

LG Dual Controller

Each software is released under license type that can be found on program pages as well as on search or category pages. Here are the most common license types:

Freeware

Freeware programs can be downloaded used free of charge and without any time limitations. Freeware products can be used free of charge for both personal and professional (commercial use).

Open Source

Open Source software is software with source code that anyone can inspect, modify or enhance. Programs released under this license can be used at no cost for both personal and commercial purposes. There are many different open source licenses but they all must comply with the Open Source Definition - in brief: the software can be freely used, modified and shared.

Free to Play

This license is commonly used for video games and it allows users to download and play the game for free. Basically, a product is offered Free to Play (Freemium) and the user can decide if he wants to pay the money (Premium) for additional features, services, virtual or physical goods that expand the functionality of the game. In some cases, ads may be show to the users.

Demo

Demo programs have a limited functionality for free, but charge for an advanced set of features or for the removal of advertisements from the program's interfaces. In some cases, all the functionality is disabled until the license is purchased. Demos are usually not time-limited (like Trial software) but the functionality is limited.

Trial

Trial software allows the user to evaluate the software for a limited amount of time. After that trial period (usually 15 to 90 days) the user can decide whether to buy the software or not. Even though, most trial software products are only time-limited some also have feature limitations.

Paid

Usually commercial software or games are produced for sale or to serve a commercial purpose.

Bring up the dual-role controller for a USB Type-C Windows system - Windows drivers

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Bring up the dual-role controller for a USB Type-C Windows system

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In this article

Summary

- OEM bring up tasks for a dual-role controller that has a USB Type-C connector

Applies to

- Windows 10 Mobile

Important APIs

- USB dual-role controller driver programming reference

The USB role-switch drivers (URS) are a set of WDF class extension and its client driver that handle the role-switching capability of a dual-role controller. If your system has a dual role controller, you can switch the role of the system depending on the device that is attached to the partner port of the USB Type-C connector of the system. This allows interesting scenarios such as wired docking.

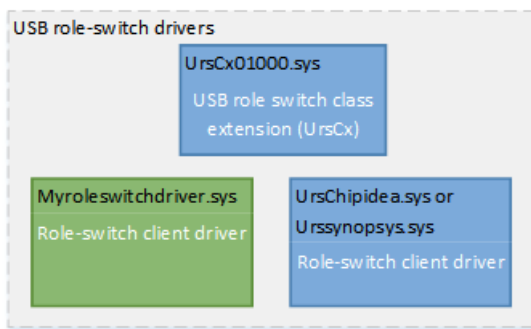
Systems can be designed such that the dual-role USB controller needs Windows to configure it to either Host or Function mode. These designs use the USB role switch stack. If the system does not use a Synopsys or ChipIdea dual role controller, you need to write a USB role switch client driver for the system's dual role controller.

Note

Systems can be designed such that the dual-role USB port needs Windows to configure it to either Host or Function mode. These designs use the USB role switch stack. If the system does not use a Synopsys dual role controller, you need to write a USB role switch client driver for the system's dual role controller.

The client driver handles hardware events and reports them to the class extension. In case of role-switch hardware events, URS decides the role and consequently loads the drivers for that role. If the controller is in host role, the USB host-side drivers are loaded; for a the function role, the device-side drivers are loaded.

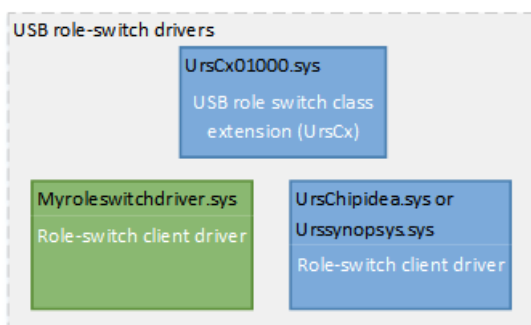
On systems with USB micro-AB connectors, the client driver for the dual-role controller makes that decision based on the ID pin in the connector by using interrupt resources assigned to it. On systems with USB Type-C connectors, this decision is made by the client driver for the connector. That driver determines the role based on the CC pins and reports the results to the USB connector manager (UCM), which then sends the results to the role-switch drivers.



1. Enable the URS driver in system ACPI

In order to use URS, you must make ACPI modifications. Replace the device on which the USB device-side drivers load with a device on which the URS must to load. For more information about how to change ACPI definition, see the example given in USB Dual Role Driver Stack Architecture. Make sure you remove the interrupt resource. This is not required for USB Type-C.

2. Load the USB role-switch drivers for the dual-role controller driver



- If your system uses ChipIdea and Synopsys controllers, load the Microsoft provided in-box client drivers for ChipIdea and Synopsys controllers.

To load the driver, you must create a driver installation package. The INF file must have Include-Needs directive that references the in-box INF for the supported controllers. The in-box INF already contains hardware IDs of other controllers. This step is required if your dual-role controller's hardware ID is not one of hardware IDs in the in-box INF. Check with your SoC vendor.

For more information, see "URS driver package" under Driver installation packages.

- If your system uses a custom controller, write a role-switch client driver. For more information, see:

USB dual-role controller driver programming reference

Feedback

Submit and view feedback for

In this article

How to use DualSense wireless controllers with PC, Mac, Android, and iOS

How to use DualSense wireless controllers with PC, Mac, Android, and iOS

If you'd like to use your DualSense™ wireless controller with compatible games and applications on a supported device, you can connect via USB or Bluetooth® in a few steps.

- Supported connections
- Bluetooth pairing
- USB connection
- Compatible games
- Reconnect with PS5 console
- Having issues?

DualSense wireless controller compatible devices

Devices using the operating systems listed below or later support DualSense wireless controller Bluetooth and USB connections. Once connected, you can use your wireless controller to control compatible games and applications.

- macOS Big Sur 11.3
- iOS 14.5
- iPadOS 14.5
- tvOS 14.5
- Android 12

Windows PC devices support the controller via a wired connection.

- Depending on the device, certain features on the controller might not be available. There's no guarantee that all devices are compatible with the controller.
- To check which Android devices support the DualSense wireless controller driver, please consult your device's manufacturer.

How to pair your DualSense wireless controller with a supported device

To pair your wireless controller with a supported device using Bluetooth for the first time, turn on pairing mode:

1. Make sure the player indicator on the controller is off. If the player indicator is on, press and hold the PS button until it turns off. If a USB is connected to the controller, disconnect it.
2. While pressing and holding the create button, press and hold the PS button until the light bar blinks.
3. Enable Bluetooth on your device, and then select the controller from the list of Bluetooth devices. When pairing is complete, the light bar blinks, and then the player indicator lights up.

A controller can be paired with only one device at a time. Each time you change devices you must pair the controller with the new device.

How to connect a DualSense wireless controller to a supported device via USB

Most Windows PC devices support the controller via a wired connection.

You can connect your controller to a supported device using a USB cable with a Type-C connector.

Certain PC games have full support for the controller, allowing you to enjoy features such as haptic feedback. For a list of supported PC games, visit the guide below.

DualSense wireless controller compatible games and applications

You can use your controller to play games streamed from your PS5™ console or PS4™ console to your supported device using the PS Remote

Play app.

Your wireless controller can also be used to play games that support generic controllers.

Bluetooth® limitations

Please note, some wireless controller features are not available when paired with a supported device:

- Haptic feedback.
- Speaker, Built-in microphone and headphone jack audio connection.
- Adaptive triggers (Android only)
- Light bar (Android only)

How to reconnect a wireless controller to your PS5 console

To reconnect your wireless controller to your PS5 console, connect it to the console with a compatible USB cable and press the PS button on the wireless controller. You can then remove the USB and use the controller wirelessly.

Need more help with your DualSense wireless controller?

If you've followed the above instructions but believe your controller is not connecting properly, please visit the PlayStation Repairs diagnostic tool.

DualSense wireless controller for PS5 console support

DualSense wireless controller for PS5 console support

Find out how to pair and charge a DualSense™ wireless controller with a PlayStation®5 console, change controller settings and what troubleshooting steps to take for controller issues.

- Pair with PS5 console
- Pair with other devices
- Charge controller
- Adjust controller settings
- Update device software
- Having issues?

How to pair a DualSense wireless controller with PS5 consoles

The first time you use a controller, you'll need to pair it with your console.

1. Make sure that your PS5™ console is on.
2. Connect the controller to your console using the included USB cable.
 - If your controller is turned off, press the PS button. After the light bar blinks, the player indicator lights up.
 - When your controller has enough battery life, you can disconnect the USB cable and use your controller wirelessly.
 - Please note, your controller can pair with only one PS5 console at a time. When you want to use your controller on another console, you'll need to pair it with that console.
 - You can use up to 4 controllers at the same time. When you press the PS button, a color is assigned to each player.

Pair additional controllers wirelessly

Once you have a controller paired with your PS5 console, you can pair an additional controller wirelessly.

1. Make sure that the additional controller's light bar is off before you start pairing. If the light bar is on, press and hold the PS button until the light turns off.
2. Using the paired controller, go to Settings > Accessories > General > Bluetooth Accessories.
3. Using the additional controller that you want to pair, press and hold the create button and the PS button at the same time.
4. Using the controller that's already paired, select the additional controller listed on your screen.

How to connect a DualSense wireless controller with other devices

You can use your controller away from your console. Find out more about compatible devices, applications, and feature support by visiting the guide below.

How to charge a DualSense wireless controller

You can check your controller battery level by selecting **Accessories** in the control center.

When you connect your controller to your PS5 console with the USB cable, your controller battery starts charging. While charging, the battery icon animates.

How to charge in rest mode

To charge your controller while your console is in rest mode:

1. Go to **Settings > System > Power Saving**.
2. Select **Features Available in Rest Mode**, and set **Supply Power to USB Ports** to **Always** or **3 Hours**.

When charging while your console is in rest mode, the light bar on your controller slowly blinks orange. After charging is complete, the light bar turns off.

Charging issues

If you experience any issues while trying to charge your controller, please try the following steps:

The USB cable that comes with your PS5 console is a Type-C to Type-A USB cable. The smaller end (which goes into the controller) is Type-C, and the larger, rectangular end is Type-A.

- Try connecting the USB cable which came with your PS5 console to a different USB-A port on the PS5 console.
- Try using another Type-C to Type-A USB cable, which is “charge and sync” or “charging and data”. Cables indicated as “Charge only” cannot be used.
- Try a Type-C to Type-C USB cable if you have one available. You may also use a charger that is compliant with the USB standard if you have one available. Please note, not all USB chargers will be capable of charging the DualSense wireless controller.

Charging indicators

To check the status while charging, tap the PS button on the DualSense wireless controller. While the DualSense wireless controller is charging, an animated battery icon will be displayed on the screen.

When the DualSense wireless controller is fully charged, the battery icon will stop animating and display three bars.

How to adjust DualSense wireless controller and audio settings

You can adjust the output device, volume levels and voice chat balance via the control center:

- Hold the PS button to display the control center, select **Sound** and choose a setting to adjust.
- Press the (mute) button on your controller to mute and unmute your mic.
- Press and hold the (mute) button on your controller to mute your mic and speakers. When the button blinks, your mic is muted, and sound output to all speakers turned off. Press the button again to return to the original state.

For general controller settings:

1. Go to the home screen and select **Settings > Accessories**.
2. Select **Controllers**.

You can adjust your volume, vibration intensity, trigger effect intensity, and the brightness of controller indicators from this menu.

How to update DualSense wireless controller device software

When you connect your controller, the device software might be updated. Connect your controller to your PS5 console with the included USB cable and follow the on-screen instructions.

To start an update manually, go to **Settings > Accessories > Controllers > Wireless Controller Device Software**.

You can also update your DualSense wireless controller device software using a PC. Visit the guide below for more information.

Having issues with a DualSense wireless controller?

If you've followed the above instructions but believe your controller is not connecting properly, please visit the PlayStation Repairs diagnostic tool.