

USB 2.0 Display Adapter - HD

## **User's Manual**

## **ABOUT THIS MANUAL**

This manual is designed for use with the USB Display Adapter –HD . Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice. The manufacturer does not make any representations or warranties (implied or otherwise) regarding the accuracy and completeness of this document and shall in no event be liable for any loss of profit or any commercial damage, including but not limited to special, incidental, consequential, or other damage.

## **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 to work according to the User's Manual.

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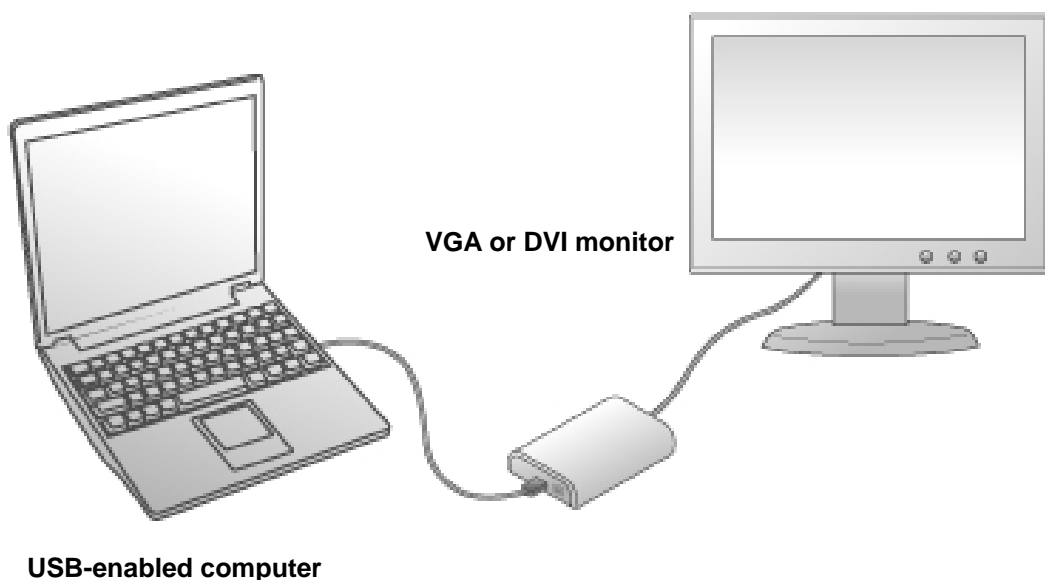
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# 1. Introduction

This USB 2.0 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 watching 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 sides of 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
- Hot-plug ; add or remove monitor without system reboot
- Small in size, works with all VGA / DVI-I displays.
- Supports High Resolution up to WUXGA 1920 x 1200
- Video streaming is supported up to 1080p
- Extend and Mirror mode support.
- Resumes from hibernation and suspend modes
- Supports up to 6 USB display adapters to work simultaneously

## 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 Cable x1
- Quick Installation Guide x1
- DVI to VGA Adapter (Optional) x1

## System Requirements

The minimum requirements for the PC are:

- With Single Core CPU at 1.2GHz or higher processor clock. Intel® Pentium®/Celeron® family, or AMD® K6®/Athlon™/Duron™ family, or compatible processor
- 512MB memory
- At least one USB2.0 port
- 30Mb of available disk space
- Windows® 2000 SP 4 , XP Home or Professional (Including Table edition) SP2 or SP3 and Vista™ SP1 or SP2(32-bit or 64-bit), Windows® 7(32-bit or 64 bit)
- 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

In addition to the following processor and memory configurations (base on usage model)

For 1-2 monitors, business usage, productivity target.

This may not provide full frame rate DVD playback at full screen.

- 1.2GHz Single Core CPU
- 512MB memory

For 3 monitors, where 1 could run DVD video while also targeting productivity and business apps.

Will support only 1 video of DVD resolution at full screen□.

- 1.6GHz CPU
- 1GB memory

For 6 screen where 1 screen can run full screen DVD video□

- 1.8GHz Core Duo
- 1GB memory

## 2. Installation

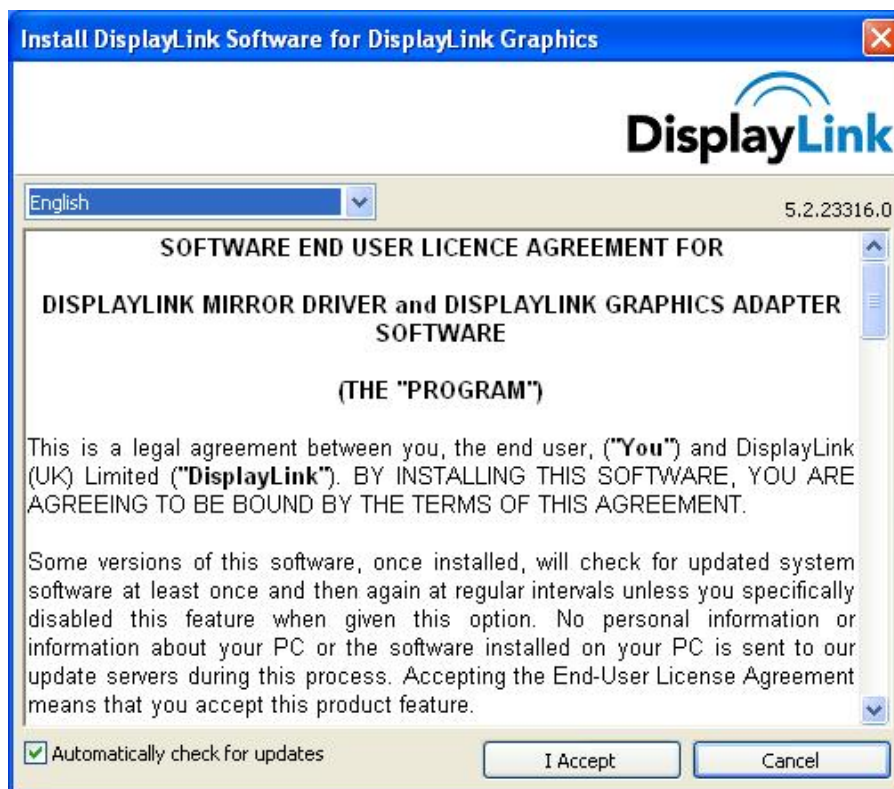
### On Windows 2000 /XP/ Vista

**Caution: DO NOT** connect the USB display adapter to your computer before you install the provided driver. You will be instructed to do so later.

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

1. Insert the provided CD into your disc drive. Please locate and double-click the **Run Setup.exe** file under **x:\Driver** where x is your disc drive letter.

You may see the **License agreement** screen prompted as below. Please click on **I Accept** to start the Driver install.



Note:

If the installer program doesn't run automatically, please locate and double-click on the **Autorun.exe** file in the CD to launch the install program.

If you encounter a **User Account Control** dialog box when attempting to install a program, enter an administrator password or click **Allow** to start the installation.

2. Please wait while Windows configures **DisplayLink Core Software**. Your screens may temporarily go black or flash during this process.

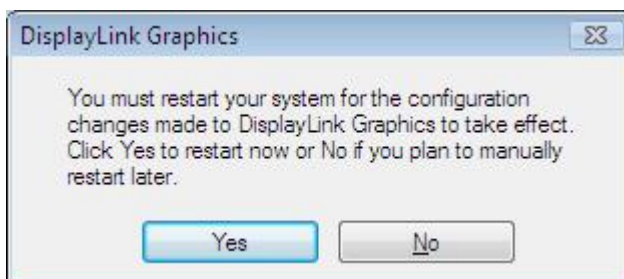


*\*Actual strings depend on your operation system. These screen shots are from Windows XP and might vary slightly for each operation system.*

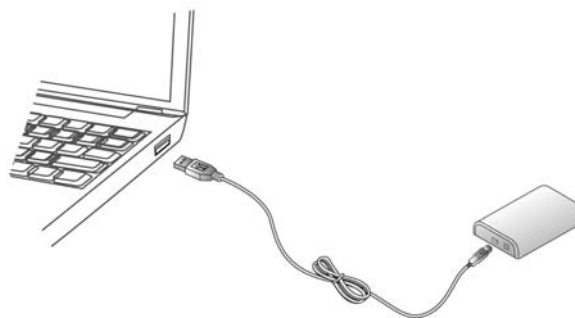
### **Notice for Windows Vista/2000 users**

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.



3. When finished, the installation screen will disappear and you will return to your desktop.
4. **Connect** the USB display 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.



5. After the installation is completed, you will see the DisplayLink Manager Icon in System Tray that looks like a monitor as below. Click on the icon to bring up the menu.



- Extend Mode:** The screen is part of the extended desktop.
- Mirror Mode:** The screen copies the contents of the primary screen.
- Off Mode:** The screen is black.
- Set as Main Monitor:** The screen is the primary screen.
- Notebook monitor off:** The Notebook screen is black and the DisplayLink screen is the primary screen.

## On Windows 7

**Caution: DO NOT** connect the USB display adapter to your computer before you install the provided driver. You will be instructed to do so later.

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

1. Insert the provided CD into your disc drive and installer program will run automatically when the **Driver CD** is inserted. Please click on **Run Setup.exe** to execute the installer program.

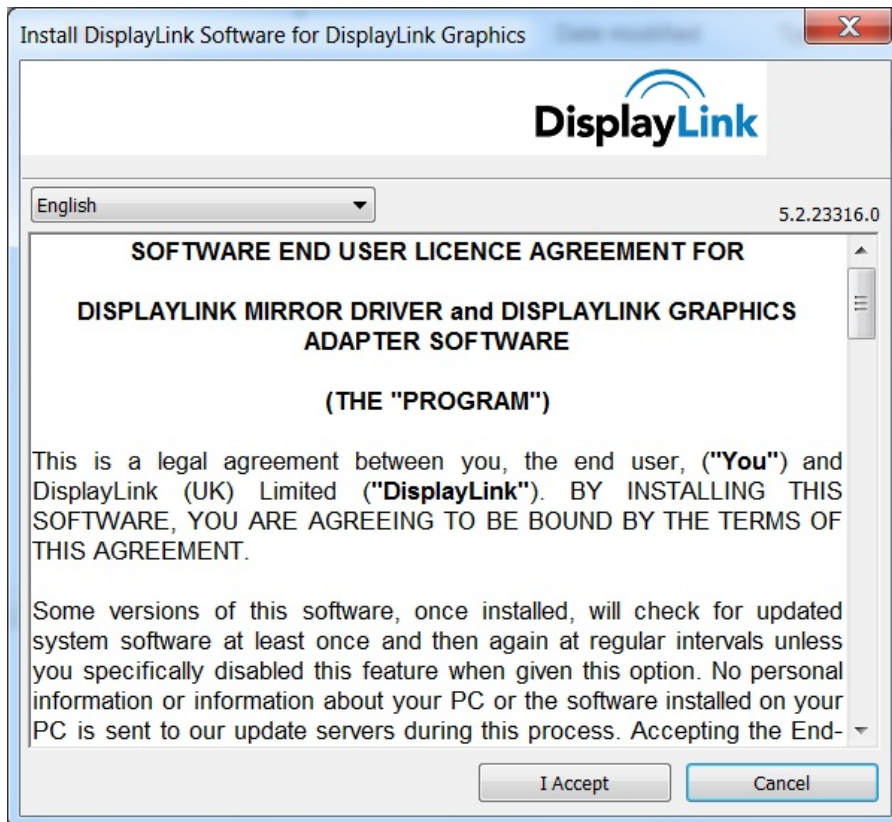


**Note** □

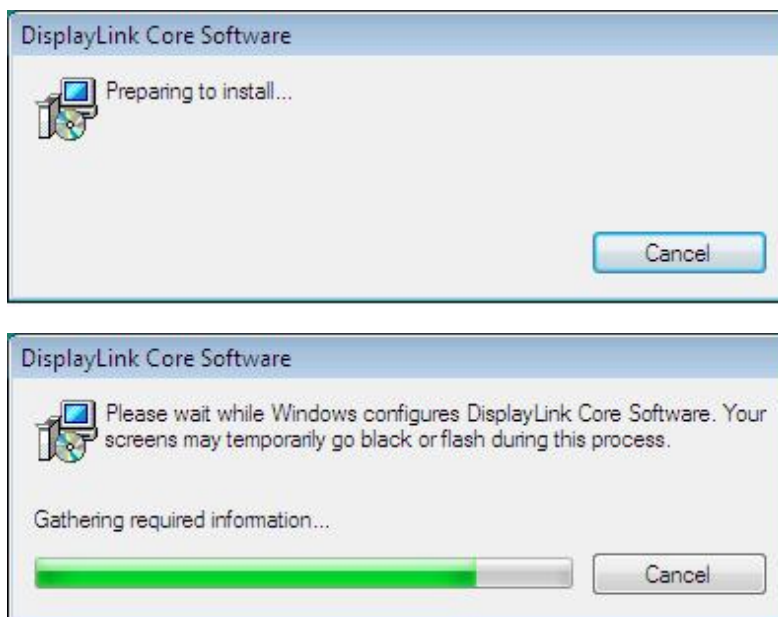
If the installer program doesn't run automatically, please locate and double-click on the **Setup.exe** file in the **Driver** folder to launch the setup program.

If you encounter a **User Account Control** dialog box when attempting to install a program, enter an administrator password or click **Allow** to start the installation.

2. When you see the **License Agreement** screen prompted as below, please click on **I Accept** to install the software for USB display adapter...

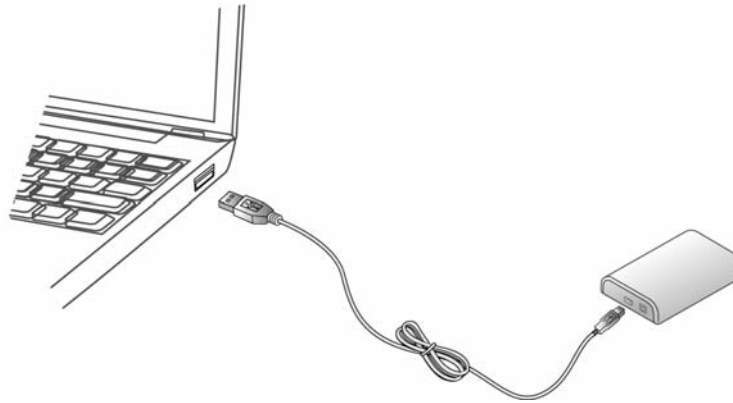


3. Please wait while Windows configures DisplayLink Core Software. Your screens may temporarily go black or flash during this process.

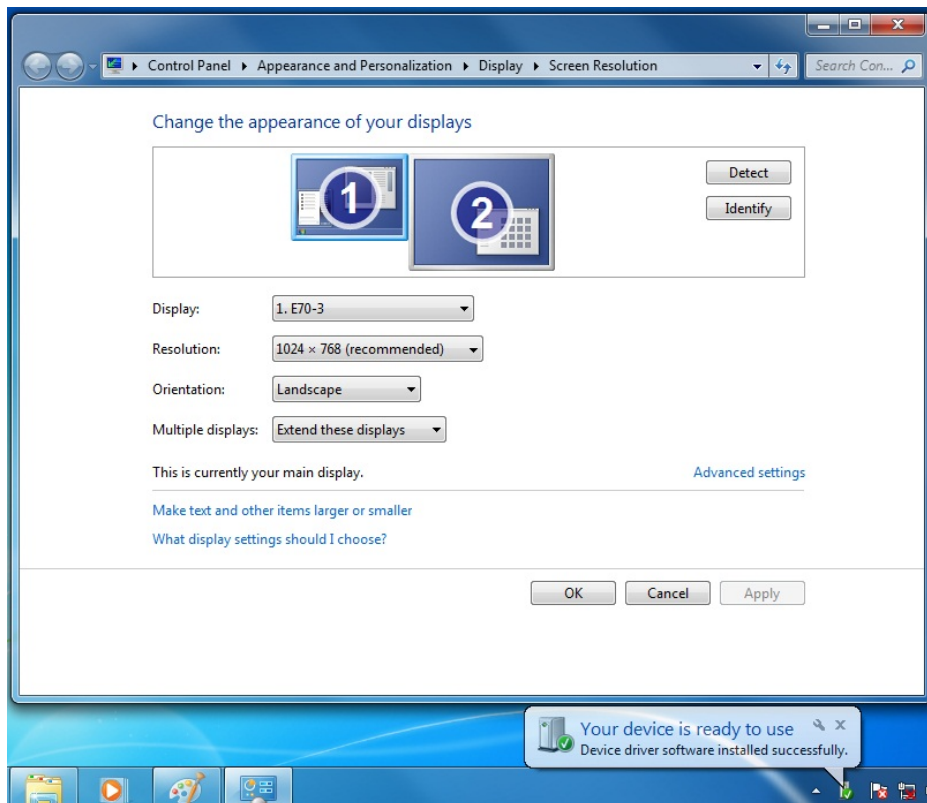


4. When finished, the installation screen will disappear and you will return to your desktop.

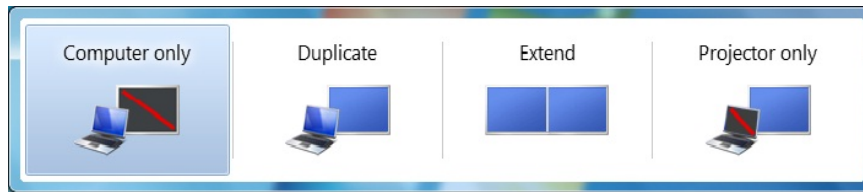
5. **Connect** the USB display adapter to your computer and monitor. Connect the smaller end of the USB cable to the adapter. Then connect the other end of the USB cable to an USB 2.0 port on your computer.



6. After the installation is completed, the following Window will pop up. You can change the appearance of your displays through the Window. Moreover, additional controls are available in Windows 7: Orientation (Portrait, landscape, rotated portrait, rotated landscape)



7. To control the behavior of an attached DisplayLink device (or screen), it is possible to use **Windows Key+P** to display a menu (and cycle through it) to allow: Disconnect Projector, Duplicate, Extend, Projector Only.

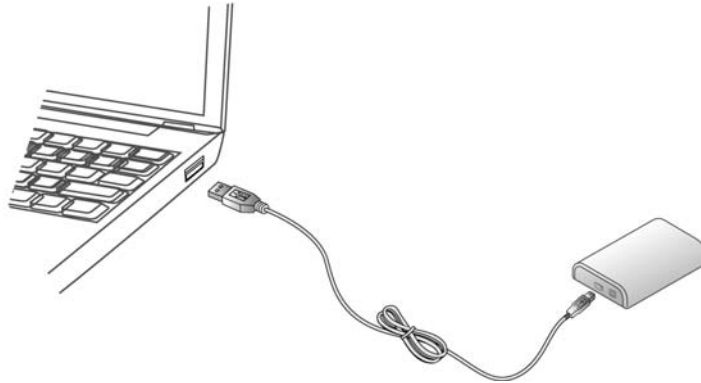


\*Actual strings depend on your operation system. These screen shots are from Windows 7 and might vary slightly for each operation system.

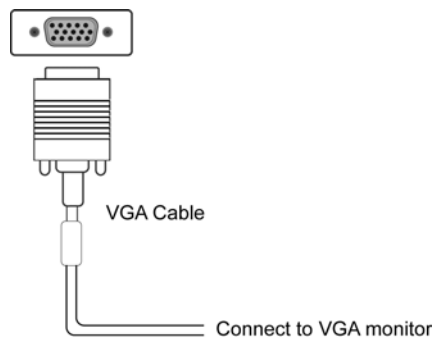
*\*Actual strings depend on your operation system. These screen shots are from Windows Vista 32-bit and might vary slightly for each operation system.*

## Connected to the adapter and monitor

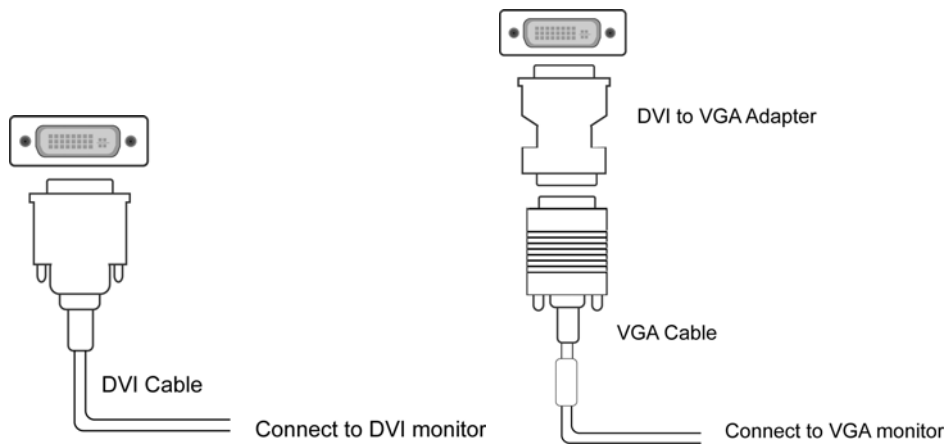
If your monitor is not yet connected to the adapter, make the connection and power on your monitor.



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



- ✦ For DVI model: The equipped DVI-I (DVI-Integrated) connector transmits both the digital and analog signals. This means it supports either of these two connection types:
  - It can be connected to a DVI-D (digital) monitor using a DVI cable (not provided)
  - Or, it can be connected to an analog VGA monitor using the provided DVI-I to VGA adapter and a VGA cable (not provided).



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

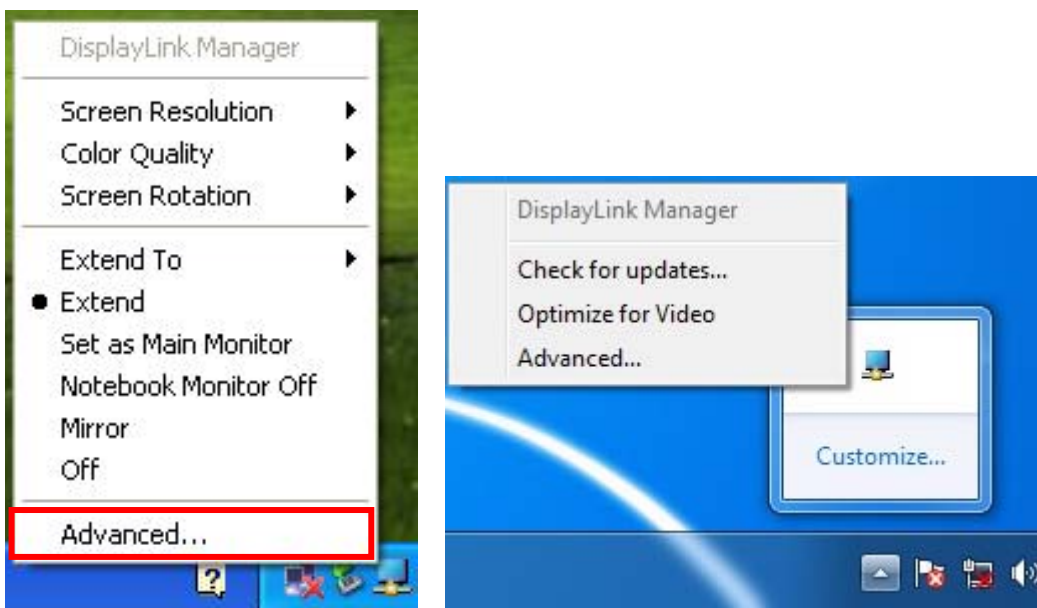
## 3. Using the Adapter

### Display Properties

Display Properties allows you to configuration the display mode, color quality, screen resolution, and physical arrangement of your monitors.

*\*The USB display adapter Display mode and adjusting Resolution, Color Depth and Refresh Rate. Please refer to the "Display mode" and Adjusting Resolution, Color Depth and Refresh Rate "" section for details.*

### Easy Setting



Click on the **DisplayLink Device** icon and select **Advanced** to configuration **Display Properties** as above or manually setting as below description.

On Windows 7, the **DisplayLink Device** icon will be hided. Please click the **arrow sign** and right click the **DisplayLink Device** icon to select **Advanced**.

### Manually Setting

Position the mouse anywhere on your computer desktop, right-click and select **Screen Resolution** on Win 7, **Personalize > Display Settings** on Vista or **Properties > Settings** on XP/2000.

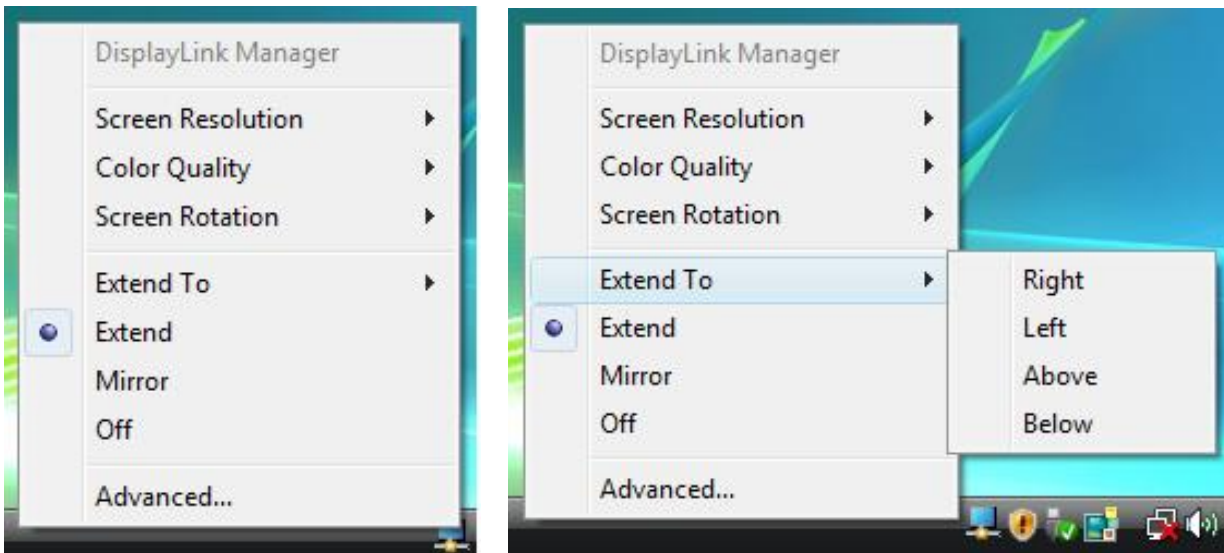
## Display Modes

There is 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.

### Extend Your Windows Desktop to Add-on Monitor (Default)

In this so-called “extended mode”, your display will be spread over the add-on monitor(s). This mode allows you to perform multiple tasks more effectively without overlapping windows.

#### Easy Setting



Click on the **DisplayLink Device** icon and select **Exchange or Extend to Right; Left; Above; Below** to configuration the setting as above, or manually setting as below description.

Notice: The full DisplayLink User Interface as above is not supported on Windows 7.

Displays Configuration on Windows 7 should be carried out using the improved Windows Display Properties dialog box (figure1), and using the Windows-P key combination (figure2).

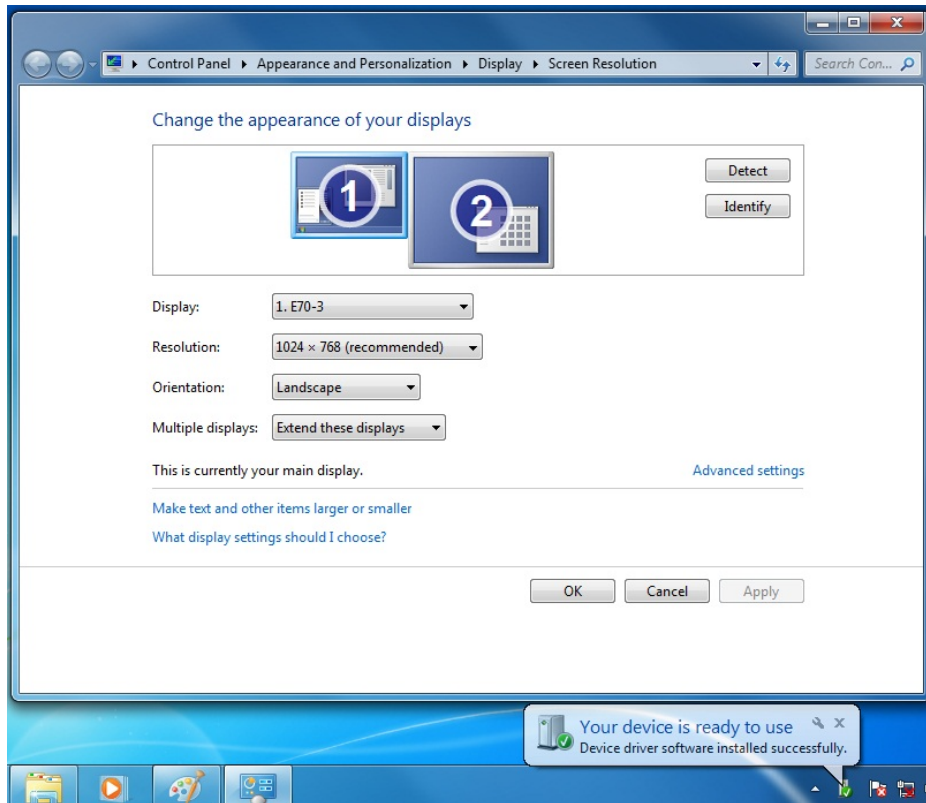


Figure 1



Figure 2

## Manually Setting

Extended mode is the default setting. To set up the adapter to use or restore extended mode, follow these steps:

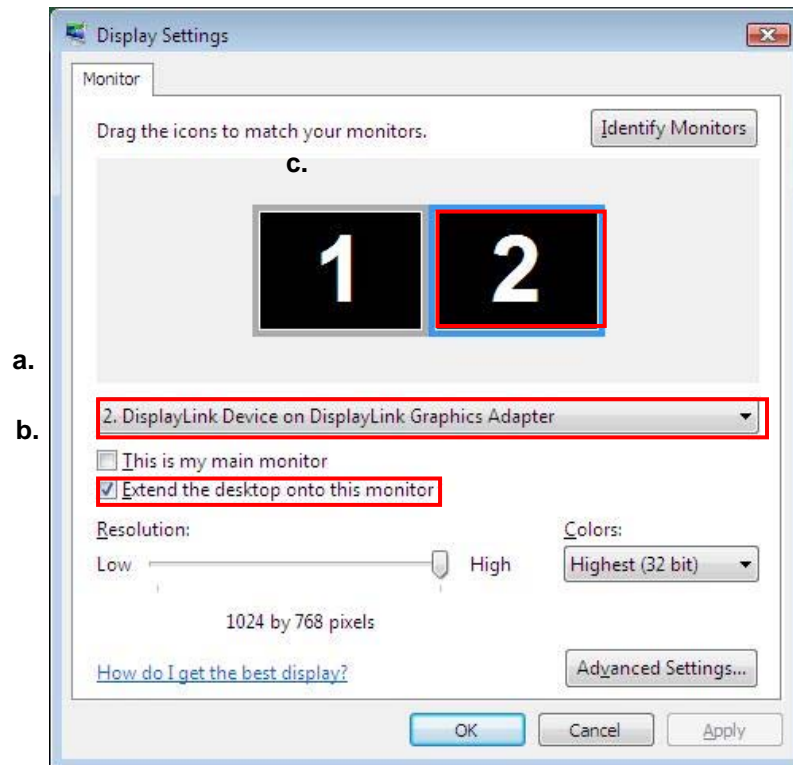
1. Position the mouse anywhere on your computer desktop, right-click and select **Screen Resolution** on Win 7, **Personalize > Display Settings** on Vista or **Properties > Settings** on XP/2000.
2. In the **Display** drop-down menu, select the option with the string “**DisplayLink Graphics Adapter**”.
3. Check the **Multiple Displays > Extend these displays** on Win 7, **Extend the desktop onto this monitor** box on Vista or **Extend my Windows desktop onto this**

**monitor** box on XP/2000.

4. Drag the icons in the window at the top of the screen to match the physical arrangement of your primary monitor and add-on monitor.

The add-on monitor connected to the adapter may be identified as either "2" or "3", depending on your computer, although there may not be a total of 3 screens connected.

5. Click OK to close the settings screen.



Once the setting is done, to use your extended desktop, simply drag and drop your open windows over to your second monitor. However, note that some applications may not support display on the extended desktop.

### Cursor disappeared ?

If you're in extended mode but the add-on monitor is not connected, the desktop still pans to the add-on monitor and it's possible that your cursor has moved to the extended desktop so that you cannot find it on the primary display. To solve the problem in such a case, connect the add-on monitor to the adapter or keep moving your mouse to try or unplug the adapter first to restore the cursor.

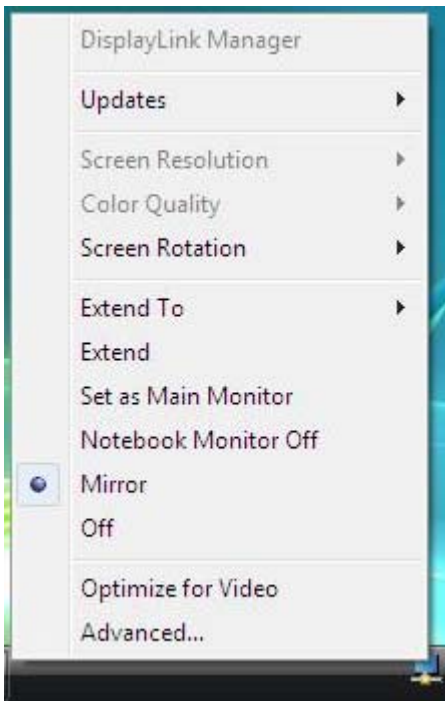
### *Video and DVD Playback in Extended Mode*

On Windows Vista with extended mode, it's suggested that you run video or DVD playback programs on your primary monitor instead of the add-on monitor to ensure the playback performance.

## **Mirror Your Windows Desktop**

This mode is referred to as “mirror” or “clone” mode. In this mode, your original screen (the primary display) will be mirrored to the add-on monitor.

### Easy Setting



**Click** on the **DisplayLink Device** icon and select **Mirror** to configuration the setting as above, or manually setting as below description.

Notice: The full DisplayLink User Interface as above is not supported on Windows 7.

Displays Configuration on Windows 7 should be carried out using the improved Windows Display Properties dialog box (figure1), and using the Windows-P key combination (figure2).

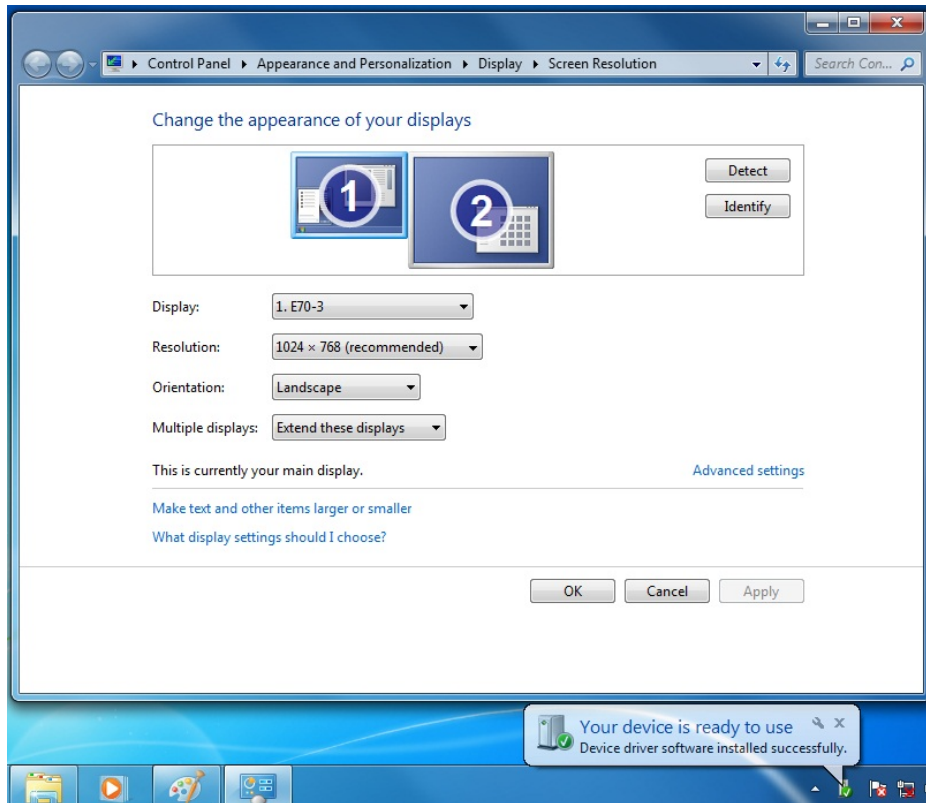


Figure 1



Figure 2

## Manually Setting

In mirror mode, the adapter will automatically select the settings (screen resolution, color quality and refresh rate) for the add-on monitor. But you can manually adjust the settings as required. However, the settings of the add-on monitor are limited by that of the primary monitor. For example, even though your add-on monitor supports a resolution of up to 1920x1080, you can only configure it to use 1280x1024 due to the primary monitor only supports a resolution of up to 1280x1024.

If you change the video output to extended mode and then want to switch back to mirror mode, follow these steps:

1. Position the mouse anywhere on your computer desktop, right-click and select **Screen Resolution** on Win 7, **Personalize > Display Settings** on Vista or **Properties > Settings** on XP/2000.
2. In the **Display** drop-down menu, select the option with the string "**DisplayLink Graphics Adapter**".
3. Check the **Multiple Displays > Duplicate these displays** on Win 7, uncheck the **Extend the desktop onto this monitor** on Vista or **Extend my Windows desktop onto this monitor** on XP/2000.
4. Click **OK** to close the settings screen

## Be the Primary Monitor

To make the add-on monitor the primary display:

1. Position the mouse anywhere on your computer desktop, right-click and select **Screen Resolution** on Win 7, **Personalize > Display Settings** on Vista or **Properties > Settings** on XP/2000.
2. In the **Display** drop-down menu, select the option ends with **DisplayLink Graphics Adapter**.
3. Check the **This is my main monitor** box on Vista/Win 7 or **Use this device as the primary monitor** box on XP/2000.

On some PCs and laptops it is necessary to disable the main display (i.e. uncheck the **Extend the desktop onto this monitor** or **Extend my Windows desktop onto this monitor** box for the main display) as part of the same settings change.

4. Click **OK** to close the settings screen.

The add-on monitor stays primary if the PC enters hibernate or suspend mode or is rebooted. If the add-on monitor is unplugged, the main display becomes primary again.

## 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.

Color Depth Resolution	Name	Refresh rates available at 16 bit color quality	Refresh rates available at 32 bit color quality
640x480	VGA	60 72 75 85	60 72 75 85
800x600	SVGA	56 60 72 75 85	56 60 72 75 85
1024x768	XGA	60 70 75 85	60 70 75 85
1280x720	720p	60	60
1280x768	WXGA+	60 75 85	60 75 85
1280x800	WXGA	60	60
1280x1024	SXGA	60 75 85	60 75
1366x768	WXGA+	60	60
1400x1050	SXGA+	60 75 85	60 75 85
1600x1200	UXGA	60	60
1680x1050	WSXGA+	60	60
1920x1080	1080p	60	60
1920x1200	WUXGA	60	60

*\*Note that interlaced modes and reduced blanking modes are not supported.*

### 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 1920x1080, then 1920x1080 is not possible even you are using a USB display adapter with 1920x1080 support. This ensures that the monitor cannot be put into an unsupported mode, which might damage it.

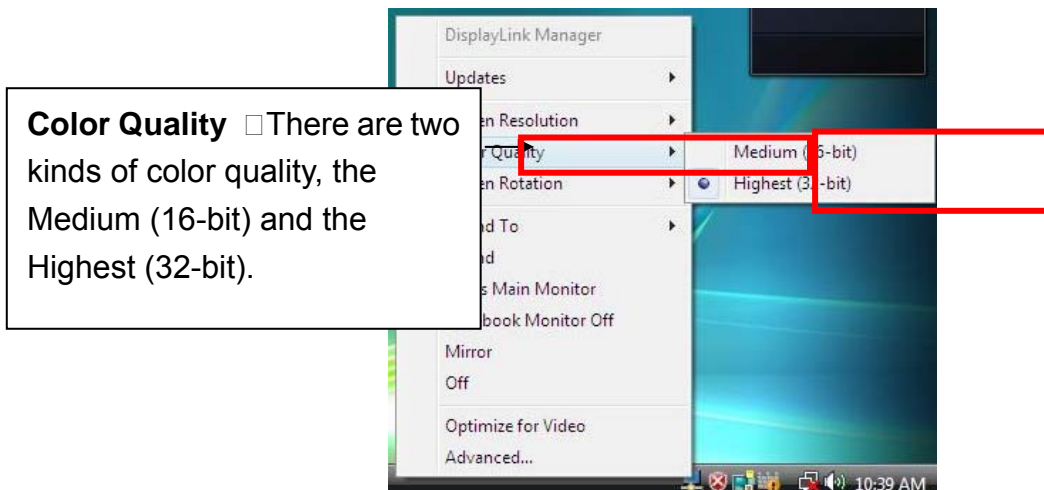
If cloning the primary display, the video component will try to use the preferred monitor mode. In some cases, this may not be the most appropriate mode for the cloned desktop. It is recommended that the primary display resolution be changed to closer match the default resolution of the add-on monitor.

## Configure the components

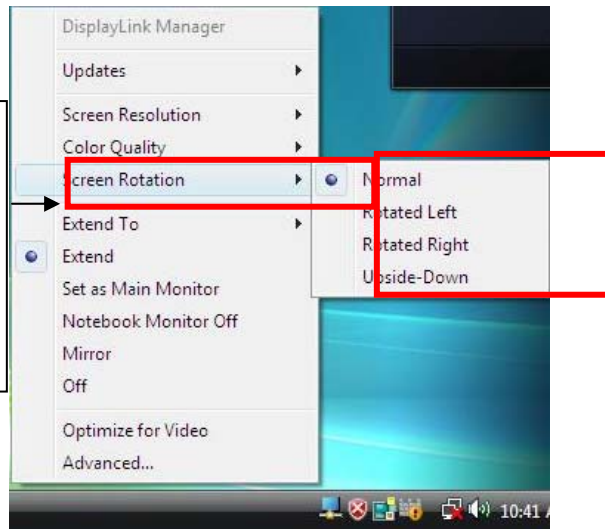
To configure the three components (resolution, color depth and refresh rate) of a screen mode, follow these steps:

### Easy Setting

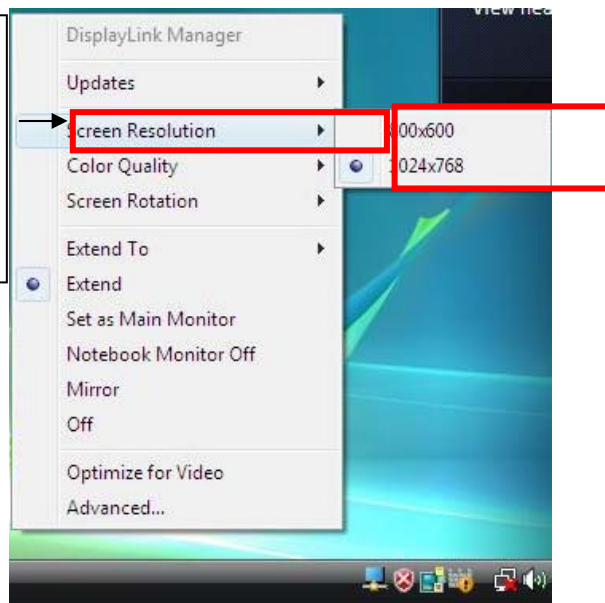
Click on the **DisplayLink Device** icon and select **Color Quality**; **Screen Rotation** ; **Screen Resolution** to configuration the setting as above, or manually setting as below description.



**Screen Rotation** □ There are four kinds of screen rotation, the Normal, Rotated Left, Rotated Right and Upside-Down.

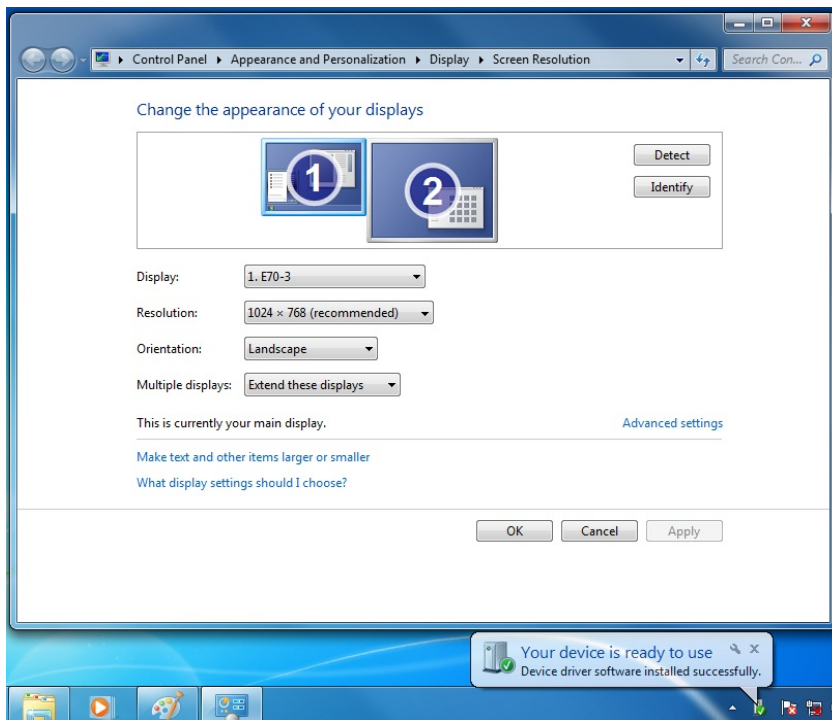


**Screen Resolution** □ The resolution will be depends on your computer setting, resolution support of monitor and else....



## Manually Setting

1. Position the mouse anywhere on your computer desktop, right-click and select **Screen Resolution** on Win 7, **Personalize > Display Settings** on Vista or **Properties > Settings** on XP/2000.
2. In the **Display** drop-down menu, select the option ends with **DisplayLink 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.

## **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.

## **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.

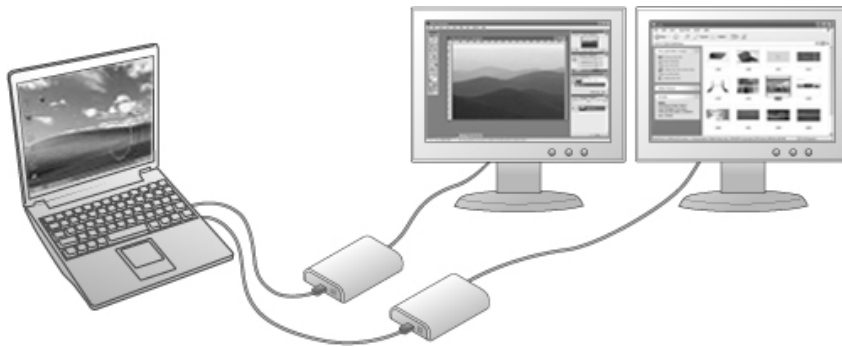
## **Using Dual Adapters**

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

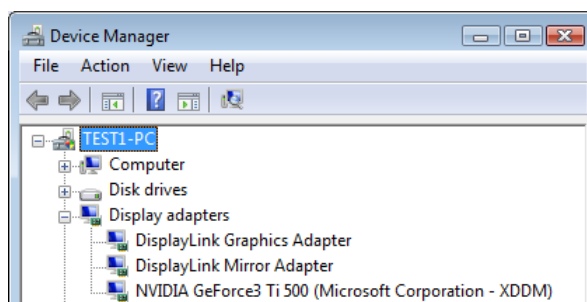
While two adapters are connected to a computer, in most cases both adapters supports extended and mirror modes. The only exception is on Windows Vista XDDM mode as described below.

**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 **...DisplayLink Graphics Adapter** (representing your first attached adapter) is configurable.



### What is Vista XDDM mode?

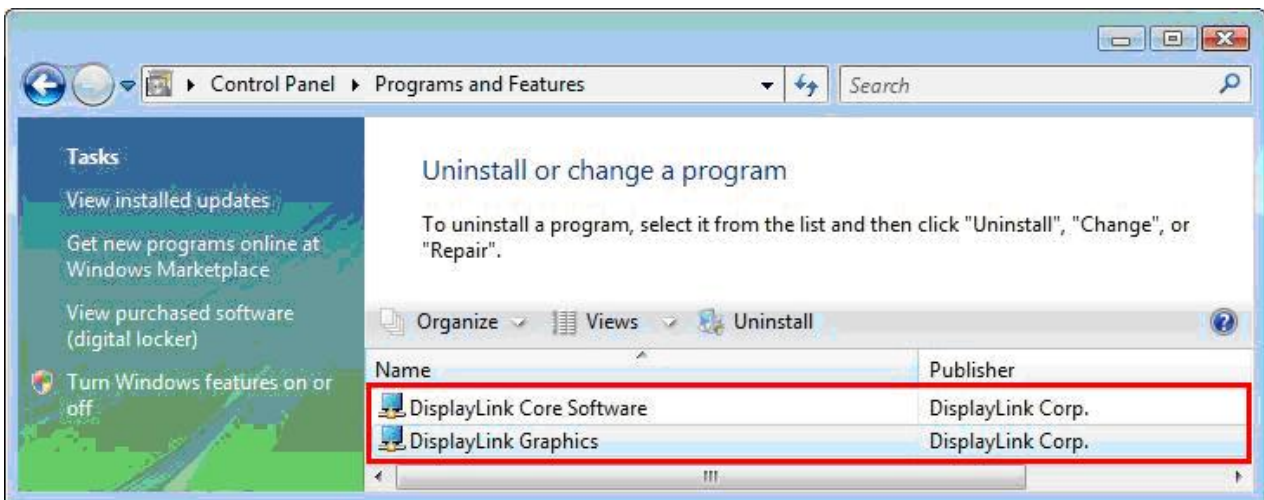
XDDM refers to Windows XP Driver Mode. It is a video card driver mode used in some legacy computers that running the new generation Vista OS. It provides an interface similar to Windows XP user Interface on Vista and one of its characteristics is that it doesn't support Windows Aero interface. To see current display video driver mode, right-click **Computer** on the desktop and select **Device Manager**. Then expand the **Display adapters** item.



## Verifying the Driver Installation

To verify your USB display adapter driver installation, please launch **Device Manager** by the steps below:

Open the **Control Panel** and double-click **Uninstall a Program** on Win 7, **Programs and Features** on Vista, and **Add or Remove Programs** on XP/2000.



*\*Actual strings depend on your operation system. These screen shots are from Windows Vista 32-bit and might vary slightly for each operation system.*

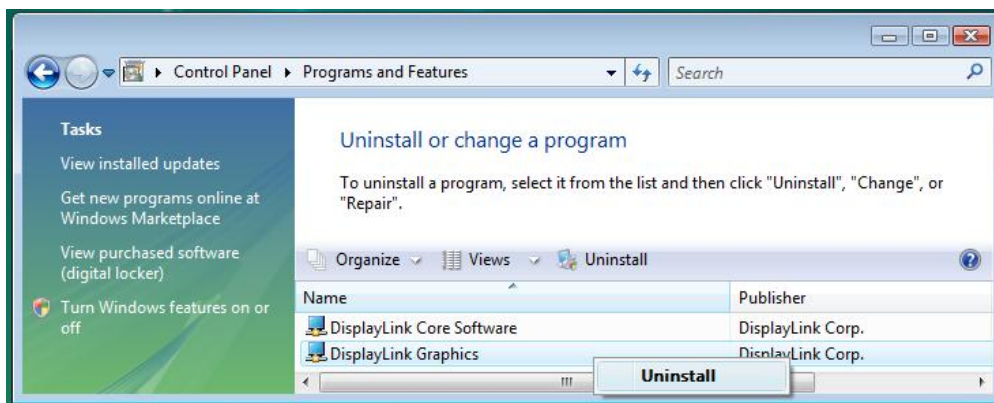
A string similar to **DisplayLink Core Software** and **DisplayLink Graphics** should be displayed.

If there is a question or exclamation mark next to that item, then the driver is not properly installed. Please delete the item, unplug the adapter and repeat the installation steps.

## Uninstall the Adapter and Driver

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

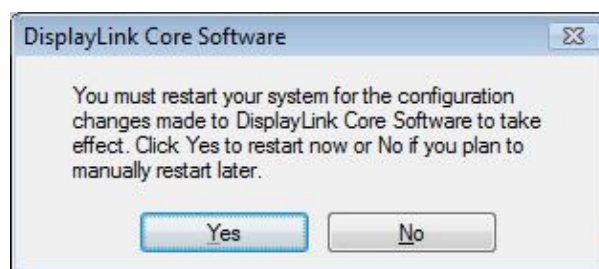
1. Open the **Control Panel** and double-click **Uninstall a Program** on Win 7, **Programs and Features** on Vista, and **Add or Remove Programs** on XP/2000.
2. Select **DisplayLink Graphics** or **DisplayLink Core Software** and click **Uninstall** or **Remove**.



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

<b>Host Interface</b>	USB 2.0
<b>Video Interface</b>	VGA or DVI-I
<b>Connectors</b>	<b>Video output:</b> VGA HDDE 15pin Female Connector DVI HDDE 30pin Female Connector <b>Host upstream link:</b> USB Mini-B Type Female Connector
<b>Connectivity</b>	Up to 6 adapters on a computer
<b>RAM</b>	8M x 16 DDR Synchronous DRAM (SDRAM)
<b>Power Mode</b>	Bus-powered
<b>Power Consumption</b>	430mA
<b>Operation System Support</b>	Windows® 2000 SP 4, XP Home or Professional (Including Table edition) SP2 or SP3, Vista™ SP1 or SP2(32-bit or 64-bit) and Windows 7 (32-bit or 64-bit).
<b>Supported Modes</b>	Extended Desktop (Default), Mirrored Desktop, Primary Display

Resolutions, Refresh rate and color depth	Color Depth	Name	Refresh rates at 16 bit color quality	Refresh rates at 32 bit color quality
	Resolution			
	640x480	VGA	60 72 75 85	60 72 75 85
	800x600	SVGA	56 60 72 75 85	56 60 72 75 85
	1024x768	XGA	60 70 75 85	60 70 75 85
	1280x720	720p	60	60
	1280x768	WXGA+	60 75 85	60 75 85
	1280x800	WXGA	60	60
	1280x1024	SXGA	60 75 85	60 75
	1366x768	WXGA+	60	60
	1400x1050	SXGA+	60 75 85	60 75 85
	1600x1200	UXGA	60	60
	1680x1050	WSXGA+	60	60
	1920x1080	1080p	60	60
	1920x1200	WUXGA	60	60

\*Note that interlaced modes and reduced blanking modes are not supported.

<b>Housing</b>	ABS Plastic
<b>Dimensions</b>	84.3 (L) x 54 (W) x17.8 (H) mm
<b>USB Cable</b>	<ul style="list-style-type: none"> <li>• Separated from the body</li> <li>• Type: USB A -Type Male to 5pin Mini USB B-Type Male</li> <li>• Length: 1M</li> </ul>
<b>Operating temperature</b>	10-40°C
<b>Storage temperature</b>	-10~60°C
<b>Relative Humidity</b>	< 85% non-condensing

\* Specifications are subject to change without notice.

## 6. Regulatory Compliance

### FCC Conditions

This equipment has been tested and found to comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference

(2) This device must accept any interference received. Including interference that may cause undesired operation.

**Important!** Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment. Use an approved phone set.

### CE

This equipment is in compliance with the requirements of the following regulations: EN 55 022: CLASS B

### WEEE Information

For EU (European Union) member users:

According to the WEEE (Waste electrical and electronic equipment) Directive, do not dispose of this product as household waste or commercial waste. Waste electrical and electronic equipment should be appropriately collected and recycled as required by practices established for your country. For information on recycling of this product, please contact your local authorities, your household waste disposal service or the shop where you purchased the product.

