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# **VIVE Streaming User Guide**

# Contents

VIVE Streaming	
About VIVE Streaming	4
What are the system requirements?	4
Preparing your computer for streaming	5
Preparing your headset for streaming	6
Connecting your headset to your computer to stream using a USB cable	7
Connecting your headset to your computer to stream wirelessly	9
Starting a streaming session	12
Solutions and FAQs	
General	13
Performance	18
Audio	22
Error messages	22
Trademarks and copyrights	

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# About this guide

We use the following symbols to indicate useful and important information:

This is a note. It provides detailed information for setup, common questions, and what to do in specific situations.

This is a tip. It will give you an alternative way to do a particular step or procedure that you may find helpful.

This indicates important information that you need in order to accomplish a certain task or to get a feature to work properly.

This is a warning. Take note to avoid potential problems or prevent damage to your hardware.

Information contained in this guide may have changed. For the most up-to-date information, including the latest version of this guide, go to VIVE Support.

Before using the product, carefully review VIVE safety information and follow all product safety and operating instructions on https://www.vive.com/legal/.

# **VIVE Streaming**

# About VIVE Streaming

VIVE Streaming lets you stream, wirelessly or through a USB cable, SteamVR-compatible titles from your computer directly to your headset. This includes VIVEPORT<sup>™</sup> titles. VR content is generated on the computer, and then sent to the headset, turning your standalone headset into a top-notch PC VR headset. Your VR titles will use the standalone headset tracking and controllers, so there's no additional hardware to set up.

## What are the system requirements?

Component	System requirements
VR headset	VIVE XR Elite
Processor	<ul> <li>Intel<sup>®</sup> Core<sup>™</sup> i5-4590 equivalent or better</li> </ul>
	<ul> <li>AMD Ryzen<sup>™</sup> 5 1500X equivalent or better</li> </ul>
GPU	<ul> <li>NVIDIA<sup>®</sup>GeForce<sup>®</sup> GTX 1060 6 GB equivalent or better</li> </ul>
	<ul> <li>AMD Radeon<sup>™</sup> RX 580 equivalent or better</li> </ul>
Memory	8 GB RAM or more
Operating system	Windows® 11 / Windows 10
USB port	1x USB 3.0 port
	(Backward compatible to USB 2.0. However, we recommend using a USB 3.0 port or newer for better performance.)
USB cable (For wired	1x USB 3.0 Type-C cable
streaming)	(Backward compatible to USB 2.0. However, we recommend using a USB 3.0 Type-C cable or newer like the VIVE Streaming Cable for better performance.)
Wireless router (For	Wi-Fi 802.11ac (5 GHz) or Wi-Fi 802.11ax (5 GHz, 6 GHz)
wireless streaming)	See Connecting to a Wi-Fi network for details.

To use VIVE Streaming, your computer must meet the following system requirements.

## Preparing your computer for streaming

Make sure you have all the software installed on your VR-ready computer to run VIVE Streaming.

- Make sure the computer GPU driver is up-to-date. Connect your computer directly to your Wi-Fi router using an ethernet cable. 1. Make sure the SteamVR software has been downloaded and launched to complete the installation. You can get it from: https://store.steampowered.com/app/250820/ SteamVR/. 2. Install the VIVE Streaming software on your computer. You can download the VIVE Streaming software at https://dl.vive.com/vshubpc. If you're using an NVIDIA graphics card, on your computer, open the NVIDIA Control Panel. Under 3D Settings, click Manage 3D settings. In the Global Settings tab, look for Power management mode, and then set it to Prefer maximum performance. Gobel Settings Program Settings Settings: Feature Setting OpenGL rendering GPU Auto-select Prefer maximum performance Power management mode Shader Cache Optimal power Texture filtering - Anisotropic sample opti... Adaptive Texture filtering - Negative LCD bias Texture filtering - Quality Quality Texture filtering - Thinear optimization On Threaded optimization Auto Triple buffering Off Vertical sync Use the 3D application setting Virtual Reality pre-rendered frames Virtual Reality - Variable Rate Super Samp... Off Restore
  - 3. Finally, make sure you've installed the VR titles on your computer.



If you're using a laptop:

- Make sure the laptop is plugged in to a power source.
- If your laptop is using an NVIDIA graphics card, open the NVIDIA Control Panel. Under 3D Settings, click Manage 3D settings. In the Global Settings tab, look for Preferred graphics processor, and then set it to High-performance NVIDIA processor.

You don't need to set Preferred graphics processor if your laptop only has a dGPU.

## Preparing your headset for streaming

Your headset needs to be set up before you can use VIVE Streaming. Here's what you need to set up on your headset to use VIVE Streaming:

- Make sure you've set up your play area on your headset. This is done on the headset, not from SteamVR or VIVE Streaming.
- Make sure all headset settings are set correctly:
  - System and software updates
  - Network connection
  - Audio settings
  - Controller pairing

All of these settings are managed by the headset, and cannot be overridden by SteamVR or VIVE Streaming.

Make sure the latest version of VIVE Streaming app is installed on the headset. On your PC, open the VIVE Streaming Hub settings, and then go to About. Under Version, click Install next to VIVE Streaming app. Then follow the onscreen instructions to install the update.

You can also visit the VIVE XR Elite forum to ask questions and communicate with other VIVE XR Elite users.

# Connecting your headset to your computer to stream using a USB cable

It's easy to start streaming SteamVR titles with a USB cable.

Make sure your USB cable, computer, and headset have been prepared before connecting your headset to the computer.

- **1.** Make sure VIVE Streaming is installed and running on your computer, and that your headset is on.
- 2. Connect the USB Type-C<sup>®</sup> end of your USB cable to your headset, and then connect the other end to a USB port on your computer. See Attaching a USB Type-C cable to VIVE XR Elite on page 9.



If the headset is not recognized by the computer (the USB icon in the VIVE Streaming Hub is gray), try the following:

- Disconnect and reconnect the USB cable.
- Connect the USB cable to a different USB port on your computer.
- **3.** Put on your headset.
- 4. In Choose USB mode, select Take no action the first time you stream. When streaming in the future, select VIVE Streaming.

- 8 VIVE Streaming
  - 5. Go to Settings > Connectivity > Computer connection.



6. Select your computer.





Select **Set "PC VR apps" as the default Library filter** if you primarily use your headset to stream PC VR titles.

#### Attaching a USB Type-C cable to VIVE XR Elite

Connect your VIVE XR Elite headset to your computer using a USB Type-C cable.



If your USB cable isn't long enough, you can get a VIVE Streaming Cable via the VIVE accessories page.

**1.** Attach the USB Type-C end of your cable to the USB port on the VIVE Battery Cradle for XR Series of the headset.



2. Connect the other end of the USB cable to a USB port on your computer.

# Connecting your headset to your computer to stream wirelessly

Before starting a wireless streaming session, you need to pair your headset with your computer.

Make sure your computer and headset have been prepared before connecting your headset to the computer.

- **1.** Make sure VIVE Streaming is installed and running on your computer, and that your headset is on.
- 2. Connect your computer directly to your Wi-Fi router using an ethernet cable.
- Make sure the Wi-Fi router that the headset connects to supports 802.11ac (5 GHz) or 802.11ax (5 GHz, 6 GHz)
- Make sure the headset and Wi-Fi router are in the same room and that there is a clear line of sight between the headset and the Wi-Fi router.
- **3.** Put on your headset.

- 10 VIVE Streaming
  - 4. Go to Settings > Connectivity > Computer connection.



11 VIVE Streaming

5

5. Select your computer.



Select **Set "PC VR apps" as the default Library filter** if you primarily use your headset to stream PC VR titles.

A QR code will appear on your computer screen.



- 6. Use the headset to scan the QR code on your computer screen to pair the headset with the computer.
- If you can't successfully scan the QR code, see What should I do if I can't successfully scan the QR code when setting up wireless streaming? on page 18.
- You only need to pair the headset and computer once.

# Starting a streaming session

It's easy to start streaming SteamVR titles with VIVE Streaming.

Before starting a wireless or USB streaming session, make sure you've connected your headset to your computer. See Connecting your headset to your computer to stream using a USB cable on page 7 and Connecting your headset to your computer to stream wirelessly on page 9.

**1.** Put on your headset.

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- 2. In the Library, do any of the following:

  - Select the filter button **=**, and then select **PC VR apps**.

In the **Computer connection** screen, select **Set "PC VR apps" as the default Library filter** if you primarily use your headset to stream PC VR titles.

3. Select the title you want to stream.

To stop streaming, press the VIVE button on the controller, and then select **Back to Lobby**.

# Solutions and FAQs

## General

#### VIVE Streaming doesn't want to launch on my computer. What can I do?

If VIVE Streaming doesn't open on your computer, make sure the VIVE Streaming server is running on dGPU instead of iGPU.

- If you're using an NVIDIA graphics card, open the NVIDIA Control Panel, and go to Manage 3D settings. In the Global Settings tab, set Preferred graphics processor to High-performance NVIDIA processor.
- If you're using an AMD Radeon graphics card, right-click on your desktop, and then click AMD Radeon Settings > System > Switchable Graphics. Look for and click RRServer.exe, and then select High Performance.

# I've started streaming but I don't see anything in the headset except for a loading animation. What should I do?

If the title doesn't start streaming in the headset, try these:

- Make sure the VIVE Streaming software is installed on your computer. You can get it from: https://dl.vive.com/vshubpc.
- If doing a wired streaming session, unplug the USB cable from your computer and then plug it again. If the streaming still doesn't start, unplug the USB cable from your computer and plug it to a different USB port on your computer.
- If you've just updated the graphics driver, restart your computer, and try again.

My computer doesn't recognize the headset and the USB icon on VIVE Streaming Hub is gray. What can I do?

If your computer doesn't recognize the headset, try these:

- Unplug, and then plug the USB cable again to the USB port.
- Try connecting the USB cable to a different USB port on your computer.
- If you've connected the USB cable to all the USB ports on your computer, and it still doesn't recognize the headset, try this:
  - 1. On your headset, go to **Settings** > **Advanced**.
  - 2. Turn on the USB compatibility mode **On/Off** switch.

I can't get wireless streaming to work, what can I do?

If wireless streaming is not working for you, try these:

- Connect your computer directly to the network router using an ethernet cable.
- Make sure the Wi-Fi router the headset connects to supports 802.11ac or 802.11ax (5 GHz).
- If possible, don't connect to a Wi-Fi mesh network.
- Have the Wi-Fi router and the headset in the same room and try to have a clear line of sight between the headset and Wi-Fi router.
- Don't use a mobile hotspot as your Wi-Fi router.
- Make sure your firewall is not blocking connections from VIVE Streaming.
- If you keep seeing "No computer found", consult your network administrator about allowing devices to broadcast messages on the network.

How do I show others what's inside the headset while doing wireless streaming?

We suggest to let others watch the content mirror on the computer monitor. Screen casting while doing wireless streaming is not recommended as it may affect wireless streaming performance.

After starting my streaming session on my headset, I see a green screen. What should I do?

Open SteamVR settings, and then go to **General**. Show the **Advanced Settings**, and then turn off the Pause VR when computer is locked **On/Off** switch.

#### VIVE Streaming can't update successfully. What should I do?

If VIVE Streaming fails to finish updating, do the following:

- **1.** Close the VIVE Streaming Hub.
- 2. Open the Windows Task Manager.
- 3. In the Processes tab, end the following tasks:
  - RRUpdateManager
  - RRServer
  - RRConsole
  - vrserver
  - vrmonitor
  - vrcompositor
  - VHConsole

M/

ViveHubServer

4. Open the VIVE Streaming Hub and restart the update.

If VIVE Streaming still fails to update, restart your computer, open the VIVE Streaming Hub, and restart the update again.

15 Solutions and FAQs

How do I make VIVE Streaming communicate through Windows Defender Firewall?

You may need to remove VIVE Streaming in Windows Defender Firewall for it be allowed through.

- On your computer, go to Control Panel > System and Security > Windows Defender Firewall > Allow an app or feature through Windows Defender Firewall., and check if VIVE Remote Render Server is in the Allowed apps and features list.
- 2. Click Change settings.



**3.** In the Allowed apps and features list, remove all instances of **VIVE Remote Render Server** and **VIVE HUB Server**.



Make sure to remove all **VIVE Remote Render Server** and **VIVE HUB Server** instances in the list.

Name	Private	Public	^
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VIVE HUB Server	<b>Z</b>		
VIVE HUB Server		Ø	
VIVE Remote Render Server			
VIVE Remote Render Server			
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- 4. Restart VIVE Streaming.
- 5. In the dialog box where it asks for permission to allow network access, click Allow access.

#### How do I resume playing a PC VR title?

Follow the steps below to resume playing the most recent PC VR title played on the headset.

- **1.** Put on your headset.
- 2. In the Library, select the filter button 두 in the upper right.
- 3. Select PC VR apps, and then select SteamVR. Play resumes where you left off.

#### What should I do if I have trouble running OpenXR titles?

If you're having problems running OpenXR<sup>™</sup> titles with VIVE Streaming, check the SteamVR settings.

Make sure VIVE Streaming is running on both your headset and computer and that the headset is detected in the SteamVR window.

- **1.** On your computer, open SteamVR settings.
- 2. Under Advanced Settings, click Show.
- 3. Click Developer.
- 4. Check if Current OpenXR Runtime is set to SteamVR. If Current OpenXR Runtime is not set to SteamVR, click SET STEAMVR AS OPENXR RUNTIME.

SteamVR Settings			-	×
General Play Area	Enable debugging options in the input binding user interface	off		
Dashboard	Allow saving of timing info	Off		
Controllers	Show GPU Performance Graph in Headset	Off		
Video Audio	Auto-save timing info on exit	Off		
Startup / Shutdown	Enable global input from overlays (Experimental)	Off		
Developer	Current OpenXR Runtime:	VIVE_OperiXR		
	SET STEAMVR AS	OPENXR RUNTIME		
	RESET PAGE	TO DEFAULT		
Advanced Settings				
Hide Show				

5. Run the OpenXR title again.

#### Why doesn't the PC VR title launch after selecting it in the Library?

If the PC VR title doesn't launch after selecting it in the Library, check the following:

- On your PC, make sure SteamVR is running and that you're signed in.
- If SteamVR or the title is updating, wait for the update to finish. After the update is finished, launch the title again.
- If you're launching a title from VIVEPORT, make sure VIVEPORT is running on your PC and that you're signed in.
- Some titles may need input from you before it launches. On your PC, check if there are messages that need your attention.

What do I do if controllers don't work properly when streaming apps?

If the controls and buttons on the controllers are not working properly when streaming apps, try changing the controller option in the VIVE Streaming settings.

- 1. In the VIVE Streaming Hub, open settings and go to VIVE Streaming.
- Under Input > Controller, check if Compatibility mode is selected or not. If Compatibility mode is selected, clear the option; if Compatibility mode is not selected, select it.
- 3. Restart SteamVR, open the app, and check if the controllers are working properly.
- **4.** If the controllers are still not working properly, open the SteamVR settings on your computer or in VR.
- 5. Click Controllers > MANAGE CONTROLLER BINDINGS.
- 6. Under Manage Controller Binding For, select the app where the controllers are not working properly.
- 7. In Active Controller Binding, click Custom > CHOOSE ANOTHER.
- 8. Select another controller binding, and then check again if the controllers work properly.

We recommend restarting the app after selecting another controller binding.

#### Are hand tracking and VIVE Wrist Tracker supported by VIVE Streaming?

Both hand tracking and VIVE Wrist Tracker are natively supported by VIVE Streaming.

- 1. In the VIVE Streaming Hub, go to **Settings** > **VIVE Streaming**, and then scroll down to **Input**.
- 2. Under **Tracking**, select or clear the **Hand tracking** option to enable or disable hand tracking.
- 3. If you're using a VIVE Wrist Tracker, do one of the following:
  - Select the **Use VIVE Wrist Tracker for hand tracking** option to enhance hand tracking precision and reliability through the VIVE Wrist Tracker.

**Hand tracking** must also be selected.

• Clear the **Use VIVE Wrist Tracker for hand tracking** option to use VIVE Wrist Tracker to track objects, similar to how you would with VIVE Tracker (3.0).

What should I do if I can't successfully scan the QR code when setting up wireless streaming?

When scanning the QR code, make sure you're facing straight at your monitor and not at an angle.



If you still can't successfully scan the QR code after several attempts, connect your headset to your PC using a USB cable. See Connecting your headset to your computer to stream using a USB cable on page 7.

Once you've paired the headset and computer, unplug your headset from your computer. On your headset, you can then select the same PC on the **Computer connection** screen to start a wireless streaming session without the need to scan a QR code.

## Performance

#### How do I improve VIVE Streaming performance?

VIVE Streaming performance is affected by your computer's system settings whether you're using a USB or wireless connection to stream.

#### General

Check the tips below to help improve the performance of VIVE Streaming.

- If your computer is using an NVIDIA graphics card, open the NVIDIA Control Panel. Under 3D Settings, click Manage 3D settings. In the Global Settings tab, look for Power management mode, and then set it to Prefer maximum performance.
- If you're experiencing frame drops, check if you're going beyond your play area's boundary. If you're constantly hitting your play area's boundary, reset your play area's boundary.

#### Streaming using a laptop

Try these tips if you're using VIVE Streaming on a laptop.

- Make sure the laptop is plugged in to a power source.
- If your laptop is using an NVIDIA graphics card, open the NVIDIA Control Panel. Under 3D Settings, click Manage 3D settings. In the Global Settings tab, look for Preferred graphics processor, and then set it to High-performance NVIDIA processor.

You don't need to set **Preferred graphics processor** if your laptop only has a dGPU.

 Try to keep the laptop cool. If the laptop gets too hot, it affects the performance of VIVE Streaming.

#### **VIVE Streaming Hub**

Try these options in the VIVE Streaming Hub.

- The render resolution might be too high for your computer's GPU. Go to Settings > VIVE Streaming. Under Graphic settings, set Streaming graphic preferences to Performance.
- If you're doing a wireless streaming session, the streaming bitrate may be too high for your network's bandwidth. Lower the bitrate in the VIVE Streaming Hub. You can also enable
   Dynamic bitrate under Streaming bitrate in Settings > VIVE Streaming. Dynamic bitrate automatically adjusts the streaming bitrate based on your network's bandwidth and the bitrate set in the VIVE Streaming Hub to give you the best wireless streaming experience.
- If you're doing a wireless streaming session, go to Settings > VIVE Streaming, and then under TCP mode, turn on Use TCP for wireless streaming.

#### Wireless streaming session

To optimize the performance of VIVE Streaming while doing a wireless streaming session, try these:

- Connect your computer directly to your Wi-Fi router using an ethernet cable.
- Have the headset and Wi-Fi router in the same room and try to have a clear line of sight between the headset and Wi-Fi router.
- Dedicate one wireless router to one headset. If you have several headsets using the same wireless router while using VIVE Streaming, reduce the number of headsets connected to the wireless router.
- If you're using the same wireless router for VIVE Streaming and video streaming services, stop using the video streaming service first while doing a wireless streaming session.
- Try switching your Wi-Fi router to another channel with less overlap with other Wi-Fi
  access points. Overlap caused by adjacent access points will degrade Wi-Fi performance.
  There are free mobile Wi-Fi analyzer tools that you can download to check Wi-Fi signals in
  your location. Consult your router's user guide to learn how to change the Wi-Fi channel.
- If possible, don't connect to a Wi-Fi mesh network.
- If possible, don't use a mobile hotspot as your Wi-Fi router.
- Screen casting affects wireless streaming performance so it's not recommended to do screen casting while doing a wireless streaming session. See How do I show others what's inside the headset while doing wireless streaming? on page 14.

I'm experiencing some content jittering when streaming, what can I do?

Check if VIVE menu is open in VR. If it is open, close it.

The content seems to be stuttering a lot and the streaming experience is not what I was expecting. What can I do?

The frame rate is not sufficient, do the following:

- In the VIVE Streaming Hub, go to Settings > VIVE Streaming. Under Performance, set Graphics settings to Performance.
- If you're using an NVIDIA graphics card, open the NVIDIA Control Panel, and go to Manage 3D settings. In the Global Settings tab, set Preferred graphics processor to High-performance NVIDIA processor.

You don't need to set **Preferred graphics processor** if your laptop only has a dGPU.

#### How do I adjust graphic preferences for VIVE Streaming?

You can adjust graphic preferences for VIVE Streaming in the VIVE Streaming Hub.

- 1. In the VIVE Streaming Hub, go to Settings > VIVE Streaming.
- 2. Under Graphic settings and Streaming bitrate, adjust the available options according to your preferences, network bandwidth, and computer's capabilities.

Each option affects the performance of VIVE Streaming. For example, while selecting **Quality** for **Streaming graphic preferences** can improve visual quality, it may affect overall performance, resulting in a less than smooth VR experience. A higher streaming bitrate can give you better

#### 21 Solutions and FAQs

video quality but require more bandwidth while a lower streaming bitrate will improve performance but may compromise video quality. Experiment with the available options until you're satisfied with the performance of VIVE Streaming.

#### Why is the GPU utilization of my PC so high when not streaming?

This may be caused by a VR title running on your PC but there's no headset connected. On your PC, close the VR title to resolve the problem.

### Audio

The audio sounds broken and there's a lot of noise. What should I do?

In the Windows Control Panel, go to the **Sound** settings and check the Playback tab. Make sure that **Oculus Virtual Audio Device** is not set as the default device.

The sound in the headset stutters and sounds distorted and garbled. What should I do?

Open SteamVR settings, and then go to **Audio**. In Audio output device, check that the default Windows audio device is not a Bluetooth<sup>®</sup> headset.

Is there a way not to mirror the audio from the headset?

On your computer, click the speaker icon in the taskbar, and then mute the audio by clicking the speaker icon.



Make sure the volume is not set to **0** when the computer audio is muted or the audio in the headset will also be muted.

#### I've started streaming content but I don't hear any sound

If you don't hear any sound, try the following:

- Open SteamVR settings, and then select Audio. Check that Audio output device is set to the default Windows audio device. If there is still no sound, try selecting another audio device from the dropdown menu.
- Open the Windows Sound control panel by right-clicking the volume icon on the taskbar and selecting Sounds. Go to the Playback tab and make sure that Oculus Virtual Audio Device is not set as the default device. Then, restart VIVE Streaming on your computer.

# Error messages

When I launch VIVE Streaming on the computer, I see an error that says "No VIVE Streaming driver found." What should I do?

If you see this error, it may be one of these reasons:

 The VIVE Streaming driver may be blocked by SteamVR. In SteamVR, go to Manage SteamVR Add-Ons, and make sure the htc\_business\_streaming **On/Off** switch is on.

- VIVE Streaming is not registered properly to SteamVR. Close SteamVR, and then restart VIVE Streaming.
- Another VR headset is already connected to the computer. Disconnect the VR headset from the computer. The headset icon in the SteamVR window should look like the screenshot below when the VIVE Streaming driver is loaded properly.



#### I'm seeing an error "No supported GPU found", what should I do?

If your laptop is using an NVIDIA graphics card, make sure the VIVE Streaming server is running on dGPU instead of iGPU. Open the NVIDIA Control Panel, and go to **Manage 3D settings**. In the **Global Settings** tab, set **Preferred graphics processor** to **High-performance NVIDIA processor**.

You don't need to set **Preferred graphics processor** if your laptop only has a dGPU.

#### In SteamVR, I see an error "Wrong video card." What should I do?

This error usually occurs when using a laptop to run VIVE Streaming. If your laptop is using an NVIDIA graphics card, open the NVIDIA Control Panel. Go to **Manage 3D settings**, and then in the **Global Settings** tab, set **Preferred graphics processor** to **High-performance NVIDIA processor**.



You don't need to set **Preferred graphics processor** if your laptop only has a dGPU.

#### What do the error codes and messages mean? What can I do?

Check the error code associated with the issue, and then try to resolve the error with the suggested steps.

Table	1:	VIVE	Streaming	Hub
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Error code	Issue	Steps to resolve issue
100	Unable to create log. Check available disk space.	Free up some space on your hard drive so the log file can be created.

#### 24 Solutions and FAQs

Error code	Issue	Steps to resolve issue
120, 430	Required files not found. Check installation.	Some necessary files are missing. Re-install the VIVE Streaming software on your computer.
200	License expired.	Your beta license has expired. Contact HTC to obtain a new one or exit beta.
310, 320	Graphics driver out of date. Update graphics driver.	Update the driver of your graphics card to the latest version.
311	Encoder initialization failed.	Update the driver of your graphics card to the latest version.
330	No supported GPU found.	<ul> <li>Check the and see if your computer's GPU meets the minimum requirements.</li> <li>If your laptop is using an NVIDIA graphics card, make sure the VIVE Streaming server is running on dGPU instead of iGPU.</li> <li>Open the NVIDIA Control Panel, and then go to Manage 3D settings. In the Global Settings tab, set Preferred graphics processor to High-performance NVIDIA processor.</li> </ul>
340	No VIVE Streaming driver found.	<ul> <li>The VIVE Streaming driver may be blocked by SteamVR. In SteamVR settings, go to Startup/Shutdown. Show the Advanced Settings, and then click Manage Add-Ons. Make sure VIVE Streaming is not blocked.</li> <li>VIVE Streaming is not registered properly to SteamVR. Close SteamVR, and then restart VIVE Streaming.</li> </ul>
440	Unable to initialize audio.	<ol> <li>Set the default audio device sample rate to 44.1K or 48K.</li> <li>Right-click the speaker icon in the System Tray, and click Sounds.</li> <li>In the Playback tab, select the default device, and then click Properties.</li> <li>In the Advanced tab, select 16 bit, 44100 Hz (CD Quality) or 16 bit, 48000 Hz (DVD Quality) in Default Format.</li> </ol>

Error code	Issue	Steps to resolve issue
450	Failed to bind to port.	The required network ports for VIVE Streaming are currently occupied. Restart VIVE Streaming. If the error message still appears, do the following:
		1. Open the Command Prompt window.
		2. Enter netstat -aon   findstr /c:7554 /c:7654 /c:9009, and then take note of the value in the last column (e.g. 15524).
		C:\Windows\System32\cmd.exe           C:\Program Files\VIVE Business Streaming>netstat -aon   findstr /c:7554 /c:7654 /c:9009           TCP         0.0.0.0:7554         0.0.0.0:0         LISTENING         15524           TCP         0.0.0.0:7654         0.0.0.0:0         LISTENING         15524           UDP         0.0.0.0:9009         *:*         15524
		3. Open Task Manager and go to the Details tab.
		4. In the PID column, look for the process that has the same value in step 2 and end the process.
		Image: Ele Options View       Processes Performance Apphistory Startup Users       Name       PID       Status       Image: Name       1524       Running       14824
		<ul> <li>5. In the Command Prompt window, enter netstat -aon   findstr /c:7554 /c:7654 /c:9009 again and make sure these ports are no longer occupied.</li> <li>6. Postart \//\/E Streaming</li> </ul>
5.0.4		
501	USB connection too slow. Use USB 3.0 or higher.	<ul> <li>For wired streaming, it's strongly recommended to use USB 3.0 or higher.</li> <li>Check that the USB cable you're using is 3.0. We recommend using the VIVE Streaming Cable.</li> </ul>
		<ul> <li>Make sure the USB cable is connected to a USB 3.0 port on your computer.</li> </ul>
		<ul> <li>Don't use a USB hub or adapter.</li> </ul>
		If the problem persists, try a different port on your computer.

Error code	Issue	Steps to resolve issue
601	Missing frames.	There is a problem with the connection between the headset and computer. Try these:
		<ul> <li>Unplug the USB cable from your computer and then plug it again.</li> </ul>
		<ul> <li>Unplug the USB cable from your computer and plug it to a different USB port on your computer.</li> </ul>
		<ul> <li>If you've just updated the graphics driver, restart your computer, and try again.</li> </ul>
		<ul> <li>If this error appears after updating the graphics driver, try to roll back to the driver version where VIVE Streaming was working fine.</li> </ul>

#### Table 2: VIVE Streaming installer

Error code	lssue	Steps to resolve issue
003	Cannot copy files.	Run the VIVE Streaming installer again.
101	Unable to register driver	1. Re-install SteamVR.
	with SteamVR.	<b>2.</b> Launch SteamVR to complete the installation.
		<b>3.</b> Re-install the VIVE Streaming software.
102	SteamVR configuration	1. Re-install SteamVR.
	not found. SteamVR is required for VIVE Streaming.	2. Launch SteamVR to complete the installation.
		3. Re-install the VIVE Streaming software.
		If the problem persists, select the <b>Force install without</b> <b>checking SteamVR</b> option in the VIVE Streaming Hub Installer dialog before clicking <b>Retry</b> .
		Force install without checking SteamVR is only available in VIVE Streaming Hub Installer version <b>1.0.0.11</b> or later. Download the latest version from https:// dl.vive.com/vshubpc.
103	Unable to download VIVE Streaming installation packages due to network connectivity issues.	1. Make sure you have a reliable internet connection.
		<b>2.</b> Check your network security settings to make sure the connection to the host server is not being blocked.
		<b>3.</b> Run the VIVE Streaming installer again.

#### Table 3: VIVE Streaming app in headset

Error code	Issue	Steps to resolve issue
912	Unable to connect.	Select $\mathbf{OK}$ to retry. If the problem persists, do these:
	Check your network and host, and then try again. Also, make sure VIVE Streaming software is installed on the computer (https:// dl.vive.com/vshubpc).	<ul> <li>Check that the USB cable is connected to the headset and computer.</li> </ul>
		<ul> <li>Unplug the USB cable from your computer and then plug it again.</li> </ul>
		<ul> <li>Unplug the USB cable from your computer and plug it to a different USB port on your computer.</li> </ul>
		<ul> <li>Make sure your computer's and router's firewall are not blocking connections from VIVE Streaming.</li> </ul>
921	Frame loss timeout. Frames timed out or were lost. Check the network and your computer, and try again.	VIVE Streaming failed to receive video frames and timed out after multiple retries. Try these:
		<ul> <li>Unplug the USB cable from your computer and then plug it again.</li> </ul>
		<ul> <li>Unplug the USB cable from your computer and plug it to a different USB port on your computer.</li> </ul>
		<ul> <li>If you've just updated the graphics driver, restart your computer, and try again.</li> </ul>
		<ul> <li>If this error appears after updating the graphics driver, try to roll back to the driver version where VIVE Streaming was working fine.</li> </ul>
		<ul> <li>In VR, quit the VIVE Streaming app by pressing the VIVE button on the controller, and then selecting X at the top-right corner of the menu. Then, launch VIVE Streaming again.</li> </ul>
931	<b>Driver not found</b> . Driver not detected. Check your computer and try again.	<ul> <li>The VIVE Streaming driver may be blocked by SteamVR. In SteamVR settings, go to Startup/Shutdown. Show the Advanced Settings, and then click Manage Add-Ons. Make sure VIVE Streaming is not blocked.</li> </ul>
		<ul> <li>VIVE Streaming is not registered properly to SteamVR.</li> <li>Close Steam//D, and then restart /////E Streaming</li> </ul>
		<ul> <li>Make sure SteamVR is updated to the latest public release.</li> </ul>
		<ul> <li>Make sure SteamVR is updated to the latest public release.</li> </ul>

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