HOLOLIGHT

HOLOLIGHT STREAM SDK

RELEASE NOTES

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hololight.com
Telephone: +43 664 88 23 46 32
Email: info@hololight.com

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Hololight Stream

NOTE

Documentation for all features, including upgrade guides, are available in the “Docs” folder in the Hololight Stream package. Most features also come with examples for how to use the feature in a project. To import an example, import the “Hololight Stream Examples” package into your Unity project and load from the “Samples” section in the “Package Manager” window. Unity will then copy the example into the “Assets” folder.

New features

Unreal Engine support

You can now use Hololight Stream in Unreal applications. Hololight Stream for Unreal Engine supports the following features:

- XR Rendering
- D3D11 and D3D12 support
- Device agnostic connection and reconnection
- Head tracking
- Hand tracking
- Controller input
- Audio
- Microphone
- Passthrough
- Configure settings
  - Signaling port
  - Bandwidth
  - Connection ports
  - Logging

i Limited support for Handheld & Desktop versions, due to missing input.

New clients supported

- Apple Vision Pro
- PICO 4 Ultra
- HTC VIVE Focus Vision, HTC VIVE Focus 3, HTC VIVE XR Elite
- Web browser

Feature support by device

Feature	Apple Vision Pro	PICO 4 Ultra	HTC VIVE devices	Web browser
Hand tracking	✓	✓	✓	
Controller input		✓	✓	
Head tracking	✓	✓	✓	
XR rendering	✓	✓	✓	
XR input simulation[1]				✓

Logitech MX Ink Stylus support on Hololight Stream Client for Meta Quest

Added support for Logitech MX Ink Stylus for Meta Quest 3 and 3S devices.

1) Microsoft defines this as "...emulates the behavior of devices and platforms that may not be available in the Unity editor."

Improvements

- Improved passthrough image quality.
- Enable and disable passthrough mode while connected to the application with a Hololight Stream Client.
- Improved color through 10 bit encoding.
- Automated color space. Hololight Stream now detects this setting in the project itself.
- Significantly reduced latency.

Known issues and workarounds

Unity

- Hololight Stream does not officially support Unity 6. Using Hololight Stream with Unity 6 may work, but only after updating examples and dependencies.
- Unity 2021.3 (LTS) and Unity 2022.3 (LTS) render visuals differently. Keep this in mind when upgrading to a newer version of Unity. This is a Unity bug and not related to Hololight Stream.
- Exporting spatial anchors can fail. If this happens, retry exporting. Most of the time this solves the problem.
- Speech recognition does not allow updating keywords at runtime. Doing so can crash the application. Instead, register all keywords on startup until this issue is resolved.
- When initializing the Hololight Stream loader late, Hololight Stream Extensions cannot get the data channels correctly and some features do not work (For example touchscreen support). We recommend setting the “Initialize XR on Startup” flag under “XR Plugin Management” inside the Unity project settings.
- When viewing an application, either in the Unity Editor or through the application itself, there is visible culling of 3D objects when using single-pass instanced rendering.
- The MX Ink Stylus example does not support hands and controllers
- Changing settings may not work in the camera stream example when changing and applying those settings multiple times very quickly.

- Enabling debugging with DirectX 12 through the DirectX Control Panel will cause Unity to crash with DirectX 12 enabled in the project.
- Single-pass instanced rendering in DirectX 12 is not supported in all Unity versions. In those cases, you might need to use multi-pass rendering instead, which is less efficient.
- When using the camera stream feature and DirectX 12, Unity will show the warning, "d3d12: Creating a default shader resource view with dxgi-fmt=29 for a texture that uses dxgi-fmt=28". We reported this issue to Unity. The issue requires a fix on Unity's side.

Unreal Engine

Using RenderDoc and D3D12 will lead to a stuck state when connecting and will only display a black frame instead. Other graphical debuggers could potentially have similar effects on the Hololight Stream plugin.

Clients

- IP addresses that are entered will reset to their original value when switching between tabs.
- **HTC VIVE:** When connecting to the server application, the "Establishing connection" prompt is not visible. This does not affect the connectivity and is purely cosmetic.
- **Microsoft HoloLens 2:** Using the camera stream significantly impacts performance. The device also heats up significantly.
- **Windows:** There is visible screen tearing when using a faster refresh rate on the server than on the client. For example, screen tearing occurs when the server output is 240Hz, but the monitor the client is using is 60 Hz.
- Microphone capture can stop working as expected if it wasn't actively turned off before disconnection. What happens in these cases is that the microphone capture is still enabled but has invalid data.
- **Meta Quest** for Business: When restarting a Meta Quest device in Meta Quest for Business mode, user data like connection history and bookmarks won't be saved.
- On **Meta Quest 2** and **Meta Quest 3s**, the Hololight Stream trial version watermark appears correctly only when setting the optics to the minimal eye distance. Other eye distances will render the trial version watermark incorrectly shifted for the left and right eye.
- The Hololight Stream trial version watermark of older Hololight Stream server versions will render twice when using the newest version of Hololight Stream Client on **Meta Quest 3**. We always recommend using the same server and client version.