



# nVisor ST50

## Head-Mounted Display

The nVisor ST50 offers high-fidelity virtual and augmented reality developers and users a new professional head-mounted display with unprecedented performance for under \$20k.

### PRODUCT SPECIFICATIONS

#### electrical

<b>Power Input</b>	5 VDC
<b>Video Input</b>	1280x1024 60 Hz (DVI/HDMI)
<b>Power Consumption (W)</b>	< 6

#### mechanical

<b>Weight (g)</b>	1050
<b>IPD Range (mm)</b>	54-74
<b>Cable Length (m)</b>	4.2

#### optical

<b>Eye Relief (mm)</b>	23
<b>Exit Pupil (mm)</b>	10
<b>Total HFOV</b>	40°
<b>Vertical FOV</b>	32°
<b>Overlap</b>	100%
<b>Focus/convergence</b>	Infinity (factory adjustable)
<b>Geometric Distortion</b>	< 2%
<b>See-through Transmission</b>	46%

#### performance

<b>Spatial Resolution (arc-min/pixel)</b>	1.9
<b>Display Technology</b>	OLED
<b>Resolution</b>	1280x1024
<b>Brightness (fL)</b>	23 fL
<b>Contrast</b>	10000:1
<b>Pixel Defects / Eye</b>	< 30 stuck on subpixels

#### audio

<b>Microphone Sensitivity</b>	-44dB ±3dB
<b>Mic Terminating Impedance</b>	2.2K Ohm
<b>Pickup Pattern</b>	Omnidirectional
<b>Microphone Response</b>	20Hz ~ 16kHz
<b>Mic Transducer Principle</b>	Electret Condenser
<b>Headphone Distortion</b>	<0.2%
<b>Headphone Impedance</b>	60 ohms
<b>Headphone Response</b>	15 - 25,000 Hz

### COMPATIBLE PRODUCTS

#### Motion Trackers

- InertiaCube 2+
- InertiaCube 3

#### Eye Trackers

- Viewpoint Binocular Eyetracker



- USB Adapter; InterSense IC2+/3

The nVisor ST50 is built around a new Organic Light Emitting Diode (OLED) microdisplay from EMagin. The microdisplay provides 1280x1024 pixels per eye in a low-power, compact design. The patent-pending eyepieces display the image across a 50° diagonal field-of-view with < 2% distortion, making the see-through compatible optics ideal for professional augmented reality applications that require precision alignment between real and virtual environments. The nVisor ST50 works equally well as a see-through or fully immersive display. A removable cover can be quickly applied to allow users the flexibility to develop both virtual and augmented reality applications using the same HMD. And the nVisor ST50 supports standard motion tracking devices from InterSense, Ascension, Polhemus, and others via a tracker platform mounted on the back of the HMD.

NVIS is at the forefront of immersive display technology and development, and the culmination of our experience is evident in the simplicity and performance of this HMD. Unsurpassed visual acuity is designed into a lightweight, ergonomically friendly device that is both easy to use and comfortable to wear. HDMI cables from the HMD plug directly into the image source with no additional video processing electronics. Stereo headphones and programmable buttons compliment the high-resolution displays to provide the rich, high-fidelity immersive experience required in the most demanding training and simulation applications.

Contact NVIS today to learn more. The nVisor ST50 will be available within the US directly from NVIS and worldwide through our authorized resellers.