

# Dell P3223DE

## Dell Display Manager

### User's Guide

Model: P3223DE  
Regulatory model: P3223DEt





**NOTE: A NOTE indicates important information that helps you make better use of your computer.**

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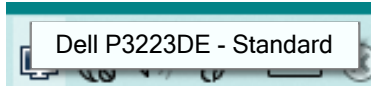
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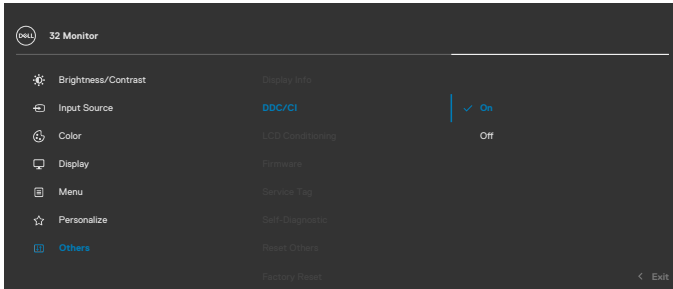


# Overview

Dell Display Manager is a Microsoft Windows application used to manage a monitor or a group of monitors. It allows manual adjustment of the displayed image, assignment of automatic settings, energy management, window organization, image rotation, and other features on selected Dell monitors. After installed, Dell Display Manager runs each time the system starts and places its icon in the notification tray. Information about monitors connected to the system is available when hovering over the notification-tray icon.

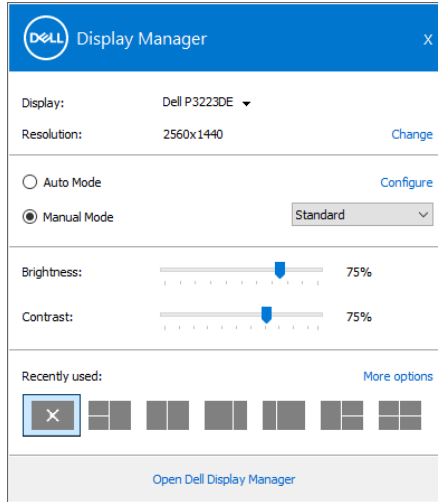


**NOTE:** Dell Display Manager uses DDC/CI channel to communicate with your monitor. Ensure DDC/CI is enabled in the menu as follows.



# Using the Quick Settings Dialog

Clicking Dell Display Manager's notification tray icon opens the **Quick Settings** dialog box. When more than one supported Dell monitors are connected to the computer, a specific target monitor can be selected using the menu. The **Quick Settings** dialog box allows you to easily adjust the brightness, contrast, resolution, window layout, and so on. It also allows you to enable automatic switching between preset modes or to select a preset mode manually.



The **Quick Settings** dialog box also provides access to Dell Display Manager's advanced user interface that is used to adjust basic functions, configure auto mode and access other features.



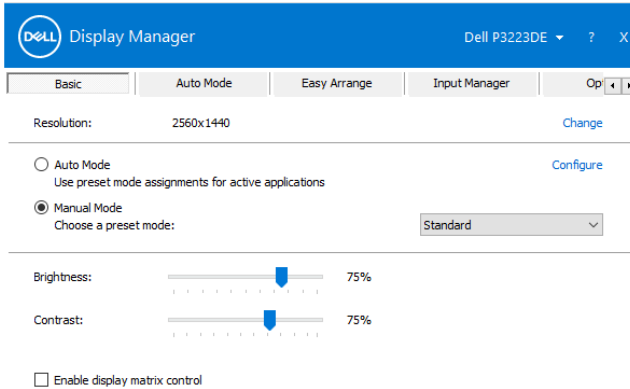
 **NOTE:**

<b>Feature</b>	<b>Function</b>	<b>Description</b>
Quick DDM Access	Quick key to call up DDM UI	<ul style="list-style-type: none"><li>• Ctrl+Shift+D</li><li>• Use Page Up/Page Down key or click on "&gt;" to flip through all Easy Arrange layouts.</li></ul>
	Control individual display in multiple display setup	<ul style="list-style-type: none"><li>• Select the monitor from the dropdown box. If more than one monitor is connected to your computer, an icon appears on the selected monitor for a second so you know which monitor you have selected.</li><li>• Perform monitor self-test feature check.</li><li>• Move DDM UI to the monitor to be controlled.</li><li>• Press Ctrl+Shift+D to bring up the miniUI under the mouse pointer.</li></ul>

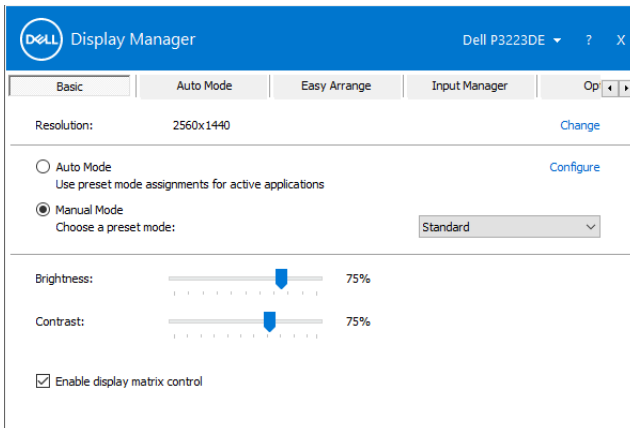


# Setting Basic Display Functions

You can select **Manual Mode** that enables you to manually select a preset mode or select **Auto Mode** that applies a preset mode based on the active application. An on-screen message displays the current preset mode whenever it changes. The selected display's **Brightness** and **Contrast** can also be directly adjusted from the **Basic** tab.



**NOTE:** When multiple Dell monitors are connected, select “Enable display matrix control” to apply brightness, contrast and color presets controls to all monitors.



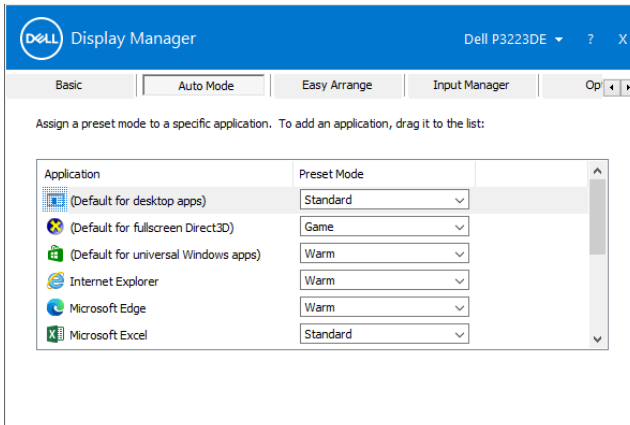
# Assigning Preset Modes to Applications

The **Auto Mode** tab allows you to associate a specific **Preset Mode** with a specific application, and apply it automatically. When **Auto Mode** is enabled, Dell Display Manager automatically switches to the corresponding **Preset Mode** whenever the associated application is activated. The **Preset Mode** assigned to a particular application may be the same on each connected monitor, or it can vary from one monitor to another.

Dell Display Manager is pre-configured for many popular applications. To add a new application to the assignment list, simply drag the application from the desktop, Windows Start Menu or elsewhere, and drop it onto the current list.

**NOTE:** Preset Mode assignments for batch files, scripts, loaders, and non-executable files such as zip archives or packed files, are not supported.

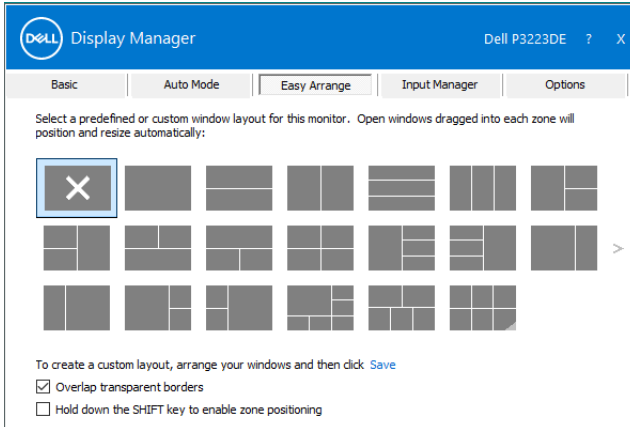
You can also configure the Game preset mode to be used whenever a Direct3D application runs in full-screen mode. To prevent an application from using mode, assign a different preset mode to it.





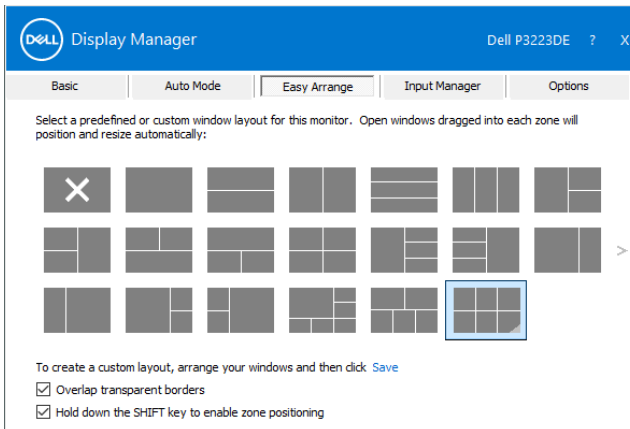
# Organizing Windows with Easy Arrange

**Easy Arrange** helps you to effectively organize your application windows on the desktop. You first choose a pre-defined layout pattern which suits your work, then you just need to drag the application windows into the defined zones. Press “>” or use Page Up/Page Down key to find more layouts. To create a custom layout, arrange the open windows and then click **Save**.

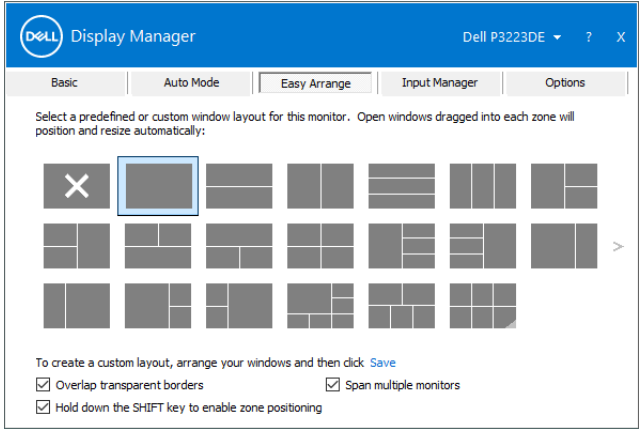


Windows OS 10 only, you can apply different window layouts for each of the virtual desktops.

If you often use Windows snap feature, you can select “**Hold down the SHIFT key to enable zone positioning**”. This gives Windows snap priority over **Easy Arrange**. You will then need to press the Shift key to use **Easy Arrange** positioning.



If you are using multiple monitors in an array or matrix, **Easy Arrange** layout can be applied across to all the monitors as one desktop. Select “**Span multiple monitors**” to enable this feature. You need to align your monitors properly to make it effective.



There are other advanced usage of **Easy Arrange**. Refer to table below.

Feature	Function	Description
<b>Enhanced Easy Arrange</b>	Custom layouts	<ul style="list-style-type: none"> <li>Save and name 5 customized <b>Easy Arrange</b> patterns.</li> <li>Configure x*y patterns.</li> </ul>
	6 MRU (most-recently-used) layouts	<ul style="list-style-type: none"> <li>Press <b>Ctrl+Shift+Home</b> to cycle among the last 6 MRU layouts.</li> </ul>
	On the fly partition resizing	<ul style="list-style-type: none"> <li>Hold down Ctrl while resizing current <b>Easy Arrange</b> layout to adjust the size and numbers of cells in a layout.</li> <li>Newly formed <b>Easy Arrange</b> pattern is saved into the <b>Easy Arrange</b> icon position.</li> <li>Hold down Ctrl while clicking on a modified layout icon to restore it to default layout.</li> </ul>
	<b>Easy Arrange</b> layouts for portrait mode	<ul style="list-style-type: none"> <li>Portrait mode <b>Easy Arrange</b> icons are presented when monitor is rotated.</li> </ul>

**NOTE:** An application may require a minimum effective resolution for its application window. Such application may not fit in an Ease Arrange zone if the zone is smaller than the required window size.

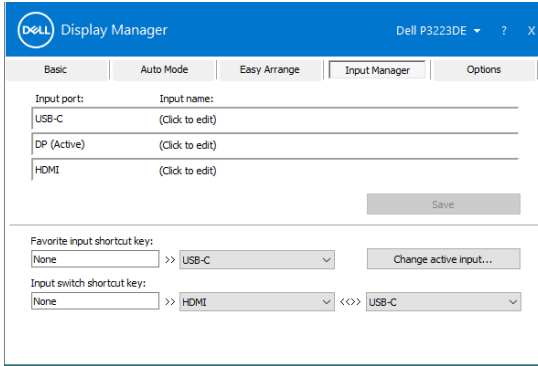


# Managing Multiple Video Inputs

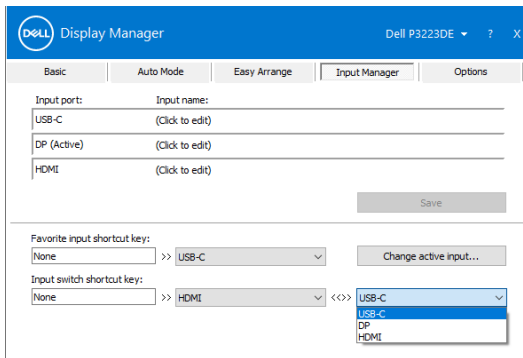
The **Input Manager** tab provides convenient ways for you to manage multiple video inputs connected to your Dell monitor. It makes it very easy to switch between inputs while you work with multiple computers.


All video input ports available to your monitor are listed. Provide a valid input name and save the changes.

You can define a shortcut key to quickly switch to your favorite input and another shortcut key to quickly switch between two inputs if you often work between them.



You can use the dropdown list to switch to any input source.

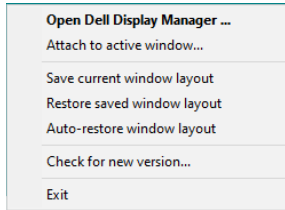


 **NOTE:** DDM communicates with your monitor even when the monitor is displaying video from another computer. You can install DDM on the computer you frequently use and control input switching from it. You may also install DDM on other computers connected to the monitor.

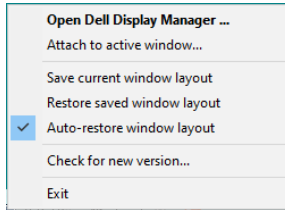


# Restoring Application Positions

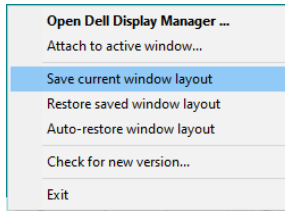
DDM can help you restore application windows into their positions when you reconnect your computer to the monitor(s). You can quickly access to this feature by right-clicking on DDM icon in the notification tray.



If you choose “**Auto-restore window layout**” (support Windows OS 10 or 8.1), your application windows’ positions are tracked and remembered by DDM. DDM automatically puts the application windows into their original positions when you reconnect your computer to your monitor(s).




To go back to a favorite layout, first select “**Save current window layout**” and then “**Restore saved window layout**”.



You may use monitors with different models or resolutions in your daily routine, and you may apply different window layouts on them. DDM is able to know the monitor you have reconnected and restore application positions accordingly.

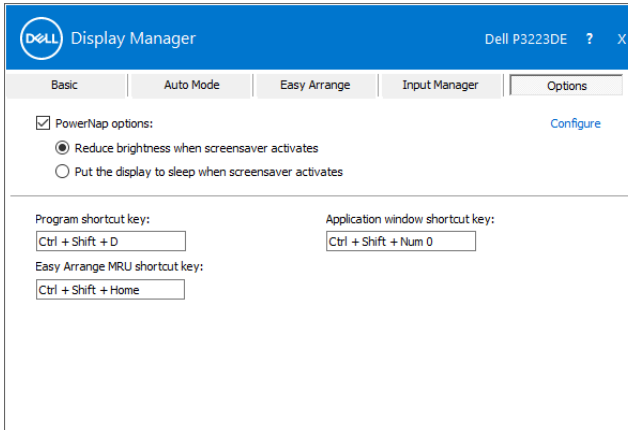
In case you need to replace a monitor in a monitor matrix configuration, you can save the window layout before replacement and restore the layout after a new display is installed.

 **NOTE:** You should keep your applications running in order to benefit from this feature. DDM does not launch applications.



# Applying Energy Conservation Features

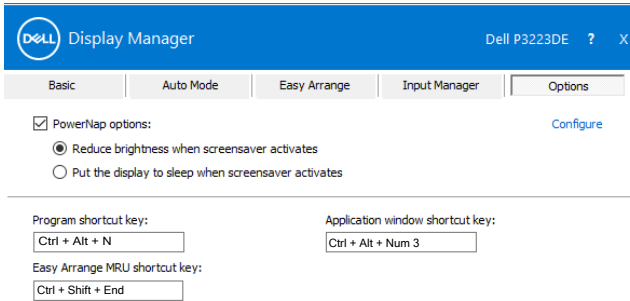
On supported Dell models, an Options tab is available that provides PowerNap energy conservation options. You can choose to set the display's brightness to the minimum level, or to put the display to sleep when the screensaver is activated.



# Other Shortcut Keys

You can define the shortcut keys for quick access to the following DDM functions:

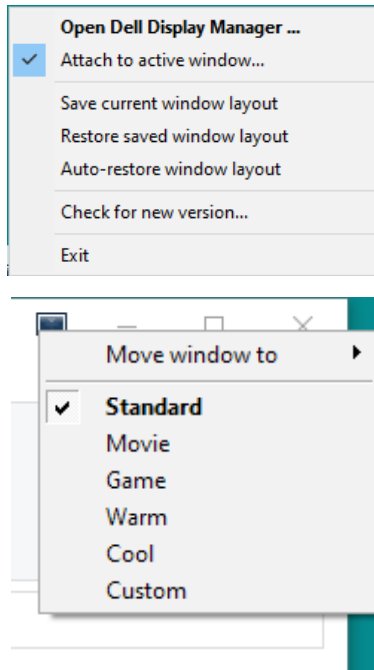
- **Program shortcut key:** to quickly open the **Quick Settings** dialog box.
- **Easy Arrange MRU shortcut key:** to quickly apply the 6 recently used window layouts.
- **Application window shortcut key:** to launch a quick menu for options under **Auto Mode** and **Easy Arrange**.



# Attach DDM To Active Windows (Windows 10 Only)

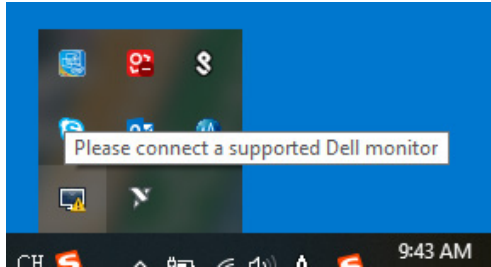
DDM icon can be attached to the active window you are working on. Click on the icon for easy access to below features.

Feature	Function	Description
Attach DDM to Active Window (Windows 10 only)	Change preset or snap to different partitions	· DDM icon attached to active window and user can easily switch the window position, change color preset mode, and associate auto preset mode.
	Shortcut key trigger	· On a running app window, press Ctrl+Shift+Ins to trigger the attached DDM menu.
	Move app window among <b>Easy Arrange</b> cells	· Send the app window to previous/next <b>Easy Arrange</b> cell.
	Move app window among monitors	· Send the app window to previous/next monitor.

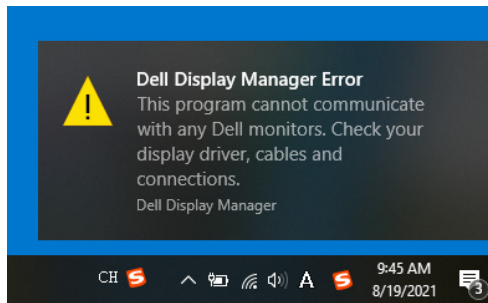


# Troubleshooting

If DDM does not work with your monitor, DDM will show the following icon in your notification tray.



Click on the icon, DDM shows a more detailed error message.



Please note that DDM only works with Dell-branded monitors. If you are using monitors from other manufacturers, DDM doesn't support them.

If DDM is unable to detect and/or communicate with a supported Dell monitor, please take the following actions to troubleshoot:

1. Make sure the video cable is properly connected to your monitor and your computer. especially the connectors should be firmly inserted into position.
2. Check the monitor OSD to ensure DDC/CI is enabled.
3. Make sure you have the correct and latest graphics driver from the graphics vendor (Intel, AMD, NVidia, etc.). Graphics driver is often the cause of DDM failure.
4. Remove any docking stations or cable extenders or converters between the monitor and the graphics port. Some low-cost extenders, hubs or converters may not support DDC/CI properly and can fail DDM. Update the driver of such device if the latest version is available.
5. Restart your computer.





DDM may not work with the following monitors:

- Dell monitor models earlier than year 2013 and D-series of Dell monitors. For more information see <https://www.dell.com/support/monitors>
- Gaming monitors using Nvidia-based G-sync technology
- Virtual and wireless monitors do not support DDC/CI
- Some early models of DP 1.2 monitors, it may be necessary to disable MST/DP 1.2 using the display OSD

If your PC is connected to the Internet, you will be prompted to upgrade to a newer version of DDM when it is available. It is recommended to download and install the latest DDM application.

You may also check for new version by right clicking on DDM icon.

