Owner's Manual

USB 2.0 to VGA Adapter

Model: U244-001-VGA

Este manual esta disponible en español en la
página de Tripp Lite: tripplite.com/support

Ce manuel est disponible en français sur le site
Web de Tripp Lite : tripplite.com/support

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1. Introduction

1.1 Features

- Add an additional monitor, LCD or projector through a single USB 2.0 port
- Simultaneously connect up to six display adapters to a Windows® computer or up to four on a Mac®
- Hot-pluggable; add or remove monitor without the need for a system reboot

1. Introduction

- Automatically resumes from hibernation and suspend modes
- Supports video resolutions up to 1920 x 1080 (60 Hz), 1080p (60 Hz)
- Set additional monitors to extend the primary display, duplicate the primary display, or set an additional monitor as the primary display
- Plug-and-Play; software installs automatically upon connection*

* Requires a network connection on your computer

1.2 Package Contents

Before installation, please check the items in the package. The package should contain the following items:

- U244-001-VGA
- Driver CD
- Owner's Manual

1.3 Optional Accessories

- P502-Series High Resolution VGA Cables

1.4 System Requirements

Windows

- Windows® 2000 or later
- USB 2.0 port
- VGA monitor

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1. Introduction

Mac

- An Intel-based Mac running OS X 10.4 or later. Power PC-based Macs are not supported.
- USB 2.0 port
- VGA monitor

  Computer requirements when using 1-2 display adapters:

  - 1.2 GHz Single Core CPU
  - 512MB memory

  Computer requirements when using 3 display adapters:

  - 1.8 GHz Single Core CPU
  - 1GB memory

  Computer requirements when using 4-6 display adapters:

  - 1.6 GHz Core Duo CPU
  - 1GB memory

  Note: Only one added monitor can support DVD playback. In order to support DVD playback, your computer must meet the following requirements:

  - 2.0 GHz Core Duo CPU
  - 1GB memory
  - Adapter screen resolution must be set to 800 x 600 with 16-bit color

2. Installation

Note: This product features built-in drivers that install automatically upon connection to a computer with an active network connection. If they do not install, or do not fully install, you can obtain the driver file from the included CD or tripplite.com/support.

1. Connect the built-in USB cable on the display adapter to an available USB 2.0 port on your computer.

2. Connect the display adapter to a monitor using a VGA cable, such as Tripp Lite's P502-Series High Resolution VGA Cables.

3. Once connected, the computer will recognize the display adapter and complete the installation. The video signal should now display on the add-on monitor.

Note: It may take a few moments for the screen to appear on the add-on monitor. Also, it is normal for the screen to flicker on and off a few times when first connected. If the add-on monitor remains blank, you may need to restart your computer.
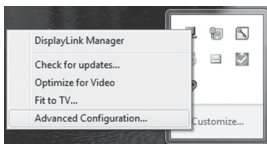
3. Using the Adapter

3.1 Display Properties

Once installed, the computer video can be *Extended* from the primary display to the add-on display, *Mirrored* to display the same thing on both, or changed to use the add-on display as the primary display. This can be done by opening the *Display Settings* page on your computer (see next page) and changing the settings.

3. Using the Adapter

Windows

To access the display settings on a Windows computer, right-click on your computer's desktop and select the *Properties* or *Personalize* option (depending on your Windows operating system). From there you will need to access the *Settings* or *Display* option to get to the *Display Settings* page. A quick way to access this page is to use the display adapter icon in the lower-right corner of your computer screen. Right-click on this icon and select the *Advanced* option to automatically pull up your computer's *Display Settings* page.

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3. Using the Adapter

Below are additional settings available to Windows users via the display adapter right-click menu:

- *Check for Updates* – Connects to *Windows Update*, checks for newer versions of the Display Link software and downloads them (if available).

- *Optimize for Video* – When playing video content on an add-on monitor, this setting can help to improve playback performance.

  Note: Text may appear less clear when this is enabled.

- *Fit to TV* – When using your display adapter to connect a TV to your computer, the Windows desktop may not always completely appear on the screen. This setting can be used to adjust the picture to display properly.

In addition to the display adapter right-click menu, Windows Vista and Windows 7 users can press the [Windows Key] and the [P] key at the same time to pull up the menu below, which quickly allows you to switch the display settings.
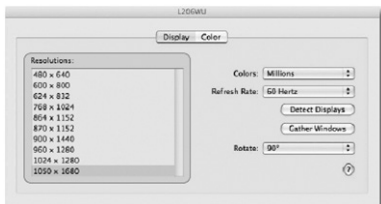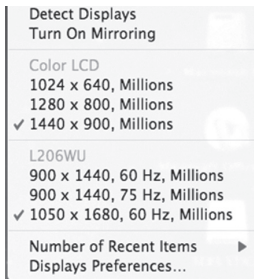
3. Using the Adapter

Notes:

- *The display adapter icon only appears in the lower-right corner of Windows computers and offers a quick way to adjust the display(s) settings. The settings available in this right-click menu may vary, depending on your Windows operating system.*
- *Only Mirror mode is supported under Windows Vista Display Driver Model (WDDM) mode. In addition, the Aero Experience (Flip 3D effect) will be disabled under Windows Vista Display Driver Model (WDDM) mode as long as the display adapter is connected.*

Mac

To access the display settings on a Mac computer, open your computer's *System Preferences* menu and select the *Displays* option. A quick way to adjust these settings is by clicking on the monitor icon in the upper-right corner of the screen. When the *Show displays* in menu bar setting is checked in the *Display Settings* menu, clicking the monitor icon will display a menu that includes the available monitors and settings.

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3. Using the Adapter

```
Detect Displays
Turn On Mirroring

Color LCD
1024 x 640, Millions
1280 x 800, Millions
✓ 1440 x 900, Millions

L206WU
900 x 1440, 60 Hz, Millions
900 x 1440, 75 Hz, Millions
✓ 1050 x 1680, 60 Hz, Millions

Number of Recent Items          ▶
Displays Preferences...
```

3.2 Extending Video to the Add-On Display

To extend the video of the primary monitor to the add-on monitor, follow the steps below:

Windows

1. Open your computer's *Display Settings* page.

2. Select the monitor icon that represents the add-on display you wish to change or choose the add-on display from the drop-down menu. The primary display is always icon 1.

3. Once you've selected the monitor icon for the add-on display, check the checkbox to extend video onto the monitor or select the extension option from the drop-down list.

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3. Using the Adapter

4. Drag the monitor icons in the *Display Settings* page so they are positioned to replicate the location of the actual displays. For example, if display 1 is directly to the left of display 2, the monitor icons should be positioned that way. This affects which side of the screen the mouse is allowed to move to the next display from, and is therefore essential to ensure smooth mouse movement between displays.

5. Click the *Apply* button to activate the changes. The computer video will now be extended from the primary display to the add-on display.
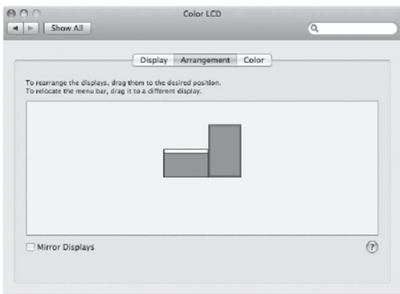
   Note: When playing a DVD, it is recommended that you play the DVD on a monitor connected to the computer via standard cabling, and not an add-on monitor connected via display adapter. If you need to play a DVD on an add-on monitor, you must have a 2.0 GHz Core Duo CPU with 1GB memory, and the screen resolution must be set to 800 x 600 with 16-bit color. If multiple display adapters are connected to a computer, only one of them can play DVD content.

Mac

1. Open your computer's *Display Settings* page. By default, all monitors added to your computer will be extended to the right of the primary display.

2. If the displays are set to be mirrored, the *Mirror Displays* checkbox will be checked. To uncheck this checkbox and extend the video among all displays, check the *Arrangement* option in the *Display Settings* page.

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3. Using the Adapter

3. When unchecked, video will be extended among
   the connected monitors, with the Arrangement
   screen display icons to represent the location of
   the monitors. Drag the monitor icons so they are
   positioned to replicate the location of the actual
   displays. For example, if display 1 is directly to
   the left of display 2, the monitor icons should be
   positioned that way. This affects which side of the
   screen the mouse is allowed to move to the next
   display from and is therefore essential to ensure
   smooth mouse movement between displays. The
   primary display will always be indicated by a white
   bar at the top of its icon.

3. Using the Adapter

3.3 Mirroring Video on the Add-On Display

To display the same thing on both the primary and add-on display, follow the steps below:

Windows

1. Open your computer's *Display Settings* page.
2. Select the monitor icon that represents the add-on display you wish to change, or choose the add-on display from the drop-down menu. The primary display is always icon 1.
3. Un-check the box next to *Extend the desktop onto this monitor*, or select the option from the drop-down menu to duplicate the display, and then click the *Apply* button.

   Note: In Mirror mode, the add-on display settings are limited by those of the primary display. If the primary display only supports a resolution of 1280 x 1024, the add-on monitor will be limited to a resolution of 1280 x 1024 or less.

Mac

1. Open your computer's *Display Settings* page.
2. Bring up the *Arrangements* screen by clicking on the *Arrangements* option in the *Display Settings* page.
3. *(Setting all add-on displays to mirror mode)* To set all add-on displays to mirror the primary display, simply check the *Mirror Displays* setting.

3. Using the Adapter

4. *(Setting some add-on displays to mirror mode)* To set some add-on displays to mirror the primary display while leaving others as extended, uncheck the *Mirror Displays* setting.

5. While holding down the [Cmd] and [Alt] keys on the keyboard, drag the icon of the add-on monitor that you wish to mirror onto the icon of the primary display.

6. Repeat step 4 for each add-on display you wish to mirror, while leaving the other displays extended.

3.4 Making the Add-On Display the Primary Display

To make the add-on display the primary display for the computer, follow the steps below:

Windows

1. Open your computer's *Display Settings* page.

2. Select the monitor icon that represents the add-on display you wish to change, or choose the add-on display from the drop-down menu. The primary display is always icon 1.

3. Check the box next to *This is my main monitor* and click the *Apply* button to make the add-on display the primary display for the computer.

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3. Using the Adapter

Notes:

- *Some computers require you to first deselect the original primary display before setting a new primary display.*
- *Once set as the primary display, the add-on display will continue to be the primary display as long as it is connected to the computer. Once disconnected, the primary display will default back to the monitor connected to the computer via standard cable.*
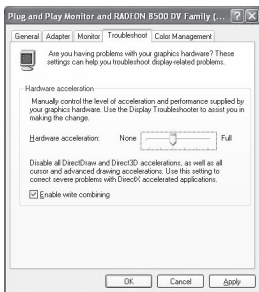
Mac

1. Open your computer's *Display Settings* page.
2. Bring up the *Arrangements* screen by clicking on the *Arrangements* option in the *Display Settings* page.
3. Drag the white bar at the top of the primary monitor icon to the icon of the display you wish to make the new primary monitor.

4. Troubleshooting

Q: **Why is the display on the add-on monitor blank?**

A: If the monitor power LED is Green, wait a moment for the monitor to display the video, as it may take some time for the video to be displayed on the add-on monitor. If after a few minutes the video does not display, restart your computer. Also, make sure the computer is not in standby or hibernation mode, as it will cause the add-on monitor to be blank.

If the monitor power LED is Red, check that the connection is properly made. If the connection is fine and the problem still exists, uninstall the driver, unplug the adapter and reinstall the driver.

4. Troubleshooting

Q: **Why is the add-on monitor flickering?**

A: This is usually caused by a low refresh rate. When in "Mirror Mode," increase the refresh rate of the main monitor. This will in turn increase the refresh rate of the add-on monitor, which should stop the flickering. When in "Extended Mode," increase the refresh rate of the add-on monitor.

Q: **When I play MPEG files using Windows Media Player on the extended monitor, why does the display become abnormal when I switch it to full screen mode?**

A: If your system is Windows XP SP1, upgrading to SP2 will solve this problem.

Q: **Why does the video not display properly when in "Full-Screen" mode?**

A: Try the following tips to improve the smoothness of the video playback:

- Reduce the resolution of the display to 640 x 480 or 800 x 600.
- Use the adapter in extended mode.
- Terminate any other CPU intensive applications running on the computer.
- As some media players require DirectX hardware support to correctly operate, try a different media player which requires less DirectX support.

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4. Troubleshooting

- Drag the media player to the add-on screen and close the player. Restart the player and it should open on the add-on monitor. Now try playing the media file again.
- Try reducing the hardware acceleration level of the primary display (NOT the add-on monitor) to levels 1, 2 or 3 and restarting the media player. The hardware acceleration can be found by right-clicking on your desktop and click "Properties > Settings > Advanced > Troubleshoot."
- The video playback may be unusual when the add-on monitor is mirroring the primary display and there is another extended screen connected to the computer. The extended screen must be disabled before the content will be correctly cloned to the add-on monitor.

Q: **In "Extended Mode," why does the add-on monitor have a black border around the desktop?**

A: This happens when the resolution used by the add-on monitor is higher than the resolution used by the primary monitor. To solve this problem, configure the add-on monitor to use the same resolution as the primary monitor.

4. Troubleshooting

Q: In "Extended" mode, why does the cursor disappear?

A: If you're in extended mode but have not yet connected the add-on monitor to the display adapter, the desktop will still pan to the add-on monitor. It's possible that your cursor has moved to the extended desktop and is no longer visible on the primary display.

When this occurs, try the following:

- Connect the add-on monitor to the display adapter. You should be able to see the mouse cursor once the computer screen is displayed.
- Move your mouse to try and drag the cursor back onto the primary monitor.
- Unplug the display adapter from the computer to restore the cursor.

5. Specifications

Feature	Specification		
Source Connector	USB A (Male)		
Display Connector	HD15 (Female)		
Maximum Number of Display Adapters	6 (Windows), 4 (Mac)		
RAM	8M x 16 DDR Synchronous DRAM (SDRAM)		
Power	Bus-powered		
Supported Operating Systems	Windows 2000 and above, Mac OS X 10.4 and above		
Operating Temperature	10° to 40° C (50° to 104° F)		
Storage Temperature	-20° to 70° C (-4° to 158° F)		
Relative Humidity	Less than 85%, Non-Condensing		
	Resolution	**16-Bit Refresh Rate**	**32-Bit Refresh Rate**
	640 x 480	60, 72, 75, 85	60, 72, 75, 85
	800 x 600	56, 60, 72, 75, 85	56, 60, 72, 75, 85
	1024 x 768	60, 70, 75, 85	60, 70, 75, 85
	1280 x 720 (720p)	60	60
Supported Video Resolutions	1280 x 768	60, 75, 85	60, 75, 85
(Note: Interlaced and reduced	1280 x 800	60	60
blanking modes are not	1280 x 1024	60, 75, 85	60, 75
supported)	1366 x 768	60	60
	1400 x 1050	60, 75, 85	60, 75, 85
	1600 x 1200	60	60
	1680 x 1050	60	60
	1920 x 1080 (1080p)	60	60

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Warranty and Product Registration

3-Year Limited Warranty

Tripp Lite warrants its products to be free from defects in materials and workmanship for a 3-Year period from the date of retail purchase by end user. Tripp Lite's obligation under this warranty is limited to repairing or replacing (at its sole option) any such defective products.To obtain service under this warranty you must obtain a Returned Material Authorization (RMA) number from Tripp Lite or an authorized Tripp Lite service center. Products must be returned to Tripp Lite or an authorized Tripp Lite service center with transportation charges prepaid and must be accompanied by a brief description of the problem encountered and proof of date and place of purchase. This warranty does not apply to equipment which has been damaged by accident, negligence or misapplication or has been altered or modified in any way, including opening of the unit's casing for any reason. This warranty applies only to the original purchaser who must have properly registered the product within 10 days of retail purchase.

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Product Registration

Visit tripplite.com/warranty to register your new Tripp Lite product. You'll be automatically entered into a drawing for a chance to win a FREE Tripp Lite product!*

* No purchase necessary. Void where prohibited. Some restrictions apply. See website for details.

Warranty and Product Registration

Warning!

Use of this equipment in life support applications where failure of this equipment can reasonably be expected to cause the failure of the life support equipment or to significantly affect its safety or effectiveness is not recommended.

FCC Notice, Class B

This device complies with part 15 of the 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.

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

• Reorient or relocate the receiving antenna.

• Increase the separation between the equipment and receiver.

• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

• Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications to this equipment not expressly approved by Tripp Lite could void the user's authority to operate this equipment.

Warranty and Product Registration

WEEE Compliance Information for Tripp Lite Customers and Recyclers (European Union)

Under the Waste Electrical and Electronic Equipment (WEEE) Directive and implementing regulations, when customers buy new electrical and electronic equipment from Tripp Lite they are entitled to:

- Send old equipment for recycling on a one-for-one, like-for-like basis (this varies depending on the country)
- Send the new equipment back for recycling when this ultimately becomes waste

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