



SXGA61-S

- binocular HMD -
- with single front camera -



1. Technical Characteristics

The SXGA61-S HMD is a specialized product designed for Virtual Reality (VR) applications. It is an opto-electronic device that projects an image or streams video through near-the-eye micro-displays. The SXGA61-S HMD is used like a standard monitor for computers with HDMI video output. The device is equipped with two micro OLED displays attached to magnifying optical elements of high quality for each eye.

By the addition of a front camera, also called scene-camera, the SXGA61 standard device becomes a video see-through HMD. With the use of an appropriate software, the real environment in front of a user can be overlaid with virtual content.

2. Technical Specifications

Micro Displays	2 x SXGA OLED 1280 x 1024 pixels
Display Color	4 x 10 bits for RGBW
Luminance (RGBW)	300 cd/m ² (typical), 400 cd/m ² (max)
Contrast	10 000 : 1
Frame Rate	60 Hz
Overlap	100 %
FOV (diagonal)	43 - 45 degrees
Aspect Ratio	5:4 (12 mm x 9.6 mm active area display)
Distortion	< 3 %
Eye Relief	27 mm
Eye Motion Box	8 mm (h) x 6 mm (v)
Eye distance (IPD)	56 – 68 mm adjustable
Accommodation Distance	2130 mm
Video Interface	HDMI
Power Consumption	< 2.5 W (5V taken from USB)

Operating Temperature	-40° C to +70° C (operating temperature display)
Weight	225 g (without headband)
Dimensions (W/H/D)	150 mm x 53 mm x 52 mm

Subject to technical modifications

3. Technical Specifications Camera

Single Camera	752 x 480 (max 61 fps), USB 2.0 (optional IEEE1394)
Camera Sensor	1/3" CMOS, progressive scan, global shutter
Gain	auto/manual, 0 dB to 12 dB
Shutter Speed	auto/manual, 0.12 ms to 512 ms
Synchronization	external trigger, software trigger or free-running
Focus	manually adjustable
Iris	fixed
Lens	6 mm (0.9x vision), changeable by user, lens mount M12

4. How to operate the SXGA61-S

- 1) Connect the HDMI plug to the graphic-card output of your PC.
- 2) Connect the USB plug, which comes from the HDMI-Dongle, to the PC. This will powerup the SXGA61-S.
- 3) The camera driver can be found on our website: <http://www.trivisio.com/support/softwaredrivers/>
Follow the installation instructions before you connect the camera USB plug to the computer. After driver installation is complete, connect the camera to your computer and Microsoft Windows® will recognize the new hardware automatically. To check the USB camera you can run the CameraViewer software.
- 4) The focus can be manually adjusted by turning the camera lenses (1).



To disconnect the SXGA61-S from your computer, perform the above steps in reverse order.