

[User's Manual >>](#)

EXPANDING YOUR VIEW

USB DISPLAY ADAPTER



Safety Instructions

Always read the safety instructions carefully

Keep this User's Manual for future reference

Keep this equipment away from humidity

If any of the following situation arises, get the equipment checked by a service technician:

- The equipment has been exposed to moisture.

- The equipment has been dropped and damaged.

- The equipment has obvious sign of breakage.

- The equipment has not been working well or you cannot get it work according to User's Manual.

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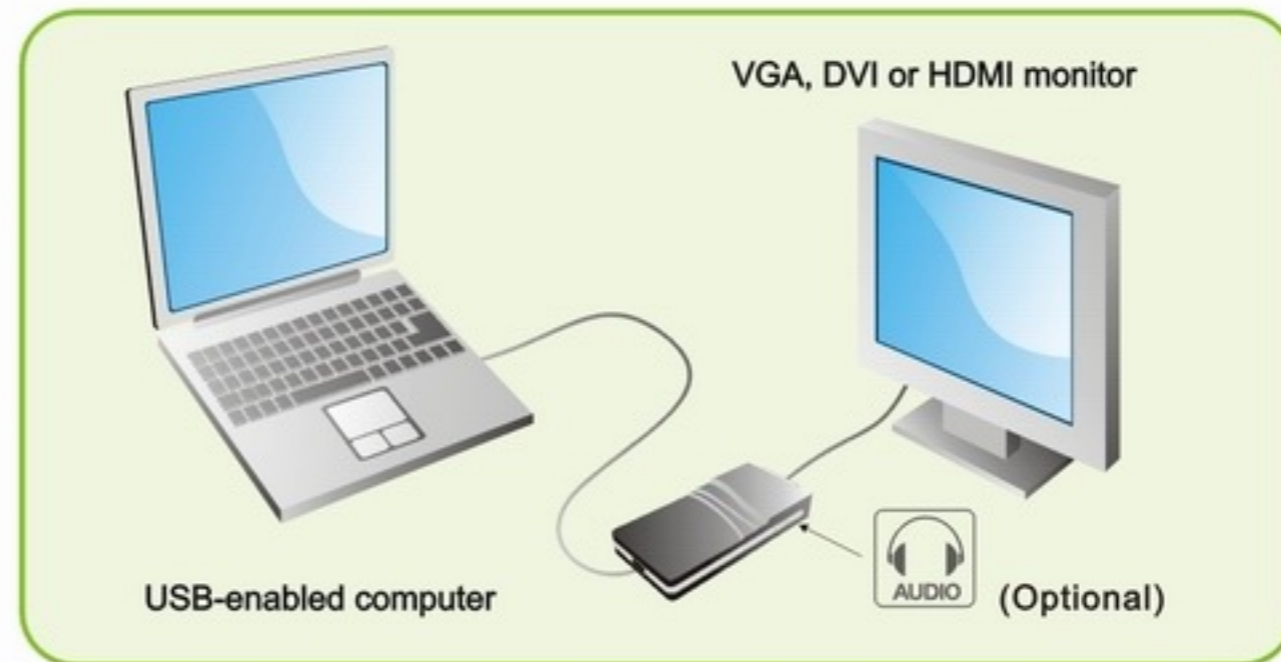


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1. INTRODUCTION

This USB Display Adapter enables you to connect one more monitor, LCD or projector to a computer with a USB 2.0 port. For desktop users adding an extra monitor via USB connection is easier than ever without having to open the computer chassis to install an internal video card. Once the installation is done, the USB-attached monitor soon wakes up. No function key hassle to swap a second monitor

With this handy adapter, you can enjoy many benefits Brought by an add-on monitor. The most obvious one is that you get more desktop area to have more applications visible at one time. For example, you may work on one monitor while your family watch video on the other. No more stacking windows within the confines of a single display. Or you may span an application, e.g. spreadsheets, across two displays. What's more, the adapter is hot pluggable. If you are not using the extra monitor, just unplug the adapter at any time; no reboot needed



System performance is an important issue when using multiple monitors. Another benefit of this adapter is that it uses little computer resource, ensuring users get quality display without comprising computer performance.

Applications

Office workstation

- View your large spreadsheets across two screens with Display continuity
- Multitask more effectively without overlapping windows
- Edit on one screen while surfing the Internet information On The other

On the road

- Do multiple screen presentations without bringing Another Computer
- Easily provide multiple screen exhibitions in a trade show

Graphics workstation

- Use second display for palettes/tools
- Get a panoramic view of large documents

Editing workstation

- Type documents on one screen while viewing reference Material on the other
- Compare two documents simultaneously across two Screens

Financial analysis

- Have one monitor per data stream
- View charts and live data at the same time

Entertainment

- View videos/TV on one screen and reviews on the other
- Get additional perspectives when playing games

Features

- Add-on monitor, LCD or projector through a single USB 2.0 Port
- Supports up to 6 USB display adapters to work Simultaneously
- Plug & Play
- Audio and Microphone (Optional)
- Hot-plug; add or remove monitor without system reboot
- Windows 2000 / XP(32-Bit) / Vista(32-Bit, 64-Bit), Windows 7 Supported
- Apple OS X - Tiger 10.4.11, Leopard 10.5.5 supported
- Resumes from hibernation and suspend modes

System Requirements

The minimum requirements for the PC are:

- With CPU at 1.2GHz or higher processor clock. Intel Pentium/Celeron family, or AMD K6/Athlon/Duron family, Or Compatible processor
- 256 MB of RAM
- At least one USB2.0 port
- 30Mb of available disk space
- Windows 2000_SP4 / XP / Vista 32/64-bit, Windows 7
- MAC OS X
- Super VGA (800 x 600) or higher resolution monitor

To play DVD on the adapter-attached monitor, in addition to the requirements above, the following requirements should also be met:

- With dual core CPU at 2.0 GHz processor clock
- The adapter screen resolution be set to 800x600 with 16bit Color

Package Contents

Before installation, please check the items in the package.

The package should contain the following items:

- | | |
|----------------------------------|----|
| • USB Display Adapter | x1 |
| • Driver CD | x1 |
| • USB 2.0 Cable | x1 |
| • Quick Installation Guide | x1 |
| • DVI to VGA Adapter (Optional) | x1 |
| • DVI to HDMI Adapter (Optional) | x1 |
| • Audio Adapter (Optional) | x1 |
| • Audio Cable Adapter (Optional) | x1 |

2. Installation

Follow the procedures below to install the driver and then connect the adapter:

1. Insert the provided driver CD into your CD-ROM drive. The setup program will run automatically. If not, locate and double-click the **Setup.exe** File under the **Driver** folder on the CD.

Notice for Windows Vista users:

Windows Vista users will encounter a **User Account Control** dialog box when attempting to install a program. Enter an administrator password or click **Allow** to start the installation.

When prompted with **Windows Security** dialog box, select **Install this driver software anyway**.

Notice for Windows 2000 users:

If the following message appears, please download and install the required Patch first and then execute the **Setup.exe** file on the CD.



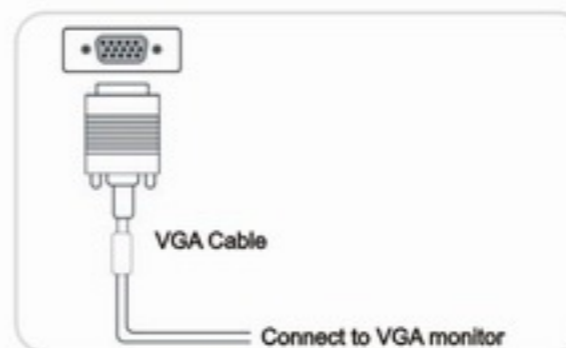
2. When the welcome screen appears, click **Next**.



3. If prompted to restart your computer, click Yes to restart or No to manually restart later. Note that a reboot is always needed for a successful installation. If the reboot prompt doesn't appear, make sure to manually reboot Your computer.



4. Connect the adapter to your computer and monitor.
Connect the smaller end of the USB cable to the adapter. Then connect the other end of the USB cable to an USB 2.0 port on your computer.
If your monitor is not yet connected to the adapter, make The connection and power on your monitor.



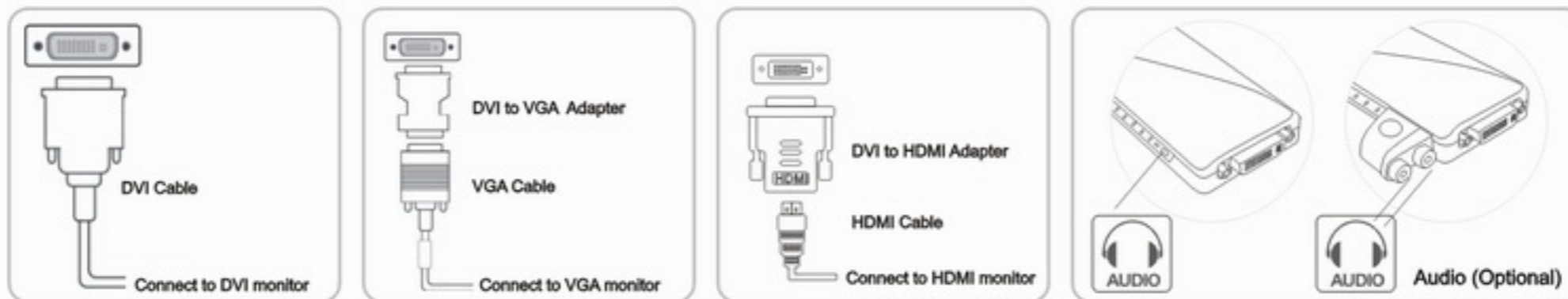
- For VGA model: Use a VGA cable (not provided) to connect the VGA jack to a monitor equipped with VGA input jack.

- **For DVI or DVI+Audio Model :**

The equipped DVI-I (DVI-Integrated),HDMI connector transmits both the digital and analog signals. This means it supports either of these three connection types:

It can be connected to a DVI-D (digital) monitor using a DVI cable (not provided) it can be connected to an analog VGA monitor using the provided DVI-I to VGA adapter and a VGA cable (not provided).

Or, it can be connected to an HDMI monitor using the provided DVI-I to HDMI adapter (Optional)and a VGA cable (not provided).



5. After you connect the adapter, Windows will automatically complete the installation.

6. Once the installation is done, an extended screen will appear on the add-on monitor.

For Windows Vista, if the add-on monitor is blank, please reboot your system again.

If required, you can connect and disconnect the add-on monitor any time without disconnecting the adapter from the USB port on your computer.

To change the display mode, see next chapter for instructions.

- During the installation, it's normal that the screen flicks black a couple of times.
- Sometimes it takes time for the add-on monitor to show the video.

3. Using the Adapter

Display Modes

There are several ways you can utilize the monitor attached on the adapter. The add-on monitor can be configured to use either “mirror mode”, “extended mode” or be the primary display as described in this section.

Once connected there will be a DisplayLink icon on the task bar



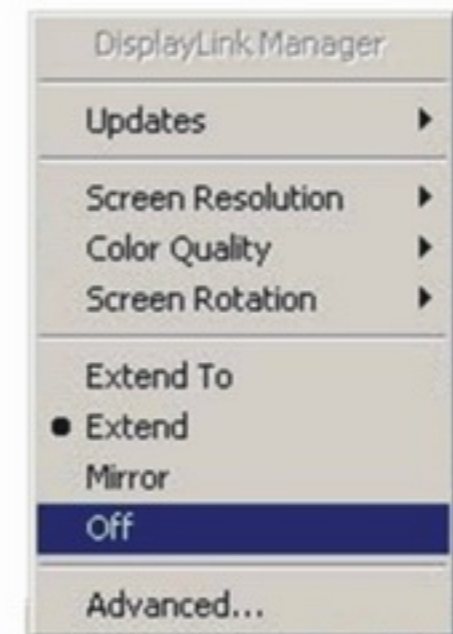
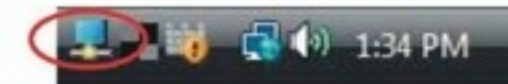
Video Mode Configuration

When the UGA adapter first connects, the default setting is in extension mode. You may change the screen mode and the operation mode under the Windows display properties.

Go to Control Panel and double click “Display.” Choose “Settings” tab.

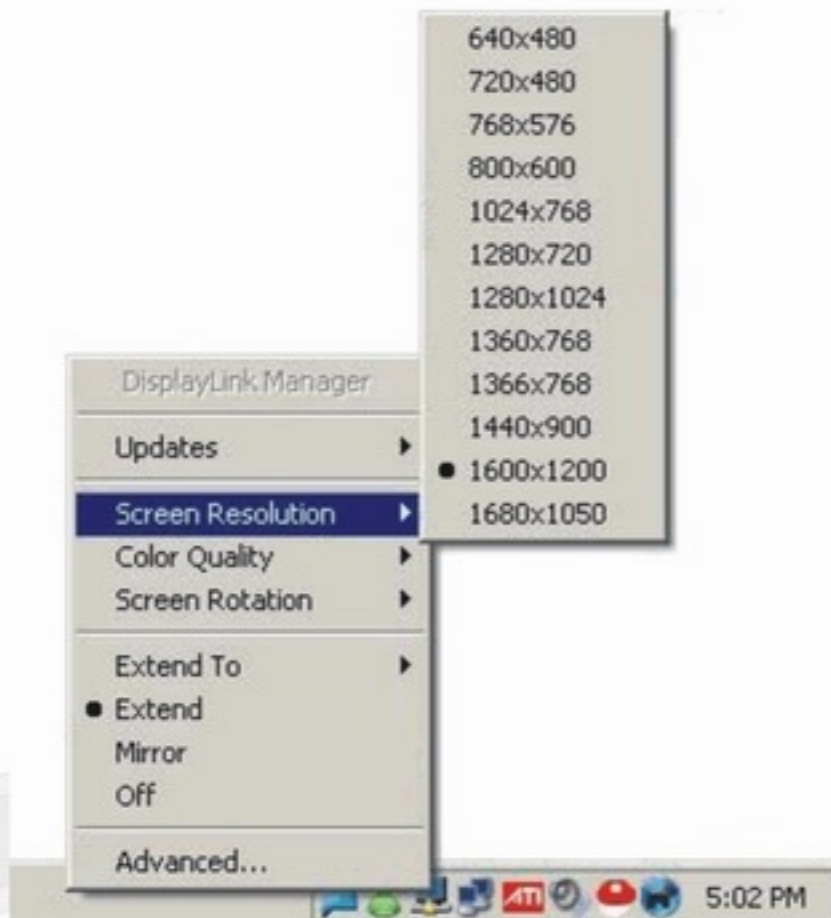
There are two options to adjust the Resolution, Color Quality, Screen Rotation, and Extended or Mirror Mode. One is to click on the **DisplayLink icon** in the task bar another is to go to Control Panel, double click on “Display,” then choose settings tab.

Note: If no output is seen on the monitor connected to the UGA adapter, it may be in a mode which cannot be displayed by the monitor. This can happen if the monitor does not have its supported modes to the UGA adapter Reduce the resolution of the primary display until an image is shown.



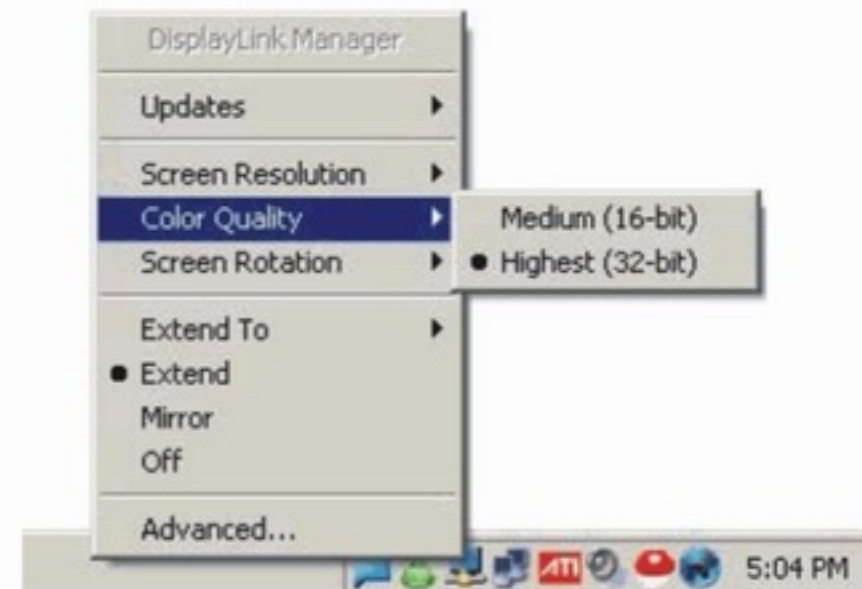
Screen Resolution

Screen Resolution for extended display or mirrored display.
To change the resolution, you have to be in extended mode.



Color Quality

Color Quality can be selected to 16 bit or 32 bit



Screen Rotation

Normal - screen is in normal position

Rotated left - Rotates screen to the left

Rotated right - Rotates screen to the right

Upside-Down - Rotates screen upside down

Extend To

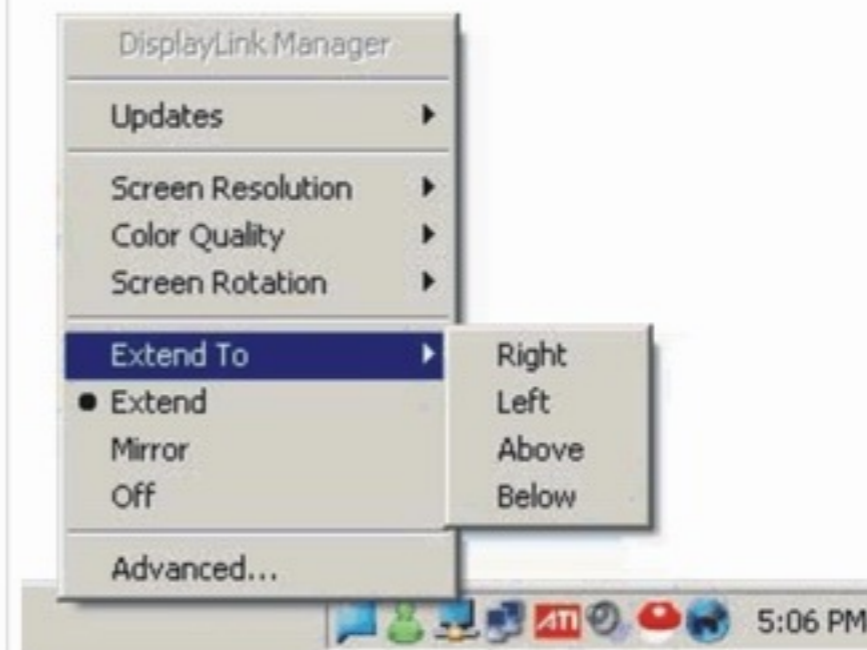
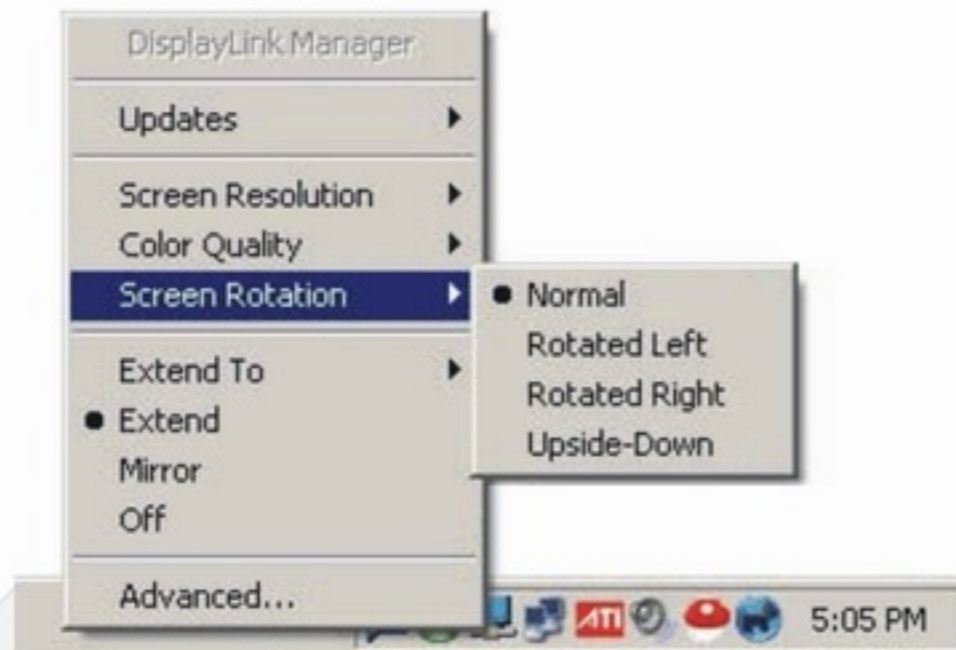
When multiple displays are connected the image can be extended separately to different monitors.

Extend To Right - Extends to the right display

Extend To Left - Extends to the left display

Extend to Above - Extends to above display

Extend to Below - Extends to below display



Extend

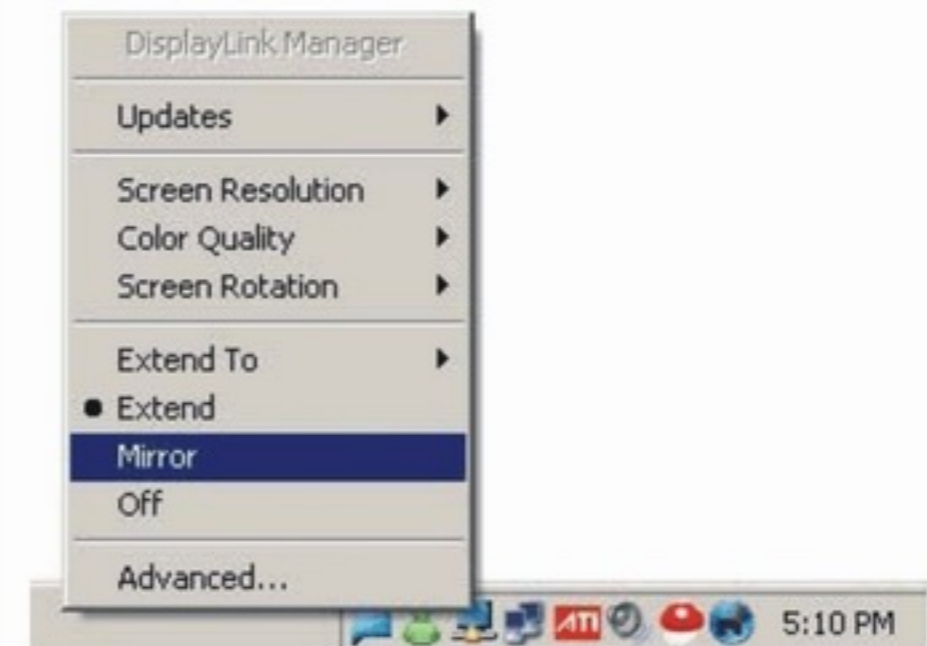
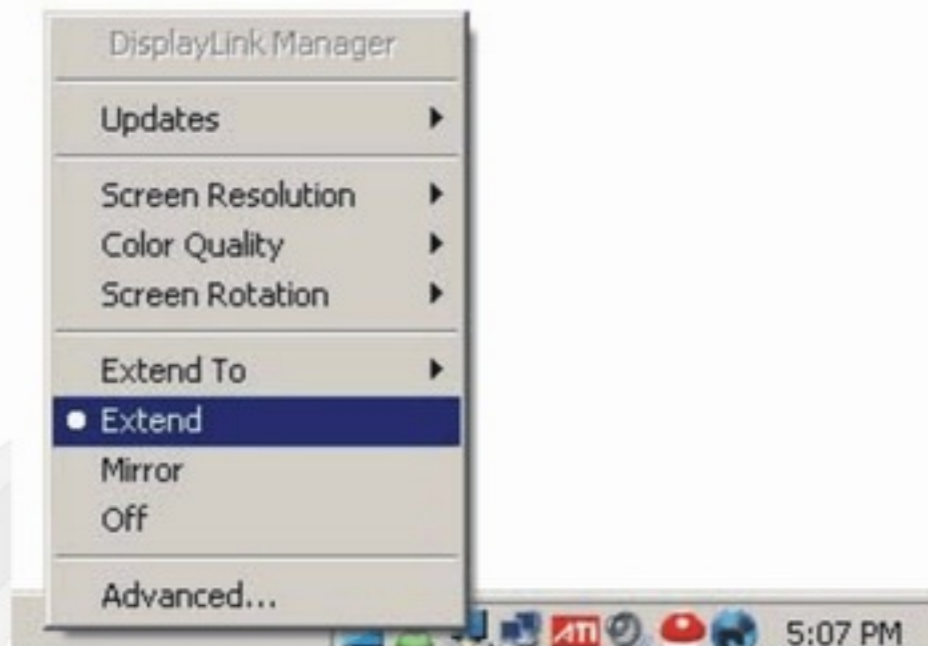
Extends the desktop to second display

Mirror

Extends the desktop to second display

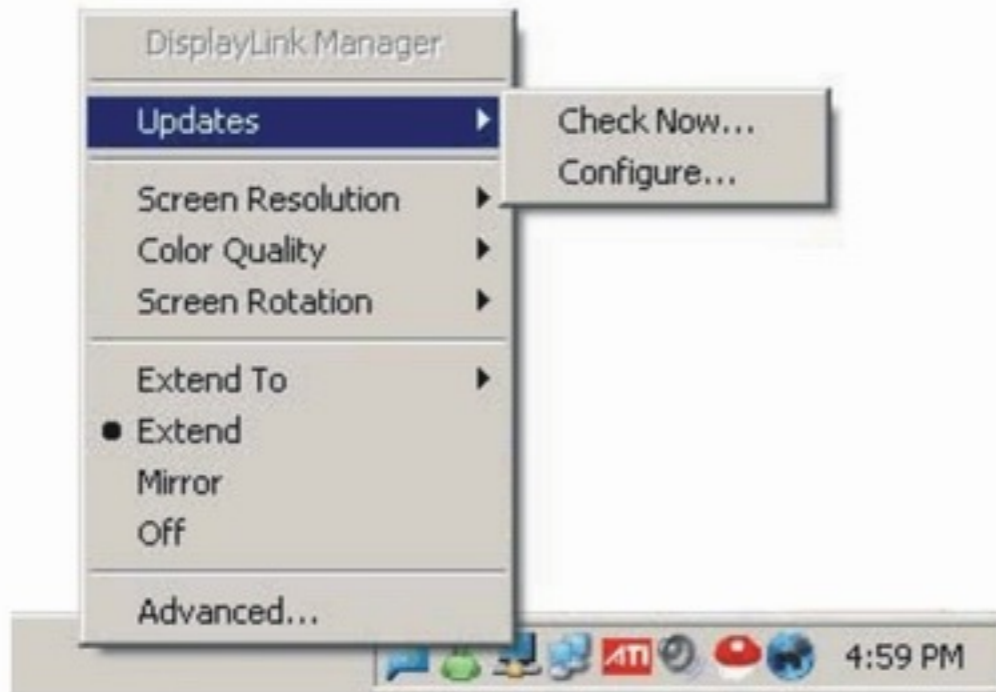
Mirros desktop to second display.

When connecting to computer LCD the PC and the MAC display settings are unchanged. The max resolution that can be displayed on the mirror display is 1600x1200. If connecting to a LCD or Plasma TV the PC display settings need to be set at 1024x768 the MAC display settings are unchanged



Updates

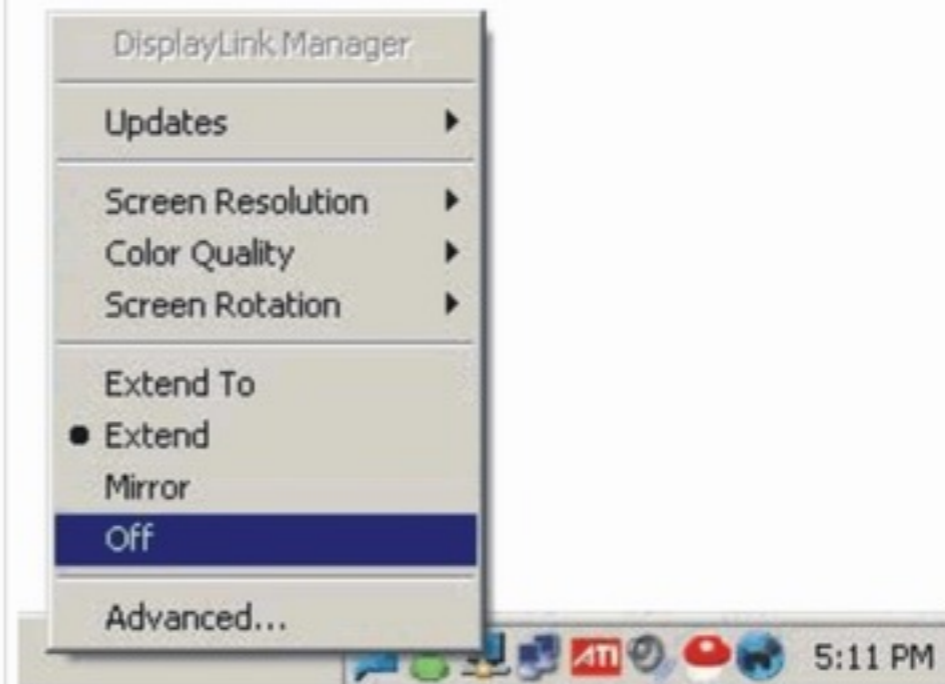
From this menu the software can be updated online, or configured for automatic updates



Off / Advanced

Off : Turns off software.

Advanced : Windows Display Settings



Adjusting Resolution, Color Depth and Refresh Rate

There are three components that make up the screen mode:

Resolution: In common usage, this refers to the number of pixels displayed on screen horizontally and vertically.

Color Depth: This defines the number of different colors that can be shown on the screen at the same time.

Refresh rate: Measures the speed that the entire screen is rescanned. Higher frequencies reduce flicker.

Some monitors advertise the supported modes through the video connector. If this is the case, the adapter identifies the supported modes from the monitor. If the monitor does not advertise the supported modes, the adapter software chooses a set of common screen modes for the monitor.

The software supports the modes listed below.

About the resolutions and refresh rates available to users

The resolutions and refresh rates available to the user through Windows are a comprise of the support from the following elements:

- The USB display adapter
- The primary monitor and the add-on monitor
- The primary video card on your computer and installed drivers

Therefore, for example, if your monitor doesn't support a resolution of 1600x1200, then 1600x1200 is not possible even you are using a USB display adapter with 1600x1200 support. This ensures that the monitor cannot be put into an unsupported mode, which might damage it.

The software supports the modes listed below.

Color Depth Resolution	Refresh rates available at 16 bit color quality	Refresh rates available at 32 bit color quality
640x480	60 72 75	60 72 75
800x600	56 60 72 75 85	56 60 72 75 85
1024x768	60 75 85	60 75 85
1280x960	60 85	60 85
1280x1024	60 75 85	60 75
1360x768	60	60
1366x768	60	60
1368x768	60	60
1400x1050	60 75 85	60 75 85
1440x900	60	60
1600x1200 **	60	60
1600x1050 **	59 60	59 60
1920x1080 **	59 60	59 60
1920x1200 ***	60	60
2048x1152 ***	60	60

* Note that interlaced modes are not supported.

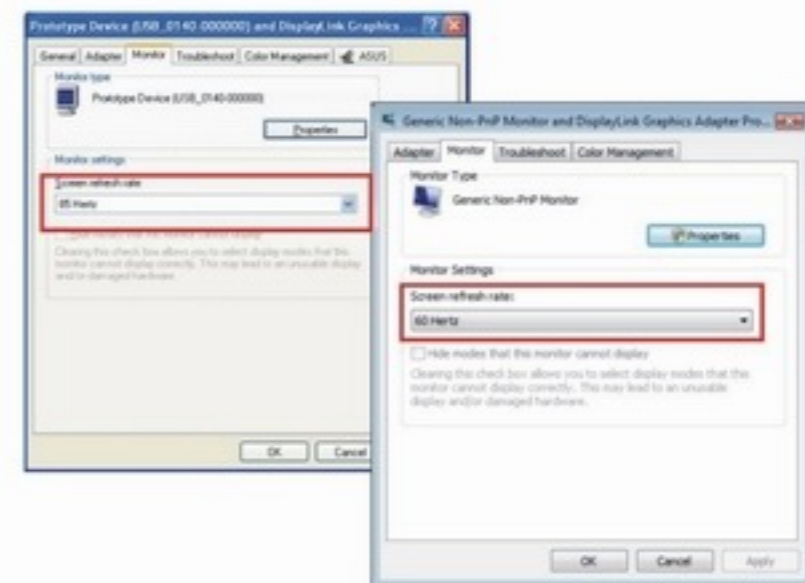
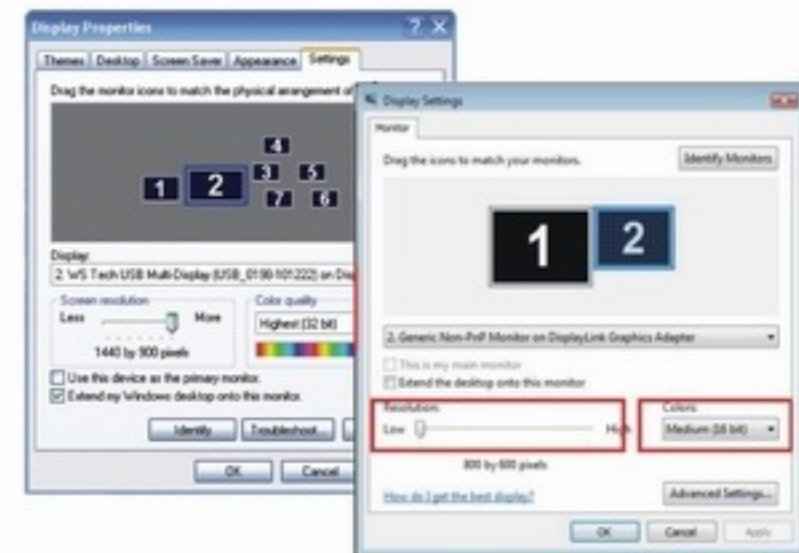
**Only supported by 1600x1200 model.

***Only supported by 1920x1200 model.

If cloning the primary display, the video component will try to use the preferred monitor mode. In some cases, this may not be the most appropriate mode for the cloned desktop. It is recommended that the primary display resolution be changed to closer match the default resolution of the add-on monitor.

To configure the three components (resolution, color depth and refresh rate) of a screen mode, follow these steps:

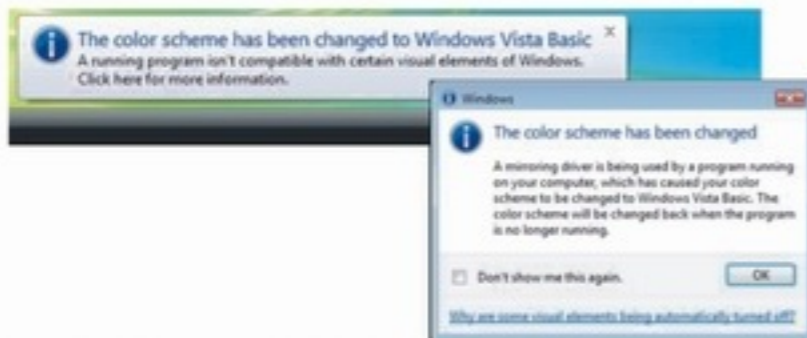
1. Position the mouse anywhere on your computer desktop, right-click and select Properties > Display Settings on Vista or Properties > Settings on XP/2000.
2. In the Display drop-down menu, select the option ends with “USB Graphics Adapter” .
3. To change the screen resolution or color quality, select those options on The screen. Be sure to select one of the supported resolutions and color quality numbers in the table above. For an add-on monitor, you can also Select any resolution or color quality supported by that monitor.
4. To change the refresh rate, click Advanced... and then click Monitor.
5. Select a refresh rate from the Screen refresh rate drop-down list and then click Apply.
6. Click OK to close the settings screen.



Effects on Vista Aero Interface

The USB Display Adapter follows up with the release of the Virtual Graphics Card (VGC) software to add the much needed Vista Aero 3D support in addition to improving video playback on Windows XP. Version 4.3 driver supports Vista's Aero 3D "Glass effect" in USB video's extend and mirror mode. For video playback in Vista, WMP11, WinDVD 8, PowerDVD 7 and RealPlay 11 should work.

On Windows Vista, after you install the USB display adapter the original Vista Aero interface (if enabled) will be disabled. You will be warned that that color scheme has been changed when finishing the adapter installation. But if you unplug or Uninstall the adapter, the system will automatically resume the Aero Glass look.



Standby and Hibernate, Shut Down and Restart

When the adapter is connected to a computer and an external monitor, if the computer goes into standby or hibernate mode, the external monitor display goes blank.

When the computer returns to an active state, the external monitor display keeps the same settings it had before the Computer went into standby or hibernate mode. However, if the add-on monitor was set for extended mode, windows that were previously on the external monitor will not move back to that secondary monitor. Also, if the add-on monitor is in extended mode and the computer requires a login after standby or hibernate mode, the login screen appears on the

primary computer monitor, not the external monitor.

If the computer is shut down, restarted and logged in, again the add-on monitor returns to the same mode as it was before shutdown.

Using Multi Adapters

Up to 6 adapters can be simultaneously attached to one computer. To use two adapters:

1. Install the driver as described in the "2. Installation" section and connect the first adapter to your computer.

The flip 3D effect will be automatically disabled when the adapter is in service. But if you unplug or uninstall the adapter, the system will automatically resume the 3D effect.

2. Then connect the second adapter to your computer. The system will automatically complete the installation.

While two adapters are connected to a computer, in most cases both adapters supports extended and mirror modes. The only exception is on Windows Vista XDDM mode as described below.

Limitation for dual adapters on Windows Vista in XDDM mode:

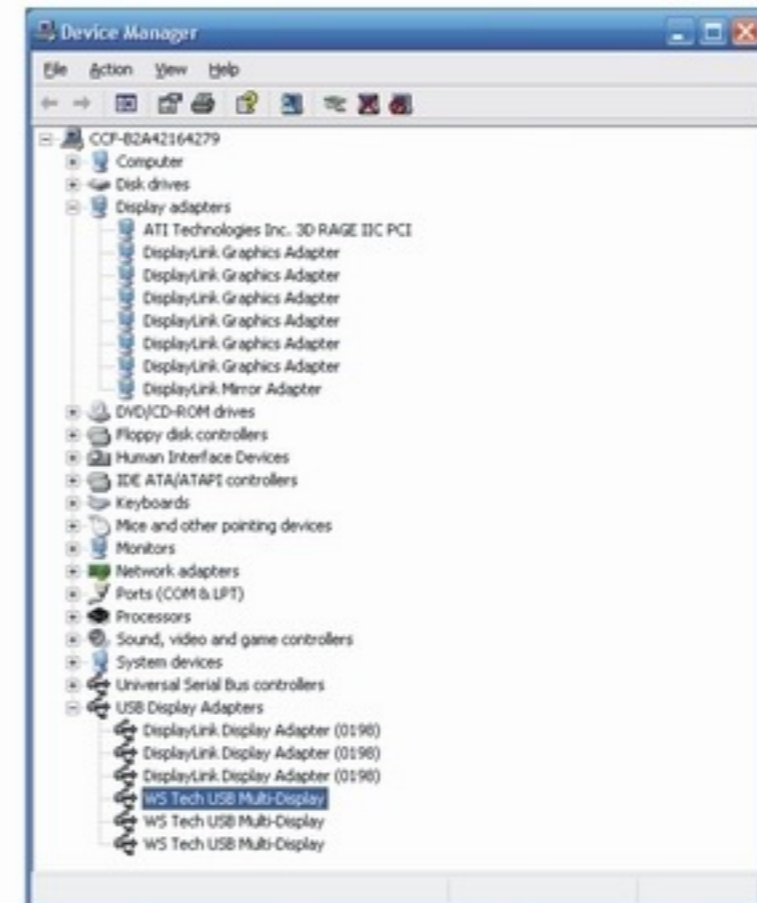
In this mode one extended screen and one mirrored screen is supported. Only the first connected adapter can be configured to use extended mode; the second adapter is forced to Use mirror mode. When you bring out the Windows display settings dialog box, you will find that only one ...USB Graphic Adapter(representing your first attached Adapter) is configurable.



What is Vista XDDM mode?

XDDM refers to Windows XP Driver Mode. It is a video card driver mode used in some legacy computers that running the new generation Vista OS. It provides an interface similar to Windows XP user Interface on Vista and one of its characteristics is that it doesn't support Windows Aero interface.

To see current display video driver mode, right-click Computer on the desktop and select Device Manager. Then expand the Display adapters item.



Audio Modes (for UGA + Audio Model)

Prior to using the speaker/microphone connected to the Adapter, you have to correctly configure your application to use USB (Multimedia) Audio Device, i.e., the audio components of the UGA Adapter.

When the UGA Adapter is connected to your computer, the audio devices named USB (Multimedia) Audio Device are automatically installed and may override Windows default audio settings. The most obvious effect is that your original music playback will be re-directed to the speaker connected to the UGA Adapter. However, it's possible that users may want to use original sound card for music playback and use the Adapter's audio ports for Play Movie via Media Player software (such as Windows Media Player, Real Player, WinDVD, PowerDVD etc...). In such cases users need to manually configure required audio device for each application.

Configuring Windows Audio Device

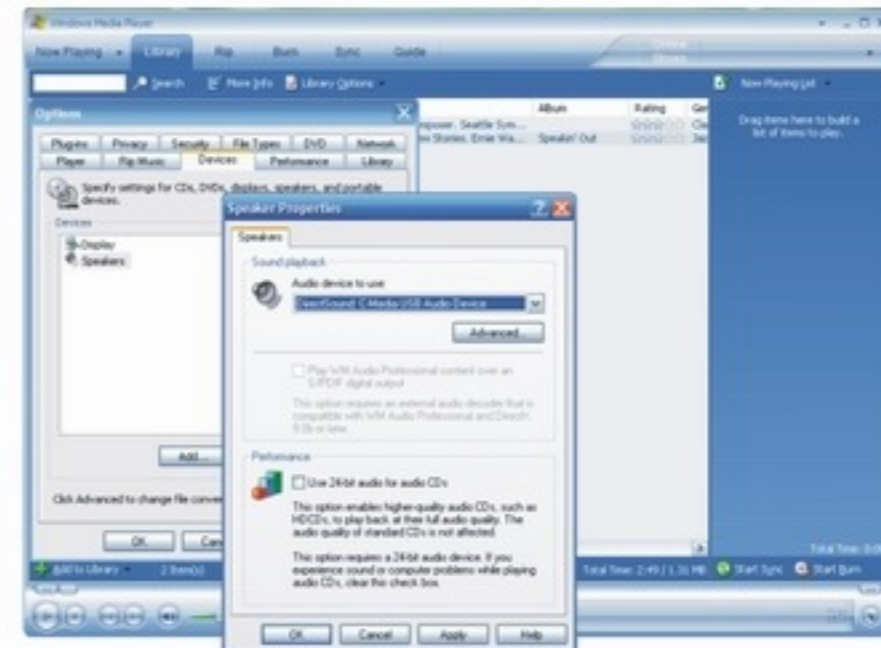
To specify a sound device for music playback in Windows, open Control Panel and double-click the sound or audio icon. Then select a desired device in the playback section. If you want to use your original sound card for music playback, make sure to select it instead of USB Audio Device.



Configuring Application Audio Device

To Play Movie via Media Player software using the Headphone or Speaker connected to the UGA Adapter, make sure the Media Player software (such as Windows Media Player, Real Player, WinDVD , Power DVD etc...) are configure to use USB Audio Device as the 3audio in and out devices.

To chat via instant messaging software using the headphone and microphone connected to the UGA Adapter, make sure the instant messaging software, (such as MSN messenger, Yahoo messenger or Skype) are configured to use USB Audio Device as the audio in and out devices.



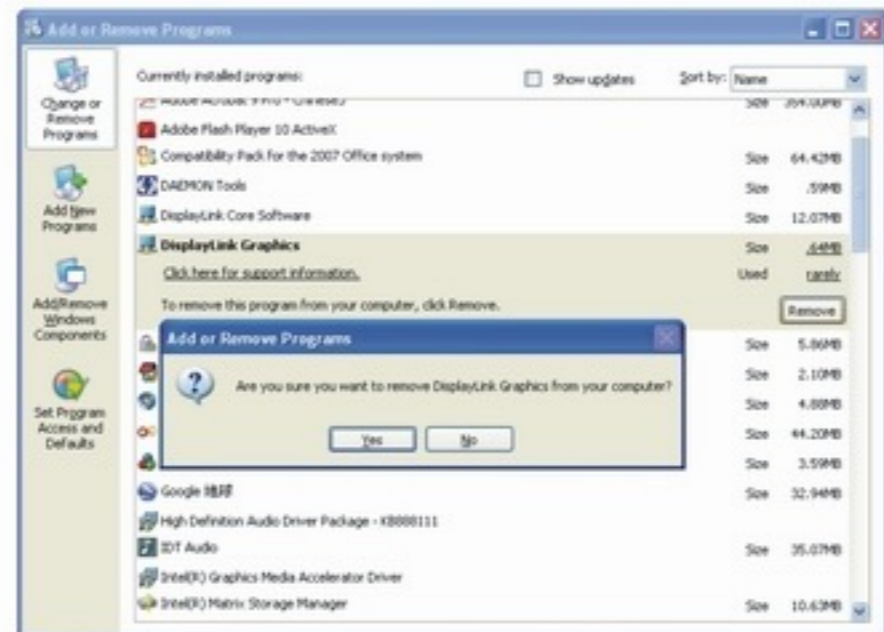
Disconnecting the Adapter

If the adapter is unplugged from the computer, the add-on monitor goes blank. All windows and icons move to the primary screen. On reconnection of the adapter, the adapter returns to the same mode as it was before disconnection. However, windows and icons that were previously on the screen will not be moved back.

Uninstall the Adapter and Driver

If for any reason you want to uninstall the video adapter and its driver, please take these steps:

1. Open the **Control Panel** and double-click **Programs and Features** on Vista or **Add or Remove Programs** on XP/2000.
2. Select **DisplayLink Graphics** and click **Uninstall or Remove**.
3. Click **Yes** to confirm the removal. During the removal process a couple of DOS windows will pop up.
4. Click **Yes** to restart your computer and then unplug the adapter **Now**.



4. TROUBLESHOOTING

Q1: The display on the add-on monitor is blank?

A: If the monitor power LED is green (in most cases), wait a moment for the monitor to show the video as sometimes it takes time for the add-on monitor to show the video. You can also reboot your system to try again. Also make sure the computer is not in standby or hibernation mode, which will lead the add-on monitor to be blank.

If the monitor power LED is red (in most cases), check if the connection is properly made. If problem still exists, uninstall the driver, unplug the adapter and reinstall the driver to try again.

Q2: The add-on monitor is flickering?

A: This is usually caused by a low refresh rate. To solve this problem:

- In mirror mode, increase the refresh rate of the main monitor. This will in turn increase the refresh rate of the add-on Monitor.
- In extended mode, increase the refresh rate of the add-on monitor.

Q3: When I play MPEG file by Windows Media Player on the extended monitor, how come the display becomes abnormal when I switch it to full screen mode?

A: If your system is Windows XP SP1, we suggest you upgrade it to SP2 to solve this problem.

Q4: When playing the video in full screen mode, the motion is not smooth?

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

Reduce the resolution of the display to 640x480 or 800x600.

Use the adapter in extended mode.

Terminate any other CPU intensive applications running on the computer.

If you still have issues playing media content on the adapter, try the following steps:

- As some media players require DirectX hardware support to correctly operate, try a different media player which requires less DirectX support.
- 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. Some players use this setting even when playing on a different display.
- 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.

Q5: In extended mode, the add-on monitor appears to have a black border around the desktop?

A: This happens when the resolution used by the add-on monitor is larger 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.

5. SPECIFICATIONS

Host Interface	USB 2.0
Video Interface	VGA 、 DVI-I or HDMI
Connectors	Video Modes: VGA HDDE 15pin Female Connector Or DVI-I 24pin + 5pin Female Connector Audio Modes: Audio / Microphone Support / Mixed Audio output RCA*2(Left and Right Track) Interface Host upstream link: USB Mini-B Type Female Connector
Connectivity	Up to 6 adapters on a computer
RAM	8M x 16 DDR Synchronous DRAM (SDRAM)
Power Mode	Bus-powered
Operation System Support	Win 2K/SP4, XP 32-bit, Vista 32/64-bit, Windows7, MAC OS X
Supported Modes	Extended Desktop (Default) Mirrored Desktop Primary Display

**Resolutions,
Refresh rate
and color depth**

The software supports the modes listed below.

Color Depth Resolution	Refresh rates available at 16 bit color quality	Refresh rates available at 32 bit color quality
640x480	60 72 75	60 72 75
800x600	56 60 72 75 85	56 60 72 75 85
1024x768	60 75 85	60 75 85
1280x960	60 85	60 85
1280x1024	60 75 85	60 75
1360x768	60	60
1366x768	60	60
1368x768	60	60
1400x1050	60 75 85	60 75 85
1440x900	60	60
1600x1200 **	60	60
1600x1050 **	59 60	59 60
1920x1080 **	59 60	59 60
1920x1200 ***	60	60
2048x1152 ***	60	60

* Note that interlaced modes are not supported.

**Only supported by 1600x1200 model.

***Only supported by 1920x1200 model.

Housing

Plastic

USB Cable

Separated from the body
Type: USB A -Type Male to 5pin Mini USB B-Type Male
Color: Black

Operating temperature

10-40°C

Storage temperature

-10~80°C

Relative Humidity

< 85% non-condensing

* Specifications are subject to change without notice.

6 Mac OS X User Guide

Introduction

This guide applies to software version 1.0 and above of the MAC software.

What is the Mac Driver?

The Mac driver is designed for Mac OS X 10.4 (Tiger) and 10.5 (Leopard) to enable you to add an additional monitor to your Mac using DisplayLink technology. This software allows you to run your UGA devices on any Intel based desktop or laptop Mac, allowing you to connect up to 4 additional monitors via USB.

Please Note: Power PC-based Macintosh computers, such as late-model iMacs, PowerBooks and PowerMacs, are not currently supported.

What else do I need to use this driver?

As well as an Intel based Mac running the latest versions of Mac OS X 10.4 or 10.5, you will need a UGA device. One UGA device is required for each of the additional displays you wish to connect to your Mac.

Setup Guide

Installing/Uninstalling the MAC Driver

To run the MAC Installer, double-click the MAC DriverInstaller image: this will mount the MAC Driverinstaller.

Select 'Software Installer' to begin installing the MAC Driver on your Mac. This will run a standard Mac installer and will require a restart once complete.

Select 'User Guide' to view the User Guide.

Select 'Software Uninstaller' to uninstall the MAC Driver from your Mac. This will require a restart once complete.



Connecting displays to your Mac

Once you have installed the MAC Driver, simply plug in your UGA products via USB and connect each display to a device. You can now connect up to 4 additional displays. Example setups include:

Example 1: Adding two displays to a MacBook Pro MacBook Pro connects to two monitors via USB cables using UGA adapters. Monitors connect to graphics adapters via standard VGA/DVI cables.



Example 2: Adding three displays to a MacBook Air MacBook Air connects to a standard powered USB hub. Three monitors are connected to the USB hub via UGA adapters. Monitors connect to graphics adapters via standard VGA/DVI cables.



Managing Multiple Displays

When attaching a display that the software has not seen before, the display will default to being extended to the right of the main display. To configure the settings for each of your USB attached displays, select 'Displays' from the 'System Preferences' menu. This will open a 'Display Preferences' window on each of your attached displays allowing you to configure each display as required.

It is possible to use the 'Gather Windows' button to bring all the Display Preferences' windows onto the main display.

Display Preferences:

Display Resolutions

Rotating a Display

Position of Displays

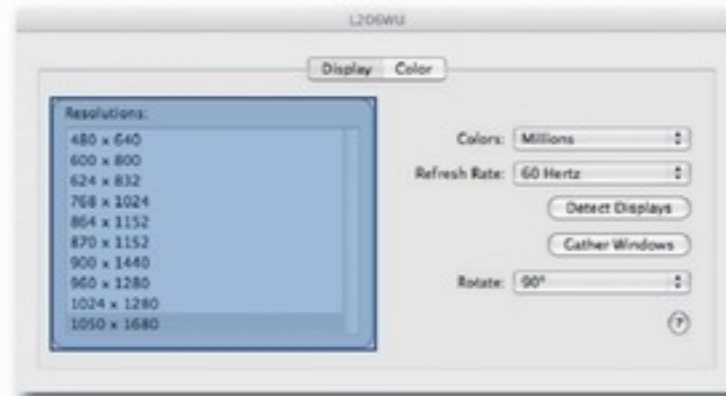
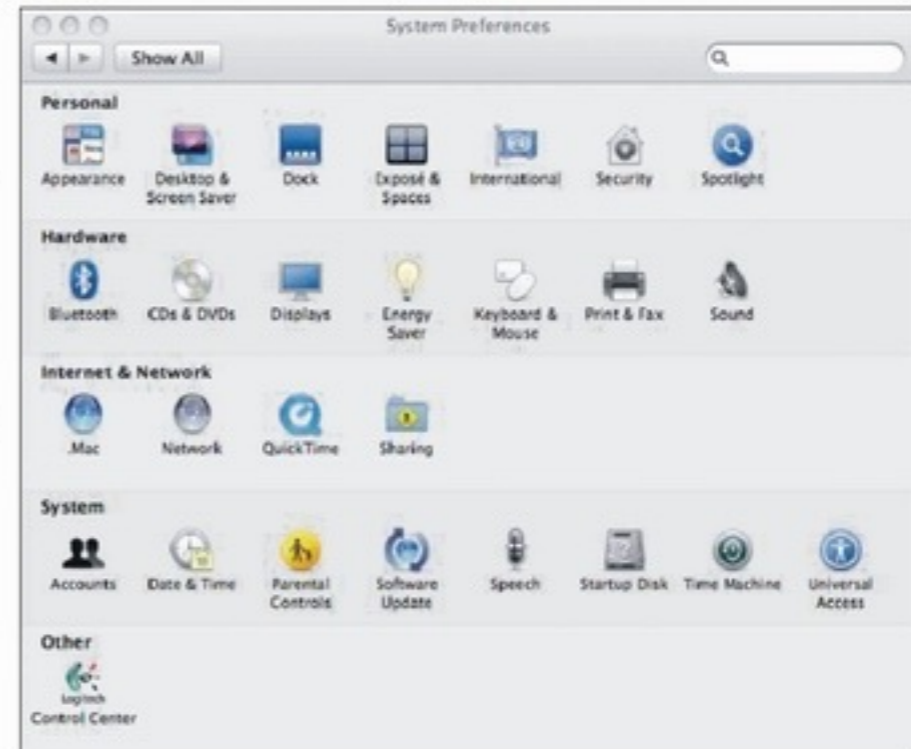
Display Positions

Display to Mirror mode

Display to Extend

Using both extended and mirrored displays

Changing the main display



Configuring Displays from the Menu Bar

If you have checked the “Show displays in menu bar” in Display Preferences then you can configure displays by clicking the display icon in the menu bar. This will show a menu similar to the following:

This menu allows you to perform the following actions:

Detect all displays connected to the Mac. Turn display mirroring on/off

Set the resolution of both the primary display, and the additional display(s),

by selecting one of the recently used resolutions.

Configure how many 'recent resolutions' should be shown in this menu.

Open 'Display Preferences!'



How it works?

DESKTOP OR
NOTEBOOK COMPUTER



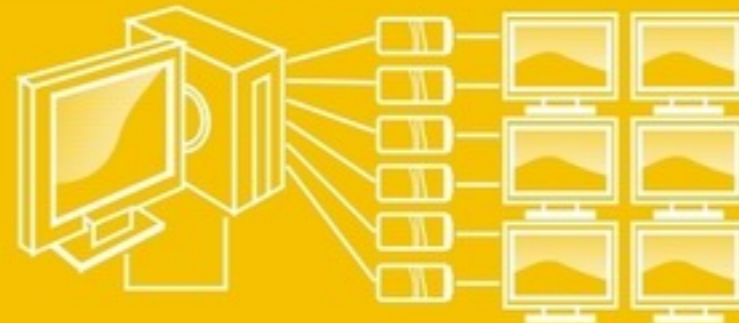
USB2.0 CABLE



VGA CABLE



Monitor
Projector



Expandable up to 6 display units



USB to VGA



USB to VGA



USB to DVI



USB to DVI w/Audio



Net UGA+Audio



PC Docking+UGA



Wireless UGA