



DisplayLink Graphics Adapter User Manual

Software Version 5.4

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Introduction

Welcome to your DisplayLink Graphics Adapter software. It allows you to easily connect extra monitors to your laptop or desktop PC's USB port.

The connected monitors can be configured to either mirror your main screen, or extend the Windows desktop allowing visibility of more applications at the same time. The DisplayLink graphics adapter can also be configured to be the primary display

DisplayLink's Graphics Adapter Software allows full configuration of all additional USB displays, including:

- Support for up to 6 additional USB Displays
- Resolutions up to 2048 x 1152 (Product dependant)
- Rotation
- Layout of displays
- Color Depth

Note: Menu items and screen selections are shown in *italics*.

PC Requirements

DisplayLink software can be used on PCs, from Netbooks, Notebooks/Laptops to Desktops. The driver will run on processors ranging from Atom N270 based PCs, basic single Core CPUs, and of course the latest Dual, Quad Core and Core i3/i5/i7 CPUs.

The performance of the software is dependent upon the processing power available, as well as the operating system in use. More capable systems offer higher performance.

DisplayLink software is available for PCs running one of the following Windows operating systems:

- Windows 7 (32-bit or 64-bit)
- Windows Vista with Service Pack 1 or 2 (32-bit or 64-bit)
- Windows XP Home or Professional (including Tablet edition) with Service Pack 2 or 3
- Windows 2000 with Service Pack 4

Note: 64-bit editions of XP are not supported. No Windows Server editions are supported. Mac OS X support can be found at <http://www.displaylink.com/mac>

Recommended typical system requirements are:

Windows 7

For Windows 7, the Windows Experience Index (WEI) is a useful measure of hardware level. The WEI is accessible from Computer > Properties, or from Control Panel > System.

The recommended typical hardware requirements for the PC are:

- WEI score of at least 3 in the 'Graphics; Desktop performance for Windows Aero' category.
- Overall WEI score of at least 3 as recommended by Microsoft.
- At least one USB 2.0 port.
- 30 megabytes (MB) of free disk space.
- Computer screen for use with the DisplayLink device, if it is not integrated.
- Network access for software downloads, or access to a CD-ROM drive.

Windows Vista

For Windows Vista, the Windows Experience Index (WEI) is a useful measure of hardware level. The WEI is accessible from Computer > Properties, or from Control Panel > System.

The recommended typical hardware requirements for the PC are:

- WEI score of at least 3 in the 'Graphics; Desktop performance for Windows Aero' category.
- Overall WEI score of at least 3 as recommended by Microsoft.
- At least one USB 2.0 port
- 30 megabytes (MB) of free disk space.
- Computer screen for use with the DisplayLink device, if it is not integrated.
- Network access for software downloads, or access to a CD-ROM drive.

If the PC specification is below this, performance will be lower (or CPU loading higher than acceptable).

Windows XP/2000

- 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 screens where 1 screen can run full screen DVD video:
- 1.8GHz Core Duo
- 1GB memory
- At least one USB 2.0 port.
- 30 megabytes (MB) of free disk space.
- Computer screen for use with the DisplayLink device, if it is not integrated.
- Network access for software downloads, or access to a CD-ROM drive.

Graphics Card Support (Windows Vista/Windows 7)

On Windows Vista and Windows 7, DisplayLink software interacts closely with the primary graphics card. DisplayLink support and test a single graphics card (GPU) installed in a PC from all major GPU vendors (Intel, ATI, NVidia and Via)

The following GPU configurations may exhibit compatibility issues on Windows 7 and Vista in certain circumstances:

- Switchable Graphics (ATI/Intel)
- Switchable Graphics (ATI/ATI)
- Switchable Graphics (NVIDIA/Intel)
- NVIDIA SLI in SLI mode

Other GPU configurations, including the following, are currently unsupported and will not function on Windows 7/Vista:

- Hybrid Graphics
- Hybrid SLI
- Hybrid Crossfire
- Crossfire
- SLI not in SLI mode
- Multiple WDDM 1.1 graphics drivers active at once

Graphics Card Support (Windows 2000/XP)

All graphics cards are supported on Windows 2000/XP.

Supported Languages

The following languages are supported in version 5.4, on all supported operating systems:

- Arabic
- Bahasa Indonesian
- Bulgarian
- Chinese (Traditional)
- Chinese (Simplified)
- Croatian
- Czech
- Danish
- Dutch
- English
- Finnish
- French
- Greek
- German
- Hungarian
- Italian
- Japanese
- Korean
- Norwegian
- Polish
- Portuguese
- Russian
- Slovak
- Slovenian
- Spanish
- Swedish
- Turkish

Unsupported languages default to English.

Installing the DisplayLink Graphics Adapter Software

The following section shows you how to install the DisplayLink Graphics Adapter software on different operating systems.

Note: If you have v3.x, R4.1 or R4.2 DisplayLink software installed you must uninstall it, using the Windows Add/Remove Programs feature, before installing this release. Devices will continue working after this release is installed.

Windows 7

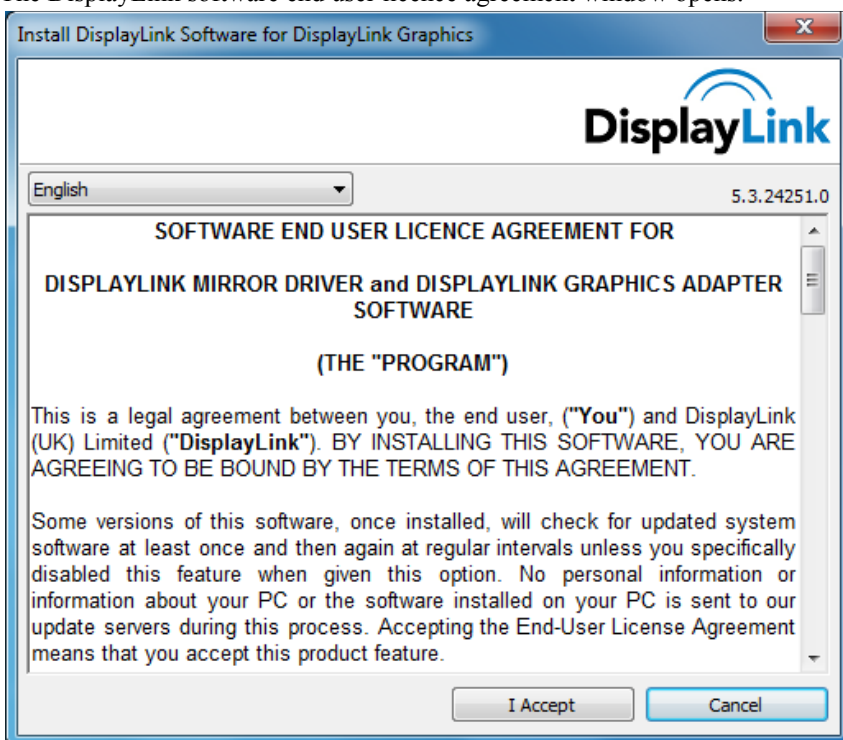
The preferred method of installation is using Window 7's Windows Update facility.

To Install the DisplayLink Graphics Adapter on Windows 7

1. Connect your DisplayLink device via the USB cable to your PC.
Windows detects the new hardware and automatically downloads the driver.



2. Once downloaded, the install will run
The DisplayLink software end user licence agreement window opens.



3. Click *I Accept*.
The DisplayLink Core software installs

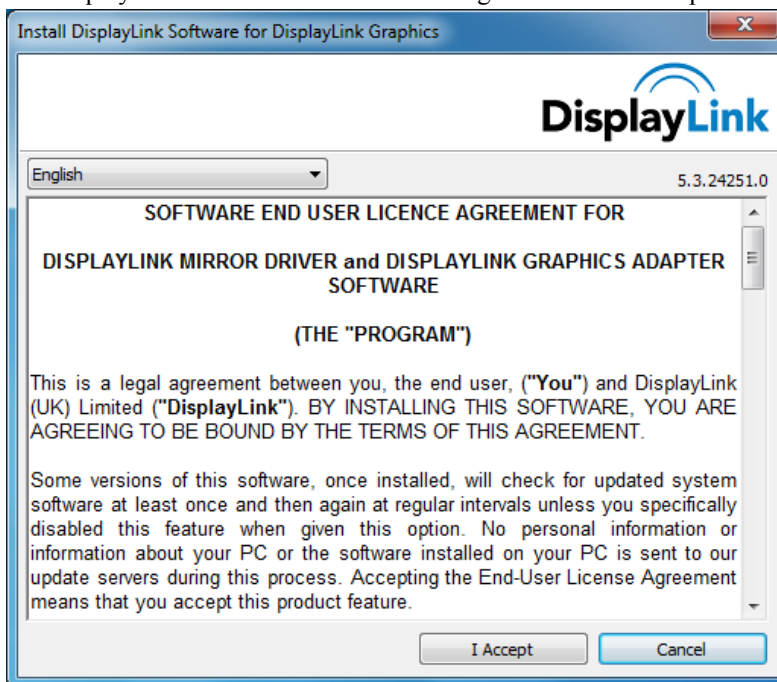


Note: The screen may flash or go black during the install.

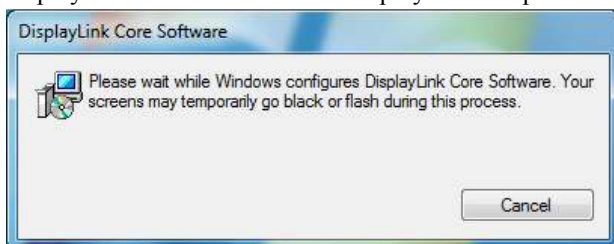
Alternatively you may install the software from a website download or CD-ROM:

Important! Do not connect a DisplayLink device/screen to your PC before the install.

1. Double click on *Setup.exe*.
The Windows User Account Control window opens (if enabled in the OS).
2. Click *Yes*.
The DisplayLink software end user licence agreement window opens.



3. Click *I Accept*.
DisplayLink Core software and DisplayLink Graphics installs.

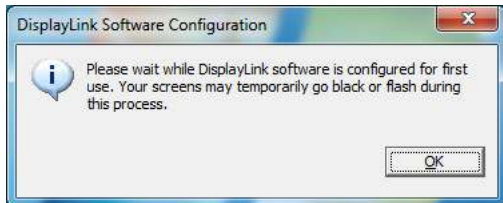


Note: The screen may flash or go black during the install.
No message will be shown at the end of the install.

4. Connect your DisplayLink device via the USB cable to your PC.
Installing device driver message



The Windows User Account Control window opens.



5. Click *Yes*.
DisplayLink automatically installs the device.
The DisplayLink software end user licence agreement window opens (see above).
6. Click *I Accept*.
The DisplayLink graphics adapter software installs, without notification that it has completed.

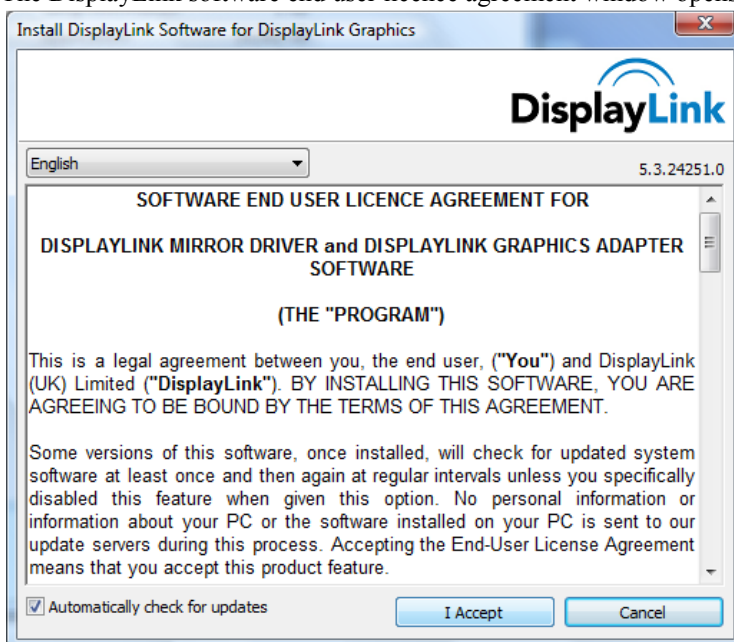
Note: On some machines you may need to reboot before you can use your DisplayLink enabled device.

Windows Vista

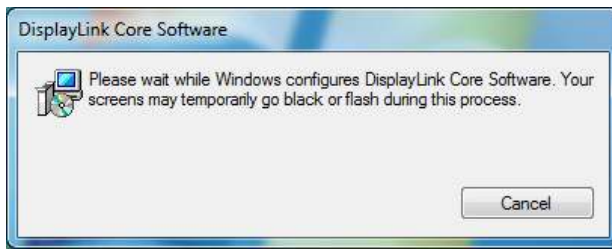
To Install the DisplayLink Graphics Adapter on Windows Vista

Important! Do not connect a DisplayLink device/screen to your PC before the install.

1. Double click on Setup.exe.
The Windows User Account Control window opens (if enabled in the OS).
2. Click Continue.
The DisplayLink software end user licence agreement window opens.



3. Click *I Accept*.
DisplayLink Core software and DisplayLink Graphics installs.



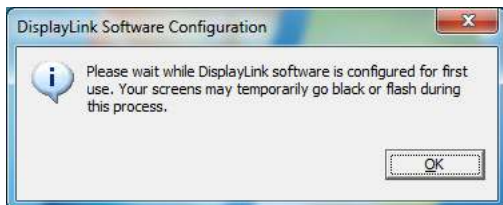
Note: The screen may flash or go black during the install.

No message will be shown at the end of the install.

4. Connect your DisplayLink device via the USB cable to your PC.
Installing device driver message



The Windows User Account Control window opens.



5. Click *Yes*.
DisplayLink automatically installs the device.
The DisplayLink software end user licence agreement window opens (see above).
6. Click *I Accept*.
The DisplayLink graphics adapter software installs, without notification that it has completed.

Note: On some machines you may need to reboot before you can use your DisplayLink enabled device.

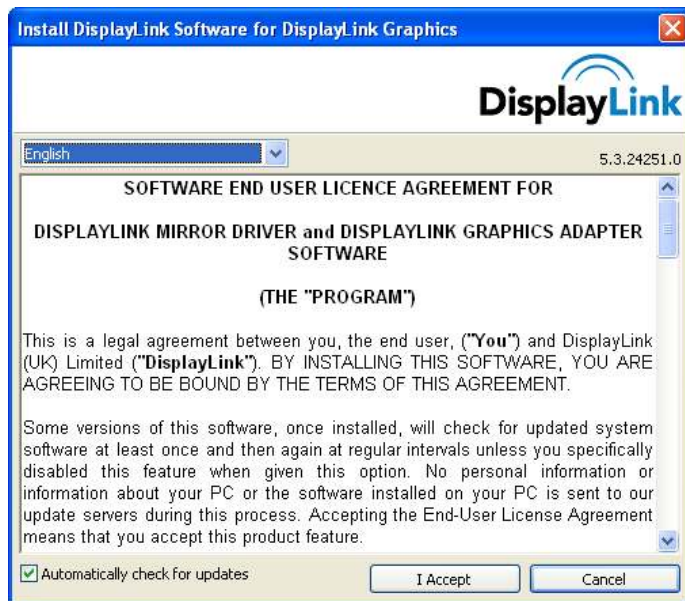
Windows XP

The details that follow are for Windows XP – there are differences in some terminology and user interfaces on Windows 2000, but the basic steps are the same.

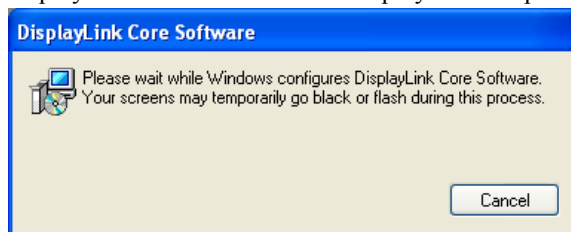
To Install the DisplayLink Graphics Adapter on Windows XP

Important! Do not connect a DisplayLink device/screen to your PC before the install.

1. Double click on Setup.exe.
The DisplayLink software end user licence agreement window opens.



2. Click *I Accept*.
DisplayLink Core software and DisplayLink Graphics installs.



Note: The screen may flash or go black during the install.

3. Connect your DisplayLink device via the USB cable to your PC. The following message (or similar) will be seen.



Windows installs the DisplayLink device.

Note: The screen may flash or go black during the install.

Using the DisplayLink Software

This section describes how to use DisplayLink's Software. The section is divided into sub-sections relating to your operating system.


Note: The terminology for mirror mode, can vary between operating systems and the DisplayLink GUI. The terms "Clone", "Mirror" and "Duplicate" essentially all provide the same function of cloning the pixels from one display to another.

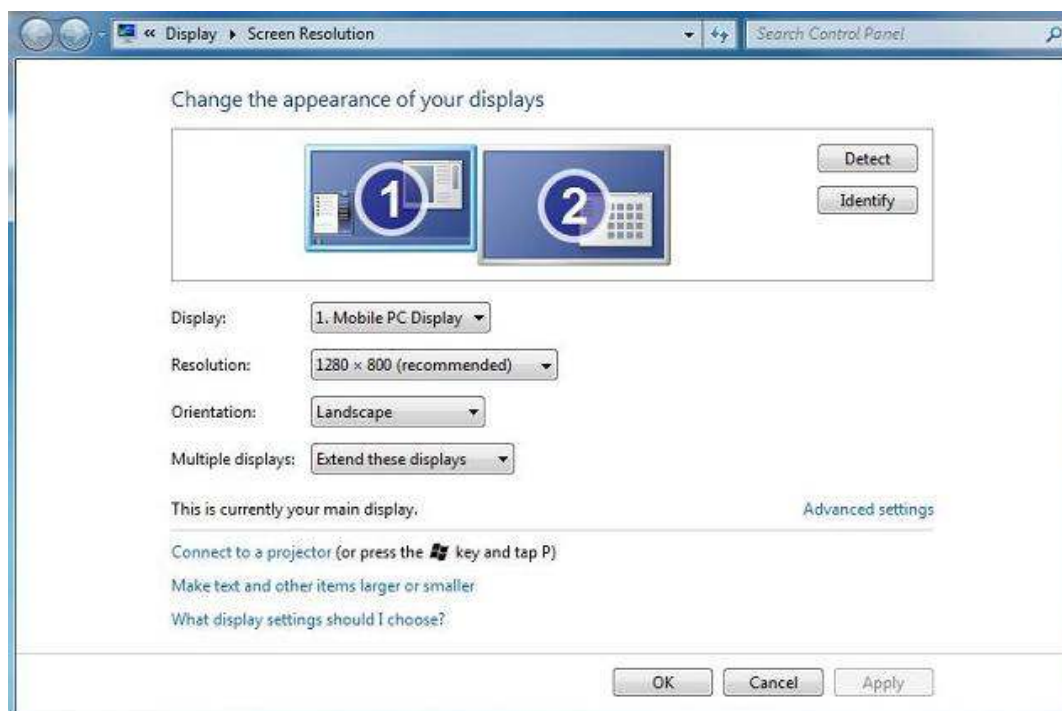
Windows 7 - Controlling the Display

On Windows 7, you can configure a DisplayLink device through the use of Windows Display Properties (WDP). WDP provides a simple method to attach, rotate, duplicate or extend screens as well as modify screen resolution.

To open WDP

There are several ways to open WDP.

1. Right-click on the desktop.
 2. Select Screen Resolution from the menu.
 3. WDP opens.
- OR
1. From Start menu > Devices and Printers.
 2. Double-click the DisplayLink Device icon.
 3. WDP opens.
- OR
1. Right click on the DisplayLink icon .
 2. Click *Advanced*.
 3. WDP opens.



Setting the Display

Follow this procedure to set the display.

To set the display

1. Open WDP.
2. Set the display options. Refer to the table below for details on each option.

Menu	Sub-Menu	Description
Display		Use the drop down list to select a display to be configured.
Resolution		Use the drop down list and user the slider to choose a resolution.
Orientation	Landscape	Sets the display to landscape view.
	Portrait	Sets the display to portrait mode.
	Landscape (flipped)	Sets the display to upside down landscape mode.
	Portrait (flipped)	Sets the display to upside down portrait mode.
Multiple displays	Duplicates these displays	Reproduces the main display on the second display.
	Extend these displays	Extends the main display onto the secondary display.
	Show Desktop only on 1	The desktop appears on the display marked 1. The display marked 2 becomes blank.
	Shows Desktop only on 2	The desktop appears on the display marked 2. The display marked 1 becomes blank.

Table 1: WDP Options

To control the behaviour of an attached DisplayLink display, it is also possible to use Windows Key+P to display a menu (and cycle through it) to switch mode.

To control the Display

1. Select the Windows Key+P.
The following menu appears.



2. Click on one of the options.
The display updates to reflect your choice.

The DisplayLink Icon Application

You can configure the behaviour of the DisplayLink Graphics Adapter through the DisplayLink icon application on the taskbar, where present.

To show the DisplayLink Manager menu

1. From the taskbar, click the *Show hidden icons* arrow to show all available icons.



2. Click the DisplayLink icon . A menu appears with several options, as described in the following table.


Menu	Description
Check for updates	Connects to the Windows Update and checks for newer versions and downloads them, if available.
Optimize for Video	Select this option for better movie playback performance on the DisplayLink enabled displays. Only select this option when playing back video content. Note: Text may appear less clear when enabled.
Advanced	Opens the Windows Display Properties (WDP)

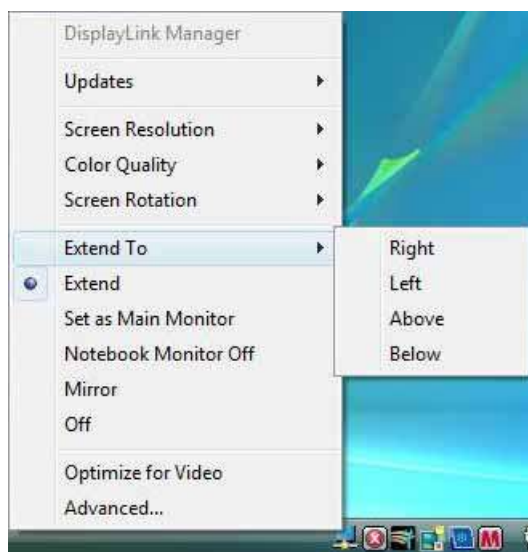
Table 2: DisplayLink menu – Windows 7

Windows Vista – Controlling the Display

When devices are attached, an icon appears in the taskbar. This gives you access to the DisplayLink manager menu.

To use the DisplayLink Manager Menu

1. Click the DisplayLink icon  on the taskbar. The menu appears as shown below.



2. Select an option from the menu, using the following table for the options available.

Menu Option	Sub-menu Option	Description
Updates	Check Now	Connects to the Update Server to check for newer driver versions and downloads them, if available.
	Configure	Opens the Update Options window where you can configure automatic updates.
Screen Resolution		Displays a list of available resolutions. Some resolutions may be enclosed by []. Please see, Inferred Modes .
Color Quality	Medium (16-bit)	Changes the colour depth of the extending display to 16 bit
	Highest (32-bit)	Changes the colour depth of the extending display to 32bit
Screen Rotation	Normal	No rotation is applied to the DisplayLink display
	Rotated Left	Rotates the extended or mirrored display by 270 degrees.
	Rotated Right	Rotates the extended or mirrored display by 90 degrees.
	Upside-Down	Rotates the extended or mirrored display by 180 degrees.
Extend To	Right	Extends the display to the right of the main display.
	Left	Extends the display to the left of the main display.
	Above	Extends the display above of the main display.
	Below	Extends the display below the main display.
Extend		Extends your desktop onto the secondary display.
Set as Main Monitor		Sets the secondary display as the main display.
Notebook Monitor Off		Switches off the display of an attached notebook and makes the DisplayLink display primary.
Mirror		Copies what is on the main display and reproduces it on the secondary display.
Off		Switches off the secondary display.


Menu Option	Sub-menu Option	Description
Optimize for Video (Vista and Windows 7 Only)		Configures the secondary display for optimum full screen video performance output. Note: Text may appear less clear.
Advanced		Opens the Display Settings window.

Table 3: DisplayLink menu – Windows Vista

Setting the Display into Extend Mode

In extend mode, the monitor attached to the DisplayLink Graphics Adapter forms part of the extended Windows desktop. The extra desktop area is a great productivity aid, allowing more applications or documents to be visible at a time.

To set the display into Extend Mode


1. Click on the DisplayLink icon .
2. Select *Extend*.

The device is now extended in the direction it was the last time the display was in this mode. For more control, use the *Extend To* submenu and select one of the options. This puts the device into extend mode, and places it to the Left/Right/Above/Below the main (primary) monitor.

Setting the Display into Mirror Mode

In mirror mode, the monitor attached to the DisplayLink Graphics Adapter duplicates what is on the primary display.

To set the display into Mirror mode

1. Click on the DisplayLink icon .
2. Select *Mirror*.

The resolution, colour depth and refresh rate of the primary screen are replicated on the monitor connected to the DisplayLink Graphics Adapter.

If the monitor connected to the DisplayLink Graphics Adapter supports a lower resolution than the primary display, then the primary graphics device will have its resolution changed automatically to ensure the whole picture fits on the external screen. Where the monitor connected to the DisplayLink Graphics Adapter is of a larger size than the primary screen the image will be letter-boxed to keep the aspect ratio correct.

Windows Vista and XP – Windows Display Properties

You can also configure the DisplayLink Graphics Adapters from the Windows Display Properties dialog box.

To open the Windows Display Properties on Windows Vista

1. Right-click on the Desktop.
2. Click Personalize.
3. Click Display Settings.
The Display Settings window opens.

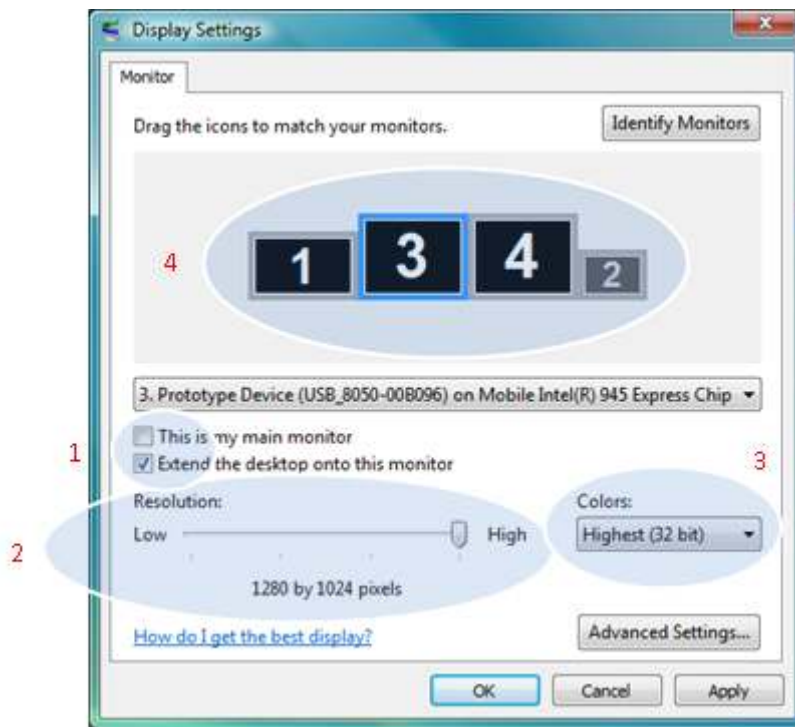


Figure 1: Display Setting - Vista

Select the display to be configured. Its mode, resolution, colour quality and position can all be controlled from here.

To open the Windows Display Properties on Windows XP

1. Right-click on the Desktop.
2. Select Properties.
The Display Properties dialog opens.
3. Select the *Settings* tab.

Setting the Display into Extend Mode


Use this procedure when you want to extend the Windows desktop to the DisplayLink display. This allows many different applications to be spread over multiple displays, to be able to see multiple applications at the same time.

To set the display to Extend Mode using Windows Display properties

1. Select *Extend the desktop onto this monitor* checkbox (1 in Figure 1).
2. Arrange the screen resolution using the *Resolution* slide bar. (2)
3. Select the colour quality from the *Colors* drop-down list. (3).
4. Arrange its position with respect to the other monitors on the extended desktop in using the drag area (4).
5. Click *OK* to save your changes.

For more detailed mode setting, including the refresh rate, click *Advanced Settings* button, then the *Adapter* tab then on the *List all modes* button. All valid combinations of resolution, colour quality and refresh rate are listed. For CRT monitors, it is best to use a high refresh rate so as to avoid discomfort due to flicker. Flat panel monitors do not flicker and a low refresh rate is adequate.

To set the display to Extend Mode using the DisplayLink menu

1. From the taskbar, click on the DisplayLink icon .
2. Select *Extend*.


Setting the DisplayLink Display to Mirror the Primary Screen

Mirror mode copies what is on the main display and reproduces it on the secondary display.

To set the display into Mirror Mode

1. Uncheck the *Extend the desktop onto this monitor* checkbox (1 in Figure 1).
2. Click *Apply*.

To set the display into Mirror mode using the DisplayLink menu

1. From the taskbar, click on the DisplayLink icon .
2. Select *Mirror*.

Note: The display resolution of the primary display and the DisplayLink display may be changed to a lower resolution. In mirror mode, both screens must output the same resolution, which may not be the maximum resolution of the display.

This mode is NOT recommended if using the DisplayLink display as the primary laptop display, as it is unlikely to provide the optimum resolution for the DisplayLink display. Please see, [Setting the DisplayLink display as the Primary Display](#).

Setting the DisplayLink display as the Primary Display

To make the DisplayLink Graphics Adapter the Primary Display


1. Select the *This is my main monitor* checkbox (1 in Figure 1).
2. Click *Apply*.

Note: On some PCs and laptops it is necessary to disable the main display (clear the *Extend the desktop onto this monitor* checkbox for the main display) as part of the same settings change. The reason for this is that many primary graphics card drivers tend to make the laptop screen primary if it is enabled. The only workaround for this is to disable the laptop screen to allow another screen to be primary. To do this:

1. Select the *This is my main monitor* checkbox (1 in Figure 1) of the DisplayLink display.
2. Select the primary display (Display 1).
3. Uncheck the *Extend the desktop onto this monitor* checkbox (1 in Figure 1).
4. Click *Apply*.

The DisplayLink Graphics Adapter stays primary if the PC enters hibernate or suspend mode or is rebooted. If the DisplayLink Graphics Adapter is detached, the main display becomes primary again.

To make the DisplayLink Graphics Adapter the Primary Display using the DisplayLink menu

1. From the taskbar, click on the DisplayLink icon .
2. Select *Set as Main Monitor*.

Setting a Laptop Lid to do Nothing (Upon Close)

It is possible to work conveniently with a laptop by setting its action on lid closed to 'do nothing' then making the DisplayLink Graphics Adapter screen primary while disabling the main screen. The laptop lid can then be closed and the laptop used with DisplayLink Graphics Adapter screen and with external keyboard and mouse.

To set a laptop to do nothing

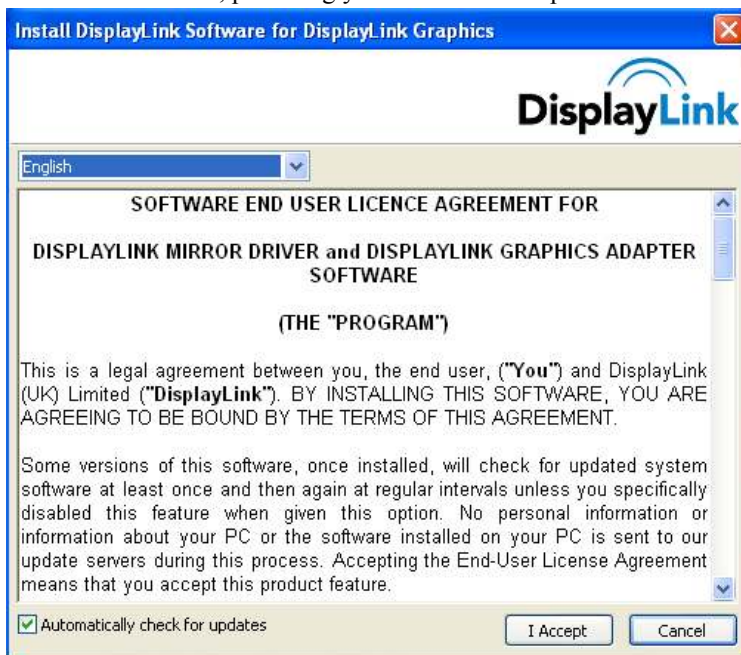
1. Select Start menu > Control Panel > Power Options.
2. Select *Choose* what closing the lid does.
3. From When I close the lid, select *Do nothing* from the *On battery* and *Plugged in* drop down list.

Windows Update

On Windows 7, the DisplayLink software connects to the Microsoft Windows update site to obtain the latest DisplayLink driver. On selecting “Check for updates”, the DisplayLink software connects to Windows update, downloads and installs the latest software.

Automatic Updates

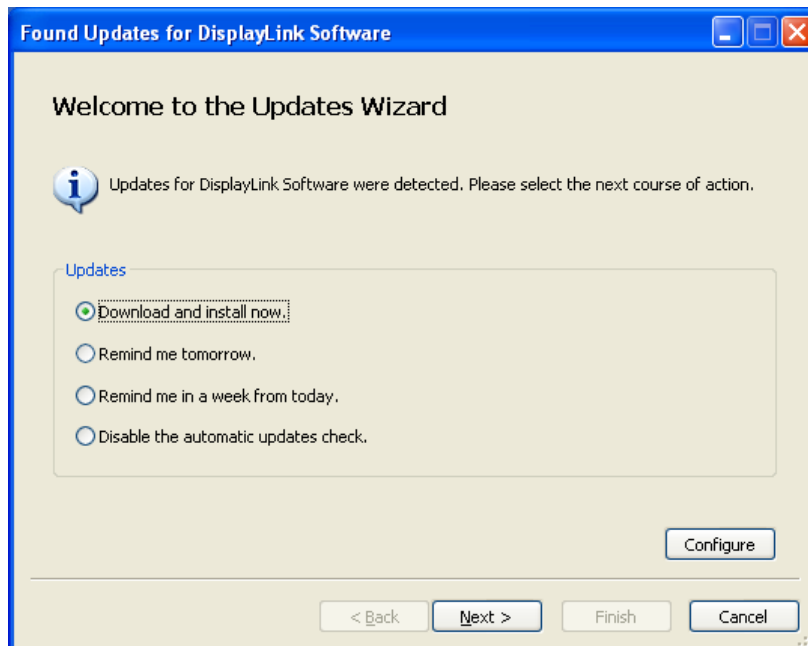
DisplayLink Automatic Updates is a product maintenance feature from DisplayLink, supported on Windows 2000/XP and Vista. The automatic update mechanism ensures that the DisplayLink Graphics Adapter has the most up-to-date drivers and software, providing you with increased performance and stability.



You can be disable this feature during install by clearing the *Automatically check for updates* checkbox.

Using the Updates Wizard

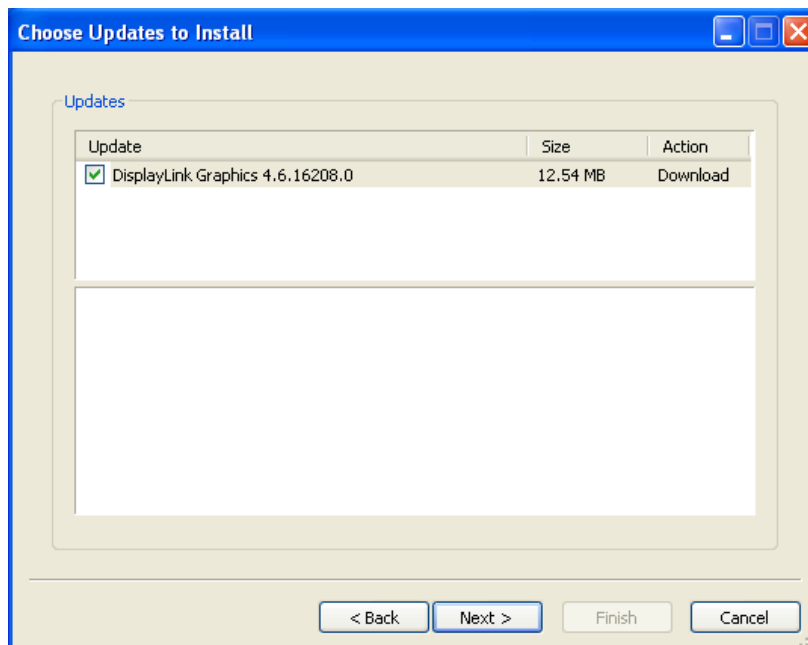
By default, automatic updates is configured to check for updated software on the plugging in of a DisplayLink Graphics Adapter, or the resume or start of your PC, every seven days. When newer software is available, the Updates Wizard launches.



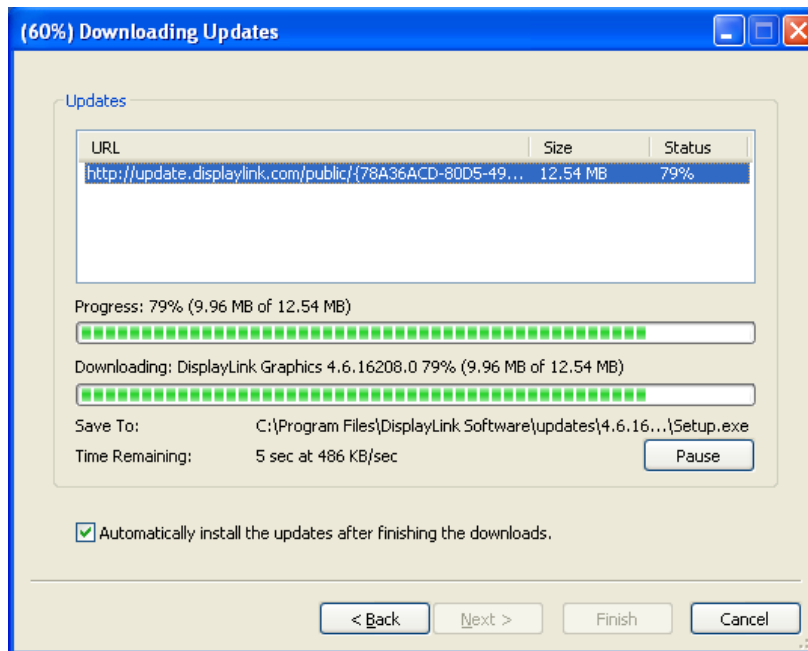
1. Select *Download and install now.*

Note: You can download and install the software immediately, but it is also possible to hide the reminder until a later date, or disable the reminder and future update checks entirely.

The Choose Updates to Install screen opens showing all the available updates. The most recent update is automatically set to Download, whilst others are skipped.



2. Click 'Next' to download the latest update.
The Downloading Updates screen opens.




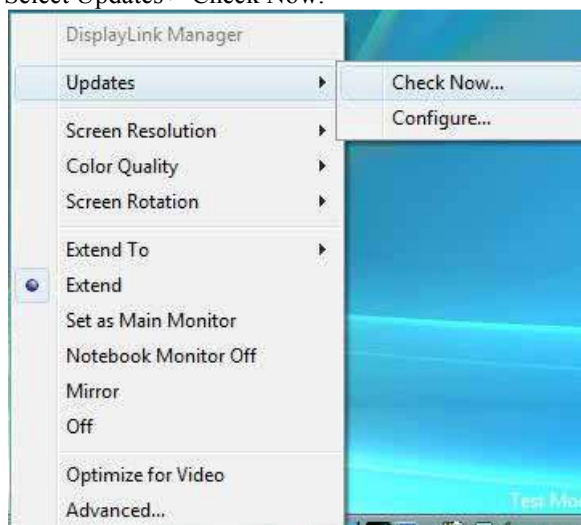
3. If you check the highlighted box, then installation of the latest software begins immediately after the download has finished, otherwise click 'Next' to begin software installation.

Manual Updates

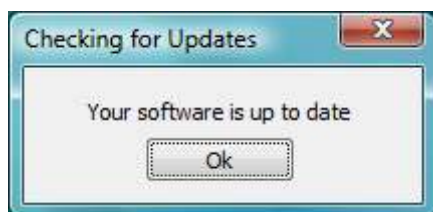
You can check for updates manually at any time.

To manually check for updates

1. Click on the DisplayLink icon  .
The DisplayLink menu opens.
2. Select Updates > Check Now.




If you have the most recent software, the dialog box, shown below, appears. Otherwise the *Choose updates to install* dialog opens.



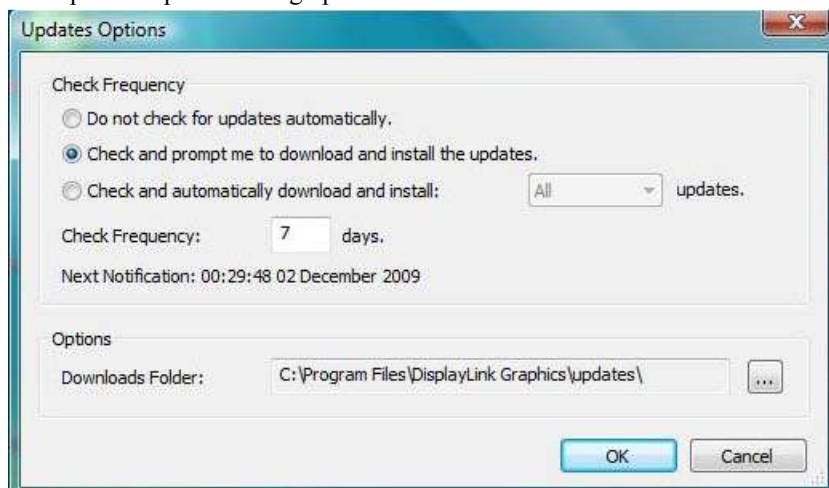
Configuring Updates

You can configure the check frequency, the updater's action on finding newer software and the download folder,

To configure updates

1. Click on the DisplayLink icon .
2. Select Updates > Configure.

The Updates Options dialog opens.



3. Select the options you want to change and click *OK*.
DisplayLink saves your changes.

Uninstalling the DisplayLink Graphics Adapter Software

The method for uninstalling differs slightly depending on your operating system.

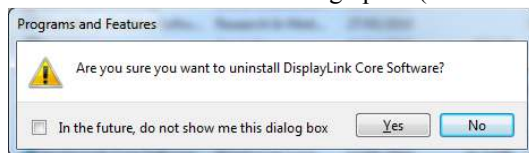
Uninstalling on Windows 7

Use this procedure to uninstall the DisplayLink Graphics Adapter software from Windows 7.

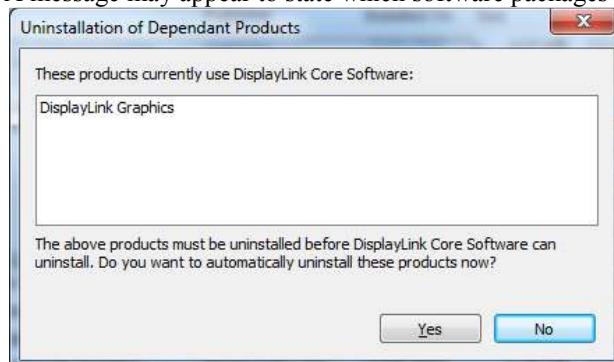
To uninstall the DisplayLink Graphics Adapter on Windows 7

1. From the Start Menu, select Control Panel.
2. From the Programs item, click *Uninstall program*.
3. Double click on *DisplayLink Core software*.

A windows confirmation dialog opens (if enabled)

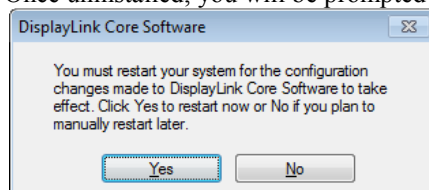


4. Click *Yes*.
5. A message may appear to state which software packages will also be uninstalled



Click *Yes* to uninstall the packages that use DisplayLink Core Software
The uninstaller automatically uninstalls the software.

6. Once uninstalled, you will be prompted to reboot



Click *Yes* to complete the uninstall.

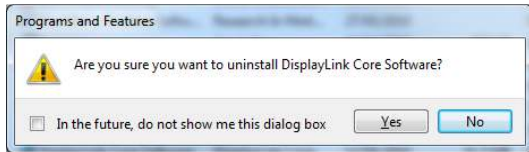
Uninstalling on Windows Vista and XP

The DisplayLink Graphics Adapter software can be removed from the *Programs and Features* utility under the Windows Vista control panel. (On Windows XP this is called *Add or Remove Programs*).

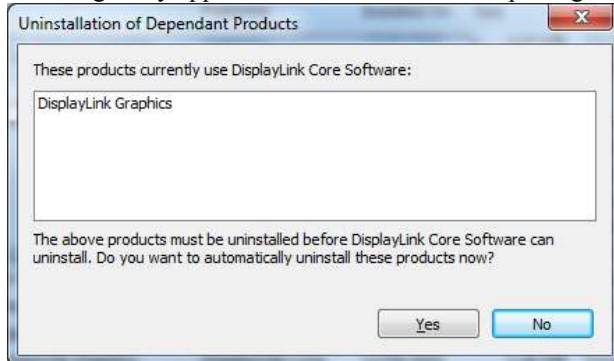
To uninstall the DisplayLink Graphics Adapter Software on Windows Vista

1. Select Start > Control Panel > Programs and Features.
2. Select *DisplayLink Core software* and click on *Uninstall*.

A windows confirmation dialog opens (if enabled)

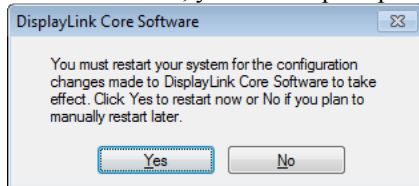


3. Click *Yes*.
4. A message may appear to state which software packages will also be uninstalled



Click *Yes* to uninstall the packages that use DisplayLink Core Software
The uninstaller automatically uninstalls the software.

5. Once uninstalled, you will be prompted to reboot

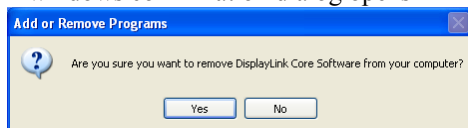


6. Click *Yes* to complete the uninstall.

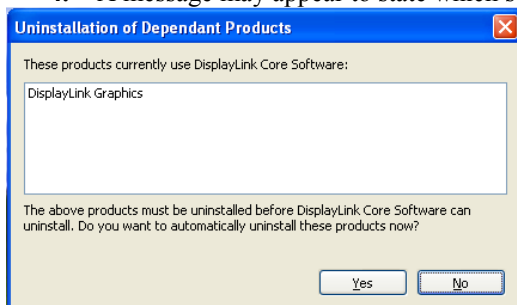
To uninstall the DisplayLink Graphics Adapter software on Windows XP

1. Select Start > Control Panel > Add or Remove Programs.
2. Select DisplayLink Core software and click on *Remove*.

A windows confirmation dialog opens

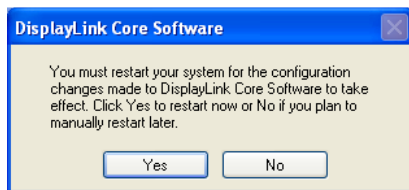


3. Click *Yes*.
4. A message may appear to state which software packages will also be uninstalled



Click *Yes* to uninstall the packages that use DisplayLink Core Software
The uninstaller automatically uninstalls the software.

5. Once uninstalled, you will be prompted to reboot
6. A message may appear to state which software packages will also be uninstalled



7. Click *Yes* to complete the uninstall.

Additional Information

The following section provides additional information on the use of the DisplayLink Graphics Adapter software.

DirectX 10 Game support

V5.4 adds support for some DirectX 10 games on Windows 7. To improve the gaming experience, it is recommended that:

- Antialiasing (AA) settings are turned OFF
- Locking to vsync is turned ON

These options are usually configurable within the DirectX 10 game.

To play 3D games on a DisplayLink screen with reasonable performance the system specs must meet the game “recommended” hardware specification, not just the minimum specification.

Monitor Calibration

Monitors can now be calibrated with applications that use the Display Data Channel Command Interface (DDC/CI). Both the monitor and application must support DDC/CI for this to work. An example of an application that is now supported is [ScreenWhite](#).

DDC/CI is not supported on displays with integrated DisplayLink technology, for example mini monitors.

Media Playback

On Windows 7, Vista and Windows XP (in extend mode), the DisplayLink Graphics Adapter can display media files and DVDs using the following media players:

- Windows Media Player 11 (<http://www.microsoft.com/windows/windowsmedia/default.mspx>)
- WinDVD 8 (www.intervideo.com)
- PowerDVD 7 (www.cyberlink.com)
- RealPlayer 11 (www.real.com)

The DisplayLink Graphics adapter can display media files and DVDs using most media players. Media playback in mirror mode (XP) or in Basic mode (Vista and Windows 7) is not recommended.

Using Multiple DisplayLink Graphics Adapters

The software supports up to six simultaneously USB attached screens. It is also possible that different sets of screens are being used at different times, for example two in the office and two at home. The software saves each screen’s display profile separately. This allows for different physical positioning, or different resolutions, of connected monitors in the office and the home.

Standby and Hibernate, Shut down and Restart

If the PC that the DisplayLink Graphics Adapter is connected to is placed into standby or hibernate mode, the display goes blank. When the PC is again powered up (and unlocked if necessary) the connected monitor returns to the same mode as it was before stand by or hibernation.

If the PC is shut down, restarted and logged in, again the connected display returns to the same mode as it was before shutdown.

DisplayLink Graphics Adapters with Multiple Users

DisplayLink Graphics Adapters work with multiple users on the PC. The mode settings are saved for each user so each can use their own desktop configuration.

Disconnecting the DisplayLink Graphics Adapter

If the DisplayLink Graphics Adapter is powered off or the USB cable is removed from the computer, the display blanks. All windows and icons move to the primary screen.

On reconnection or powering up of the DisplayLink Graphics Adapter, the display 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.

Supported Screen Modes

There are three components that make up the screen mode:

Resolution: The number of pixels displayed on screen horizontally and vertically.

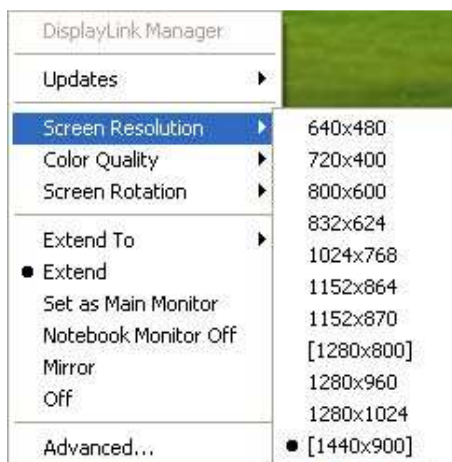
Color Quality: The number of different colors that can be shown on the screen at the same time.

Refresh Rate: The speed that the entire screen is rescanned. Higher refresh rates reduce flicker.

Some monitors advertise the supported modes through the VGA or DVI connector. If this is the case, the DisplayLink Graphics Adapter identifies the supported modes from the monitor. If the monitor does not advertise the supported modes, the DisplayLink Graphics Adapter software chooses a set of common screen modes for the monitor.

Inferred Modes

Some modes in the DisplayLink GUI are shown with [] around them.



This occurs when connecting a monitor with a preferred mode higher than the maximum supported resolution of the DisplayLink device

In this case, the preferred resolution of the monitor cannot be supported. However we add lower resolutions of the same aspect ratio to be tried with the monitor. Modes in square brackets [] imply that these are modes not reported by the monitor, but have been made available by the DisplayLink software for you to try.

As these are inferred modes from the preferred mode of the monitor, they are not guaranteed to work with the display.

Error Messages

DisplayLink Graphics Adapter software occasionally displays user messages in a bubble in the notification area. The table below lists the user messages and their description.

Message	Description
Insufficient system resources exist to complete the requested service	This can occur when entering extend mode with low system resources. The PC does not have enough memory to start an extend display. Close down any unused applications. The situation may also be improved by rebooting the PC.
The requested allocation size was too large	This can occur if trying to mirror a primary display with a resolution above 2300x1700 (4:3) or 2600x1500 (16:9).
Incompatible Display Driver	This message will appear if the primary graphics card drivers installed are not WDDM compatible. Windows 7 is not designed to operate without WDDM drivers. Download and install the latest Windows 7 (WDDM) drivers for your primary graphics card.
The system cannot write to the specified device	This warning may be displayed in Windows XP after changing the display mode several times (e.g. Extend/Dock mode) from the DisplayLink GUI. If this happens, detach and reattach the device to restore normal operation.

Further Support

<http://www.displaylink.com/support>.

Troubleshooting

Minor issues can generally be resolved by:

- unplugging and re-plugging the DisplayLink device,
- changing the display mode via the DisplayLink GUI, or,
- changing the display mode via Windows Display Properties.

On Windows 7/Vista WDDM (Aero and Basic)

DisplayLink software works closely with the graphics card and there may be interoperability issues with some graphics cards. If this happens:

1. Try to upgrade to the latest graphics drivers.
2. Try to upgrade to latest DisplayLink software.
3. Report the issue via your support channel.
4. If necessary, boot into Safe Mode and use Windows' Backup and Restore Center to recover.