

Streaming from Hand Engine to Unity

This document will take you through the steps of linking Unity with a Hand Engine data stream and visualising this in Unity.

Requirements

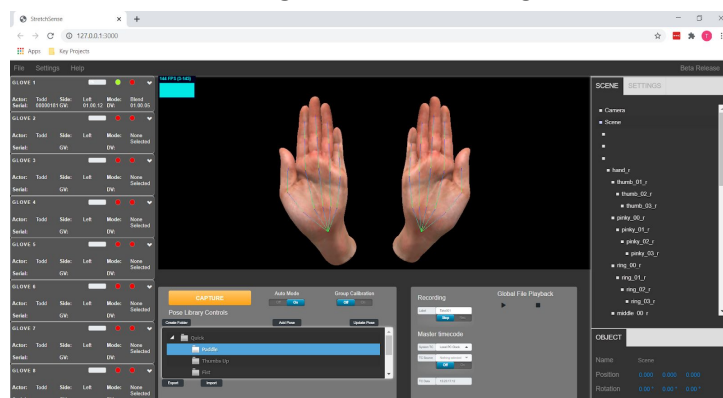
- StretchSense Hand Engine: Email mcpsupport@stretchsense.com for details
- Unity: <https://unity3d.com/get-unity/download>
- Unity HandEngine Plugin: Included in the install directory of StretchSense Hand Engine
- Operating System: Windows 10

Related Documents

- DOC-5002 - Setting up COM Port for Wired USB Connection
- DOC-5003 - StretchSense USB Dongle Setup Guide
- DOC-5004 - StretchSense MoCap Pro Glove Firmware Update Guide
- DOC-5008 - StretchSense UltraSync One Module Configuration
- DOC-5009 - StretchSense Hand Engine Installation Guide
- DOC-5010 - StretchSense Hand Engine User Guide
- DOC-5011 - Streaming from Hand Engine to Unity
- DOC-5012 - Streaming from Hand Engine to UE4 (Unreal)
- DOC-5014 - Streaming from Hand Engine to MotionBuilder
- DOC-5019 - MoCap Pro Glove Production Ready Checklist
- DOC-5020 - Remapping to a Custom Character Hand in Hand Engine

Setting Up your Unity Project

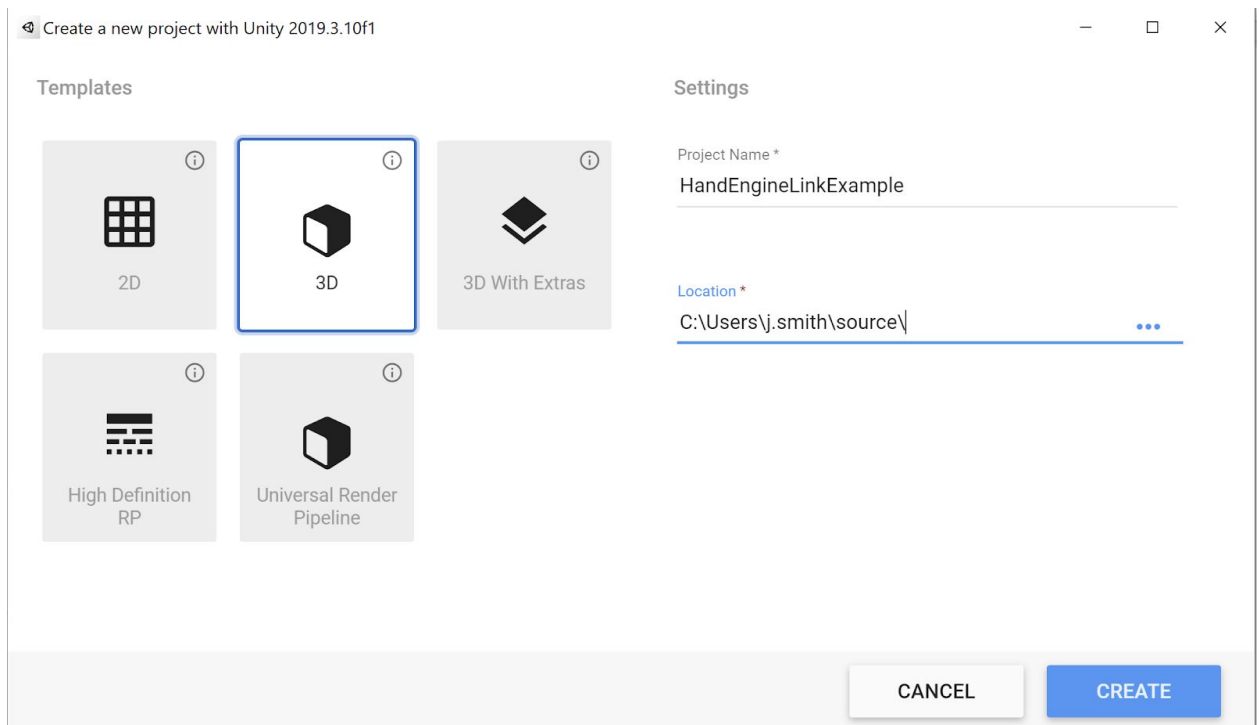
1. Download and Install the StretchSense Hand Engine and Unity
 - a. **NOTE:** In this guide we are using Unity version 2019.3.10f1
2. Launch Hand Engine and setup a hand
 - a. See **DOC-5010 - StretchSense Hand Engine User Guide** for glove calibration instructions



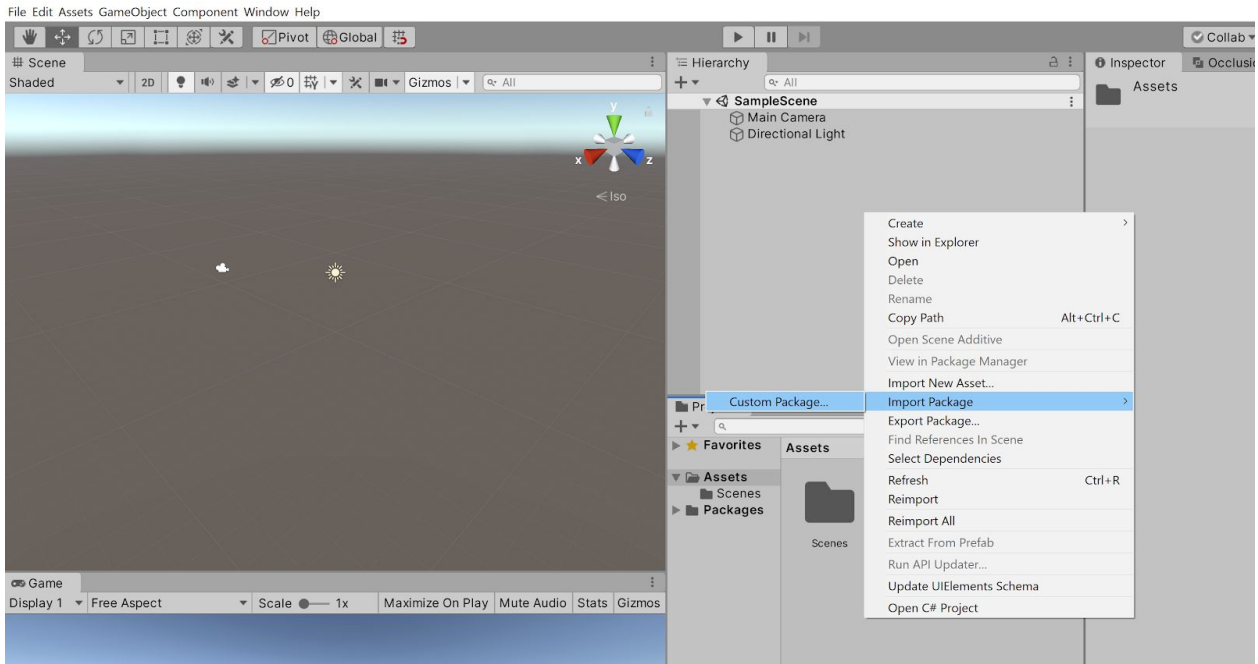
3. Launch **Unity Hub** and create a new project



4. Select the 3D option from the templates window, then click **Create**



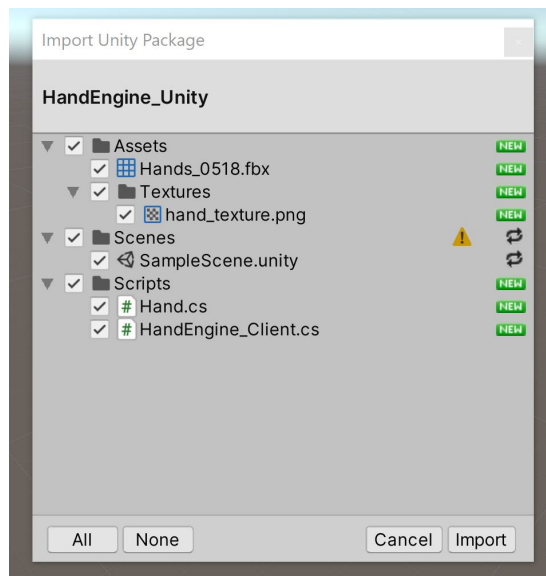
- Once your project is created we will bring in the Hand Engine Plugin by right clicking in the **Project Assets Directory** and selecting **> Import Package > CustomPackage**



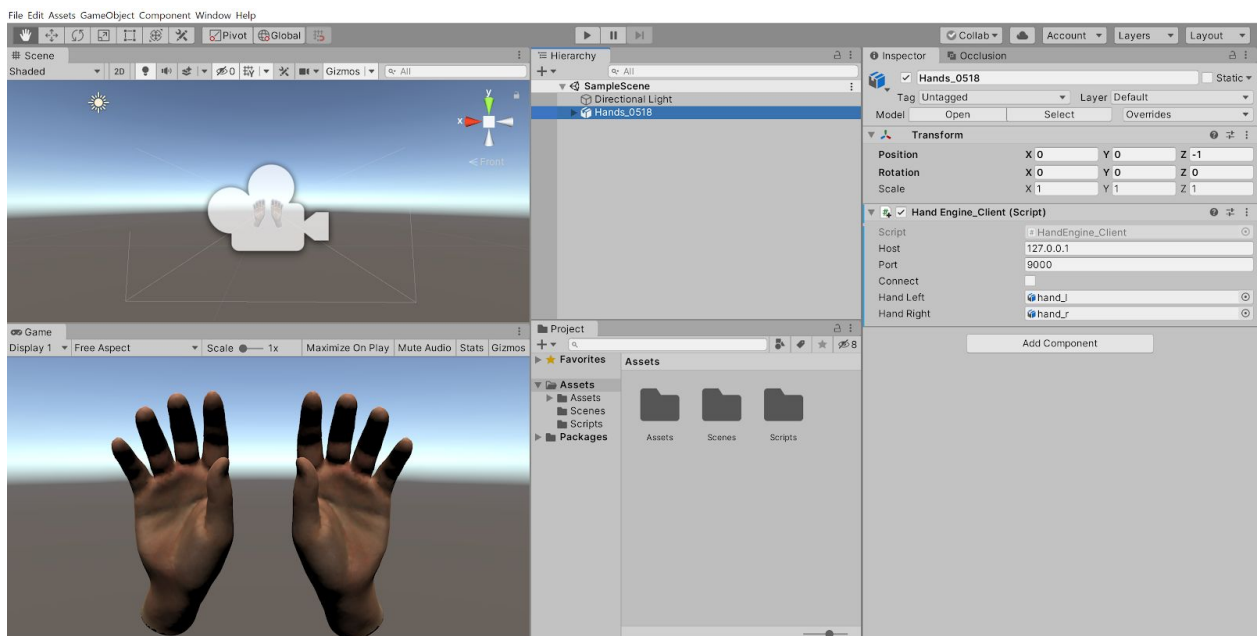
- Select the HandEngine_Unity.unitypackage
 - NOTE:** This Unity package can be found in the Plugins folder in the installation directory of StretchSense Hand Engine (e.g. **C:\Program Files (x86)\StretchSense\Hand Engine\Plugins\Plugins**)

<input type="checkbox"/>	Name	Date modified	Type	Size
<input checked="" type="checkbox"/>	HandEngine_Unity.unitypackage	25/06/2020 12:38 PM	Unity package file	9,846 KB

- When prompted import all of the elements in the package
 - NOTE:** this will replace the default SampleScene



8. Once the scene is reloaded your view should show the hands in **Scene/Game Views** and a **Hand Asset** in the Hierarchy



9. Our Hand Engine and Unity project are now set up and the next step is to link them together. Return to the Hand Engine window and in the **Device Pane** on the left of the screen, enter your **TCP Port** number and set **Streaming** to **On**. Check that the **Streaming Status** light in the device title bar (the right traffic light indicator) has turned green

DOC-5011 - Streaming from Hand Engine to Unity

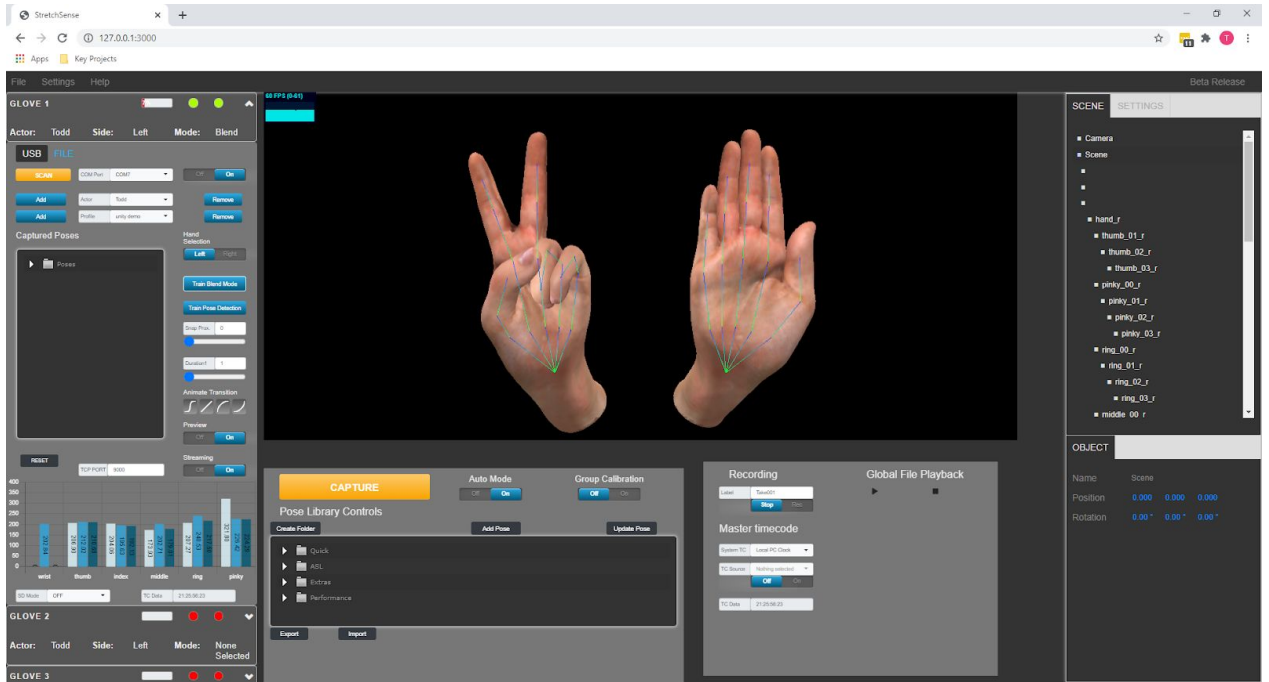
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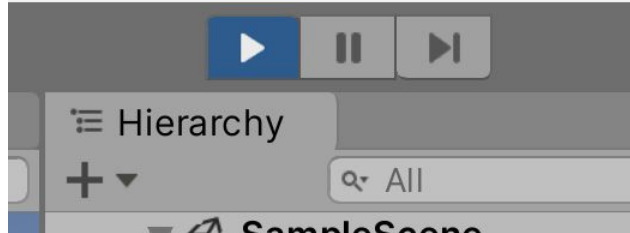
Last Updated By: AD

Authors: AD, TG

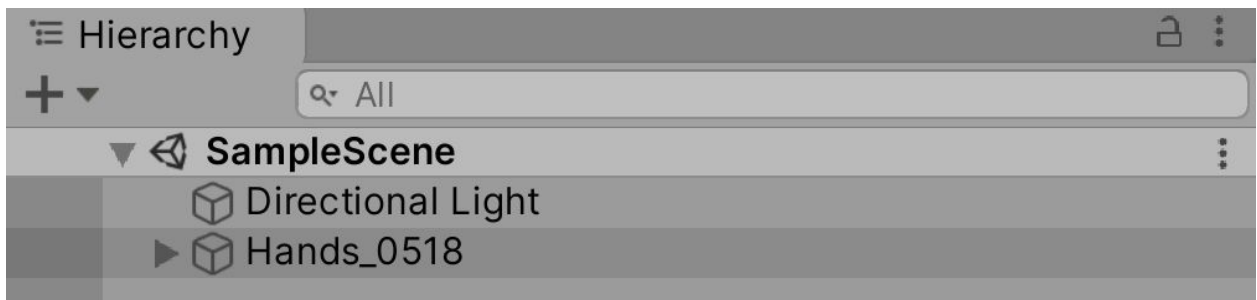
Revision: 5



10. Move back to your Unity project and start your scene by pressing the **Play** icon

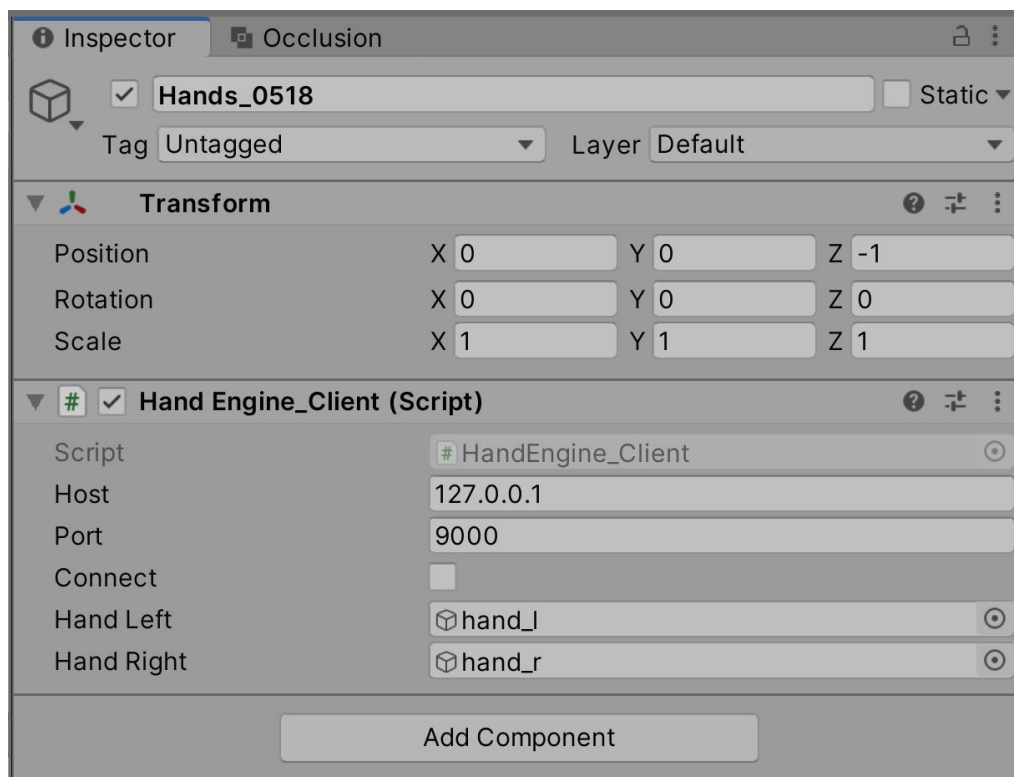


11. Click on the **Hands_0518** Asset in the **Hierarchy View** this will bring up options in the **Inspector** view.

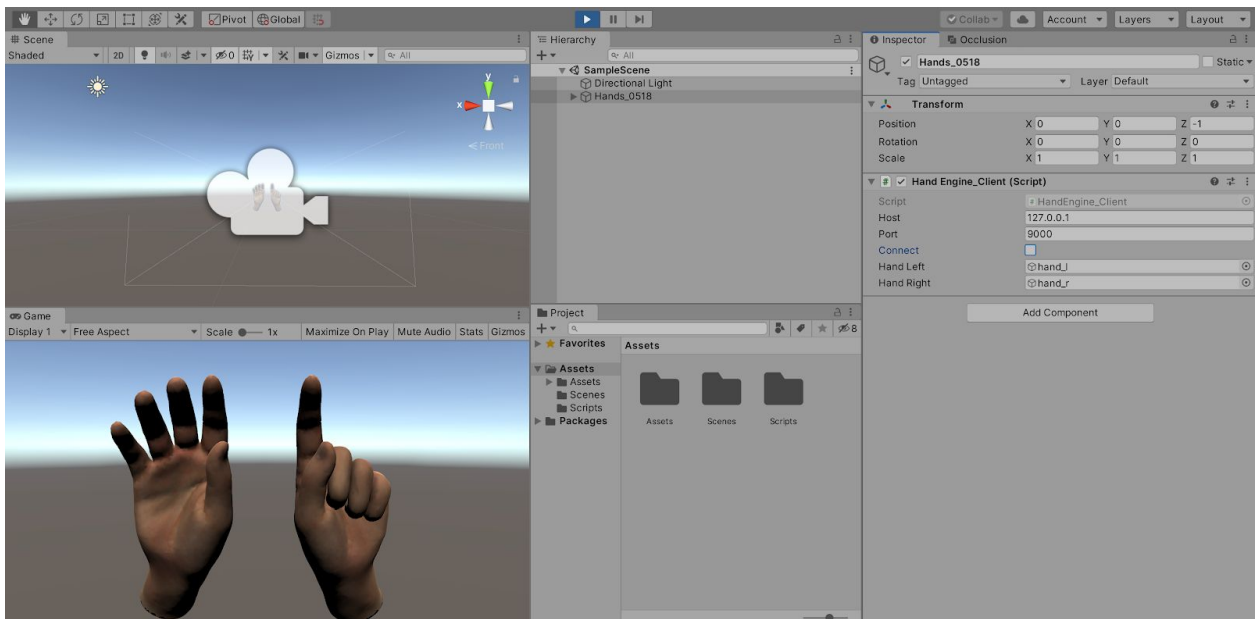


12. Go down to **HandEngine_Client** script and check the **Host** and **Port** settings match what you set in Hand Engine in Step 9 above.

- a. **NOTE:** The default value for Host is 127.0.0.1 = localhost, i.e. you are running Hand Engine on the same PC that you are running Unity. If you have bound Hand Engine to a different IP address (e.g. if you are running Hand Engine and Unity on different computers on the same LAN), use this IP address instead for **Host**.



13. Press the **Connect** check box once to make the hand asset in Unity live and slaved to the data stream coming from Hand Engine, and the connected hand will start moving.
 - a. **NOTE:** This check box will clear itself immediately and the connected hand will start moving.



14. You can now use the hand controlled by your StretchSense MoCap Pro Glove in your Unity Project.

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Revision Summary

Revision	Date	Notes
5	2020.10.02	Updated for Beta4
4	2020.09.21	Updated for Beta3.5
3	2020.08.21	Updated for Beta3
2	2020.07.21	Updated related docs, added disclaimer text
1	2020.07.09	Initial version