ENGLISH

Matrox **ATC RG Series**

ATC RG-200DL • ATC RG-400SL

User Guide

10992-301-0105
2009.05.21

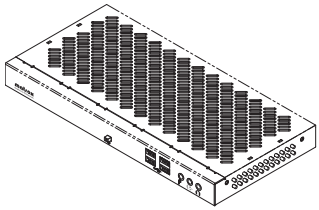
www.matrox.com/graphics

matrox®
Graphics for Professionals

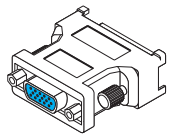
Overview

Thank you for purchasing a Matrox ATC RG product. This product is a complete remote graphics solution. ATC RG-200DL units can support up to two monitors. These monitors can be dual or single link digital monitors or analog monitors. ATC RG-400SL units can support up to four digital or analog monitors. As a remote graphics solution, it separates the CPU and hard disks of your system from the computer peripherals – monitors, keyboard, mouse, and audio hardware.

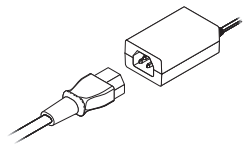
Hardware supplied



Matrox ATC RG remote graphics unit
(ATC RG-400SL shown)



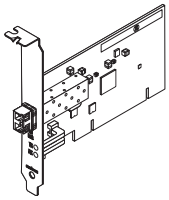
4 DVI-to-HD15 adapters
(ATC RG-400SL only)



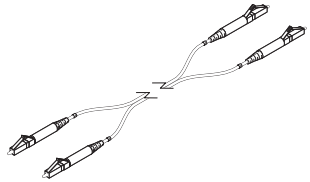
Power supply*

* Multiple power cables are provided for international support.

Hardware required (sold separately)



Matrox PCI or PCIe interface card
(PCI card shown)



Dual LC optical cable
(50 µm/125 µm or 62.5 µm/125 µm)

Installation overview

To install your Matrox product:

1. Install your interface card – see "Hardware installation", page 4.
2. Connect your ATC RG unit, monitors, and other peripherals – see "Connection setup", page 7.

3 Install the software. Your Matrox ATC RG product supports a number of operating systems such as Windows, Unix, and Linux. To obtain a display driver for your operating system, contact your Matrox representative.

Note: **Windows XP SP2 (Service Pack 2)** – Windows may install a Matrox display driver unsupported by your product when the hardware in your unit is detected. If you aren't prompted to install a display driver, ***DON'T RESTART*** your system. Manually install the display driver on your Matrox installation CD-ROM before you restart.

If you're installing an ATC RG-200DL unit with a dual link digital monitor, the display driver used by Windows Service Pack 2 may disable your dual link DVI connector and enable the HD-15 connector. To install a driver that supports the dual link feature of your Matrox product, you need connect an analog monitor to the HD-15 connector.

Hardware installation

This section describes how to install a Matrox interface card in your host computer. If your Matrox interface card is already installed in your computer, skip to "Connection setup", page 7. For information specific to your computer, like how to remove its cover, see your system manual.

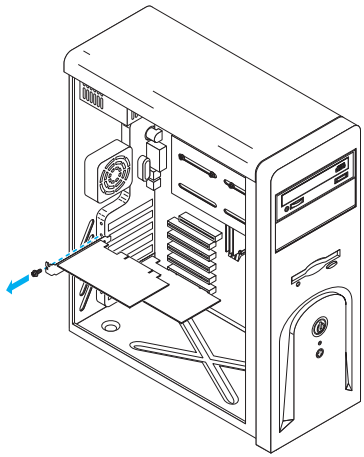
WARNING: To avoid personal injury and to prevent damage to your computer or Matrox hardware, turn off your computer, unplug it, and then wait for it to cool before you install your Matrox product and touch any of the internal parts of your computer.

While your computer is turned off but still plugged in, some electrical current is supplied to the motherboard. This current may prevent newly installed hardware from working properly.

Also, static electricity can severely damage electronic parts. Before touching any electronic parts, drain static electricity from your body (for example, by touching the metal frame of your computer). When handling a card, carefully hold it by its edges and avoid touching its circuitry.

1 Open your computer and remove your existing graphics card *

If a graphics card ***isn't*** already installed in your computer, skip to step 2.



a Using **Add/Remove Programs** in the Windows **Control Panel**, remove any currently installed display drivers. Restart your computer for the changes to take effect.

After your computer restarts, you're prompted to install drivers for the new graphics hardware detected. Click **Cancel**.

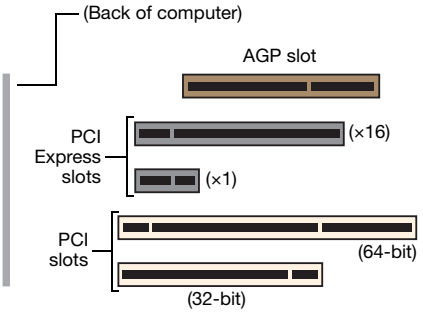
b Turn off your computer and all peripherals such as your monitor or printer.

c Open the computer and remove your existing graphics card. (If graphics hardware is built into the motherboard of your computer, you may need to disable it manually after your Matrox card is installed. For more information, see your system manual.)

* With multi-display mode, you may be able to use your existing graphics card. For Windows 2000/XP, see Windows 2000/XP online help under "Install additional monitors".

2 an expansion slot for your interface card

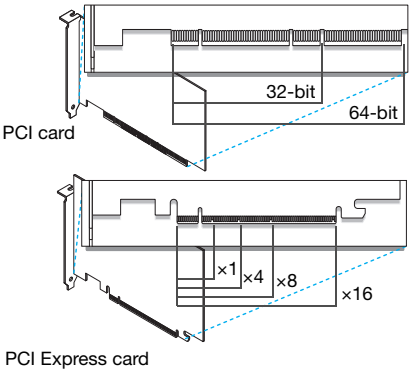
Most computers have different types of expansion slots. Choose a PCI or PCI Express (PCIe) ×1 slot, depending on the type of Matrox card you have. If you have a PCI card, your card supports both 64-bit and 32-bit PCI slots. Your system manual should identify the location of each type of expansion slot in your computer.



Note: If you're using a PCI card in a 64-bit PCI slot, your choice of PCI slot may affect your card or system performance. For more information, see your computer manual.

WARNING: Inserting your Matrox card into the wrong type of slot could damage your card, your computer, or both.

If you're using a PCI interface card in a 64-bit PCI expansion slot, your card uses only the part of your expansion slot closest to the back of the computer.

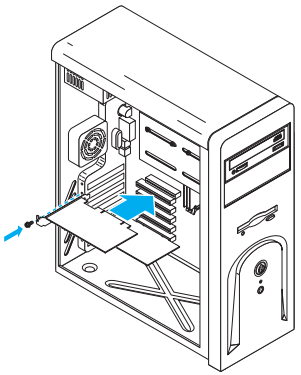


3 Insert your Matrox interface card

a Position your Matrox card over the expansion slot you've chosen.

b Push the card in firmly and evenly until it's fully seated in the slot.

c Secure the bracket of your Matrox card to the computer frame.



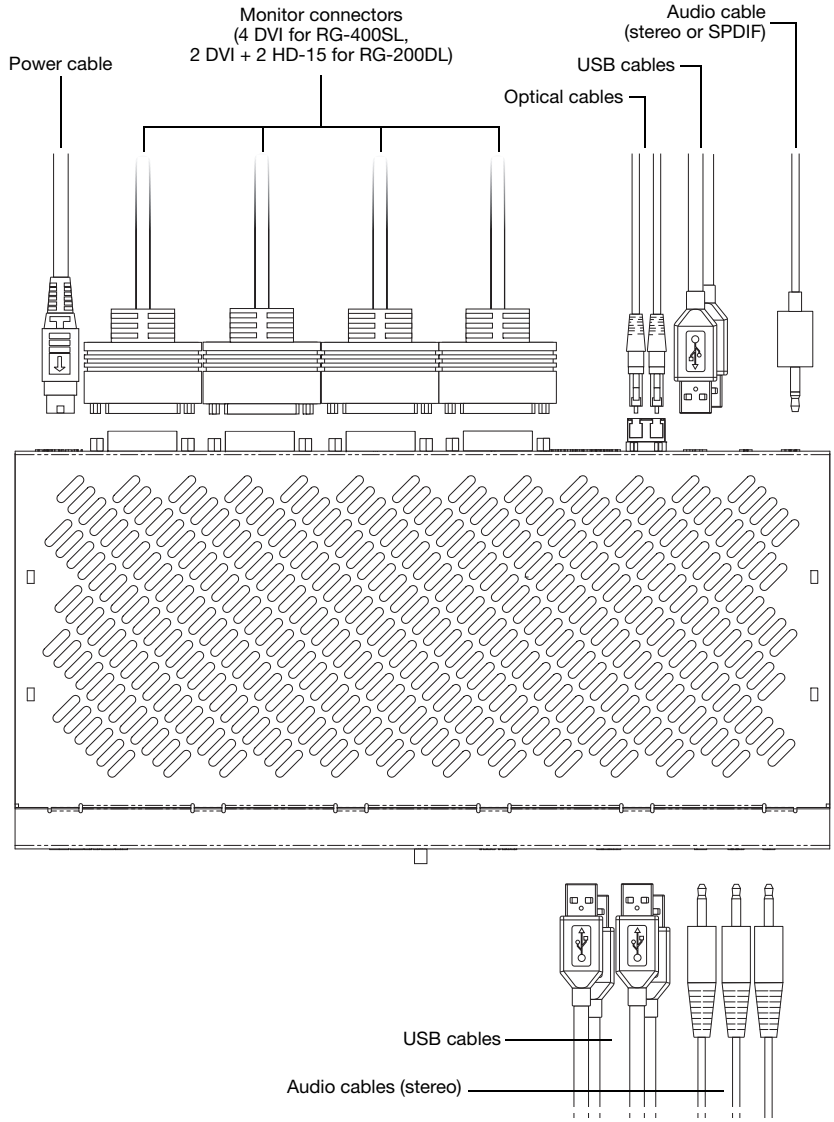
Your Matrox card is now installed. ***Before restarting your computer***, first connect your RG400SL unit to your computer, then connect your monitors and your peripherals to your unit (see "Connection setup", page 7). ***After connecting***, restart your computer and install your Matrox software.

WARNING: If your computer doesn't restart after your Matrox card is installed, turn off your computer to avoid damaging electronic parts.

Connection setup

This section describes how to connect monitors and other peripherals to your Matrox ATC RG unit.

Connection overview



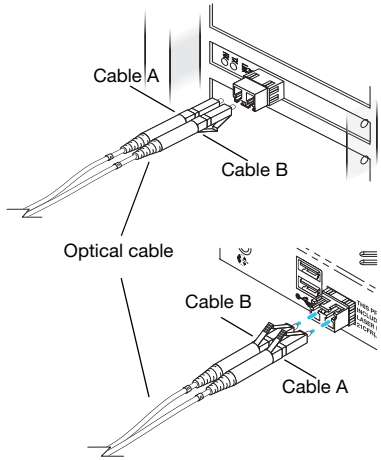
Step-by-step connection setup

WARNING: Because the body of your ATC RG unit is used to disperse heat, it may become warm to the touch. Make sure your unit is located in a well ventilated area and nothing is blocking its ventilation holes.

1 Connect your unit to your interface card

To connect your ATC RG unit to your interface card, you need a dual LC optical cable (sold separately).

Connect one end of your optical cable to the optical connector of your interface card. Connect the other end of your cable to the optical connector on your unit. Make sure your connectors are properly connected.



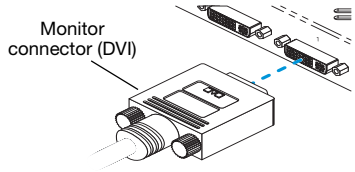
Note: The maximum length of optical cable supported by your Matrox product is 250 meters/750 feet. For more information, see "Product information", page 12.

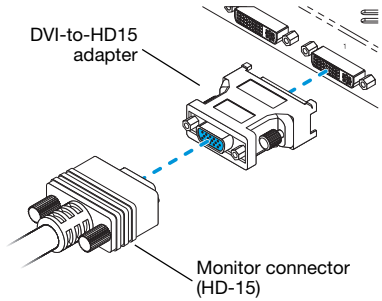
2 Connect your monitors

ATC RG-400SL – Connect your monitors to the monitor connectors at the back of your ATC RG unit.

If your monitors have DVI connectors, connect them directly to the monitor connectors at the back of your unit.

If your monitors have HD-15 connectors, you need DVI-to-HD15 adapters to connect your monitors to the monitor connectors on your unit.

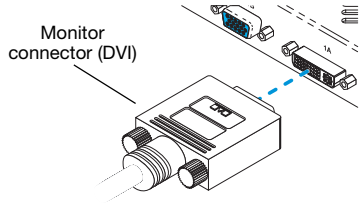


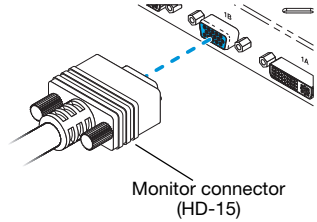


ATC RG-200DL – Connect your monitors to the monitor connectors at the back of your Extio unit.

If your monitors have DVI connectors, connect them directly to the DVI monitor connectors (**A**) at the back of your unit.

If your monitors have HD-15 connectors, connect them directly to the HD-15 monitor connectors (**B**) at the back of your unit.



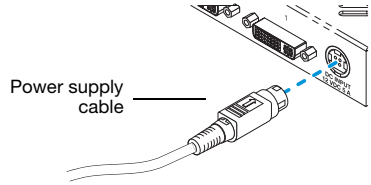


> Note: While a DVI monitor is connected to a DVI connector on your unit, the corresponding HD-15 connector is disabled.

3 Connect the power supply

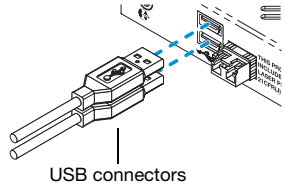
Attach one end of the power supply cable provided with your Matrox product to the power connector on your Matrox product.

Plug the power supply cord into an electrical outlet.



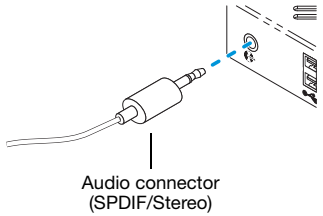
4 Connect your input devices (optional)

To use a keyboard or mouse, simply connect a USB mouse or keyboard to one of the USB connectors on your unit. There are 2 USB connectors at the back of the unit and 4 at the front.



> Note: USB devices (including keyboard and mouse) are unavailable until Windows starts.

5 Connect your audio devices (optional)



Your unit has 2 input and 2 output audio connectors. The 2 input connectors are **Line in** ( ) and **Microphone** ( ). The 2 output audio connectors are **Headphones** ( ) and **Line out** ( ). All audio connectors support stereo jack connectors. The **Line out** connector also supports *SPDIF* (Sony/Philips Digital Interface Format) mini-plug optical connectors.

To connect an audio device to your unit:

a Plug one end of your audio cable into the audio connector on your unit.

b Plug the other end of the cable in your audio device. For information on the type of connector supported by your audio device, see its documentation.

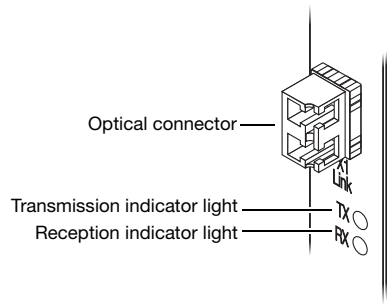
> **Note:** If you're using the headphone connector at the front of your unit, the line-out connector at the back of the unit is muted.

Your Matrox product is now installed. Restart your computer, and install your Matrox software.

Verifying your interface connection

To check your interface connection, your computer and your ATC RG unit must be on.

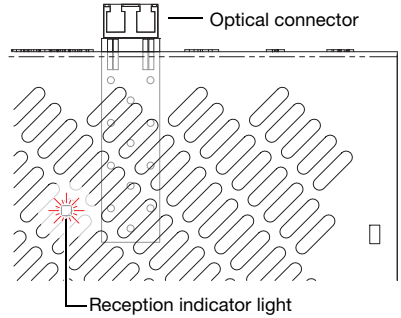
On the bracket of your interface card, make sure both the transmission (**TX**) and reception (**RX**) indicator lights are green.



If the reception indicator is red and you have separate optical cables, switch the cables in the optical connector of your Matrox product.

If the transmission indicator is red, your optical connector may be loose. Make sure your optical connector is firmly in place by pushing it into its housing. If the light doesn't change to green, contact your Matrox representative.

On your ATC RG unit, make sure the reception indicator light is off while your unit is turned on. This indicator light is inside your unit next to the optical connector. If the indicator light is on (red) and you have separate optical cables, switch the cables in the optical connector of your Matrox product.



Note: If the reception indicator lights on your interface card and your ATC RG unit are red after changing the cables, your optical cable may be damaged. Try your connection with a different optical cable.

Product information

Remote unit features

	Matrox ATC RG-200DL	Matrox ATC RG-400SL
Digital monitor support	DVI (single and dual link)	DVI (single link)
# of displays supported	2	4
Interface card supported	Optical	Optical
Memory	128 MB	128 MB
Maximum display resolution	2048 × 2048	1920 × 1200
# of DVI-to-HD15 adapters	—	4
# of USB connectors	2.0 compliant (2 in back, 4 in front)	2.0 compliant (2 in back, 4 in front)
# and type of audio connectors	Back: 1 stereo/SPDIF output Front: 1 microphone input, 1 line-in input, 1 stereo output	Back: 1 stereo/SPDIF output Front: 1 microphone input, 1 line-in input, 1 stereo output

Interface card features

Interface type	Optical
Card Type	PCI or PCIe ×1
Form factor	Low-profile
Cable type supported	Dual-LC optical
Maximum distance (cable type)	250 m (50 µm/125 µm) 150 m (62.5 µm/125 µm)

Notes

- Your Matrox graphics hardware is 100% VGA compatible and supports all VESA standards: VBE 2.0 (Super VGA modes), DPMS (energy saving), and DDC-2B (Plug-and-Play monitor).
- To get the most of your Matrox product, we recommend using the highest color palette setting (a 32-bit color palette) for all your displays.

- The display resolutions and refresh rates available depend on your Matrox graphics hardware, display driver, software monitor settings, and monitor. For information on the capabilities of your monitor, see your monitor documentation.
- If you're using multiple monitors, your Matrox hardware uses the same display resolution and monitor settings for all your monitors. This display resolution and monitor settings (such as refresh rate) are dependent on your operating system and your display driver.
- If you're using BNC connectors with a Plug-and-Play monitor, the Plug-and-Play feature of your monitor can't be used. To use the Plug-and-Play feature of your monitor, instead of the BNC connectors, use the 15-pin connector at the back of your monitor.

Supported VESA modes (main display)

In the table below, VESA modes supported by your Matrox graphics hardware are indicated by a VESA mode number. Many Super VGA DOS programs use VESA modes.

Display resolution	16 colors	256 colors	32 K colors	64 K colors	16 M colors
640 × 400	—	100	—	—	—
640 × 480	(VGA)	101	110	111	112
800 × 600	102	103	113	114	115
1024 × 768	—	105	116	117	118
1280 × 1024	—	107	119	11A	11B
1600 × 1200	—	11C	11D	11E	11F

	Rows			
Columns	**25**	**43**	**50**	**60**
80	—	—	—	108
132	109	10A	10B	10C

Customer support

Matrox Web

Matrox is on the Internet with a World Wide Web (WWW) site. Our Web site has product literature, press releases, technical material, a sales office list, trade show information, and other relevant material.

- Visit the Matrox Graphics Web site at www.matrox.com/graphics.
- E-mail questions or comments regarding the site to webmaster@matrox.com.

If you have a problem

Matrox values your business and offers professional support for your Matrox product. For product support, contact your Matrox representative or visit our technical support Web site at www.matrox.com/graphics/support/.

Information we need

Please give a complete description of the problem, and include:

- Matrox card serial number, model number, revision number, BIOS number, driver type and version, and memory address at which the Matrox card is installed.
- Computer brand and model name.
- Monitor brand and model name.
- Operating system, version, and service pack.
- Brand and model of any other cards and devices installed on your system.

Program specific problems

If a problem appears with a specific program, please give us the following information:

- Display settings (color palette, display resolution, and so on) applied when the problem occurs.
- If possible, take note of the file and segment address that caused the problem.
- Detailed steps known to cause the bug, so we can reproduce it.

Warranty

A. Limited Warranty Statement

1. Matrox Graphics Inc. (“Matrox”) warrants to the end-user customer, who provides adequate proof of purchase that Matrox hardware products purchased from Matrox authorized dealers will be free from defects in materials and workmanship for a period of one (1) year from the date of purchase. This warranty applies only to the original end-user purchaser and is non-transferable. Conditions and limitations of Matrox’s warranty are stated below.
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   - **b.** incompatibilities due to the user’s hardware or software applications with or in which the Matrox product interfaces;
   - **c.** product of a special or custom-made nature;
   - **d.** unauthorized modification or misuse;
   - **e.** improper installation, misapplication or negligence;
   - **f.** operation outside the product’s environmental specifications;
   - **g.** improper site preparation or maintenance;
   - **h.** software;
   - **i.** other causes that do not relate to a product defect;
   - **j.** defects or damage suffered as a result of force majeure (including theft);
   - **k.** defects or damage suffered as a result of normal wear and tear, and/or
   - **l.** stolen goods.
3. If Matrox receives, during the applicable warranty period, notice of a defect in a warranted hardware product and the defective Matrox product in question, Matrox shall at its sole option, either repair or replace the product, and shall return the repaired product or a replacement product within a reasonable delay. The replacement product may not be new, provided that it has functionality at least equal to that of the product being replaced.
4. This warranty is valid in any country where Matrox hardware products are distributed by Matrox or its authorized dealers.
5. This Limited Warranty Statement gives the customer specific legal rights. The customer may also have other rights which vary from state to state in the United States, from province to province in Canada, and from country to country elsewhere in the world.

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3. To the extent allowed by local law, the remedies provided in this Limited Warranty Statement are the customer’s sole and exclusive remedies.

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4. Customer shall be responsible for all applicable taxes, duties and customs fees on any replacement unit, as well as all transport, insurance, storage and other charges incurred on all returned products.

D. Obtaining Service

1. Verify that your Matrox product was installed and configured according to the information in its accompanying documentation.
2. Read the "Troubleshooting" information included with the Matrox product to see if you can solve the problem yourself.
3. If you are still experiencing difficulties, please contact your dealer where you purchased your Matrox product.
4. If you must return a Matrox product, leave the configuration as it was when you were using it, and leave all identification stickers on the product. Pack the product in its original box and return to your Matrox dealer where the product was purchased, together with your proof of purchase. Your Matrox dealer will return the product for you. Alternatively, if this first option is unavailable to you, you may contact the Matrox Technical Support group who will issue an Return Merchandise Authorization (RMA) number, upon receipt of adequate proof of purchase, and inform you of shipping instructions. DO NOT RETURN THE PRODUCT TO MATROX WITHOUT MATROX'S RMA NUMBER AND EXPRESS AUTHORIZATION.

E. General

This limited warranty shall be governed by the laws of the Province of Quebec, Canada and the federal laws of Canada applicable therein and the courts of the Province of Quebec shall have exclusive jurisdiction to hear and decide any dispute instituted by the customer in connection with this limited warranty; the customer waives, by accepting the product, its rights to institute proceedings in connection with this warranty against Matrox in any jurisdiction other than Quebec.

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   - Making alterations or copies of any kind in the Software (except as specifically permitted above).
   - Attempting to unassemble, de-compile or reverse engineer the Software in any way.
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   - Making copies, or verbal or media translations, of the user’s guide.
   - Making telecommunication data transmissions of the Software.

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Limited warranty Matrox warrants to you, for a period of 90 days normal use from your date of purchase, that:

1. The CD/disks on which the software is furnished and the documentation are not defective.
2. The Software is properly recorded upon the CD/disks included.
3. The documentation is substantially complete and contains all the information Matrox deems necessary to use the software.
4. The Software functions substantially as described in the documentation.

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USA

FCC Compliance Statement

Remark for the Matrox hardware products supported by this guide 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 instructions 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 own expense.

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.

CANADA

(English) Industry Canada Compliance Statement

Remark for the Matrox hardware products supported by this guide These digital apparatus does not exceed the Class A limits for radio noise emission from digital devices set out in the Radio Interference Regulation of Industry Canada.

(Français) Conformité avec les exigences du ministère de l'Industrie Canada

Remarque sur les produits matériels Matrox couverts par ce guide Ce present 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.

USA

(English) FDA (Food and Drug Administration) requirements for Laser Products

Remark for the Matrox hardware products supported by this guide This product includes a 850 nm Laser Product compliant to 21CFR Subpart J Class 1.

JAPAN

VCCI Compliance Statement

Remark for the Matrox hardware products supported by this guide This is a Class A product based on the standard of the Voluntary Control Council for Interference by Information Technology Equipment (VCCI). If this equipment is used in a domestic environment, radio disturbance may occur, in which case, the user may be required to take corrective actions.

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EUROPE

(English) European user's information – Declaration of Conformity

CE

Remark for the Matrox hardware products supported by this guide These devices comply with EC Directive 89/336/EEC for a Class A digital device. They have been tested and found to comply with EN55022/CISPR22 and EN55024/CISPR24. In a domestic environment these products may cause radio interference in which case the user may be required to take adequate measures. To meet EC requirements, shielded cables must be used to connect the monitor and other peripherals to the card. These products have been tested in a typical class A compliant host system. It is assumed that these products will also achieve compliance in any class A compliant system.

(Français) Informations aux utilisateurs Européens – Déclaration de conformité

Remarque sur les produits matériels Matrox couverts par ce guide Ces unités sont conformes à la directive communautaire 89/336/EEC pour les unités numériques de classe A. Les tests effectués ont prouvé qu'elles sont conformes aux normes EN55022/CISPR22 et EN55024/CISPR24. Le fonctionnement de ces produits dans un environnement résidentiel peut causer des interférences radio, dans ce cas l'utilisateur peut être amené à prendre les mesures appropriées. Pour respecter les impératifs communautaires, les câbles de connexion entre le moniteur ou autres périphériques et la carte doivent être blindés. Ces produits ont été testés dans un système hôte typique compatible classe A. On suppose qu'ils présenteront la même compatibilité dans tout système compatible classe A.

(Deutsch) Information für europäische Anwender – Konformitätserklärung

Anmerkung für die Matrox Hardware-Produktunterstützung durch dieses Handbuch Diese Geräte entsprechen EC Direktive 89/336/EEC für ein digitales Gerät Klasse A. Sie wurden getestet und entsprechen demnach EN55022/CISPR22 und EN55024/CISPR24. In einer Wohnumgebung können diese Produkte Funkinterferenzen erzeugen, und der Benutzer kann genötigt sein, entsprechende Maßnahmen zu ergreifen. Um EG-Anforderungen zu entsprechen, müssen zum Anschließen des Monitors und anderer Peripheriegeräte an die Karte abgeschirmte Kabel verwendet werden. Diese Produkt wurden in einem typischen, der Klasse A entsprechenden, Host-System getestet. Es wird davon ausgegangen, daß diese Produkte auch in jedem Klasse A entsprechenden System entsprechend funktionieren.

(Italiano) Informazioni per gli utenti europei – Dichiarazione di conformità

Nota per i prodotti hardware Matrox supportati da questa guida Questi dispositivi sono conformi alla direttiva CEE 89/336/EEC relativamente ai dispositivi digitali di Classe A. Sono stati provati e sono risultati conformi alle norme EN55022/CISPR22 e EN55024/CISPR24. In un ambiente domestico, questi prodotti possono causare radiointerferenze, nel qual caso all'utente potrebbe venire richiesto di prendere le misure adeguate. Per soddisfare i requisiti CEE, il monitor e le altre periferiche vanno collegati alla scheda grafica con cavi schermati. Questi prodotti sono stati provati in un tipico sistema host conforme alla classe A. Inoltre, si dà per scontato che questi prodotti acquisiranno la conformità in qualsiasi sistema conforme alla classe A.

(Español) Información para usuarios europeos – Declaración de conformidad

Observación referente a los productos de hardware de Matrox apoyados por este manual Estos dispositivos cumplen con la directiva de la CE 89/336/EEC para dispositivos digitales de Clase A. Dichos dispositivos han sido sometidos a prueba y se ha comprobado que cumplen con las normas EN55022/CISPR22 y EN55024/CISPR24. En entornos residenciales, estos productos pueden causar interferencias en las comunicaciones por radio; en tal caso el usuario deberá adoptar las medidas adecuadas. Para satisfacer las disposiciones de la CE, deberán utilizarse cables apantallados para conectar el monitor y demás periféricos a la tarjeta. Estos productos han sido sometidos a prueba en un típico sistema anfitrión que responde a los requisitos de la clase A. Se supone que estos productos cumplirán también con las normas en cualquier sistema que responda a los requisitos de la clase A.

EUROPE

(English) European user's information – Directive on Waste Electrical and Electronic Equipment (WEEE)

Please refer to the Matrox Web site (www.matrox.com/environment/weee) for recycling information.

(Français) Informations aux utilisateurs Européens – Règlementation des déchets d'équipements électriques et électroniques (DEEE)

Se référer au site Web de Matrox (www.matrox.com/environment/weee) pour l'information concernant le recyclage.

(Deutsch) Information für europäische Anwender – Europäische Regelungen zu Elektro- und Elektronikaltgeräten (WEEE)

Bitte wenden Sie sich an der Matrox-Website (www.matrox.com/environment/weee) für Recycling-Informationen.

(Italiano) Informazioni per gli utenti europei – Direttiva sui rifiuti di apparecchiature elettriche ed elettroniche (RAEE)

Si prega di riferirsi al sito Web Matrox (www.matrox.com/environment/weee) per le informazioni di riciclaggio.

FRANCE

Avertissement sur l'épilepsie

À lire avant toute utilisation d'un jeu vidéo par vous-même ou votre enfant Certaines personnes sont susceptibles de faire des crises d'épilepsie ou d'avoir des pertes de conscience à la vue de certains types de lumières clignotantes ou d'éléments fréquents dans notre environnement quotidien. Ces personnes s'exposent à des crises lorsqu'elles regardent certaines images télévisées ou qu'elles jouent à certains jeux vidéo. Ces phénomènes peuvent apparaître alors même que le sujet n'a pas d'antécédent médical ou n'a jamais été confronté à une crise d'épilepsie.

Si vous-même ou un membre de votre famille avez déjà présenté des symptômes liés à l'épilepsie (crise ou perte de conscience) en présence de stimulations lumineuses, veuillez consulter votre médecin avant toute utilisation.

Nous conseillons aux parents d'être attentifs à leurs enfants lorsqu'ils jouent avec des jeux vidéo. Si vous-même ou votre enfant présentez un des symptômes suivants: vertige, trouble de la vision, contraction des yeux ou des muscles, perte de conscience, trouble de l'orientation, mouvement involontaire ou convulsion, veuillez immédiatement cesser de jouer et consultez un médecin.

Précautions à prendre dans tous les cas pour l'utilisation d'un jeu vidéo Ne vous tenez pas trop près de l'écran. • Jouez à bonne distance de l'écran de TV et aussi loin que le permet le cordon de raccordement. • Utilisez de préférence les jeux de vidéo sur un écran de petite taille. • Évitez de jouer si vous êtes fatigué ou si vous manquez de sommeil. • Assurez-vous que vous jouez dans une pièce bien éclairée. • En cours d'utilisation, faites des pauses de dix à quinze minutes toutes les heures.

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