

How to convert 4K HDMI to USB C?

V1.0



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1. WHY CONVERT HDMI TO USB-C?

A converter from HDMI to USB-C can bridge older devices to newer displays, offering benefits like power delivery, data transfer, and versatile single-cable setups that have driven the adoption of USB-C ports on modern whiteboards and displays.

2. BENEFITS OF HDMI TO USB-C CONVERTERS

The primary benefit of an HDMI to USB-C converter is to bridge compatibility between devices that use different connection standards, allowing users to connect HDMI-only source devices (like older laptops, gaming consoles, or Blu-ray players) to modern displays or whiteboards equipped with only USB-C inputs.

- **Expanded Compatibility:** The converter ensures that legacy devices are not obsolete, enabling them to connect to newer display technologies.
- **High-Resolution Support:** Many quality adapters support high resolutions, including 4K, ensuring excellent video quality is maintained during the conversion process.
- **Portability and Simplicity:** These adapters are typically compact and plug-and-play, making them easy to carry for presentations or travel, eliminating complex setups or driver installations.

3. IS THERE ANY WAY TO CONVERT 4K HDMI TO USB C?

Yes, the **INFOBIT iTrans HC** (4K HDMI to USB-C Converter) is available that can convert an HDMI 4K signal from a source device to a USB-C output for connecting to a USB-C display, with support for up to 4K@60Hz resolution.

The **iTrans HC** is unidirectional, meaning it only works from an HDMI source (laptop, PC, game console, etc.) to a USB-C display (monitor, AR glasses, portable monitor), and do not work in reverse.

4. IMPORTANT CONSIDERATIONS

- **Unidirectional Signal Flow:** The **iTrans HC** converter is specifically designed to go from an **HDMI source** (output) to a **USB-C display** (input). They will not work for connecting a USB-C laptop to an HDMI monitor.

- **DP Alt Mode:** The USB-C monitor or display you are connecting to must support **DisplayPort Alternate Mode (DP Alt Mode)** to receive a video signal over its USB-C port.
- **External Power:** The **iTrans HC** require external power via a micro-USB connection to function correctly and deliver a stable 4K signal, especially for portable monitors.
- **Resolution and Refresh Rate:** Ensure both the source device's graphics card and the target display support 4K@60Hz for optimal performance.

5. ITRANS HC INTRODUCTION

The **INFOBIT iTrans HC** is a dedicated **4K 60Hz HDMI to USB-C converter** that allows you to connect a traditional HDMI source device to a modern display or whiteboard with a USB-C input.



5.1 KEY FEATURES AND SPECIFICATIONS

The **iTrans HC** offers a range of features for professional audiovisual applications:

- **Video Resolution:** Supports HDMI input resolutions up to **4K@60Hz 4:4:4** and provides a corresponding USB-C output signal, also at up to 4K@60Hz.
- **Audio Support:** Provides up to 7.1 channels of HD audio pass-through, including support for PCM, Dolby TrueHD, and DTS-HD Master Audio formats.
- **HDMI Loop Output:** Includes an additional HDMI loop-out port, which allows you to connect a second, local HDMI display, monitor, or capture device simultaneously.
- **HDCP Compliance:** It is compliant with HDCP 2.2, ensuring compatibility with most protected content sources like Blu-ray players or streaming devices.
- **Power Supply:** The device is powered by a standard 5V/1A USB power supply (max consumption of 3.2W).
- **Design:** It features a compact, black plastic enclosure, making it easy to integrate into various setups.

5.2 HOW IT ADDRESSES YOUR NEEDS

The **iTrans HC** is a suitable product for your needs because it is specifically designed to perform the exact function you requested: converting an HDMI 4K signal to a USB-C output.

- **Converts HDMI 4K to USB-C***: The device takes an HDMI 2.0b input and converts it to a USB-C output (supporting DP 1.2 Alt-mode), maintaining the 4K@60Hz resolution.
- **Bridges Old to New Technology**: It solves the compatibility issue between older devices with HDMI output and newer displays or whiteboards that primarily use USB-C inputs.
- **Maintains Quality**: It ensures the high quality of the 4K signal is preserved, supporting advanced color space and depth specifications.

Note: USB-C* only supports Audio and Video, does not support PD.

5.3 DIAGRAM

