

Matrox DigiDesktop

INSTALLATION & USER GUIDE

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DigiSuite End-User Customer Support
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FCC compliance statement

Warning

Changes or modifications to this unit not expressly approved by the party responsible for the compliance could void the user's authority to operate this equipment.

The use of shielded cables for connection of the monitor to the card is required to meet FCC requirements.

Note

This device complies with Part 15 of 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.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his or her own expense.

Grounding information

If this device is connected to a CATV system, please ensure that proper grounding guidelines are followed. Specifically, the cable ground should be connected to the grounding system of the building as close to the point of cable entry as practical. Consult the relevant code entries for your area, such as Art. 820-40 of the National Electrical Code (NEC).

Industry Canada compliance statement

This digital apparatus does not exceed the Class A limits for radio noise emission from digital apparatus set out in the Industry Canada Radio Interference Regulation.

Le présent appareil numérique n'émet aucun bruit radioélectrique dépassant les limites applicables aux appareils numériques de Classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par Industrie Canada.

Grounding information

If this device is connected to a CATV system, please ensure that proper grounding guidelines are followed. Specifically, the cable ground should be connected to the grounding system of the building as close to the point of cable entry as practical. Consult the relevant code entries for your area or section 54 of the Canadian Electrical Code.

Dans le cas où cet équipement est branché au réseau de câblodistribution, il est nécessaire de s'assurer que les pratiques de mise à la terre soient respectées. Particulièrement, le câble de mise à la terre devrait être relié à la terre du réseau électrique à un point le plus près possible de l'entrée de câblodistribution. Pour de plus amples renseignements, veuillez vous reporter aux règlements locaux pertinents ou à la section 54 du Code canadien de l'électricité.

EC declaration of conformity

This device complies with EC Directive 89/336/EEC for a Class A digital device. It has been tested and found to comply with EN50081-1 (EN55022/CISPR22), EN50082-1 (EN61000-4-2:1995, EN61000-4-4:1995, ENV50140:1994) and EN60950. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

Le présent appareil numérique répond aux exigences stipulées dans la directive européenne 89/336/EEC prescrite pour les appareils numériques de classe A. Ce produit a été testé conformément aux procédures EN50081-1 (EN55022/CISPR22), EN50082-1 (EN61000-4-2:1995, EN61000-4-4:1995, ENV50140:1994) et EN60950. Lorsque cet appareil est utilisé dans un environnement résidentiel, il peut entraîner des interférences radioélectriques. Dans ce cas, l'utilisateur est prié de prendre des mesures correctives appropriées.

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Notes

Welcome to DigiDesktop

This chapter outlines some of the powerful features of your DigiDesktop, lists its computer system requirements, and briefly describes this manual's contents.

C H A P T E R

1

DigiDesktop — state of the art

Features

- ❑ Two graphic display controllers with independent non-interlaced output.
- ❑ Dual-screen Windows NT desktop.
- ❑ Ultra-high resolution up to $1600 \times 1200 \times 24$ -bit color.
- ❑ Accelerated 3D modeling.
- ❑ Up to four simultaneous video windows.
- ❑ Four composite or four Y/C video inputs.
- ❑ Two independent YUV 4:2:2 video decoders.
- ❑ Multiple YUV 4:2:2 video input sources over the Movie-2 bus.
- ❑ PCI mezzanine connector that supports daughter-board expandability.

TriMedia Module (optional)

- ❑ 8-MB dedicated SDRAM frame buffer.
- ❑ Accelerated image transfer from DigiMix or other cards connected via the Movie-2 bus.
- ❑ Realtime linear scaling.
- ❑ Realtime YUV and RGB color space conversion at 32-bit precision.

System requirements

Note The following recommendations provide good performance when using DigiSuite hardware and software in most situations. Some software packages may have additional or different requirements.

DigiDesktop requires the following minimum system configuration:

- ❑ An Intel Pentium II CPU, 266 MHz or higher.
- ❑ 128 MB or more of physical RAM.
- ❑ Windows NT 4.0 operating system with at least Service Pack 4. Service Pack 5 is recommended¹.
- ❑ One empty 32-bit PCI card slot.

DigiDesktop documentation

Most of the information you'll require to install and work with DigiDesktop as a stand-alone component is included in this manual. However, any important information that wasn't available at print time is provided to you in the following ways:

- ❑ The *Readme* file installed with the software in the Matrox DigiSuite Utilities folder.
- ❑ Printed Release Notes packaged with the manuals.

If you're installing DigiDesktop with other DigiSuite cards, refer to your particular DigiSuite system's installation manual *for* information on installing the individual components to assemble a state-of-the-art audio/video system tailored to your specific needs.

The DigiSuite manuals are also available as Portable Document Format (PDF) files in the *DigiUtils\Docs* directory on the DigiSuite CD-ROM. You can view these documents using Adobe Acrobat Reader version 3.0 or later. To install the Acrobat Reader, run Windows NT Explorer, go to the *AcrobatReader* directory on the DigiSuite CD-ROM, then double-click the *.exe* file contained therein.

¹Available from the Microsoft web site at www.microsoft.com.

About this manual

This manual contains the following information:

- ❑ Chapter 1, “Welcome to DigiDesktop,” contains information about DigiDesktop features, system requirements, and the available documentation.
- ❑ Chapter 2, “Hardware Installation,” guides you through the process of installing DigiDesktop as a stand-alone component in your system.
- ❑ Chapter 3, “Software Installation and Monitor Setup,” has step-by-step instructions on installing the drivers and utility software for DigiDesktop as well as on setting up your monitor.
- ❑ Chapter 4, “Configuring DigiDesktop,” explains how to change various settings and defaults on your DigiDesktop card.
- ❑ Chapter 5, “Displaying Video in a Window with Matrox DigiView,” explains how to use the Matrox DigiView program to display video in a window on your computer’s monitor.
- ❑ Chapter 6, “Troubleshooting,” suggests solutions to various installation and configuration problems.
- ❑ Appendix A, “DigiDesktop Cables and Connectors,” provides an overview of DigiDesktop cables and connections as well as pin definitions.
- ❑ Appendix B, “DigiDesktop Specifications,” contains DigiDesktop technical information.
- ❑ Appendix C, “Customer Support,” lets you know how to contact us for customer support.

Style conventions

The following style conventions are used in this manual:

- ❑ The names of files, directory paths, and manuals appear in *italics*. For example:
 - The data is stored in the *sample.wav* file.
 - The file is located in your *C:\Windows\System* directory.
 - Please refer to your *DigiSuite Installation Manual*.
- ❑ Menus and commands that you need to choose are displayed in the form **Menu | Command**. For example, **File | Save** means click **File** in the menu bar, then click **Save** in the menu that appears.
- ❑ The names of keys are displayed in small capital bold letters, such as the **CTRL** key.

DigiDesktop accessories

- ❑ Two cables (DTOP/IO/CBL), each of which provides the following connectors:
 - Two Y/C (S-Video) inputs
 - One VGA output
- ❑ Four Y/C-to-composite adapters (ILMPRO-BNC-ADP) so that each cable supports two composite inputs.
- ❑ Two adapters (DTOP/VGA/ADP), each of which provides an HD-15-VGA output (no analog video inputs).

Notes

Hardware Installation

This chapter describes how to install DigiDesktop in your computer system as a stand-alone component. It also provides BIOS configuration information for all types of DigiDesktop installations.

C H A P T E R

2

Important!

The installation instructions in this chapter are to be used only when installing DigiDesktop as a stand-alone component without any other DigiSuite cards. For all types of DigiDesktop installations, this chapter provides configuration information in “[Configuring your system BIOS settings](#)” on page 15. For instructions on installing DigiDesktop with other DigiSuite cards, refer to the installation manual for your DigiSuite system.

Before you begin

Antistatic and safety precautions

Read the following information carefully before installing DigiDesktop in your computer system.



Static electricity from your body can damage your DigiSuite cards, Movie-2 bus, or your computer. Although you may not notice it, static electricity is generated every time you move. It's often too small to cause a spark, but it can still cause damage to sensitive electronic components or at least reduce their lifespan.

To avoid damage, please observe the following precautions:

- ❑ Do not remove DigiSuite cards from their antistatic bags until you are ready to install them. Before removing the cards, place the packages within easy reach of the area where you intend to perform the installation.
- ❑ Try to work in an area where the relative humidity is at least 50%.
- ❑ Do not wear wool or synthetic clothing. These fabrics tend to generate more static electricity than cotton, which is best for this kind of work.
- ❑ Turn off the power switches on your computer and its connected components.
- ❑ Once you've opened your computer, drain static electricity from your body by touching a bare metal surface on your computer chassis before you install or remove any parts of your system. If you have a grounding wrist strap, use it while handling and installing any components in your computer.

Make sure your computer is compatible

To make sure your computer system is compatible with the DigiSuite cards you'll be installing, visit our Web site at <http://www.matrox.com/video>, and refer to the *DigiSuite System Recommendations* in the Customer Support section.

You can also call Matrox Video Products Group Customer Support at:

800-810-2550.....	U.S. and Canada
+33 (0) 1 45 60 62 09	France
+49 (0) 89 61 44 74 57	Germany
+44 (0) 1753 665 679	UK, Middle East, and Africa
1 514 685-7230 ext. 2388	All other countries

Start with a functioning system

Before attempting any DigiSuite installation, you should have a computer system with Windows NT 4.0 and at least Service Pack 4 fully installed and functioning smoothly (Service Pack 5 is recommended). This will avoid potential problems later on.

DigiDesktop installation overview



Warning Failure to read the detailed instructions may result in broken parts and/or system malfunctions.

The following steps summarize the DigiDesktop installation as a stand-alone component. Each step is explained in detail in the following sections. This list is simply to give you an overview. Do not attempt to install DigiDesktop without reading the detailed instructions that follow.

The following steps summarize the installation process:

- 1 Switch to the standard VGA display driver in Windows NT (if you already have a graphics card in your system).
- 2 Identify the expansion slot in which you'll install DigiDesktop and remove your existing graphics card.
- 3 Insert DigiDesktop.
- 4 Close your computer's cover.
- 5 Connect your external devices.
- 6 Configure your system BIOS.
- 7 Install your software as outlined in Chapter 3, "Software Installation and Monitor Setup," on page 17.

If you already have a graphics card

If you already have a graphics card in your system, you must switch to the standard VGA display driver in Windows NT and remove your card before installing DigiDesktop.

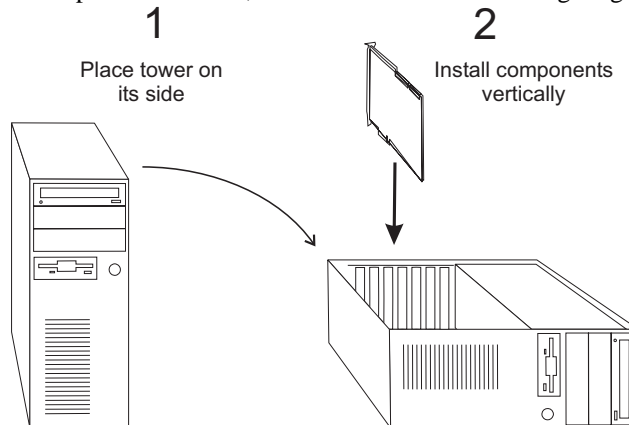
To switch to VGA mode:

- 1 Choose **Start | Settings | Control Panel**, then double-click the **Display** icon.
- 2 In the **Display Properties** dialog box, click the **Settings** tab, then the **Display Type** button.
- 3 Click the **Change** button in the **Display Type** dialog box.
- 4 Select **(Standard display types)** under **Manufacturers** and **VGA compatible display adapter** under **Display** in the **Change Display** dialog box, and click **OK**.
- 5 Shut down Windows NT and turn off your computer. You will be removing your card at a later stage in the installation process.

Choose the best installation position

Open your computer and determine, based on the following explanation, which position is best suited to your type of system.

It's easiest to install DigiDesktop (and to remove your existing graphics card) from above. For typical desktop systems, this is easy because access to the expansion slots in such systems is from the top. If, however, you have a tower-type system and want to insert DigiDesktop from above, place the computer on its side, as illustrated in the following diagram:

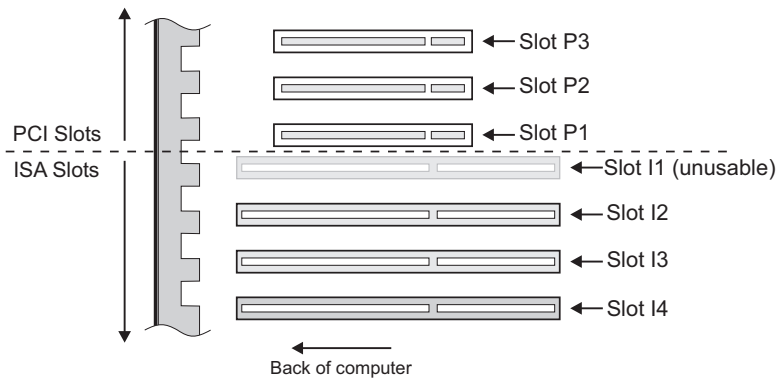


Identify your expansion slots

DigiDesktop is installed in one of your computer's expansion slots. Most PCI-bus computers currently manufactured have a combination of PCI and ISA slots. Usually, the PCI slots are made with a plastic of a contrasting color (generally white) and are shorter than the ISA slots in your system.

While some computer motherboards have numbered slots, these do not follow any standard industry convention. For example, one computer may have three PCI slots and four ISA, whereas another may have four PCI slots and three ISA slots, and so on.

To avoid confusion, use the following numbering scheme to identify each slot position. Since all PCI-based systems have two types of slots, there is always one PCI slot bordering the other type (usually ISA). Start counting outwards from this "border" in each direction for each type. In the following diagram, there are three PCI slots referred to as P1, P2, and P3. There are also four ISA slots: I1, I2, I3, and I4.



Note PCI slot P1 and ISA slot I1 are considered “shared” slots. As such, only **one** of the two may be used at a time.

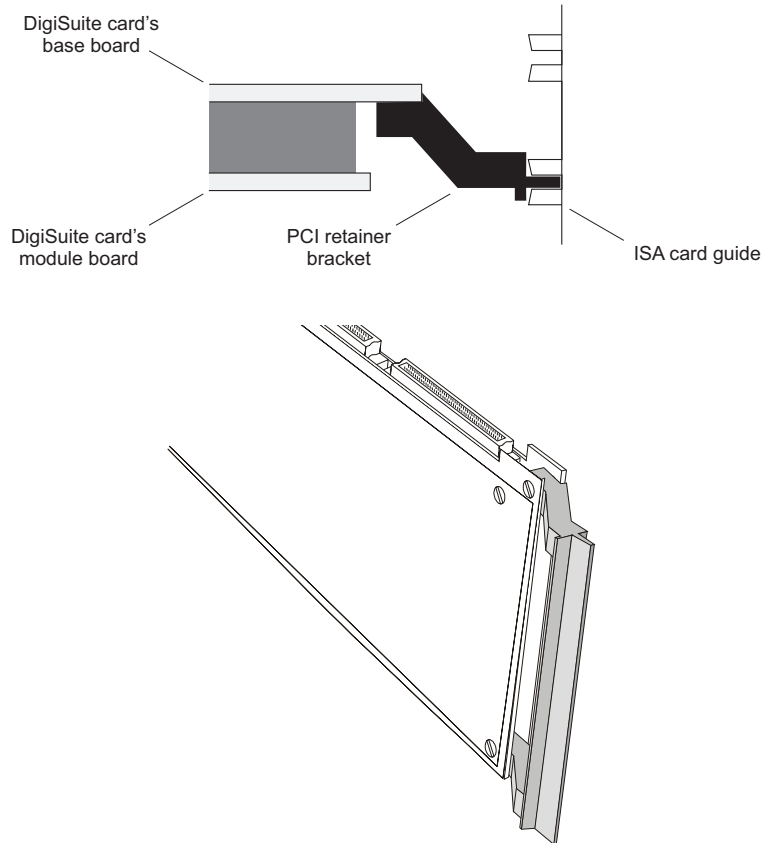
We recommend that you install DigiDesktop in slot P3. This will ensure easier installation should you wish to add a DigiMix, or any other card in the future. If you already have another PCI card in P3, you will be moving it to another free PCI slot at a later stage in the installation process.



Important Make sure you're using a validated computer system or motherboard. For more details, refer to “**Make sure your computer is compatible**” on page 9.

Use the PCI retainer brackets

Almost all computers contain card guides at the front end of the computer chassis. These help to stabilize cards. Since PCI cards are neither long enough nor correctly centered to use these guides, some of the PCI-based DigiSuite cards are equipped with a PCI retainer bracket. The following diagram depicts the retainer bracket's use:



Removing the PCI retainer bracket

This section explains how to remove the DigiDesktop PCI retainer bracket. Please do not attempt to handle your card until you have reached “Installing DigiDesktop” on page 14.

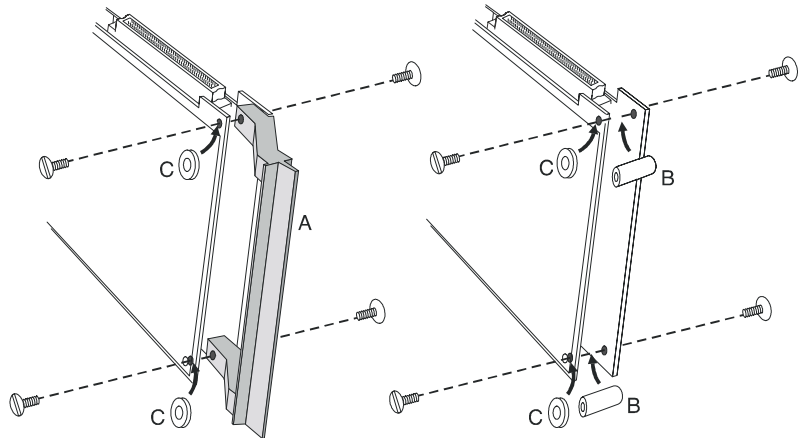
With some computer models, you may have to remove the PCI retainer bracket. If you’re installing a standard DigiDesktop (that is, without the

TriMedia Module), simply remove the screws holding the bracket in place and then carefully remove the bracket.

In the case of DigiDesktop with the TriMedia Module, however, the PCI retainer bracket also acts as a spacer between the base circuit board and the TriMedia Module. With this in mind, we supply you with two metal spacers plus four extra screws.

➤ **To remove the DigiDesktop PCI retainer bracket:**

- 1 Remove the four screws and two nylon washers (C) that fasten the PCI retainer bracket (A) and carefully extract the bracket from between the DigiDesktop base circuit board and TriMedia Module. To do so, you may have to loosen the screw located in the top left corner of the TriMedia Module (not shown). Make sure you do this by loosening the corresponding screw on the backside of the DigiDesktop base board. Do **not** loosen the screw on the TriMedia Module itself as it holds the insulating mylar (transparent protective sheet) in place.
- 2 Carefully insert the two large metal spacers (B) and nylon washers (C), align both with the screw holes in the DigiDesktop base circuit board and TriMedia Module, and carefully fasten them with the four provided screws.



Install non-DigiSuite cards first!

It's important to install any non-DigiSuite cards in your system before installing your DigiDesktop. If you don't do so, your DigiSuite system may not work properly.

In addition, try to leave empty slots between your DigiDesktop and non-DigiSuite cards if it's possible. This will permit additional air flow between cards.

Installing DigiDesktop



Important Before removing DigiDesktop from its protective antistatic bag, place the package within easy reach.

- 1 Touch a gray metal part of your computer chassis in order to drain static electricity from your body. Use a grounding wrist strap if you have one.
- 2 Remove your existing graphics card (if you already have one in your system). If slot P3 already contains another PCI card, either move it to an unused PCI slot or remove it completely.
- 3 Remove the metal plate located at the back of the slot. Save the screw, as you'll need it to fasten DigiDesktop after you insert it.
- 4 Take DigiDesktop out of its antistatic bag and remove the PCI retainer bracket as explained in "Removing the PCI retainer bracket" on page 12, if necessary.
- 5 Carefully align the card with its expansion slot.
- 6 Slide the card towards the slot until it touches. Make sure that the metal plate at the back of the card slips into the opening left by the blank metal plate you removed in step 3 above. In addition, be sure the PCI retainer bracket is aligned with and inserted into the card guide inside the front of the computer chassis.
- 7 Once the card is aligned, press it into the slot connector until it's firmly in place.
- 8 Secure the card by fastening its metal bracket to the computer chassis using the screw you removed in step 3 above.
- 9 Close your computer cover.

- 10 Install your external devices. Be aware that for your monitors to function properly, you must connect them **before** starting up your system. Refer to Appendix A, “**DigiDesktop Cables and Connectors**,” on page 39 for details on DigiDesktop cables and connections.
- 11 You are now ready to configure your BIOS settings as explained in the following section.

Configuring your system BIOS settings

For DigiDesktop to function properly as a part of your PCI-based computer system, you may have to change certain BIOS settings.

Selecting **Optimal** under **Defaults** will suffice in most cases. However, if the BIOS on your PCI system allows for enabling/disabling of interrupts, interrupt selection, and enabling/disabling of bus mastering for individual slots, configure the slot you've chosen for DigiDesktop to the settings outlined below.

The method for accessing the BIOS settings varies from one system to another. Please refer to your computer system's manuals for the correct procedure.

BIOS settings for DigiDesktop PCI slot

PCI Interrupts.....	Enabled
PCI Interrupt number	Any available
Bus mastering	Disabled
Plug 'n Play	Disabled

Notes

Software Installation and Monitor Setup

This chapter describes how to install the DigiDesktop software and set up your monitor.

C H A P T E R

3

What software do you install for DigiDesktop?

The software for DigiDesktop includes the following:

- ❑ **Matrox display driver and PowerDesk** Let you configure your DigiDesktop display settings, such as the display resolution and color palette, as well as define your monitor setup.
- ❑ **DigiUtils software** Software for DigiSuite that lets you use DigiDesktop's video-in-a-window capabilities (this includes Matrox DigiView), the DigiSuite Configuration program that lets you configure your video input/output settings and on-screen video windows, and drivers that let you use DigiDesktop with Video for Windows and DirectShow programs.

For details on additional software that you can choose to install if your system includes other DigiSuite cards, such as DigiMix and DigiMotion or DigiSuite LE, refer to the installation manual for your DigiSuite system.



Note The Microsoft DirectShow run time files are always installed by the DigiUtils Setup program. If you have a more recent version of the run time files on your system, however, those files will **not** be overwritten.

Before you begin

This section explains what you need to do to prepare your system for the DigiDesktop software installation.



Important Make sure you've correctly installed DigiDesktop in your computer before attempting to install the software on your system.

Check your Windows NT version

To run DigiDesktop software, you must have installed Windows NT version 4.0 with at least Service Pack 4 (Service Pack 5 is recommended). If you aren't sure which Service Pack is presently installed, do the following:

- ❑ Choose **Start | Programs | Administrative Tools (Common) | Windows NT Diagnostics**.

The resulting message box displays your Windows NT version number, followed by the Service Pack that's presently installed on your system.

Set Administration permission level

In order to install or remove DigiDesktop software, you must be configured as an Administrator in Windows NT User Manager. For details about the User Manager program, consult the appropriate Microsoft documentation.

Installing the Matrox display driver and PowerDesk

You need to install the Matrox display driver and PowerDesk for DigiDesktop before installing DigiUtils.

- 1 Insert the DigiSuite CD-ROM in your CD-ROM drive.
 - 2 Choose **Start | Run**.
 - 3 In the resulting dialog box, type *e:\matroxdisplaydriver\nt40\setup* (where *e:* represents your CD-ROM drive), and click **OK**.
 - 4 Select the language you want to use, then click **Next**.
 - 5 Choose an installation type:
 - To install the complete Matrox PowerDesk (recommended), click **Typical**.
 - To customize the PowerDesk installation, click **Custom**.
- If you click **Custom**, the setup program prompts you for a destination folder and what PowerDesk options you want to install.
- After you choose, the setup program automatically installs the software.
- After this is done, click **Finish** to restart your computer.

You can now configure your monitor and DigiDesktop display as explained in the following sections.

Monitor setup

➤ To check your monitor settings:

- 1 Right-click the Windows desktop background, click **Matrox Display Properties**, then click the **Monitor** tab.

- 2 **If you have a Plug-and-Play monitor:**

Make sure the **Plug-and-Play (DDC)**

monitor option is selected. The Matrox display driver will then automatically use the correct settings for your monitor. If not already selected, click this option, then click **Apply**.

⦿ Plug-and-Play (DDC) monitor

If you don't have a Plug-and-Play monitor:

The **Plug-and-Play (DDC) monitor** option will be replaced by the **Default monitor (60 Hz)** option. You can use this option, or the Matrox monitor selection method. For more information on Matrox monitor selection, see the Matrox PowerDesk online guide. To view this document, choose **Start|Programs|Matrox PowerDesk NT**.

⦿ Default monitor (60 Hz)

If you have a VESA-compatible monitor:

The **VESA settings** option allows you to manually adjust the settings of your VESA-compatible monitor.



Note Many Plug-and-Play monitors do not automatically report whether they're capable of 1152×864 or higher display resolutions. To use these resolutions, or higher refresh rates than those reported by the monitor, you can use the Matrox monitor selection method.



Warning If incorrect software monitor settings are applied, some monitors can be permanently damaged. For more information, see your monitor's manual.

Display setup

After checking your monitor's software settings, you can change your display resolution, color palette, and other Matrox PowerDesk settings. To access the Matrox display property sheets, right-click the Windows desktop background, then click **Matrox Display Properties**. To change your display resolution or color palette, click the **Settings** tab. For more information on changing your display settings, see the Matrox PowerDesk online guide. To view this document, choose **Start|Programs|Matrox PowerDesk NT**.



Important To display video in a window, you must set the color palette to **True Color (24-bit)**. Be aware that if you select a display resolution

higher than 1280×1024, you'll be able to display a maximum of one video window per monitor.

Installing DigiUtils

The following instructions will guide you through the DigiUtils installation process. DigiUtils Setup will prompt you to choose a directory in which to install the DigiUtils files and a location for the program icons. Certain messages appear throughout the process to inform you of installation progress or errors.

Some of the DigiUtils Setup dialog boxes feature **Back** and **Next** buttons. These allow you to move in either direction through the installation. If you wish to change an installation choice in a previous dialog box, move back; when you've finished, go on to the next step.

Step-by-step installation instructions

- 1 Close Control Panel and all Windows programs.
- 2 Insert the DigiSuite CD-ROM in your CD-ROM drive.
- 3 Choose **Start | Run**.
- 4 In the resulting dialog box, type *e:\digiutils\setup* (where *e:* represents your CD-ROM drive), and click **OK**.
- 5 Follow the instructions that appear on the screen. An information box indicates when Setup is complete.



Note If your computer hangs when Setup scans your system for installed cards, reboot your computer and run Setup again.

- 6 When the installation is complete, click **OK**. Setup will then restart your computer in order for the changes to take effect.

Uninstalling the DigiDesktop software

To remove the Matrox PowerDesk software from your system, choose **Start | Programs | Matrox PowerDesk NT | Matrox PowerDesk NT Uninstall**.

➤ To remove all the DigiUtils software from your system:

- 1 Do either one of the following:
 - Choose **Start | Programs | Matrox DigiSuite Utilities | UnInstall DigiUtils**.
 - Run DigiUtils Setup again, select **UnInstall DigiUtils**, then click **Next**.

- 2 The program will restart your computer for the changes to take effect.

Changing your DigiSuite hardware

If you want to change your card set combination, such as by adding a new DigiSuite card, you must first uninstall DigiUtils. Once you've installed the new card set, run DigiUtils Setup again to update your current installation. For details on the procedure for installing multiple card sets and changing your hardware installation, refer to your *DigiSuite Installation Manual*.

Configuring DigiDesktop

This chapter explains how to customize your DigiDesktop card's configuration to meet specific video input and on-screen display requirements.

C H A P T E R

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Using the DigiSuite Configuration program

When you ran DigiUtils Setup to install the DigiSuite software, your DigiDesktop was assigned default settings that are suitable for most applications. The DigiSuite Configuration program lets you customize these settings to meet specific video input and output requirements. For example, you may want to change the default proc amp settings for your video input signals and on-screen video windows.

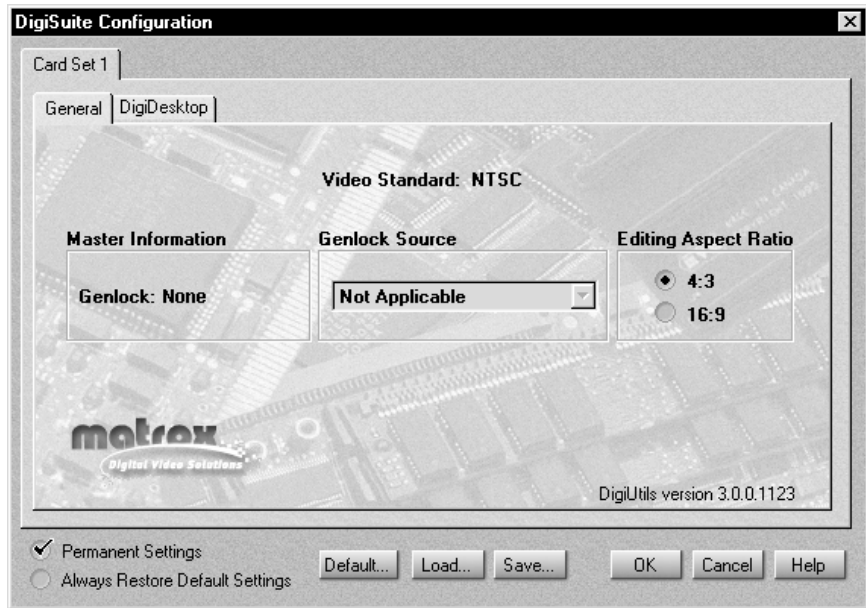


Important Before starting the DigiSuite Configuration program, close any program that's using DigiDesktop, such as Matrox PowerDesk. If you don't do so, your system and video signals may become unstable.

To start the DigiSuite Configuration program:

- 1 Choose **Start | Settings | Control Panel**.
- 2 Double-click the **DigiSuite** icon.

The DigiSuite Configuration window opens, similar to this one:



In most cases, all your DigiSuite cards are grouped into a single card set. Under the **Card Set 1** tab, tabs are provided for each card you can configure in the set. To configure a card, click its tab. The **General** tab displays basic information for your card set, such as the video standard used (NTSC or PAL).

Default button

To restore the factory default settings for your card set, click the **Default** button. If you have more than one card in your card set, you can choose which settings you want to restore.

Save and Load buttons

The **Save** button lets you save your configuration settings to a *.cfg* file. To apply those settings, click the **Load** button and select your *.cfg* file. Then select which settings you want from the file, such as **DigiDesktop**, and click **Open**.



Note Once you've configured a card set, it's a good idea to save your settings to a *.cfg* file for backup purposes.

Making permanent or temporary settings

Unless you want your card configuration settings to be effective **only** for the current work session, make sure you select **Permanent Settings**. If you clear this option, any changes you make will be cleared the next time you start your system. This lets you assign temporary settings to DigiDesktop.

For example, if **Permanent Settings** isn't selected when you click **OK**, the card configuration changes you've made will be saved only until you reboot your computer. Once you reboot, your settings will be returned to their previous state.

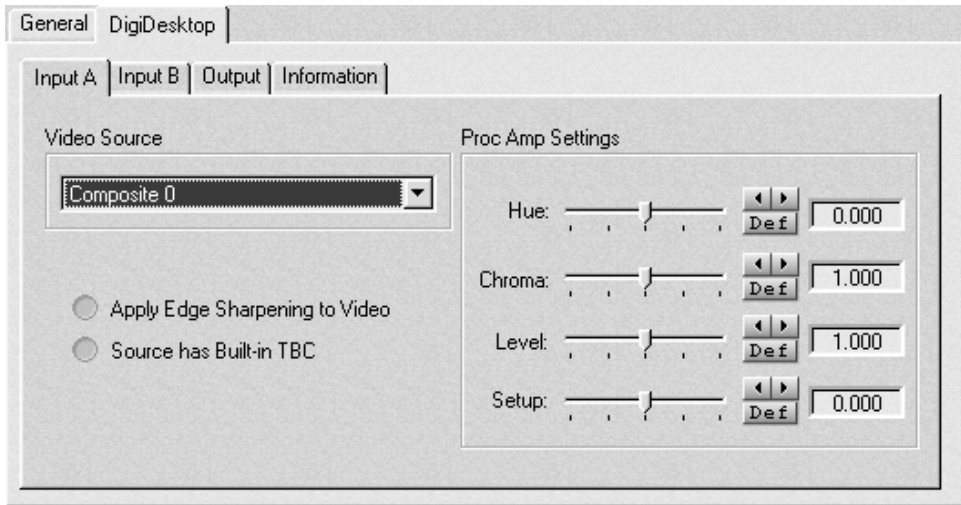
Changing default proc amp and video input settings

If you'd like your default proc amp and video input settings for DigiDesktop to be restored each time you start the DigiSuite Configuration program, select **Always Restore Default Settings**. This causes any temporary changes you made to these settings (either in the DigiSuite Configuration program or another program) to be cleared the next time you start the DigiSuite Configuration program.

Alternately, if you don't select **Always Restore Default Settings**, when you start the DigiSuite Configuration program you'll be notified if the proc amp or video input settings were changed during the current work session. You can then indicate whether or not you want to use those settings as your new defaults.

Configuring the video input signals

To select a default video source and configure your video input signals, click the **DigiDesktop** tab, then the **Input A** or **Input B** tab.



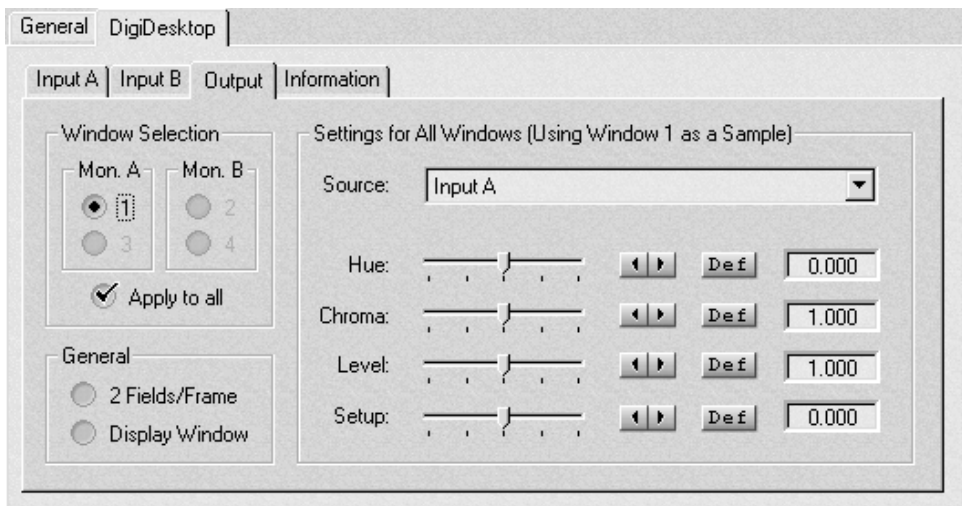
- ❑ **Video Source** Use this list to select which video input to use from the DigiDesktop connectors. For example, select **Y/C (S-Video) 1** to use the Y/C device connected to cable 1 for the specified input source (either Input A or Input B).
- ❑ **Proc Amp Settings** Use these controls to adjust the default proc amps for your incoming video signal. To obtain a precise setting for a control, click its left or right arrow instead of dragging the slider. To return a control to its factory default setting, click its **Def** button or **SHIFT+click** the slider.
 - **Hue** Adjusts the tint of the colors in the picture.
 - **Chroma** Adjusts the vividness (saturation) of the picture's colors.
 - **Level** Adjusts the difference in luminance between the lightest and darkest areas of the picture.
 - **Setup** Adjusts the level of black in the picture.
- ❑ **Apply Edge Sharpening to Video** Select this option to slightly sharpen the edges in your picture. The edge sharpening is done by amplifying the high frequency component of the video input's luminance signal. Be aware that selecting this option may reduce the clarity of fine details in your image.

- ❑ **Source has Built-in TBC** Select this option if your input signal is stable and broadcast-quality. This allows DigiDesktop to reproduce the input signal as-is, without degradation.

If your source device **doesn't** have a time base corrector or meet broadcast-quality standards, make sure this option isn't selected. DigiDesktop will then filter the signal to increase the tolerance for sync pulse instability.

Configuring the on-screen video windows

To configure the DigiDesktop on-screen video windows, click the **DigiDesktop** tab, then the **Output** tab.



- ❑ **Window Selection** Under **Mon. A** or **Mon. B**. (that is, Monitor A or Monitor B), select the video window you want to configure.
 - **Apply to all** Select this option if you want the configuration changes you make to apply to all four video windows (Window 1 will be the only available selection). To make changes individually to each window, you must clear **Apply to all**.
- ❑ **2 Fields/Frame** Select this option to display both video fields for all video windows. This option allows only **one** video window to be displayed per monitor.
- ❑ **Display Window** To preview the effect of making adjustments to a video window's proc amp settings, select **Display Window**. The video window will appear on the appropriate monitor. For example, if you adjust the proc amp settings for a window on Monitor A, and then

select a window on Monitor B, the original window will disappear from Monitor A and a new one will appear on Monitor B.

- ❑ **Source** Use this list to assign a particular video source to the currently selected video window. For example, to assign the video source you selected in the **DigiDesktop Input A** dialog box to Window 1 on Monitor A, select **1** under **Mon. A**, then select **Input A** from the **Source** list.

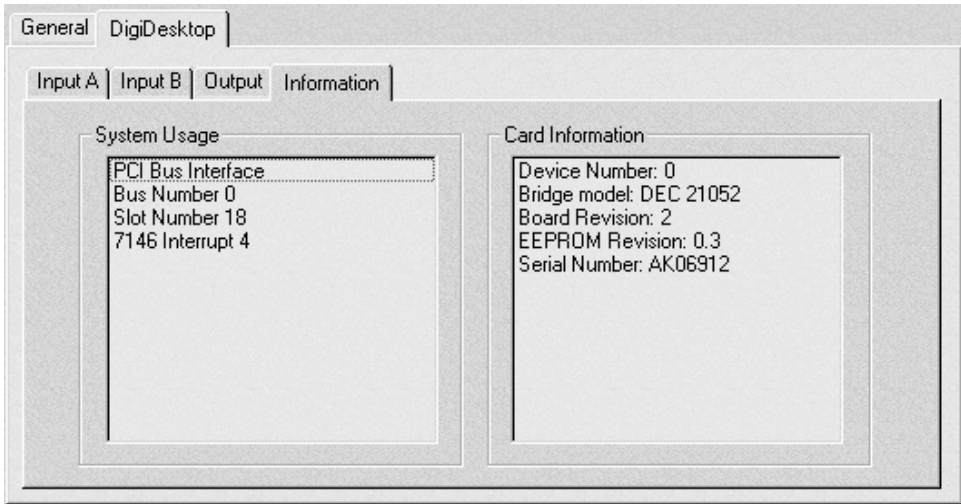


Note If your DigiDesktop is connected to one or more other cards with a Movie-2 bus, you can select **Movie-2 Bus Main** or **Movie-2 Bus Preview** to assign the Main or Preview output from the Movie-2 bus as your video window source. For example, if you're using DigiDesktop with DigiMix, you can select **Movie-2 Bus Main** to display the Main output from DigiMix. This feature, however, is supported only by programs that are configured to use the Movie-2 bus Main or Preview output.

- ❑ **Proc Amp Settings** Use the **Hue**, **Chroma**, **Level**, and **Setup** controls to adjust the proc amps of the currently selected video window. For a description of each control, see [page 26](#).

Displaying DigiDesktop information

To display system usage and other information about your DigiDesktop, click the **DigiDesktop** tab, then the **Information** tab.



You may be asked to provide this information if you call the Matrox DigiSuite Customer Support Department for assistance.

Notes

Displaying Video in a Window with Matrox DigiView

*This chapter explains how to use the Matrox DigiView program to display video
in a window on your computer's monitor.*

C H A P T E R

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Using the Matrox DigiView program

The Matrox DigiView program lets you display a live video window on your computer's monitor. You can use this window instead of a Program monitor to display your DigiDesktop analog video input. If your DigiDesktop is connected to one or more other cards with a Movie-2 bus, you can also choose to display the Main or Preview output from the bus.

For example, if you're using DigiDesktop with DigiMix, DigiSuite LE, or DigiSuite DTV, you can display the Main output from DigiSuite in the Matrox DigiView window to see the video clips you play back from DigiTools or your nonlinear editing program.



Important Before running Matrox DigiView, run **Matrox Display Properties** in the Windows NT Control panel and set the color palette to **True Color (24-bit)**.

➤ To display the Matrox DigiView window:

- 1 Choose **Start | Programs | Matrox DigiSuite Utilities | DigiView**.

You configure the video window by choosing commands from a pop-up menu. To display this menu, right-click anywhere within the window.



- 2 To ensure that the video window will always appear on top of other windows on your screen, select **Always on Top**. If you want to be prevented from moving the video window off your screen, select **Keep on Screen**.
- 3 To select the video source you want displayed in the window, choose **Select Input** from the pop-up menu, then click one of the following:
 - **Analog A** or **Analog B** Displays your input A or B video source as defined for DigiDesktop in the DigiSuite Configuration program (see [“Configuring the video input signals”](#) on page 26.)

- **Digital Main** Displays the Main (Program) output from the Movie-2 bus. Select this to display video clips played back from DigiTools or your nonlinear editing program.
 - **Digital Preview** Displays the Preview output from the Movie-2 bus. Select this only if you're running a program that's configured to use the Preview output signal.
- 4 To specify the video window's aspect ratio, choose **Aspect Ratio | 4:3** or **16:9**. When you resize the window, such as by dragging one of its sides, your selected aspect ratio will be maintained. If you'd like to resize the window without maintaining its aspect ratio, choose **Aspect Ratio | Not Maintained**.

Notes

Troubleshooting

This chapter provides some possible answers if you have trouble installing or operating your DigiDesktop.

C H A P T E R

6

Problems, possible causes, and solutions

Up-to-date information

The following pages contain information about the most common problems solved by our DigiSuite Customer Support department. These solutions are also available on our web site at www.matrox.com/video in the Customer Support section. As new information becomes available, we'll add it there first, so it's always a good idea to check the site on a regular basis.

Multiple solutions

Some of the problems identified here may have more than one possible cause, and there are frequently several possible solutions.



Note In this chapter, references to shutting off and/or restarting your system mean to actually use the physical On/Off switch. Simple software restart (from **Start | Shut Down**) or logging off the system and then logging back on are not sufficient.



Warning Never open your computer system when its power is on!

The card does not fit

Possible cause Unused slot If you're installing your DigiDesktop card in a new or previously unused slot, there may be considerable resistance as the card slides into the slot. This is normal.

Solution Install carefully Make sure that the card is perfectly aligned with the PCI slot and push it in firmly but gently until it is correctly seated.

Random or erratic system operating behavior

Possible cause 1 Inadequate ventilation The components on your DigiDesktop generate a lot of heat. It's therefore vitally important to provide adequate ventilation.

Solution 1 Provide ventilation Make sure your computer system is well ventilated with no obstructions blocking any openings, especially at the rear of the unit.

Solution 2 Operate in safe area Avoid operating your DigiDesktop-equipped computer system in areas where the temperature is above 86°F (30°C). **Do not** operate it in areas with an ambient temperature above 104°F (40°C).

Possible cause 2 Faulty hardware installation Your DigiDesktop hardware may not be installed properly.

Solution 1 Check card installation in computer Your DigiDesktop card must be properly installed. See appropriate sections of this manual for more details.

Solution 2 Check card connections Make sure that all connectors are firmly attached and properly connected.

Possible cause 3 Driver may not be running The DigiDesktop software drivers may not be running. To verify this, run **Control Panel | Services**. Check the service **DigiCtrl**. If all necessary software drivers are loaded and running, DigiCtrl should have the indication **Started** in its **Status** column. If not, one or more drivers are not running.

Solution Check version of NT Make sure you're running Windows NT version 4.0 with at least Service Pack 4 installed. Service Pack 5 is recommended.

No display available

Possible cause 1 Monitors not connected before starting For your monitors to work properly, you must have connected them before starting up your system.

Solution Restart system If you connected your monitors after startup, simply restart your system.

Possible cause 2 Bad connections Your cables or connectors may be faulty.

Solution Check connections Check your cables and connectors. Replace if necessary.

Synchronization problems

Possible cause Two video sources on the same screen but not synced Two video sources that aren't genlocked together will cause problems if you attempt to play both on the same screen.

Solution Use same sync source Make sure that both sources are genlocked to the same sync.

If nothing works

Contact your DigiSuite representative. Before doing so, please have the following information ready:

- ❑ A description of what happened.
- ❑ The serial number for your DigiDesktop card.
- ❑ As much system information as possible.
 - Your computer specs.
 - The manufacturer and version number of your computer's BIOS.
 - Windows NT version.
 - Operating environment.
 - Peripherals (especially cards occupying other slots in your computer).
- ❑ Anything else you feel will help us correct the problem.

Need more answers?

We're constantly adding new information to our documentation, both printed and on the internet. Check our web site often and keep in touch with your Matrox DigiSuite representative.

DigiDesktop Cables and Connectors

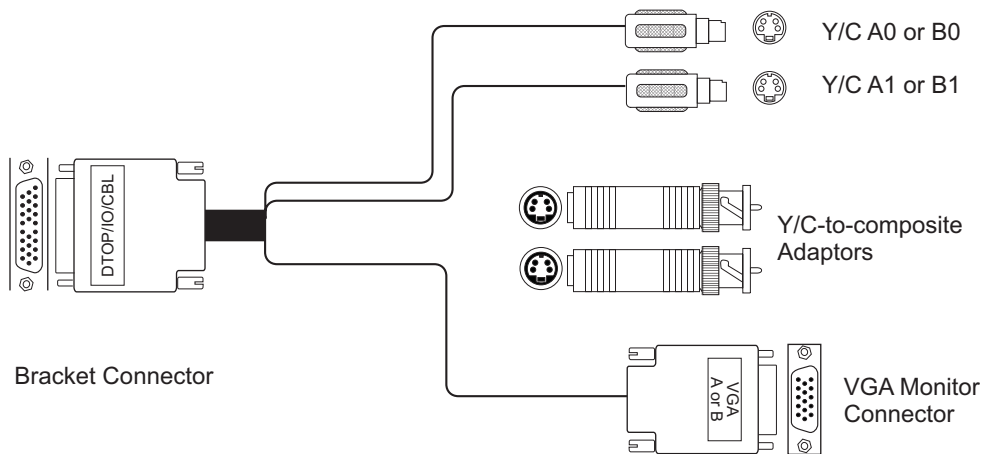
This appendix provides an overview of DigiDesktop cables and connections as well as pin definitions.

A P P E N D I X

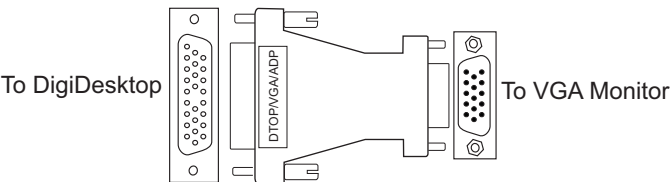


Cable overview

The DigiDesktop input/output cable (DTOP/IO/CBL) supports two Y/C (S-Video) or two composite video inputs and one VGA output. Two cables are required per card.



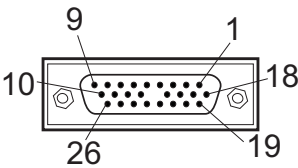
DigiDesktop adapters (DTOP/VGA/ADP), each of which provides an HD-15-VGA output (no analog video inputs), are also available. Two adapters are required per card.



Connector overview

Bracket connector (on card)

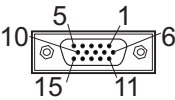
HD-26 female connector.



#	Signal	#	Signal
1.	RED_VIDEO	2.	GREEN_VIDEO
3.	BLUE_VIDEO	4.	GND
5.	MONITOR_ID1 (SDA)	6.	Y0_CVBS0
7.	MONITOR_ID2	8.	Y1_CVBS1
9.	VCC	10.	RED_GND
11.	GREEN_GND	12.	BLUE_GND
13.	GND	14.	(Key plug)
15.	Y0_CVBS0_GND	16.	C0_CVBS2_GND
17.	Y1_CVBS1_GND	18.	C1_CVBS3_GND
19.	H_SYNC	20.	H_SYNC_GND
21.	V_SYNC	22.	V_SYNC_GND
23.	MONITOR_ID0	24.	C0_CVBS2
25.	MONITOR_ID3 (SCL)	26.	C1_CVBS3

VGA monitor cable output

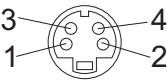
HD-15 female connector.



#	Signal	#	Signal
1.	RED_VIDEO	2.	GREEN_VIDEO
3.	BLUE_VIDEO	4.	MONITOR_ID2
5.	GND	6.	RED_GND
7.	GREEN_GND	8.	BLUE_GND
9.	VCC	10.	SYNC_GND
11.	MONITOR_ID0	12.	MONITOR_ID1 (SDA)
13.	H_SYNC	14.	V_SYNC
15.	MONITOR_ID3 (SCL)		

Y/C (S-Video) cable input

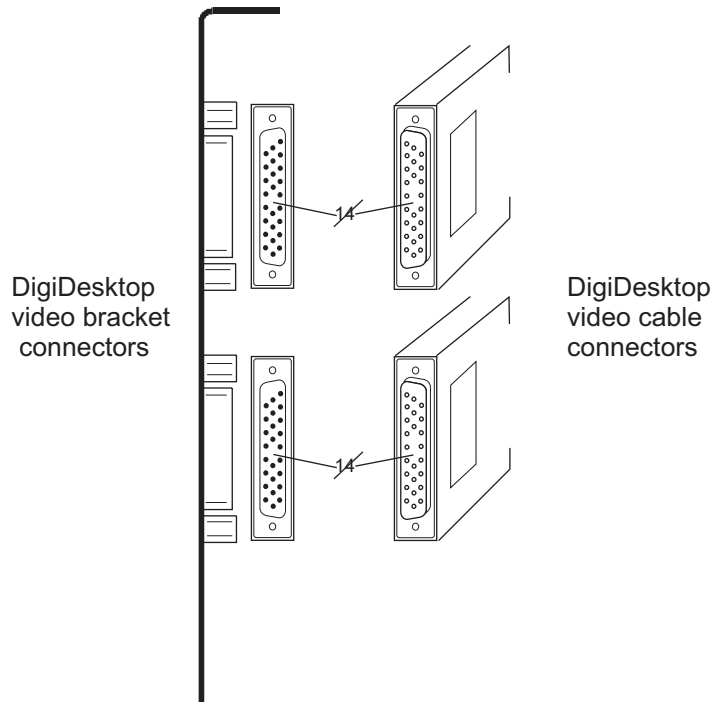
4-pin mini-DIN male Y/C connector.



#	Signal	#	Signal
1.	LUMA_GND	2.	CHROMA_GND
3.	LUMA	4.	CHROMA

Connecting your external devices

As shown in the following diagram, pin position 14 has been blocked off with a key plug on both DigiDesktop bracket connectors. Consequently, pin 14 is missing on both DigiDesktop video cables. This has been done to ensure that your external devices are properly connected when installing DigiDesktop with other DigiSuite cards.



Notes

DigiDesktop Specifications

This appendix provides DigiDesktop hardware specifications.

A P P E N D I X

B

Electrical specifications

Operating voltages and currents

Voltage +5 V, +12 V, -12 V
Currents 4 A, 150 mA, 0 mA

Video I/O Connectors

Contact resistance 20 mΩ max
Dielectric withstanding voltage 500 V
Insulation resistance 100 MΩ min

Movie-2 bus input/output

Digital I/O levels TTL compatible
..... (driven by 74ABT16374A-type registers)

Mechanical specifications

Physical dimensions

12.22" long × 4.50" high × 0.63" wide
(31.04 cm long × 11.43 cm high × 1.60 cm wide)

Connector types

Video I/O: Two HD-26 connectors
Movie-2 bus: PSHD090MS0S0
PCI connector for module expansion

Environmental specifications

Operating temperature 32°F (0° C) to 104°F (40° C)
Storage temperature -40°F (-40°C) to 167°F (75° C)
Maximum altitude
for operation 10,000 ft (3000 m)
for transport 40,000 ft (10,000 m)
Humidity
operation 20% to 80% of relative humidity*
storage 5% to 95% of relative humidity*

* non-condensing

Customer Support

This appendix explains how to reach us to obtain customer support.

A P P E N D I X

C

DigiSuite customer support

If you have a problem that you're unable to solve by referring to your DigiSuite documentation, please contact your Matrox DigiSuite representative. He or she should be able to help you quickly correct any installation or system configuration problem.

If your representative is unable to solve your problem, you may contact Matrox for further information and assistance.

Contacting us

Matrox is proud to offer worldwide technical support. Please use the contact information for your area.

United States & Canada

Telephone 1 800 810-2550
Fax 1 514 685-2853
Email video.techsupport@matrox.com

Europe, Middle East, & Africa

Telephone (France) +33 (0) 1 45 60 62 09
Telephone (Germany) +49 (0) 89 61 44 74 57
Telephone (UK, Middle East, and Africa) +44 (0) 1753 665 679
Fax +44 (0) 1753 665 599
Email video.tech.europe@matrox.com

All other countries

Telephone 1 514 685-7230, ext. 2388
Fax 1 514 685-2853
Email video.techsupport@matrox.com

World Wide Web

We also invite you to visit our World Wide Web site for up-to-the-minute information about Matrox products, free software updates, access to our support databases, and a complete list of computer equipment compatible with the DigiSuite platforms.

Internet..... www.matrox.com/video

DigiForum

If you'd like to join your peers on DigiForum, send Email to:

`listproc@matrox.com`

The **body** of the message should contain:

`SUBSCRIBE DIGIFORUM <your name>`

Substitute your first and last name for <your name>.

Only customers who've purchased and registered a DigiSuite product will be allowed to join DigiForum.

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