

Coffee Break



Take 15 minutes with HDBaseT
and simplify connectivity

HDBaseT for Virtual Reality: Enhancing the User Experience

The World of Virtual Reality

Virtual reality has become, well, reality. As we become increasingly interconnected within our own world, VR offers us an increased range of opportunities for gaming, education, training, therapy and more. VR allows us to immerse ourselves in real or imagined environments, by creating an overall sensory experience that tricks our brain into thinking that what we 'see' and 'hear' is real. But VR without the proper infrastructure can be a source of frustration, disappointment, and even health concerns.

Connectivity for the VR Experience

VR is not a stand-alone proposition. Although most marketing pictures of VR headsets show an attractive man or woman, disconnected from anything in an empty space, the reality (virtual or not) is altogether different. The VR headset must be connected either directly to the computer source and/or to an

intermediary box in a VR belt, which is then connected to the computer source. In addition, to guarantee the user experience, VR connectivity must support the highest resolution possible, and allowing for the least amount of latency.

Common Challenges for Virtual Reality

- **Cabling:** VR sets use a cumbersome clutter of several cables, connecting the headset to the user's belt and to the computer source, to provide audio & video, USB, controls and power. These are usually low-gauge, thick cables that are heavy and bulky.
- **Distance:** Because the VR experience demands performance, transmission distance of existing cables is usually limited to 1-5 meters (3-15 feet), severely limiting the user's movement. One of the most common complaints is the need to move furniture or other items in the room so as not to obstruct cables.
- **Latency:** Latency can ruin the VR experience, as your head movement should be immediately matched by the picture you are seeing (head tracking). Anything above 10ms introduces unacceptable latency which, in addition to diminishing the system performance, can also cause motion sickness.

HDBaseT for Virtual Reality

HDBaseT is the one-cable solution for Virtual Reality. HDBaseT technology allows for the convergent delivery of the 5Play feature set - uncompressed ultra-high-definition (4096H x 2160V) audio & video, USB, controls, Ethernet, and up to 100W of power over a single, thin and light cable (CatX).

The HDBaseT Difference

- **Cabling:** HDBaseT is transmitted through a single cable. This is a much less cumbersome and lighter cable than used today. In addition, it eliminates all the extra cables used today, as HDBaseT transmits HDMI (audio & video), USB and power over the same cable.
- **Distance:** Because HDBaseT is transmitted over Cat cables, it allows for much farther distances than possible until now. HDBaseT can easily increase distance by five-fold or more, providing users with much more flexibility on where to place their VR PC's vis-à-vis where they stand.

- **Latency:** Despite the fact that it runs on a simple Cat cable, HDBaseT provides uncompressed transmission with a near-zero latency experience (under 10µs). No latency, uncompressed video transmission, means better performance and enhanced user experience, a win-win situation.



For more information about HDBaseT and Virtual Reality, contact sandra@hdbaset.org.

Up to 100m/328ft CatX Cable

