

# Dell Docking Station UD22

## Administrator's Guide

## Notes, cautions, and warnings

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

 **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

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# Introduction

This guide is for IT professionals and engineers, to get more information about the following technical topics:

- Step-by-step Instructions on standalone Dock Firmware Update Utility and DisplayLink driver Installation.
- Dock asset management locally and remotely through DCM (Dell Command | Monitor) and SCCM (System Center Configuration Manager).

# Dell Universal Dock UD22 Firmware Update

## About this task

**NOTE:** Dell Universal Dock UD22 Firmware Update Utility only supports computer with Microsoft Windows operating system. Information that is provided is for Microsoft Windows users running the executable tool.

## Topics:

- Updating the firmware
- Approximate firmware update duration
- Logging
- Error handling
- Commands for Automation

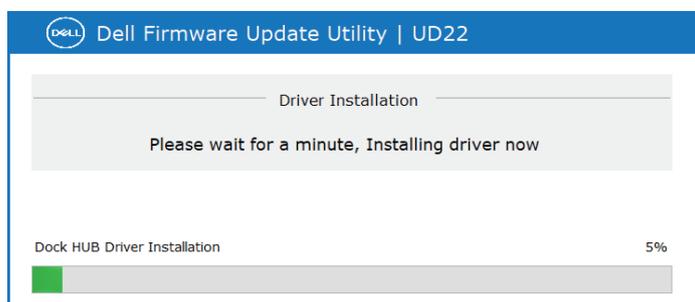
## Updating the Firmware

### Prerequisites

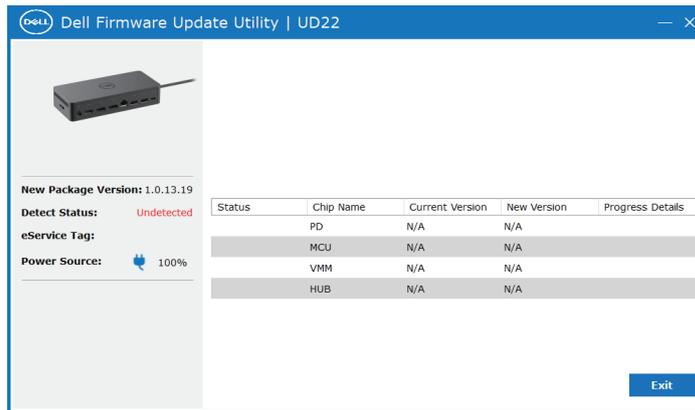
1. The following condition must be met to update firmware:
  - Your computer must have > 10% charge capacity or connected to AC power.
2. Download the Dell Universal Dock UD22 Firmware Update Utility from [www.dell.com/support](http://www.dell.com/support).

### Steps

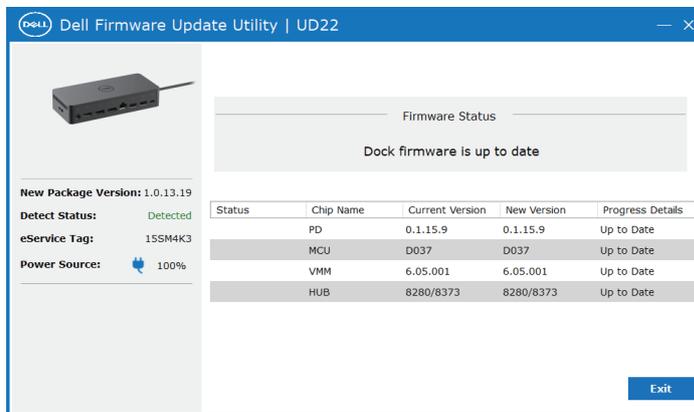
1. Connect the dock to the computer.
2. Start the tool in administrative mode.
3. When execute the Firmware Update Utility, all necessary drivers for firmware update will be installed automatically.



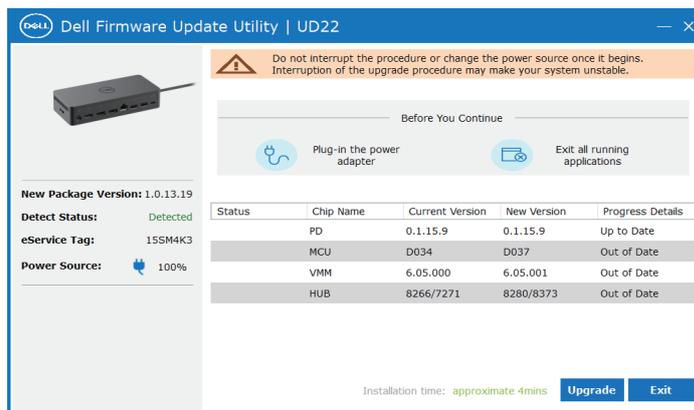
4. The following Graphical User Interface (GUI) snapshot shows a scenario when application is run without a dock connected to the computer. Click **Exit Button** to close the application.



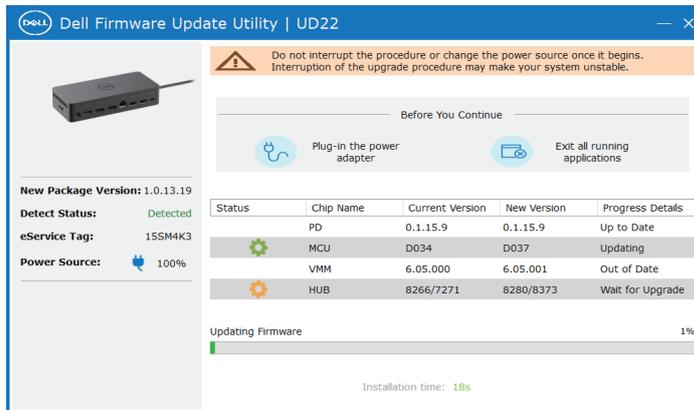
5. The following Graphical User Interface (GUI) snapshot shows a scenario when application is run with a dock connected to the computer.  
 a) All firmware version in your Dell Universal Dock UD22 is up-to-date. You can click **Exit Button** to close the FW Update Utility directly.



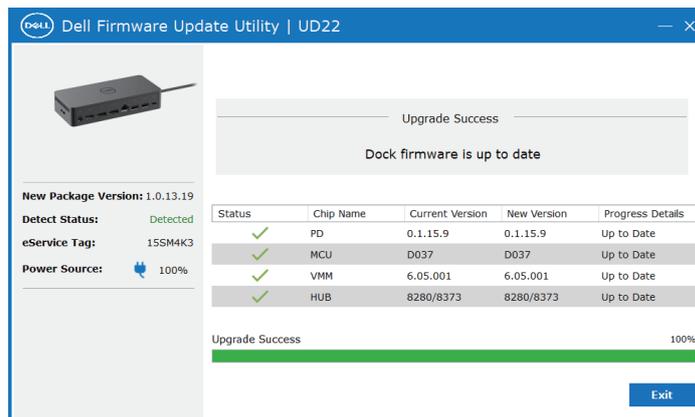
b) When firmware update is available, click **Upgrade Button** to update the dock firmware.



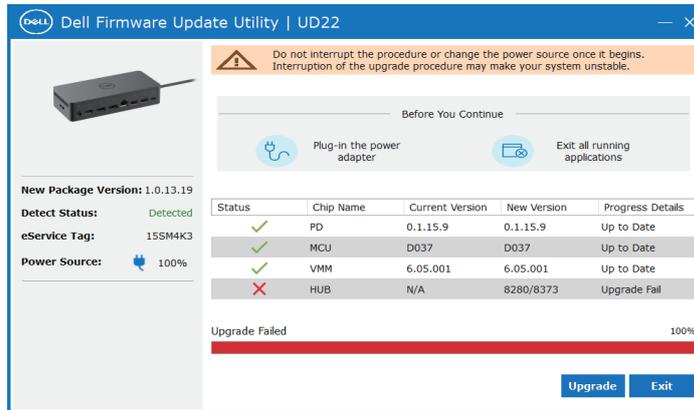
6. Wait for the firmware update to complete. The progress bar shows the percent completed and Installation time shows the elapsed time.



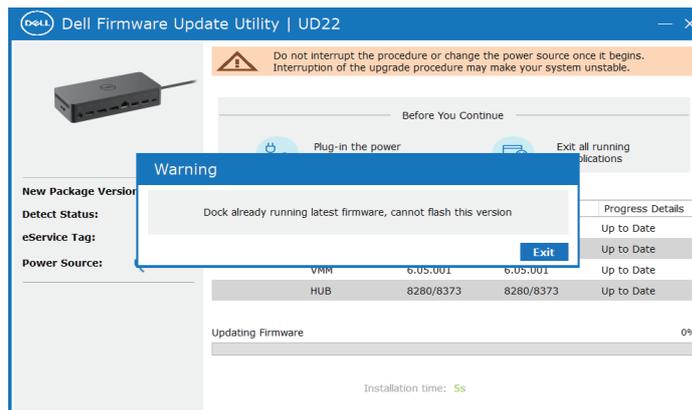
7. The following Graphical User Interface (GUI) is displayed and firmware upgrade is successful. Click **Exit Button** to close the application.



8. The following Graphical User Interface (GUI) is displayed when the utility is unable to update the latest firmware on your Dell Universal Dock UD22. Click **Upgrade Button** to try again.



9. The following Graphical User Interface (GUI) is displayed when Dell Universal Dock UD22 is running a higher version of firmware compared to the firmware version in the Firmware Update Utility. Click **Exit Button** to close the application. Please use a latest version of utility.



# Approximate Firmware Update Duration

## About this task

The firmware update time duration in the following table is from a measurement running Dock Firmware Utility A03 on a Latitude Series with Windows Operating System. These numbers are for reference only and can vary depending on multiple factors including existing firmware and/or devices attached.

**Table 1. Approximate firmware update duration**

Firmware	Update duration (in seconds)
PD_DMC	70
USB Hub	70
MCU	70
VMM	100

## Logging

The file name of log is "Dell-Universal-Dock-UD22-Firmware-Update-Utility\_9JJYT\_WIN\_1.0.13.19\_A03.txt" and the default path of log is C:\ProgramData\Dell\UpdatePackage\Log

**NOTE:** The name of the log file is determined by the name of software bundle and its version. The above mentioned log file is for software bundle 9JJYT and version 1.0.13.19

You can also access the logs by clicking the View Installation Log



# Error Handling

## Error Handling Conditions

Table 2. Error handling conditions

Error Condition	Symptom/Scenario	Message	CLI options
Power Check	If the battery level is less than 10% on portable platform and not charging.	Low Battery! Please connect your system to A/C power and re-run Updater.	/s, error message is not displayed, log will have <b>"Low Battery! Please connect your system to A/C power and re-run Updater."</b>
Dock Detection	Dock is not connected or detected by your computer.	Undetected.	/s, error message is not displayed, log will have <b>"DFU doesn't recognize the product."</b>
Firmware Update Fails	When in GUI Mode, if the Firmware Update Utility is unable to update the firmware, a Update Failed message is displayed above the progress bar.	Update Failed.	/s, error message is not displayed, log will have <b>"Dock Update failed."</b>
Firmware Update stops	Firmware Update Utility and DisplayLink cannot update dock at the same time.	DisplayLink firmware update in progress. Please retry after a minute.	/s, error message is not displayed, log will have <b>"DisplayLink firmware update in progress. Please retry after a minute."</b>
Firmware Downgrade Blocked	The version of firmware running on the dock is higher than the firmware version in the update utility.	Dock already running latest firmware, cannot flash this version.	/s, error message is not displayed, log will have <b>"Dock already running latest firmware, cannot flash this version."</b>
Cannot run additional instance of DFU	Only one instance of the application can be running.	Another instance of this application is already running.	/s, error message is not displayed, log will have <b>"Another instance of this application is already running."</b>

## Commands for Automation

### About this task

Run the utility with administrative privileges with the command-line options /s /l=filename.txt. The update is run in silent mode without GUI. Automation environment can get the return code (DUP compliant) from the tool for verifying pass or fail status. The logfile (filename.txt) can be used for parsing the dock data and individual component update information.

### Command-Line options

Table 3 Command line options

Command line	Notes
/s	Silent
/l= <filename>	Log file

### Exit codes

The following exit codes are returned by DUP compliant Firmware Update.

Table 4 Exit codes

Exit code	Description
0	Update success
1	Update unsuccessful

# Dell Command Update

Dell recommends updating the computer BIOS, graphics driver to the latest version before using the docking station. Older BIOS versions and drivers could result in the docking station not being recognized by your computer or not functioning optimally.

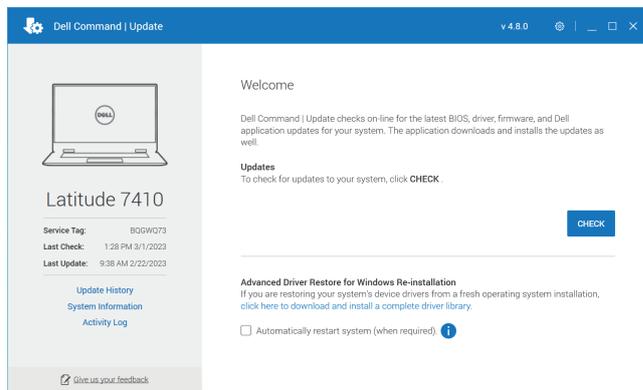
Dell highly recommends the Dell Command Update to automate the installation of BIOS, firmware, driver, and critical updates specific to your computer and docking station.

For more information about Dell command update user guide. See [Dell Command Update](#).

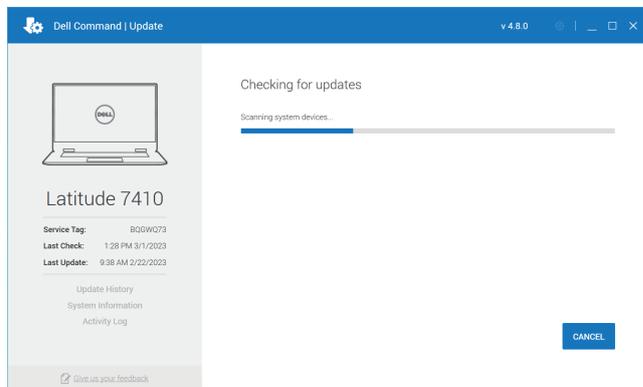
## How to update Dell Universal Dock UD22 Firmware Update by Dell Command Update

### Steps

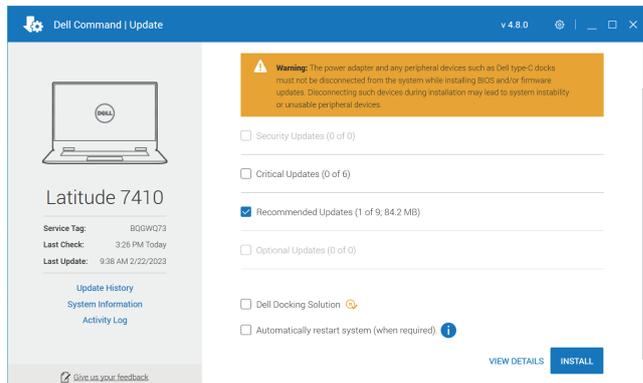
1. Please make sure the computer has a stable Internet connection.
2. Start Dell command update in administrative mode and click the Check Button.



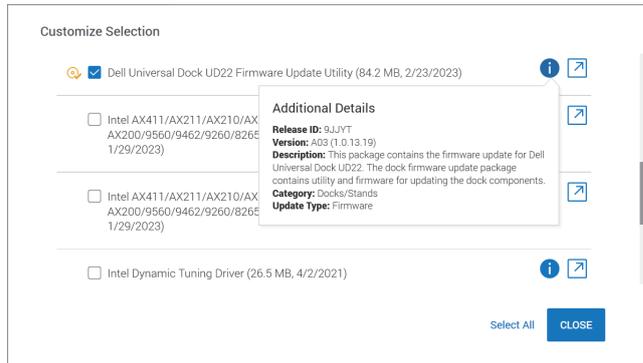
3. Wait for the scanning system device to complete.



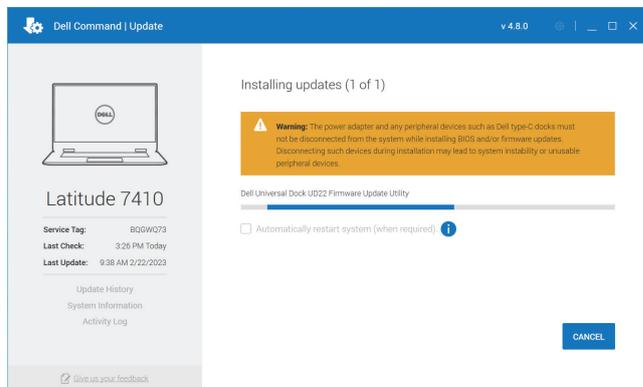
4. Click the VIEW DETAILS Button to customize.



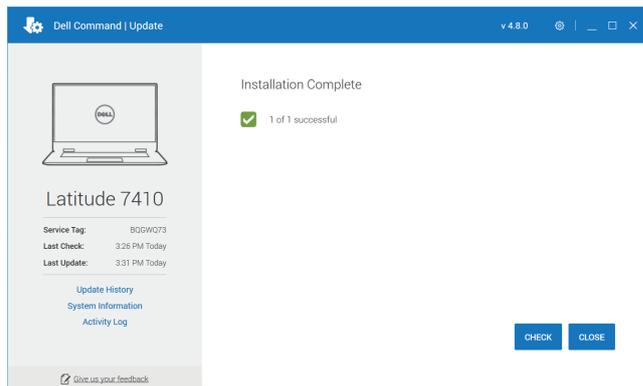
5. Select the Dell Universal Dock UD22 Firmware Update, if not selected. Click Close Button.



6. Click INSTALL Button to install Dell Universal Dock UD22 Firmware Update. Wait for the firmware update to complete. The progress bar shows current installation status.



7. Click Close after installation to complete the update



# Dell Universal Dock UD22 DisplayLink Driver installation

## About this task

Dell Docking Station driver (DisplayLink Driver) must be installed before using the docking station for full functionality.

**NOTE:** Dell Universal Dock UD22 DisplayLink Driver supports computer with Microsoft Windows operating system. Information that is provided is for Microsoft Windows users running the executable tool.

## Topics:

- Installing DisplayLink Driver
- Logging
- Commands for Automation
- DELL Command Update
- Windows Update

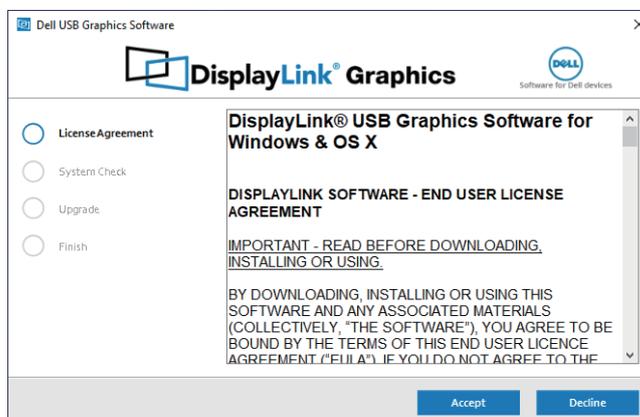
## Installing DisplayLink Driver

### Prerequisites

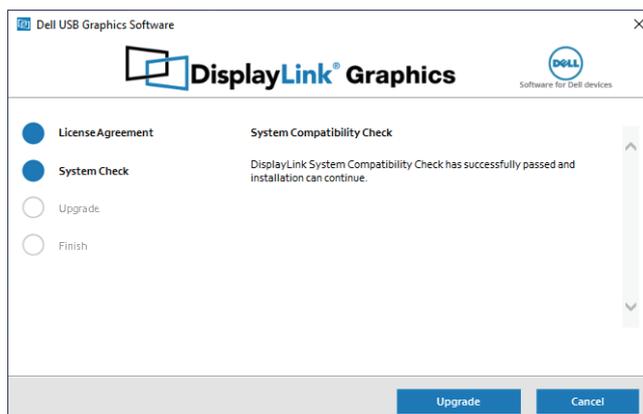
Download the Dell Universal Dock UD22 DisplayLink Driver from [www.dell.com/support](http://www.dell.com/support).

### Steps

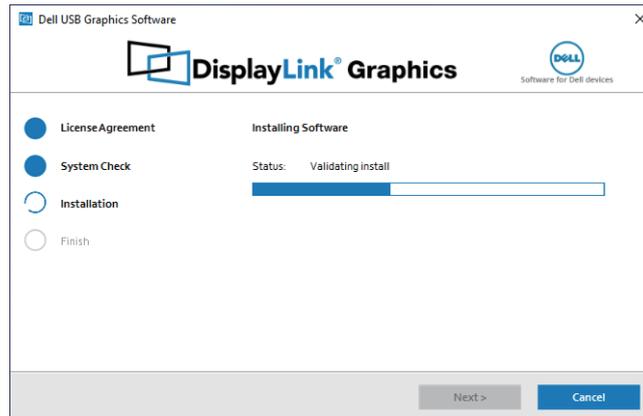
1. Start the tool in administrative mode and click the **Accept Button**.



2. Click **Upgrade Button** to install DisplayLink Driver.



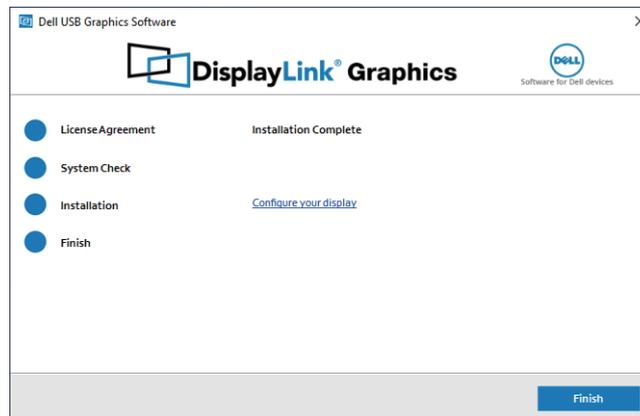
3. Wait for the driver installation to complete. The progress bar shows current installation status.



4. After driver installation, the user may be presented with one of the following outcomes.

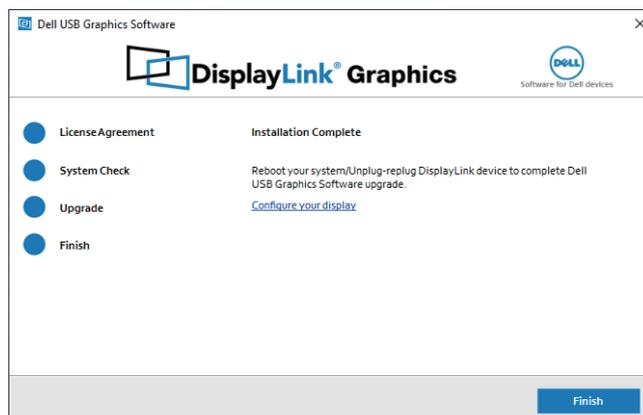
- Clean driver installation

The following screen is shown if DisplayLink driver is installed in the computer for the first time.



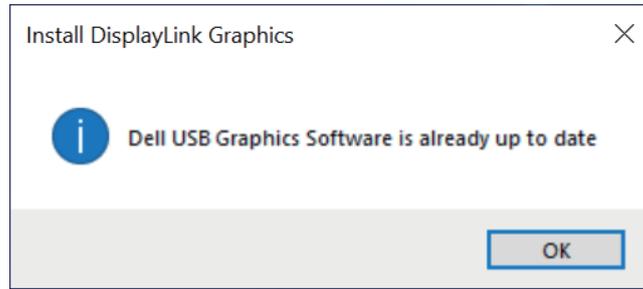
- Driver update to a newer version

The following screen is shown if DisplayLink driver is successfully updated to a newer version.



- Driver is up-to-date

The following screen is shown if the DisplayLink driver in the computer is already up to date.



## Logging

The file name of log is "DisplayLink-Dock-Driver\_N3YD5\_WIN\_10.3.6400.0\_A04.txt" and the default path of log is C:\ProgramData\Dell\UpdatePackage\Log

**NOTE:** The name of the log file is determined by the name of software bundle and its version. The above mentioned log file is for software bundle N3YD5 and version 10.3.6400.0

You can also access the logs by clicking the View Installation Log



# Commands for Automation

## About this task

Run the tool with administrative privileges with the command-line options `/s /l=filename.txt`. The update is run in silent mode without GUI. Automation environment can get the return code (DUP compliant) from the tool for verifying pass or fail status.

## Command-Line options

**Table 5 Command line options**

Command line	Notes
<code>/s</code>	Silent
<code>/l= &lt;filename&gt;</code>	Log file

## Exit codes

The following exit codes are returned by DUP compliant Driver Update.

**Table 6 Exit codes**

Exit code	Description
0	Update success
1	Update failed
2	Reboot required
8	Downgrade is not allowed

# Dell Command Update

Dell Docking Station driver (DisplayLink Driver) is required to be installed before using the docking station for full functionality. Dell recommends updating the computer BIOS, graphics driver to the latest version before using the docking station. Older BIOS versions and drivers could result in the docking station not being recognized by your computer or not functioning optimally.

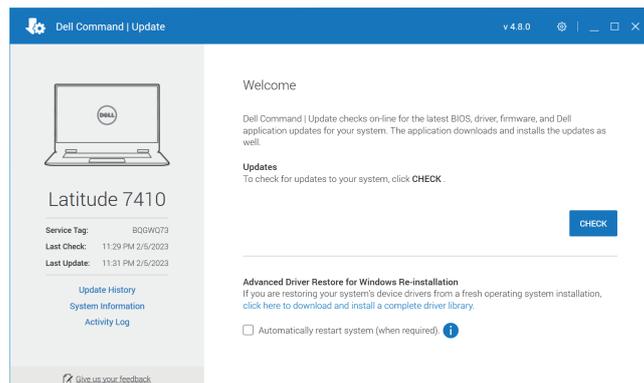
Dell highly recommends the Dell Command Update to automate the installation of BIOS, firmware, driver, and critical updates specific to your computer and docking station.

For more information about Dell command update user guide. See [Dell Command Update](#).

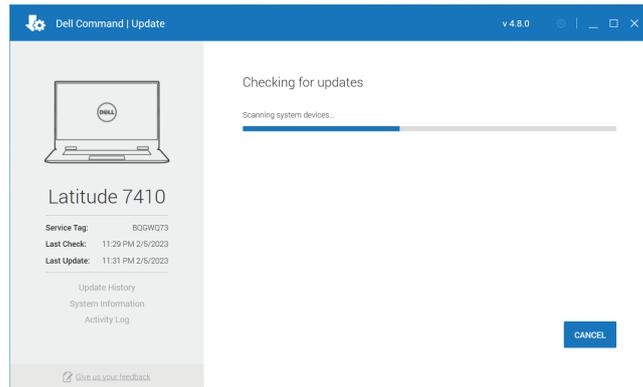
## How to update DisplayLink driver by Dell Command Update

### Steps

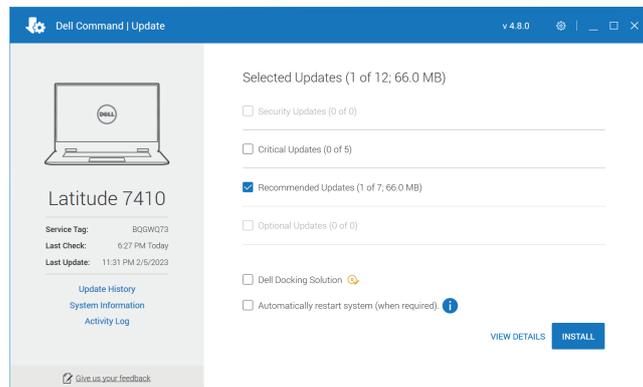
1. Please make sure the computer has a stable Internet connection.
2. Start Dell command update in administrative mode and click the Check Button.



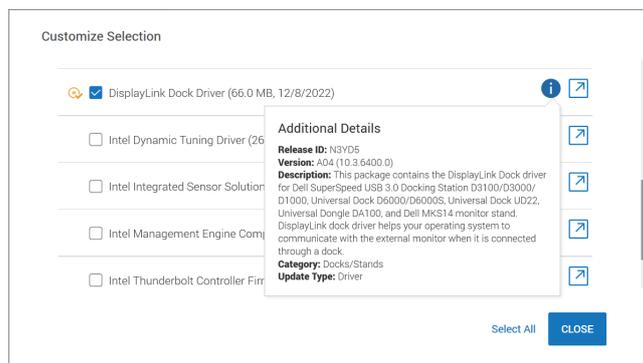
3. Wait for the scanning system device to complete.



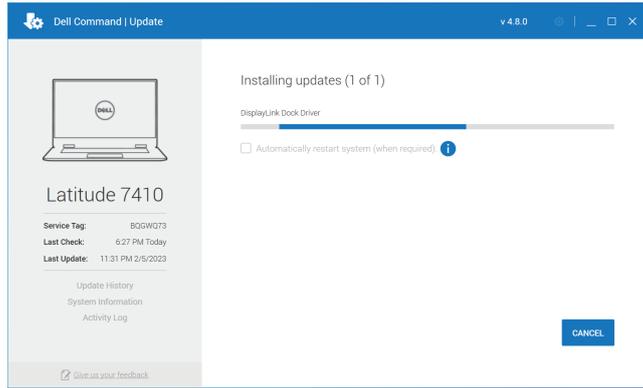
4. Click the VIEW DETAILS Button to customize.



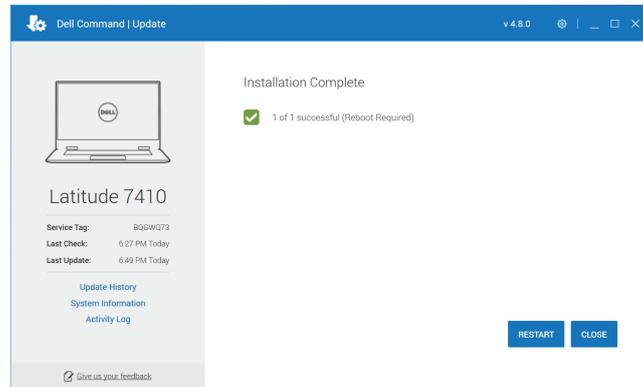
5. Select the DisplayLink Dock Driver, if not selected. Click Close Button.



- Click INSTALL Button to install DisplayLink Driver.  
Wait for the driver installation to complete. The progress bar shows current installation status.



- Click Restart after installation to complete the update.

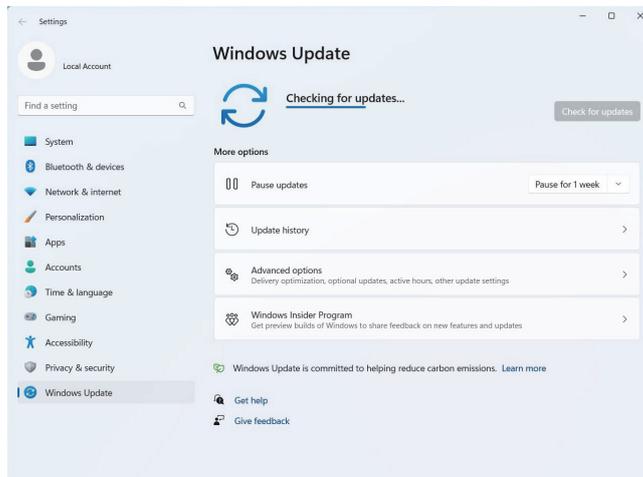
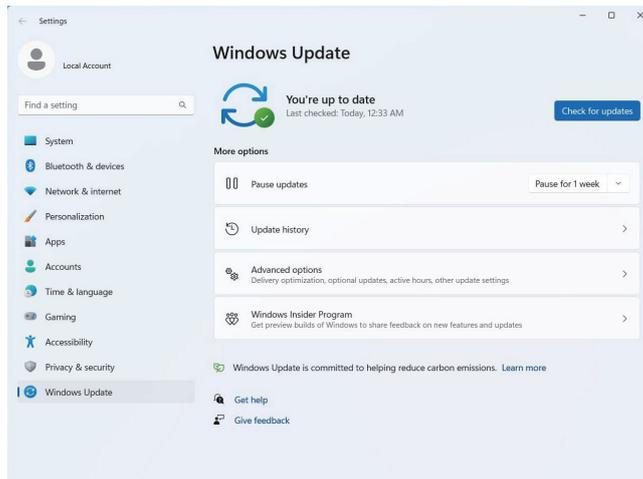


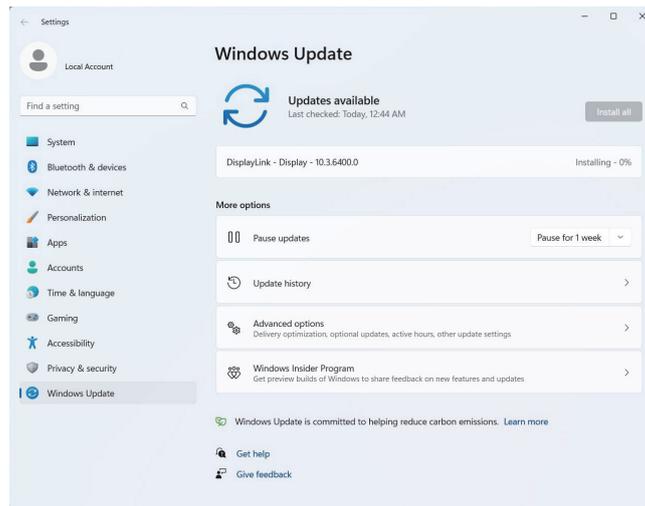
# Windows Update

The DisplayLink driver is also available via Windows Update as per the Update policy configured on the platform. Before installing the updates, ensure your computer is connected to a stable Internet connection.

## How to get DisplayLink driver

Select Start > Settings > Windows Update , then select “Check for updates”, the latest version of DisplayLink driver can be downloaded and installed. The latest version of DisplayLink driver will replace the older version installed on the platform.





### **Clean installation**

If there is no DisplayLink driver previously installed in the computer, users can get the same from Windows Update and get it automatically installed in the computer.

### **Upgrade**

The previous version of DisplayLink driver will be upgraded to the latest version.

# Dock Asset Management

## Topics:

- How to inventory Dell Universal Dock UD22 using Dell Command Monitor locally
- How to inventory Dell Universal Dock UD22 using Dell Command Monitor remotely

## How to inventory Dell Dock using Dell Command Monitor locally

### Prerequisites

Follow the steps in the Dell Universal Dock UD22 [firmware updates](#) and retrieve dock information by using Dell command monitor locally.

### Steps

1. Install Dell Command Monitor 10.8 or later. For detailed install instructions, follow [Dell command monitor Installation Guide](#)
2. Run the commands using PowerShell: `Get-CimInstance -Namespace root\dcim\sysman -ClassName DCIM_Chassis`

**NOTE:** DCIM\_Chassis can have multiple instances. For Dock Details, see instance where CreationClassName = DCIM\_DockingStation

```
PS C:\Windows\system32> Get-CimInstance -Namespace root\dcim\sysman -ClassName DCIM_Chassis | select ElementName, Name, Model, Manufacturer, Version, Tag, CreationClassName

ElementName : DELLCPGINDIA123
Name        : Main System Chassis
Model       : Latitude 7410
Manufacturer : Dell Inc.
Version     :
Tag        : B0GM073
CreationClassName : DCIM_Chassis

ElementName : Docking Station
Name        : Dell Universal Dock UD22
Model       : CABLE_ID_100W
Manufacturer : Dell Inc.
Version     : 01.00.13.19
Tag        : 15SMK3
CreationClassName : DCIM_DockingStation
```

3. Key dock properties mapping with dcim properties

**Table 7 Key dock**

Dock data	Dell command   Monitor mapping
Dock marketing name	DCIM_Chassis::Name
Dock module type	DCIM_Chassis::Model
Dock manufacturer	DCIM_Chassis::Manufacturer
Dock FW package version	DCIM_Chassis::Version
Dock service tag	DCIM_Chassis::Tag

# How to inventory Dell Dock using Dell Command Monitor remotely

## About this task

For more information, see [DELL Command Monitor User guide](#)

## SCCM Integration

### About this task

Using the MOF file within Dell Command | Monitor install package, which contains all the Dell Command | Monitor classes and importing to ConfigMgr.

Post Dell Command | Monitor installation, the integration MOF is placed at: C:\Program Files\Dell\Command\_Monitor\ssa\omacim\OMCI\_SMS\_DEF.mof. For more information about integration visit, How to get [Dell USB Type-C dock service tags using SCCM](#).

## SCCM Setup for Remote Deployment

### About this task

Information provided in the document: [Dell Business Client Update Catalog for Microsoft EMCM and SCCM](#).

For more information about Dell command monitor Users Guide. See [Dell Command | Monitor version user's guide](#).

For more information about Dell command monitor Installation Guide. See [Dell Command | Monitor version installation guide](#).