

VR Hardware Quick Research

Headsets Available on the market:

Google Cardboard

By far the cheapest “headset” available starting at a lowest price of \$8.95, the Google Cardboard is a minimal, base layer headset that is quite literally made from cardboard. Featuring foldable ear rests, a pair of generic lenses inside, a pocket to place your mobile viewing device, and a cardboard button on top that pushes foam to a phone screen as a touch-enabler, the Google Cardboard is the most basic of options.

<https://arvr.google.com/cardboard/>

Samsung Gear VR

The next step up for mobile-device-viewing VR is the Samsung Gear VR. This upgrade features a solid build with a foam faceplate, head straps, and a single media controller. As a bonus, the headset is powered by Oculus, one of the leading developers for VR today. At around \$100, this headset provides a significant upgrade but is still limited to using a mobile device.

<https://www.samsung.com/global/galaxy/gear-vr/>

Oculus Rift S

The Oculus Rift S is the first big step into PC VR that removes the mobile device and uses an actual processor to view images inside the headset. This headset is a huge price step, but the features are exponential on top of it. A full processor inside, bright vivid screens, full PC compatibility, touch controllers, and full motion tracking enables this VR headset to the best of the best. Beginning at \$300, the only drawback to this headset is that you are required to connect to a PC to use the hardware.

<https://www.oculus.com/rift-s/>

Oculus Quest 2

The newest of releases on this list, the Oculus Quest 2 provides users with all the aspects of the PC VR experience alongside full wireless capability. Two touch controllers, an updated and improved visual system that can run at 90 HZ (compared to others’ 60 HZ), and the brand-new hand-tracking functionality, the Quest 2 is running away with the VR market currently. Amazingly, the Quest 2 retails at \$300 as well.

<https://www.oculus.com/quest-2/>

Valve Index

The Valve Index is the big brother in the room. The Index takes it a step further by including “base stations” that are placed around the room for enhanced camera tracking, as well as built in headphones to the headset. This monster of a VR headset goes above and beyond the others on the list, but with a price drawback. The full Valve Index set starts at \$999.

<https://store.steampowered.com/sub/354231/>

HTC Vive

The HTC Vive is a competitor to the Valve Index at a slightly lower price range of \$899. Showing off every feature the other headsets have, the Vive shines through its unique design, lower price, and capability to do all the tasks the other guys can do at the same (or better) performance. This is a true competitor and a valid choice for anyone looking for a stylish high-end VR headset.

<https://www.vive.com/us/product/>

Conclusion

After researching every notable VR headset and collaborating with the team, the best option for us is the Oculus Quest 2. Some team members have previously worked with the Quest series and/or own the hardware themselves. The Quest 2 is blowing away the VR market currently for a reason. Its full wireless capabilities, PC VR compatibility, easy file loading accessibility, and low price range make it the optimal choice for a VR project.