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Introduction

GrafixStar 410, Videologic's S3 Trio64V2-based video-graphics card, provides you with low-cost 64-bit PCI multimedia acceleration. GrafixStar 410's built-in bilinear video scaling provides high-quality digital video playback of Indeo, Cinepak and other software video formats.

The GrafixStar 410 software graphics solution includes high-performance GrafixMAX drivers for Windows 95, VideoLogic's SmartTools display control software, and \$300 worth of free Prolab multimedia software including applications for image processing, video capture, and an on-screen CD player.

To run GrafixStar 410 you need an IBM or fully compatible 486 PC or above which complies with the PCI local bus specification and which has a spare PCI bus slot.

Make sure you read the latest product information in the file `\gs410\win95\disk1\vlgx410a.doc` on the CD-ROM if you are running Windows 95, or if you are using another system, the file `readme.txt` in the root directory of the CD-ROM.

Handling GrafixStar 410

Follow these guidelines to minimize the risk of electrostatic charges damaging the card:

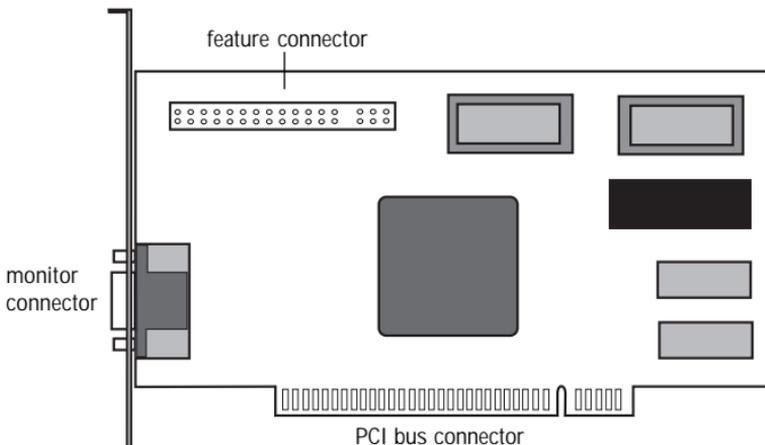
- Keep the card in its protective packaging until you are ready to install it.
- Just before handling the card, touch the metal frame of your PC with the back of your hand to discharge any static electricity which may have built up on you or your clothes.
- Hold the card by the adapter bracket or by its edges; do not touch the circuit board.
- Do not place the card on top of your computer or on any other metal surface.
- Make sure that the card is not accidentally touched by anyone else.
- Handle the card with care to avoid damage to the components on the circuit board.

Installing GrafixStar 410

Note: If installing for Windows 3.1 or 3.11, make sure you have configured Windows to run with a standard VGA display before installation. To do this, double-click the Main program group, click the Options menu, click Change Systems Settings, and click VGA from the display list box.

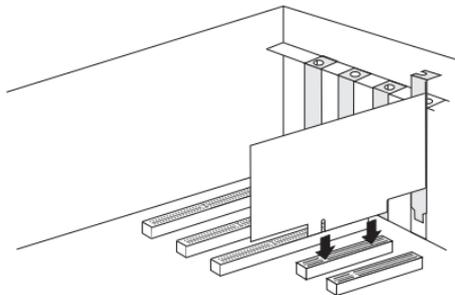
Warning: Always switch off your computer before removing the cover and observe the warnings specified in the manufacturer's documentation.

The diagram below shows the connectors on the card:



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1. Switch off your computer, monitor, and any hardware devices such as printers connected to your computer. Leave the power cable connected to the power outlet so that your computer is grounded.
2. Disconnect the monitor cable from your computer.
3. Remove the computer's cover. You may need to refer to the documentation supplied with your computer for instructions on how to do this.
4. Remove your existing display card or disable your built-in graphics controller. Refer to the documentation supplied with your computer for instructions on how to disable a built-in graphics controller.
5. Locate an empty PCI bus expansion slot and remove the slot cover. Keep the screw, you will need it later to secure the card.
6. Touch the bare metal chassis of your computer with the back of your hand to discharge any static that may have built up on you or your clothes.
7. Align GrafixStar 410 with the slot you have chosen. Firmly press the card into the slot, as shown in the diagram below. You will need to use some pressure to push the card into position, but do not use excessive force.



- Secure GrafixStar 410 using the screw that you removed previously.
- Replace the cover of your computer.
- Connect the monitor cable to GrafixStar 410. All cables connected to GrafixStar 410 should be properly shielded and comply with radio frequency interference standards.
- Switch on your computer and your computer monitor. You are now ready to install the software. If you are installing for Windows 95, continue below. If you are installing for Windows 3.1, turn to page 6.

Installing the Windows 95 software

- When your PC has restarted, a dialog box is displayed saying that Windows has found new hardware. Select Driver from Disk provided by Hardware Manufacturer, and click OK.
- Insert the VideoLogic Software Library CD-ROM into your CD-ROM drive.
- Browse to the folder `\gs410\win95\disk1` on the CD-ROM. Click OK.
- At the Install From Disk dialog box click OK. The Windows 95 drivers are copied across from the CD-ROM.
- A message is displayed notifying you of the change to your system's settings, and asking whether you want to restart the computer. Click Yes.
- When your computer has restarted, a dialog box is displayed asking whether you want to install SmartTools with DirectVideo, or just SmartTools, or neither.

SmartTools is desktop control software that controls the appearance and behavior of your desktop. Click SmartTools to install SmartTools and DirectVideo.

DirectVideo is a set of drivers that optimize your computer's performance when running DirectDraw video applications. If you only want to install DirectVideo, click DirectVideo.

If you don't want to install either SmartTools or DirectVideo, click Cancel. Note that video playback performance will not be optimized without DirectVideo.

- Follow the instructions that appear on the screen.

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- When Windows has restarted and your desktop is available, insert the VideoLogic Software Library into your CD-ROM drive. The Interactive Installation Guide should run automatically from the VideoLogic Software Library CD-ROM. If not, run the file `instaler.exe` in the root directory of the CD-ROM.

The Interactive Installation Guide presents you with the software available to GrafixStar 410 from the VideoLogic Software Library, which you can install simply by pointing and clicking.

Installing the Windows 3.1 or 3.11 software

Note: If you are running Windows 3.1 or 3.11, Windows should be set for a standard VGA display **before** you install the hardware, as explained on page 3 of this guide.

To install the GrafixStar 410 software for Windows 3.1 or 3.11:

- Insert the VideoLogic Software Library CD-ROM into your CD-ROM drive.
- In Program Manager, double-click the Main group icon.
- In the Main window, double-click Windows Setup.
- In Windows Setup, click Options, then click Change System Settings.
- In Change System Settings, scroll to the bottom of the drivers list, and click Other Display.
- Type `[drive]:\gs410\win31\disk1` where [drive] is your CD-ROM drive, and click OK.
- A list of S3 drivers is displayed, showing the driver's description, then the version number, then the resolution, color depth, and font size – SF for Small Fonts, or LF for Large Fonts.

The font size you choose depends on your combination of resolution and monitor size. For example, to be legible, a high resolution on a small monitor may require large fonts.

Click the driver with the required combination of resolution, color depth and font size.

- A message is displayed asking whether you want to restart Windows. Click OK. When Windows has restarted, GrafixStar 410 is ready to use.

Changing the screen display in Windows 3.1 or 3.11

To change the resolution or color depth of your display:

1. Follow steps 1 to 7 of Installing the Windows 3.1 or 3.11 software to select the required driver.
2. A message is displayed asking whether you want to replace the current driver on your system, or install a new one. Click Current.
3. A message is displayed asking whether you want to restart Windows. Click OK.

Installing GrafixStar 410 for other operating systems

There are a number of drivers supplied for other operating systems, such as Windows NT and OS/2. To install them, follow the instructions in the file \readme.txt on the VideoLogic Software Library CD-ROM.

SmartTools for Windows 95

The SmartTools software is a set of applications that enables you to get the most out of the powerful capabilities of your graphics card, giving you more control over the appearance and behavior of your Windows desktop.

The instructions in this section give you an overview of how SmartTools work. For more detailed instructions, refer to the online help supplied with SmartTools.

There are three Smart applications: SmartTools, SmartDisplay and SmartDesktop.

SmartTools

SmartTools enables you to create toolbars for quicker access to your applications and documents.

With SmartTools you can:

- Use toolbars for the other Smart applications, and customize these toolbars to suit your needs.
- Create toolbars for other applications, adding buttons for the programs, documents and files that you use most often.
- Assign hotkeys for the commands that you use most often.

SmartDisplay

SmartDisplay makes it easier and quicker for you to set up the properties for your monitor.

With SmartDisplay you can:

- Find the ideal display settings for the kind of work you are doing, helped by the SmartDisplay Wizard, which guides you through a step-by-step procedure.
- Select the display size, color palette, refresh rate, desktop size, connectivity and monitor alignment for your display, using a SmartDisplay set-up procedure for advanced users.

SmartDesktop

SmartDesktop controls the size and behavior of your desktop.

With SmartDesktop you can:

- Set a virtual desktop that is larger than the display size.
- Control the way you move around the desktop and reach an off-screen part of a desktop that is larger than your screen.
- Change the display size at the touch of a button, enabling you to zoom in and zoom out while you are working.

Using SmartTools

With SmartTools, you can customize the toolbars for the other Smart applications and create toolbars of your own.

Starting SmartTools

To start SmartTools, click the Start button, point to Programs and then VideoLogic SmartTools, then click SmartTools, or click the SmartTools shortcut icon on the Windows 95 desktop.

The SmartTools window contains three pages: Toolbar Properties, Customize Toolbars and Customize Hotkeys.

Toolbar properties

With Toolbar Properties selected, you can:

- Open and close existing toolbars by checking and unchecking them.
- Set the properties (Name, On Top, Tool Tips, Status Bar and Lock) for each toolbar.

Customize Toolbars

With Customize Toolbars selected, you can:

- Create new toolbars and add them to the list of toolbars on the Toolbar Properties page by dragging applications from the Applications list onto the desktop, or by dragging one of the buttons in the commands list onto the desktop.
- Add buttons to toolbars by dragging them from the Commands list onto the toolbar, move buttons by holding down the SHIFT key and dragging them along the toolbar, or remove buttons by holding down the SHIFT key and dragging them off the toolbar.
- Add buttons for other applications to the Other Apps list and set properties for these buttons.

Assigning hotkeys

With Customize Hotkeys selected, you can assign hotkey combinations to the commands that you use most often, using combinations of SHIFT, CTRL and ALT, plus the other keys on the keyboard.

Using SmartDisplay

SmartDisplay is an application that enables you to select, customize and create display modes for your monitor. If you have never set a display mode before, or if you need help in choosing your settings, you should use the SmartDisplay Settings Wizard. If you are familiar with setting display modes, you should use the Advanced Settings button.

Starting SmartDisplay

1. Select the Display Properties Control Panel either by right-clicking on the Windows desktop and choosing Properties from the menu or by clicking the Start button and pointing at Settings, then Control Panel, then double-clicking Display.

2. Click the SmartDisplay tab. The following window appears:



Setting display modes using the Wizard

The Wizard takes you through a step-by-step procedure for setting up a display mode.

To use the Wizard:

1. Click the SmartDisplay page on the Display Properties window.
2. Click the display mode you want to modify from the Display Modes list.
3. Click the SmartDisplay Settings Wizard button.
4. Follow the instructions given by the Wizard.

Setting display modes using the Advanced Settings button

This procedure enables you to choose the settings for your display mode. You should only use it if you are familiar with setting display modes.

To set a display mode:

1. Click the SmartDisplay page on the Display Properties window.
2. Click the display mode you want to modify from the Display Modes list.
3. Click the Advanced Settings button.

This takes you to the SmartDisplay Advanced Settings window. This window has five pages:

- Display - for setting the display size
- Desktop - for setting the desktop size
- Connectivity - for the type of connection to multimedia option cards
- Screen - for centering the display on your monitor
- Properties - for creating and naming display modes

Using SmartDesktop

SmartDesktop is an application which controls the appearance and behavior of your desktop. You can use SmartDesktop to set a virtual desktop, where the desktop size is larger than the display size, and you can change the display size at the touch of a button, enabling you to zoom in and zoom out while you are working.

You can use the SmartDesktop Properties page to set properties that control the way SmartDesktop works.

The SmartDesktop toolbar

Using SmartTools, you can create a toolbar for running SmartDesktop.

The SmartDesktop Display Properties page

The SmartDesktop Display Properties page provides you with an alternative way of setting SmartDesktop's characteristics.

To open the Display Properties page, click the Display Properties Control Panel and click the SmartDesktop tab.

The following page appears:



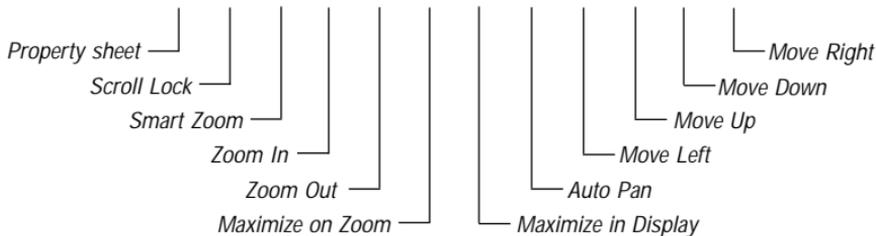
By setting Schemes, you can save different combinations of SmartDesktop settings.

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To create a SmartDesktop toolbar:

1. Start SmartTools.
2. Click the Customize Toolbars tab.
3. Click SmartDesktop in the applications list and drag it onto the desktop.

The SmartDesktop toolbar appears as follows:



Property Sheet accesses the SmartDesktop Display Properties page.

Scroll Lock disables scrolling functions. This is useful if you are using a virtual desktop and you want to work on a particular area of the desktop without accidentally moving to other areas.

When you have **Smart Zoom** selected, you can use all the virtual desktop functions. When you zoom in or zoom out with Smart Zoom selected, only the display size changes, the desktop size stays the same. You can also use the functions such as Scroll Lock, Auto Pan, Maximize on Zoom and Maximize on Display to control the way your desktop behaves. If Smart Zoom is not selected, you can only use Zoom In and Zoom Out.

Zoom In and **Zoom Out** are used to change the size of your display. You can click the Zoom In button until the display size reaches the smallest size available (640 x 480). You can click the Zoom Out button until the display size reaches the largest size, which is set in SmartDisplay.

You can also use the Zoom Display Fully In and Zoom Display Fully Out functions to zoom directly to the smallest and largest display sizes for your monitor. These functions are available as hot keys and menu items.

When **Maximize on Zoom** is selected, all maximized windows fit the new display size when you zoom in or zoom out.

When **Maximize in Display** is selected, maximized windows fit the display size. When this is not selected, maximized windows fit the desktop size.

If you have **Auto Pan** enabled, and you switch to a window which is currently off-screen (using ALT+TAB, or using the taskbar), the screen scrolls automatically to the window that you selected.

The **Move Up**, **Move Down**, **Move Left** and **Move Right** buttons on the toolbar move to the parts of the desktop which are currently off-screen (when the desktop size is larger than the display size). You can also move to these areas using the mouse.

Technical details

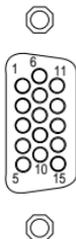
Display modes

The display modes supported by GrafixStar 410 depend on the amount of memory installed on your card, as shown in the table below.

WINDOWS DISPLAY MODES			
Display Size	Colors	1 MB Refresh Rate (Hz)	2 MB Refresh Rate (Hz)
1600 x 1200	256	-	481,60
1280 x 1024	256	-	431,60,72,75
	16	431,60,72,75	431,60,72,75
1152 x 864	65,536	-	60,70,72,75,80,85
	256	60,70,72,75,80,85,90	60,70,72,75,80,85,90
1024 x 768	65,536	-	431,60,70,72,75,80,85,90,100
	256	431,60,70,72,75,80,85,90,100	431,60,70,72,75,80,85,90,100
800 x 600	16.7 million	-	56,60,72,75,85
	65,536	56,60,72,75,85,90	56,60,72,75,85,90,100,120
	256	56,60,72,75,85,90,100,120	56,60,72,75,85,90,100,120
640 x 480	16.7 million	-	60,72,75,85,90
	65,536	60,72,75,85,90,100,120	60,72,75,85,90,100,120
	256	60,72,75,85,90,100,120	60,72,75,85,90,100,120

Monitor connector

GrafixStar 410 uses a standard 15-way high density 'D' socket. If your monitor uses a different connector your monitor dealer will be able to supply an adapter. The pin-outs are as follows:



PIN	SIGNAL	PIN	SIGNAL	PIN	SIGNAL
1	Red video	6	Red return	11	Unused
2	Green video	7	Green return	12	DDC2B-Data
3	Blue video	8	Blue return	13	Horizontal
4	Reserved	9	+5 V	14	Vertical
5	Ground	10	Sync return	15	DDC2B-Clock

Power and temperature specifications

GrafixStar 410 operates at a nominal power rating of +6.5 watts (8.5 watts max), at temperatures between 10°C (50°F) and 50°C (122°F).

Troubleshooting

This section provides solutions to problems that can happen when installing and using GrafixStar 410. For more information refer to the file `\gs410\win95\disk1\vlgx410a.doc` on the CD-ROM if you are running Windows 95, or if you are using another system, the file `readme.txt` in the root directory of the CD-ROM.

Problem: After installing GrafixStar 410, my PC does not start.

Solution: Your old graphics controller or graphics card is still active. Remove the old card or disable your graphics controller, referring to your computer's documentation for instructions on how to do this.

The card is not seated properly in your PC. Check that the card's connectors are fitted properly into the PCI slot. You may need to move the card into another slot.

Problem: My screen is blank (black) when Windows 95 has loaded.

Solution: The Hardware Acceleration bar in the Graphics section of the System Properties Performance page has been set to None, and must be changed to Full.

Restart your computer in Safe Mode, then display the 'My Computer' group, point at the monitor icon at the top left corner of the group and click the right-hand mouse button to display the context-sensitive menu. Click Properties, then Performance, then Graphics, and then set the bar to Full.

Problem: My screen is blank (black), flickering, or corrupted.

Solution: You have the wrong monitor type selected in Display Properties, and it cannot support the selected refresh rate. To select the correct monitor type, shut down Windows 95, choosing Restart the computer. (If you can't see the screen, use ALT+F4, DOWN ARROW, ENTER.) When the 'Starting Windows 95' message appears, hold down the CTRL key until Windows 95 has started. When Windows 95 has started, choose a different monitor in Display Properties.

Technical support

If you have any problems while installing or using GrafixStar 410, go through the steps below.

1. Check the troubleshooting information in the readme file on the CD-ROM.
2. Visit our technical support Internet web pages at <http://www.videologic.com>
3. Contact us online using one of the following services:
 - Internet web site: <http://www.videologic.com>
 - Internet ftp site: <ftp://ftp.videologic.com>
 - e-mail (USA, Canada & South America): support_usa@videologic.com
 - e-mail (Germany): support_gmbh@videologic.com
 - e-mail (UK & all other countries): support@videologic.com
 - bulletin board (USA, Canada & South America): +1 415 875 7748 (to 28.8, 8-N-1)
 - bulletin board (Germany): +49 (0)61 03 37 12 57 (to 28.8, 8-N-1)
 - bulletin board (UK & all other countries): +44 (0)1923 271301 (to 28.8, 8-N-1)
4. Contact your original supplier for technical help.
5. Call our customer support group. Try to have details to hand such as your PC's make and model, other cards installed, software you are running, and how to recreate the problem.

USA, Canada & South America: +1 415 875 0606

Germany: +49 (0)61 03 93 47 14

UK & all other countries: +44 (0)1923 271300

The VideoLogic FaxBack service

The FaxBack service provides a listing of VideoLogic products, with summary descriptions and reviews. When you use this service you will be asked to provide your fax number.

If calling from outside the USA, Canada and South America your number is 011, your country code, then your fax number. Use the # key when prompted to press the pound sign key.

USA, Canada & South America: 800 203 8587

Outside USA, Canada & South America: +1 800 203 8587

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