# **Unity Integration**

15.0

 | Published 2020-4-6

## **Oculus Integration for Unity - 15.0**

Unity provides built-in VR support for Oculus Rift, Oculus Quest, and Oculus Go. The Oculus Integration for Unity package adds scripts, prefabs, samples, and other resources to supplement Unity’s built-in support. The package includes an interface for controlling VR camera behavior, a first-person control prefab, a unified input API for controllers, advanced rendering features, object-grabbing and haptics scripts for Touch, debugging tools, and more.

For more information about using Unity for Oculus app development, go to the [Unity Getting Started](https://developer.oculus.com/documentation/game-engines/latest/concepts/book-unity/" \t "https://developer.oculus.com/downloads/package/unity-integration/15.0/_blank) guide.

### **Download Oculus Integration Package**

The Oculus Integration for Unity package is available for download from the [Unity Asset Store](https://l.facebook.com/l.php?u=https://assetstore.unity.com/packages/tools/integration/oculus-integration-82022&h=AT2oG0Bzj5xPbbgV4pXckdsfoWGcq6hIbKVVFNL6AA6-hJ3W-hb6Z6i3TV3o-YpalgWF4fvhX5QhAXA5-KuXkaVLUPANQPOZNpp63h_ujXjzFzZQ1Mp3BQwu3-GLvHYiRAVF9-rydG7KpKe2dTSANw" \t "https://developer.oculus.com/downloads/package/unity-integration/15.0/_blank) and on the [Unity Integration Archive](https://developer.oculus.com/downloads/package/unity-integration-archive/) page.

Check the [Compatibility and Version Requirements](https://developer.oculus.com/documentation/game-engines/latest/concepts/unity-req/" \t "https://developer.oculus.com/downloads/package/unity-integration/15.0/_blank) page for important information about compatibility. The minimum supported Unity Editor version for Oculus development is **2017.4.16**.

### **New Features**

Added support for setting universal menu as a system overlay. For more information, go to the [Enabling Focus Awareness for System Overlays](https://developer.oculus.com/documentation/unity/unity-overlays/) guide.

### **Integration Changes**

* Updated the Oculus Unity Integration to v15.0, including:
  + Updated OVRPlugin (Utilities for Unity) to 1.47
  + Updated the Audio Spatializer to 15.0
  + Updated the Platform integration to 15.0
  + Updated the Avatar integration to 15.0
  + Updated the LipSync integration to 1.43

## **Importing the latest Oculus Integration**

When importing a new version of the Oculus Integration into an existing project, follow the steps on [Importing the Oculus Utilities Package](https://developer.oculus.com/documentation/unity/latest/concepts/unity-import/) to ensure a smooth upgrade experience.

### **Version-Specific Known Issues**

This section details known issues with supported versions of Unity.

|  |  |
| --- | --- |
| ****Unity Version**** | ****Known Issues**** |
| 2017.4 | All Unity 2017.4 versions   * In order to build a store-compliant manifest and for your app to run in editor, you'll need to verify that the Oculus Android package installed from the package manager. |
| 2018.2 | All Unity 2018.2 versions   * (Mobile) You'll need to either switch the AndroidBuildSystem to internal or export a Gradle project and modify the SigningConfig in the build.gradle file to include v1SigningEnabled=true, v2SigningEnabled=false.   2018.2.20f1   * (Mobile) Some game objects may appear darker when loaded in 2018.2.20f1. To work around this issue, load the project in another version of Unity, like 2018.2.19. |

### **General Unity Known Issues**

This section details known issues with Unity that are not tied to a specific version. Issues are grouped by most closely related subject.

|  |  |
| --- | --- |
| ****Subject**** | ****Known Issues**** |
| Unity | * The Vulkan API is not currently supported for Oculus development on Unity. You may need to remove "Vulkan" from the "Graphics APIs" list in **Player Settings** if you receive build errors in the Unity Editor. * Unity has a known issue such that parenting one VR camera to another will compound tracking twice. As a workaround, make them siblings in the GameObject hierarchy. * Using the Unity Universal Render Pipeline may break Fixed Foveated Rendering on Oculus Quest and Oculus Go when using the linear color space or modifying the eye texture resolution scale. |
| Windows 10 | * If you experience long UI stalls or poor performance with the Unity Editor when targeting Rift on Windows 10, please run Windows Update to ensure that you have the latest version of Windows 10. * All Unity versions with Oculus runtime 1.17+ and Windows 10 + Creators Update: This combination results in spurious WM\_DEVICECHANGE reports in the Editor, even in non-VR projects. Many users will notice no impact, but users connected to certain USB devices may find the Editor becomes non-responsive and needs to be terminated from Task Manager. To mitigate, please update to the Beta runtime available on our Public Test channel. We are currently working with Unity and Microsoft on a permanent solution. |
| Rift | * Guardian System API: ovr\_SetBoundaryLookAndFeel currently does not take effect if the HMD is not worn when the call is made (e.g., on Start). * Transparent VR Compositor Layers do not currently support multiple layers of occlusion. * For Mixed Reality Capture, ZED Camera users should upgrade their SDK version to 2.3.1 or later. Previous versions are not compatible. |
| Mobile | * A known bug in Unity causes a deterioration of performance in mobile applications when the back button is used to enter the Universal Menu and then to return to the application. It particularly affects applications that use multi-threading or which have high CPU utilization, and S7 (Europe) and S8 (global) phones. This bug is fixed in Unity versions 2017.3.0b9 , 2017.2.0p3, 2017.1.2p4, and 5.6.4p2. * Do not use Utilities 1.11.0 due to a crash when returning to focus from Universal Menu or Quit to Home dialog. * When Single Pass Stereo rendering is enabled, building projects will fail with the error message “Shader error in 'Mobile/Bumped Detail Diffuse'” in certain cases. For more information, see “Known Issues” in the Single Pass Stereo Rendering section of [Advanced Rendering Features](https://developer.oculus.com/documentation/unity/latest/concepts/unity-rendering/). * (Gear VR) Flickering or left/right eye mismatching can occur when you have an input attribute value pass through to a pixel shader directly on Mali GPUs such as those in Samsung phones (used in Gear VR HMDs). This is because the ARM driver specifically targets such "volatile" data and tries to optimize for it, inadvertently creating the issue. A workaround is to try to use a modified version of the original value in some way. For example, instead of passing input value a directly through to shader value b, set b = a + 0.0001; which will prevent the driver from treating b differently. |

### **Legacy Unity Release Archive**

Legacy versions of the Unity Integration can be found in the [Unity Integration Archive](https://developer.oculus.com/downloads/package/unity-integration-archive/).

# **Cubemap Viewer**

1.0

 | Published 2017-2-3

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## **Cubemap Viewer 1.0**

The Cubemap Viewer is a simple VR cubemap viewing application for Oculus Rift and Gear VR that allows developers to easily preview cubemap snapshots before submitting them for use in the Oculus Store.

This download contains a Rift binary and a Gear VR APK. To use the Viewer, place a cubemap file with the required name in the directory specified by the readme file and launch the application on your VR headset.

For information on how to easily generate cubemap previews from Unity or Unreal, please see [Cubemap Screenshots](https://developer.oculus.com/documentation/unity/latest/concepts/unity-cubemap/" \t "https://developer.oculus.com/downloads/package/cubemap-viewer/_blank) in our Unity Developer Guide or [Unreal's Cubemap guide.](https://docs.unrealengine.com/en-US/Engine/Content/Types/Textures/Cubemaps/CreatingCubemaps/index.html" \t "https://developer.oculus.com/downloads/package/cubemap-viewer/_blank)

# **Mixed Reality Capture Tools**

3.3

 | Published 2020-2-28

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## **Oculus Mixed Reality Capture Tools - 3.3**

This package contains tools required to capture mixed reality content on the Oculus Quest, Rift, and Rift S. See the [Mixed Reality Capture Setup Guide - Oculus Quest](https://developer.oculus.com/documentation/mrc/mr-intro/) for information on using this package.

The Github repo for the Oculus Quest OBS plugin can be found at [https://github.com/facebookincubator/obs-plugins](https://l.facebook.com/l.php?u=https://github.com/facebookincubator/obs-plugins&h=AT1qvJKsYu3J9bEo1HFxPUyqMscJIpndwJ907SAgz5UzT984eG10zCDEt__7wCPlEeXtmMMzFY_SH8NnpGVnoBxzHoDpce1nD4c369R-n7VFUH-K_Y3-_QJIOoW0TqeVYw9G6YE24KpI4i1SZymIIA" \t "https://developer.oculus.com/downloads/package/mixed-reality-capture-tools/_blank).

**This 3.3 package only supports Oculus Quest Mixed Reality Capture. Rift users should use the previous 2.2 version of this tool.**

**Version Updates**

Version 3.3 fixes a bug around not being able to adjust horizontal FOV.

# **OVR Metrics Tool**

1.4

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## **OVR Metrics Tool 1.4**

OVR Metrics Tool can be used to provide performance metrics for Oculus applications running on Android devices, including frame rate, heat, GPU and CPU throttling values, and the number of tears and stale frames per second. OVR Metrics Tool also offers remote device management functionality.

OVR Metrics Mode has two main modes. In **Report Mode**, the tool displays a performance report about a VR session after it has concluded. Report data can be easily exported as a CSV with PNG images. In **Performance HUD Mode**, the tool displays a HUD overlay over running apps that provide real-time performance graphs and information. The information displayed on the performance HUD can be customized to preference.

OVR Metrics Tool may be used with any Oculus application, including those built with Unity, Unreal, or our native mobile SDK.

For more information, see [OVR Metrics Tool](https://developer.oculus.com/documentation/native/android/mobile-ovrmetricstool) in our Mobile SDK Developer Guide.

In version 1.4, by default no metrics will be displayed on the performance mode overlay. You must manually select the displayed stats, or you can select one of the preset options:

* Basic, which includes:
  + FPS
  + CPU level
  + GPU level
  + Stale frame count
  + CPU utilization
  + GPU utilization
  + Available memory
  + App GPU time.
* Advanced, which includes everything in Basic as well as the following:
  + Extra latency mode
  + Foveation level
  + Prediction
  + Early frame count
  + Eye buffer width
  + Eye buffer height
  + Used memory
  + Asynchronous TimeWarp (ATW) GPU time

# **Oculus ADB Drivers**

2.0

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## **Oculus ADB Drivers 2.0**

This download contains the drivers required to use ADB with Android-based Oculus devices. Version 2 adds support for MTP mode connections. For more information, review the [ADB](https://developer.oculus.com/documentation/mobilesdk/latest/concepts/mobile-adb/" \l "mobile-android-debug-intro) documentation.

To install the driver, unzip the package and right-click > **Install** the android\_winusb.inf file on your PC.