of your support CD.
3. From the 2D/3D Graphics & Video Accelerator main menu, click **Drivers**.
4. Click the **ASUS WQHL Driver Install** button from the **Drivers** menu to copy the necessary files to your computer.
5. When Setup has finished installing all the necessary files to your computer, it prompts you to restart your computer. Click **OK**.



Some features of ASUS display card is not supported by the ATI WHQL driver.

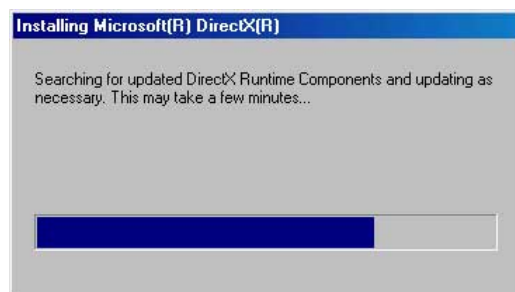
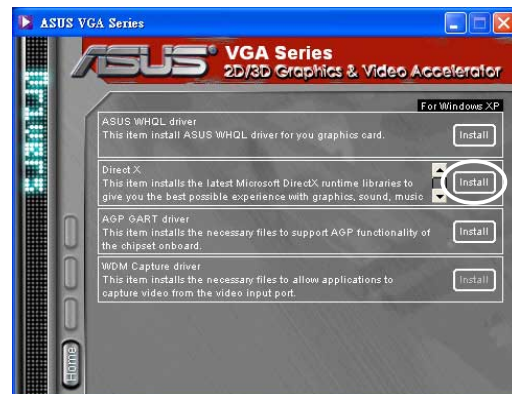
2.4 DirectX

DirectX is a group of application program interface (API) and libraries for creating and managing graphic images and multimedia effects in applications such as games or active web pages that will run in Microsoft Windows operating systems.



The DirectX driver is automatically installed when you install the ASUS Enhanced driver from the support CD. However, it is recommended to re-install the DirectX driver when you download a driver update from the ASUS website.

1. Insert the support CD into your CD-ROM drive.
2. If autorun is enabled, the 2D/3D Graphics & Video Accelerator appears automatically.
If autorun is disabled, run **Setup.exe** from the root directory of your support CD.
3. From the 2D/3D Graphics & Video Accelerator main menu, click **Drivers**.
4. Click the **DirectX Install** button from the **Drivers** dialog box to copy the necessary files to your computer.



5. When Setup has finished installing all the necessary files to your computer, it prompts you to restart your computer. Click **OK**.



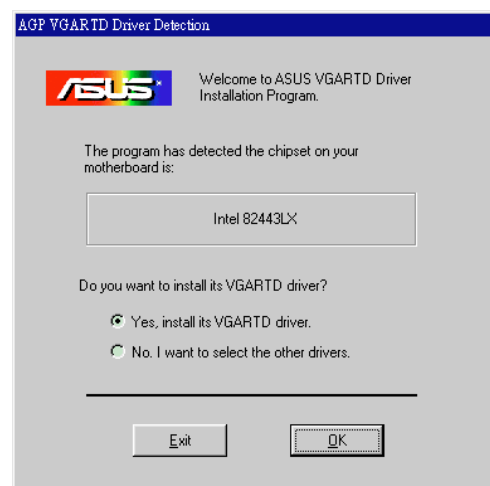
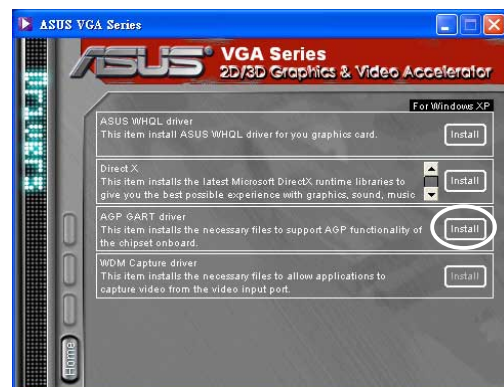
2.5 AGP GART driver

The AGP GART driver is used to support the AGP functionality of the chipset on your motherboard.



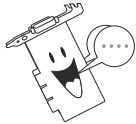
- Installation dialog boxes are slightly different for each chipset. Follow the screen instructions to install the GART driver.
- The GART driver is automatically installed when you install the motherboard drivers from your motherboard support CD. However, it is recommended to install the GART driver if it is newer than the one from the motherboard support CD.

1. Insert the support CD into your CD-ROM drive.
2. If autorun is enabled, the 2D/3D Graphics & Video Accelerator appears automatically.
If autorun is disabled, run **Setup.exe** from the root directory of your support CD.
3. From the 2D/3D Graphics & Video Accelerator main menu, click **Drivers**.
4. Click the **GART Driver Install** button from the **Drivers dialog box** to install AGP support for motherboards with Intel®, AMD®, VIA™, SiS®, NVIDIA®, ATI® or ALi® chipsets.
5. The **AGP VGARTD Driver Detection** box appears showing the chipset detected on your motherboard.
6. Select an option to install the displayed VGARTD driver or to select from a list. Click **OK**.



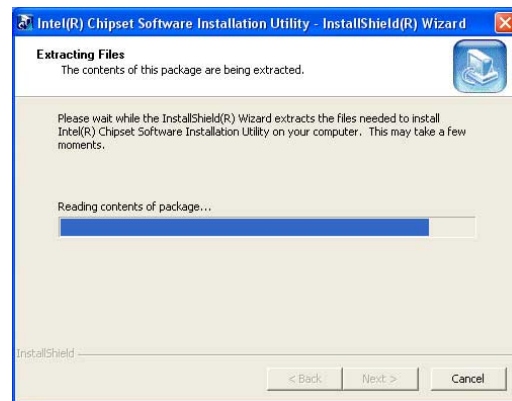
7. If you selected **Yes, install its VGART driver** on the previous screen, proceed to step 8.

If you selected **No, I want to select the other drivers**, select a driver from the combo list box and click **Install**.

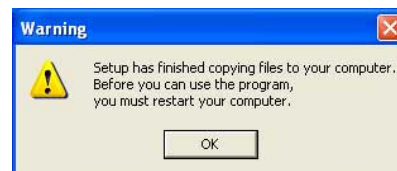


The appropriate driver for the detected motherboard chipset appears as default.

8. Follow the succeeding instructions to complete the setup. Click **Cancel** if you wish to abort the installation.



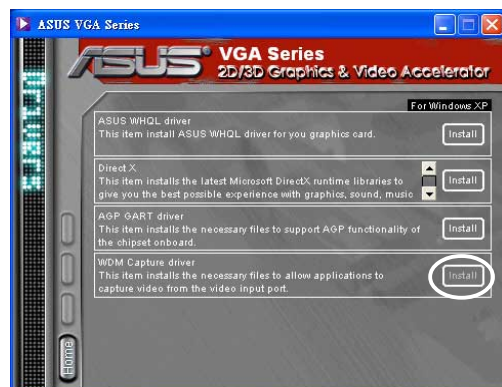
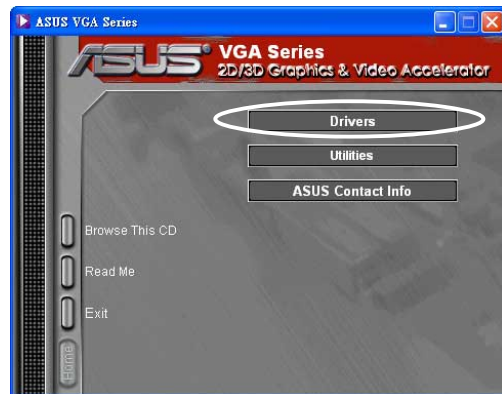
9. When Setup has finished installing all the necessary files to your computer, it prompts you to restart your computer. Click **OK**.



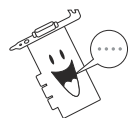
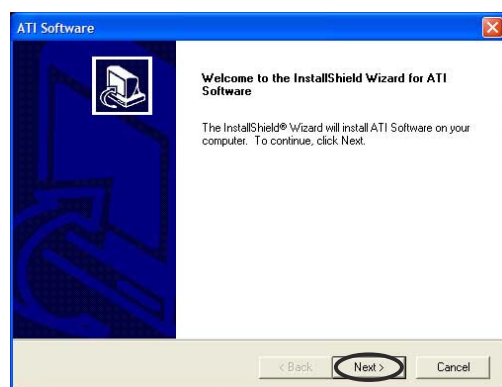
2.6 WDM capture driver

The Windows Driver Model (WDM) capture driver allows you to capture video from the video input port.

1. Insert the support CD into your CD-ROM drive.
2. If autorun is enabled, the 2D/3D Graphics & Video Accelerator appears automatically.
If autorun is disabled, run **Setup.exe** from the root directory of your support CD.
3. From the 2D/3D Graphics & Video Accelerator main menu, click **Drivers**.
4. Click the **WDM Capture driver Install** button from the **Drivers** menu to copy the necessary files to your computer.



5. From the **ATI Software** setup dialog box, click **Next** to install the appropriate driver for your graphics card.
6. Follow succeeding screen instructions.
7. When prompted, select **Yes, I want to restart my computer now** then click **Finish**.

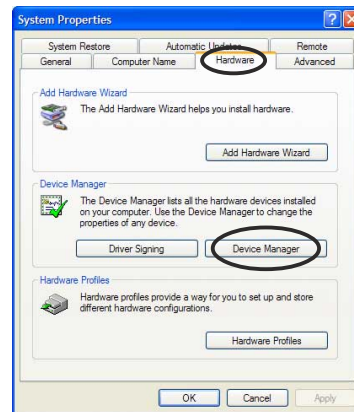


The WDM capture driver only works on graphics cards with video-in function.

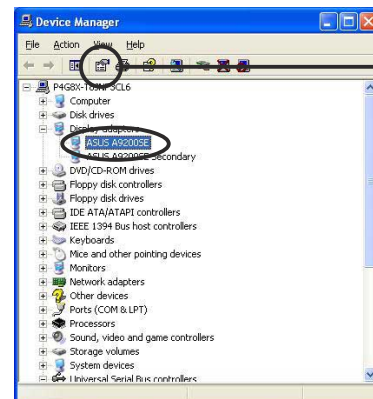
2.7 Update display driver

Follow these steps to update your current VGA driver with a new driver file from the ASUS website.

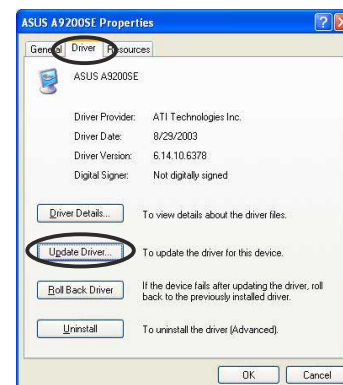
1. Boot your computer.
2. Click the **Start** button. Select **Settings**, then **Control Panel**.
3. Double-click the **System** icon in the Control Panel. Select the **Hardware** tab.
4. Click **Device Manager**, then double-click on **Display adapters**.



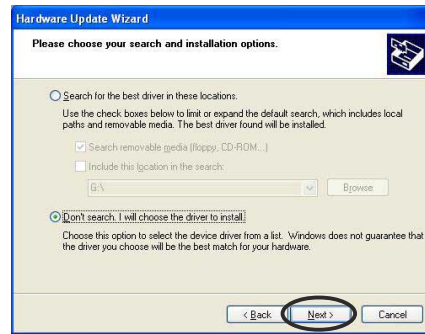
5. Select the current display adapter then click on the **Properties** icon.



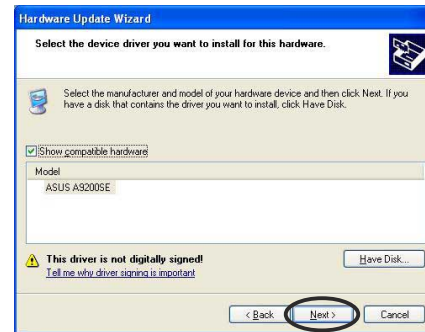
6. From the Properties dialog box, select the **Driver** tab then click on **Update Driver**.



8. Select the **Don't search. I will choose the driver to install** option, then click **Next**.



9. From the Hardware Update Wizard dialog box, click **Have Disk...**, then click **Next**.



10. When setup prompts you for the location of the driver, type the path of the driver file. For example:

D:\Win2KXP\ATIxxxx.inf

OR

Click **Browse** to locate the saved driver file in your hard disk, network, floppy or CD-ROM drive.

11. Follow the succeeding screen instructions.
12. The application prompts you to restart your computer to complete the process. Click **Yes**.

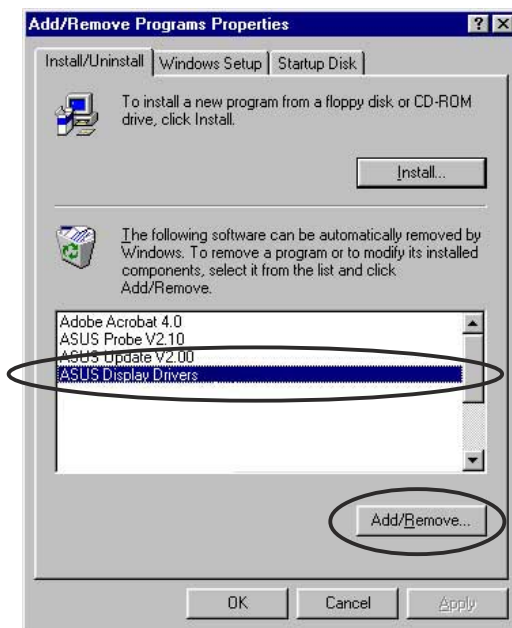
2.8 Uninstall display driver

If you want to update your display drivers or if you no longer need the display drivers for your card, use one of the following methods to completely uninstall the drivers from your system.

2.8.1 Windows 98SE/ME

Using the Control Panel

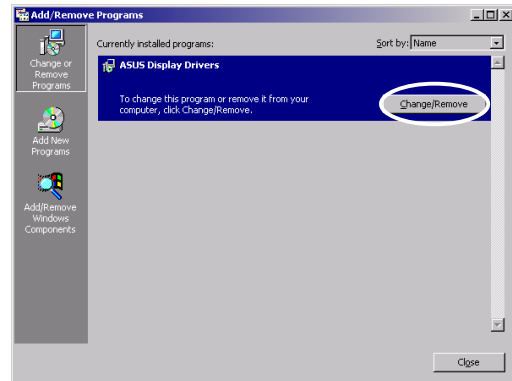
1. Click on the **Start** button. Select **Settings**, then **Control Panel**.
2. Double-click the **Add/Remove Programs** icon in the Control Panel.
3. Select the **Install/Uninstall** tab to display a list of installed programs.
4. Highlight **ASUS Display Drivers** from the list, then click on the **Add/Remove** button.
5. Follow the succeeding screen instructions.
6. The application prompts you to restart your computer to complete the process. Click **Yes**.



2.8.2 Windows 2000

Using the Control Panel

1. Click the **Start** button. Select **Settings**, then **Control Panel**.
2. From the Control Panel, double-click the **Add/Remove Programs** icon to display the **Add/Remove Programs** screen.
4. Highlight **ASUS Display Drivers** from the list, then click on the **Change/Remove** button.
5. Follow the succeeding screen instructions.
6. The application prompts you to restart your computer to complete the process. Click **Yes**.

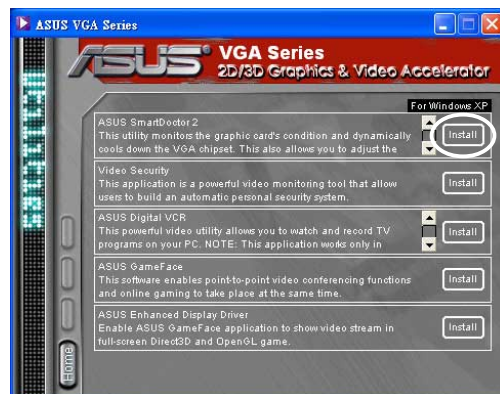
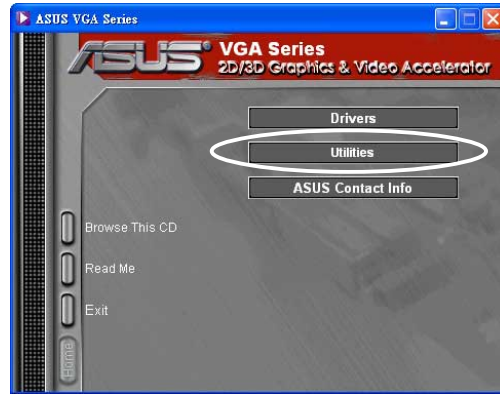


3. Utilities

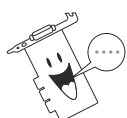
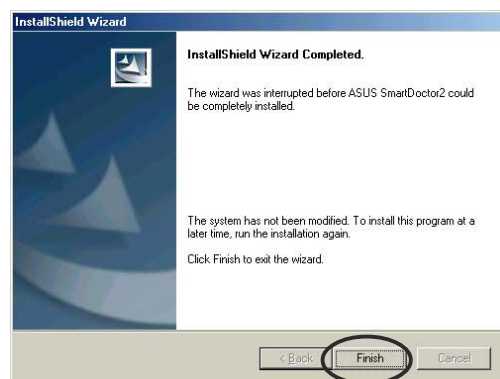
3.1 Install Smart Doctor

The Smart Doctor utility monitors the VGA card condition and significantly cools down the VGA Graphics Processing Unit (GPU). This utility also allows you to adjust the graphics card clock settings.

1. Insert the support CD into your CD-ROM drive.
2. If autorun is enabled, the 2D/3D Graphics & Video Accelerator appears automatically.
If autorun is disabled, run **Setup.exe** from the root directory of your support CD.
3. From the 2D/3D Graphics & Video Accelerator main menu, click **Utilities**.
4. Click the **ASUS SmartDoctor Install** button from the **Utilities** menu to copy the necessary files to your computer.
5. Follow the succeeding screen instructions.



6. Click **Finish**, when setup is complete.

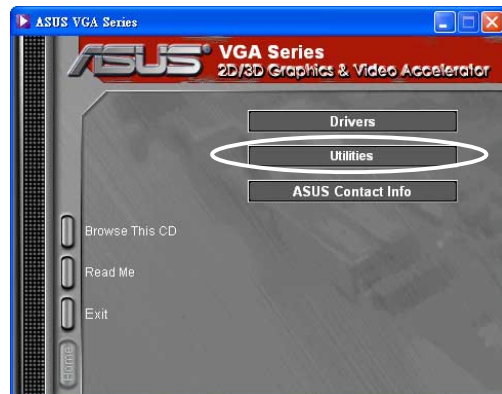


The Smart Doctor utility works only for graphics card models with a built-in hardware monitor IC. If the hardware monitor IC is not present, only the SmartDoctor overclocking function will be installed.

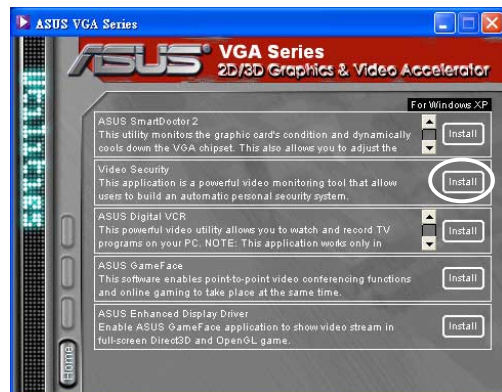
3.2 Install VideoSecurity

VideoSecurity is a powerful security utility that detects any change in a specified surveillance region. Using video capture devices, video snapshots are captured automatically when there is a deviation in the user-defined surveillance region. An optional warning message is also sent via email or phone to the user.

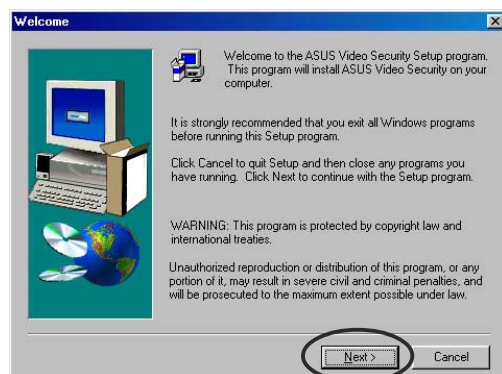
1. Insert the support CD into your CD-ROM drive.
2. If autorun is enabled, the 2D/3D Graphics & Video Accelerator appears automatically.
If autorun is disabled, run **Setup.exe** from the root directory of your support CD.



3. From the 2D/3D Graphics & Video Accelerator main menu, click **Utilities**.
4. Click the **VideoSecurity Install** button from the **Utilities** menu to copy the necessary files to your computer.



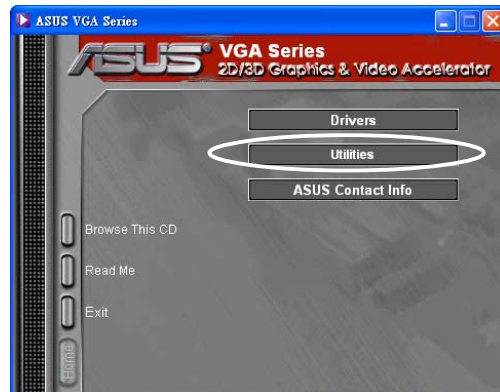
5. From the Welcome screen, click **Next** then follow the succeeding screen instructions to complete setup.
6. Click **Finish**, when setup is complete.



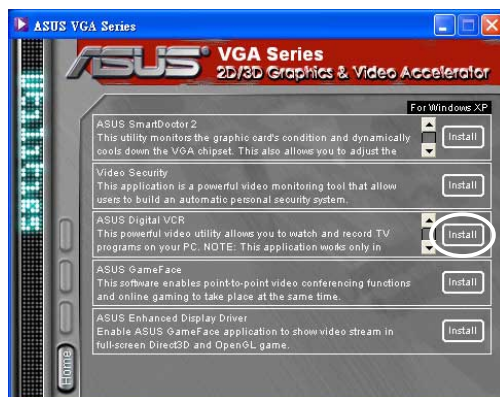
3.3 Install ASUS Digital VCR

ASUS Digital VCR is a comprehensive video utility that allows you to watch and record TV programs on your PC. This utility also supports time-shift recording that allows you to record, watch and replay your favorite TV programs at the same time.

1. Insert the support CD into your CD-ROM drive.
2. If autorun is enabled, the 2D/3D Graphics & Video Accelerator appears automatically.
If autorun is disabled, run **Setup.exe** from the root directory of your support CD.



3. From the 2D/3D Graphics & Video Accelerator main menu, click **Utilities**.
4. Click the **ASUS Digital VCR Install** button from the **Utilities menu** to copy the necessary files to your computer.



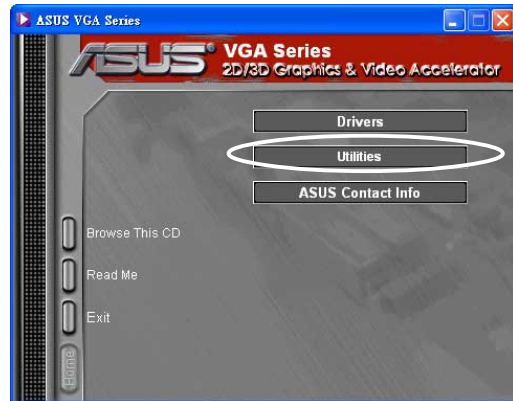
5. From the Welcome screen, click **Next**. Follow the succeeding screen instructions.
6. Click **Finish**, when setup is complete.



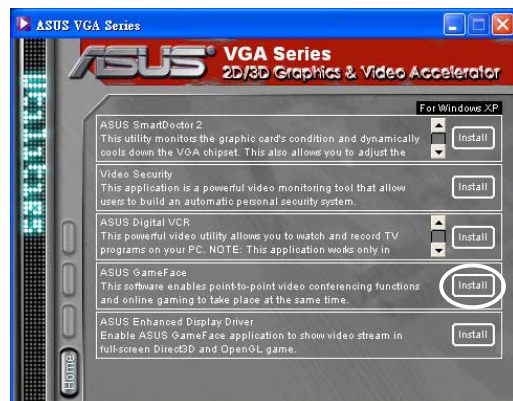
3.4 Install ASUS GameFace

The revolutionary ASUS GameFace is a real-time audio/video communication feature that enhances your interactive gaming experience. This utility enables point-to-point video conferencing functions and online gaming to take place at the same time. With this feature, you can see and talk to your opponents while playing full-screen online games!

1. Insert the support CD into your CD-ROM drive.
2. If autorun is enabled, the 2D/3D Graphics & Video Accelerator appears automatically.
If autorun is disabled, run **Setup.exe** from the root directory of your support CD.



3. From the 2D/3D Graphics & Video Accelerator main menu, click **Utilities**.
4. Click the **ASUS GameFace Install** button from the **Utilities** menu to copy the necessary files to your computer.



5. From the Welcome screen, click **Next**. Follow the succeeding screen instructions.
6. Click **Finish**, when setup is complete.

