

Technically, the iWear VR920 video eyewear is compatible with most programs running on a Mac, Windows XP or Windows Vista personal computer with a video resolution of 1024x768, 800x600 or 640x480. Some programs will however not support all of its features.

When connected to any of the above, the VR920 video eyewear performs as a wearable display system showing standard 2D or mono video. Typically, people purchase video eyewear have more ambitious goals in mind, such as 3D stereoscopic video and head-tracking – features that do require some form of support. Let's take a closer look at these and a few often overlooked items.



Operating System: The iWear VR920 video eyewear's technical specifications list 32-bit Windows XP & Vista as compatible operating systems. The eyewear is however compatible with a far greater range of operating systems, to some degree. It will function as a 2D wearable display on Macintosh, Linux and 64-bit Windows XP and Vista.

Head-tracking is also supported on Macintosh when used with applications that include native support for this feature.

3D stereoscopic video is not supported on any operating system, at this time, other than 32-bit Windows XP & Vista. For these, some form of support is required in the software being displayed or through an iWearMonitor extension.



Audio: The audio system provides more than just removable stereo headphones and an integrated microphone. It is a complete audio system that installs on your computer as a separate USB Audio Device accessible through your sound and audio device Control Panel.

Some applications provide special features when used with systems having multiple audio devices installed. These features can generally be used with the video eyewear's audio system.



Head-tracking: Three degrees of freedom head-tracking is available, when supported by an application either through native mode support or an iWearMonitor Extension.

Head-tracking allows an application to be aware of where you are looking and display the appropriate image. As an example, if you look down and out the left of a flight simulator cockpit, you'll see the ground and runway, or whatever else is below and to the left of your aircraft.

iWearMonitor Extensions are one method of providing head-tracking support. The precision and quality of this support method will vary by software title.

Native Vuzix tracking is the preferred method head-tracking support. This is provided through special code written directly into the application. Using this form of support, a software author can determine exactly how the tracking is to perform, what it does and if desired, they can provide adjustments and control options to the users. In the real-world, your feet, hands and head all work independently. Head-tracking allows that same degree of flexibility in virtual worlds.



3D Stereoscopic Video: iWear VR920 video eyewear provides 2D (mono) video by default. With supported applications, its 3D stereoscopic video truly brings a virtual world alive.

The video eyewear supports 3 methods of delivering 3D stereoscopic video; an Nvidia graphics card with compatible 3D drivers, iWearMonitor Extensions and native Vuzix Stereo support.

3D video through an Nvidia solution is supported but recommended only for applications not supported by either of the following Vuzix specific alternatives. The favorable advantage of Nvidia 3D support is the large number of supported titles, said to be in excess of a thousand. The downside if this is that it only works for systems equipped with an Nvidia graphics cards with compatible 3D video drivers. 3D drivers are not available for all models of Nvidia graphics cards and most are not compatible with Windows Vista. This limits the number of computer systems for which this is a viable alternative and those with compatibly equipped systems often claim these to be difficult to configure.

Recognizing these issues, Vuzix created its own 3D stereoscopic video drivers and two methods to employ their use. The Vuzix Stereo Drivers not only provide superior quality stereoscopic video, they are also compatible with virtually any make or model of graphics card operating on 32-bit Windows XP or Vista operating system.

One method of utilizing the Vuzix Stereo Drivers is through an iWearMonitor Extension. This support method hooks into a game or other application. As this is a post-released extension to the application, you may encounter some anomalies in some applications. Our engineering staff has become very proficient at creating iWearMonitor Extension support and in many applications; even very discerning users will be challenged to differentiate this from true Vuzix Stereo Driver native support.

The premium method of providing 3D stereoscopic support is through native support for the Vuzix Stereo Drivers written directly into an application. Using this method of support, an application's author can control the amount of separation and distance effects specific to any situation. This degree of control is not available through iWearMonitor Extension support. In addition, user controls and options can be provided and it is all seamless to the end-user; not external support is required, its plug 'n play.



3D Stereo & Head-Tracking Compatible: Typically when a person asks “What is it compatible with?”, what they really want to know is which programs will provide 3D stereoscopic video and/or head-tracking.

To be perfectly honest, we simply do not know all the programs that are 3D stereo compatible through all of the above support methods. In an effort to capture and make as much of this information available as possible, we have provided an *iWear VR920 Supported Titles Chart* and a method for end-users and software developers to add titles to its list.

If you know of a title that is supports 3D stereoscopy and/or head-tracking through any of the above methods, submit it to the list through the provided input form. There is no cost or obligation in listing titles. The Titles Chart and submission form are available at: [iWear VR920 Supported Titles Chart & Title Submission Form](#)



iWearMonitor vs. Native Support: When Vuzix was developing the video eyewear we recognized that we needed a method for supporting legacy titles – software titles already developed and on the market. With that in mind, we created the iWearMonitor and a group of Extensions that we have been steadily improving and expanding.

iWearMonitor Extensions are an aftermarket add-on, much like accessories and performance parts added onto a car. They improve looks and performance, but they may not always integrate as seamlessly as parts and options installed at the factory.

Extensions are created by Vuzix and installed into our iWearMonitor which is updated on a frequent basis and made available for free download by iWear VR920 customers. Each of these is created and tuned to a specific application using tools and resources such as SDKs (software developer kits) released by an application's authors. For some games, the results can be spectacular and both stereoscopy and head-tracking can be supported. For others, it may be only one of these two features, due to a lack of hooks into the application or when the available control options are simply not appropriate for a given style of game.

Though iWearMonitor Extensions do improve the look and performance of many applications, they typically do not offer the same degree of fit and finish as a factory installed part – native mode support for Vuzix Stereo Drivers and head-tracking. When native mode support is added to an application, the program's author has complete control of how these features work and how they are incorporated into their application. When well implemented, there is simply no better quality stereoscopy and head-tracking currently available on the market.

Vuzix makes an SDK available free of charge to all software developers and will provide engineering and other forms of assistance to commercial software developers. To download the latest version of the Vuzix iWear VR920 SDK, go to the [Vuzix website's Downloads and Drivers webpage](#) and click on the SDK's download link.

If you are not a software developer and simply want to see native support in your favorite applications, contact the developers of that applications and ask them to support the Vuzix iWear VR920 video eyewear.



VR Immersion: Many people ask about a more immersive VR environment and that too is available with the VR920 video eyewear. A low cost light shield is available that simply clips onto the eyewear's viewer. This soft rubber-like light shield molds to the shape of your face and blocks out most exterior light, providing a full-immersion VR display system.

For additional information on the Vuzix iWear VR920 Video Eyewear, go to www.vuzix.com.

For information on the iWear Developer Support Program, please email developers@vuzix.com.