

Bridge SDK Description



Draft version 0.2

Last update May 8th

Contact: bridgesdk@logitech.com



Introduction:

The Bridge SDK is a Development kit that aims at helping app makers and other SW developers to solve some of the issues arising whenever a person needs to use a Keyboard in VR.

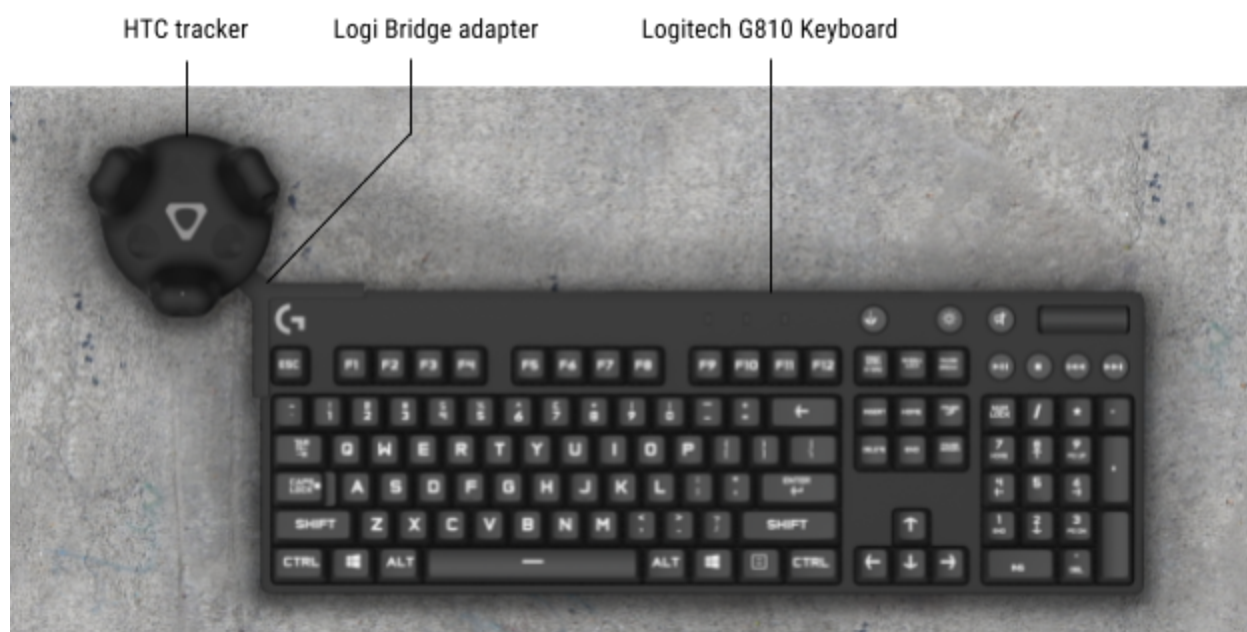
Motivation:

The motivation comes from the belief that in some situations the user still needs to use a keyboard to interact with the applications, especially in productivity-driven scenarios but also in games, chat and content browsing. We believe that that keyboard has to be physically present, since it delivers the traditional tactile experience and feedback that people value.

Components:

The Bridge SDK requires the following elements:

- Hardware
 - A Logitech G810 Keyboard (off-the-shelf)
 - A Logitech “BRIDGE adapter”
 - A HTC tracker
- Bridge Software SDK
 - SW installer sets up the Bridge software on the user system
 - End-user UI pairing utility to associate a specific HTC tracker with the Logitech G810
 - OpenVR “overlay” of a 3D VR keyboard that appears in VR environment
 - (In progress) SDK to allow developer to control aspects of the VR keyboard overlay
 - (In progress) Representation of hands overlaid (capture from the Vive HMD Passthrough camera) on the VR keyboard



Setup instructions:

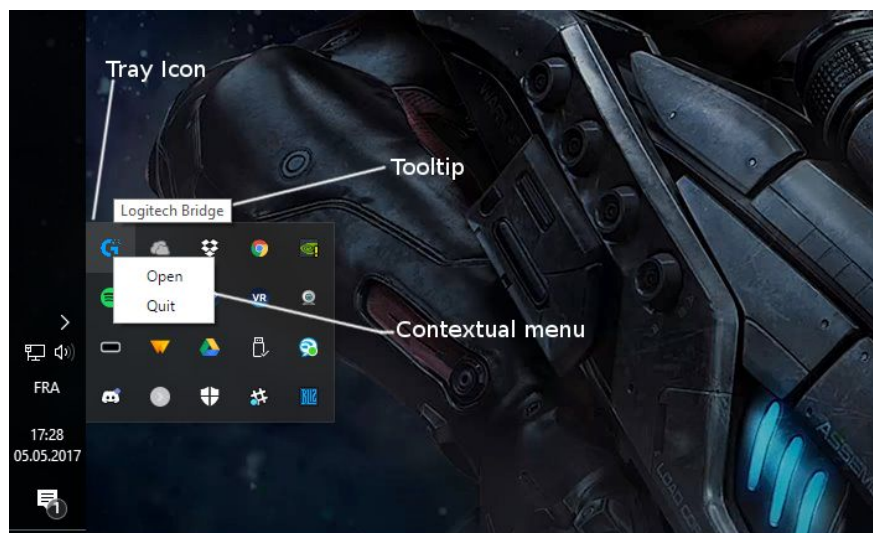
1. Fix the Bridge adapter

Follow the leaflet contained in the “bridge” box. You simply use the bridge mount to attach the Vive tracker to the mount. Approach it to the top-left corner of the keyboard. Be sure to first align the left side of it then pull the top towards the keyboard and make sure it is well secured.

2. Install Overlay 3D VR package

Head to our private GitHub repository: https://github.com/Logitech/logi_bridge_sdk, clone or download the full content. Follow the README.md instructions there.

Once installed, the overlay core functionality will be running as a service and the main UI will be sitting in the system tray to be accessed when needed.



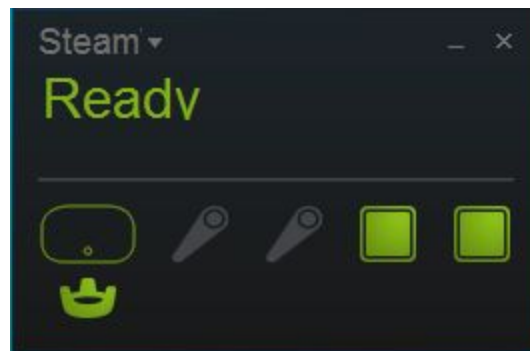
Logitech Bridge SDK SW that runs in system tray.

3. Pairing

A) in Steam VR

First pair the tracker as per HTC instructions (<http://link.vive.com/tracker/guideline>).

Make sure you turn the tracker on in pairing mode (by long pressing the center button). The tracker led will blink in that mode. Use steamVR drop down menu "/Devices/Pair Controller" to pair a new device. Follow the steps there (even if the UI references controllers rather than trackers). When successful the new tracker should appear as below in SteamVR.



B) in Logitech bridge UI

Secondly launch the logitech Bridge UI by right clicking in the system tray and select OPEN.

PASTE THOMAS INSTRUCTIONS

Description of use:

Requirements:

The overlay package is following these requirements:

- Runs on win x64 only.
- Uses Open VR api's
- Compatible with all apps that are developed based on STEAM VR (©Valve).

Overlay 3D VR Keyboard

It is the SW piece that supports the Bridge SDK and allows the user to visualize/overlay a view of the virtual representation of the keyboard in any VR application game: It acts in fact as an additional “virtual” Headset that has his own view that is virtually placed right in front of the user’s HMD’s view.

The system will get the paired HTC tracker pose and It will render a 3D representation of a G810 keyboard, complete with animations when the keys are pressed.



Fig: 3d rendered G810 keyboard in Steam Shell



Fig: skin example where fonts are bigger (more readable)



Fig: Skin example on the G810

As a first step: the application does not have to manage anything, the overlay will appear as soon as the associated tracker (see pairing chapter) is being turned on.

As a second step: we foresee that the application will be able to interface to the overlay in order to control its appearance, skins and other functions.

Keyboard shortcuts table

Here are the keyboard shortcuts that can be used:

shortcut	Keys	notes
Toggle Keyboard visibility	TBD	
Go to next skin	RIGHT CTRL + RIGHT ARROW	(it cycles back at the end)
Go to previous skin	RIGHT CTRL + LEFT ARROW	(it cycles back at the end)

API (future)

The package will allow some other more interesting features:

- App driven ON/OFF toggle
- Hands overlay transparency
- Hands overlay color
- Visual/personal skinning of the keyboard
- Any feedback/request is welcome.

Feedback procedure:

For any generic question you can use bridgesdk@logitech.com. For bug reports and features requests, please use our GitHub repository: https://github.com/Logitech/logi_bridge_sdk/issues

FAQ: [\[link to WIP\]](#)