

## I) TECHNICAL CHARACTERISTICS



The LCD29-HMD is a specialized product designed for Augmented Reality applications. It is an optic-see-through device that projects an image or a streaming video through the near-the-eye micro-displays. The frameless design allows nearly unblocked vision.

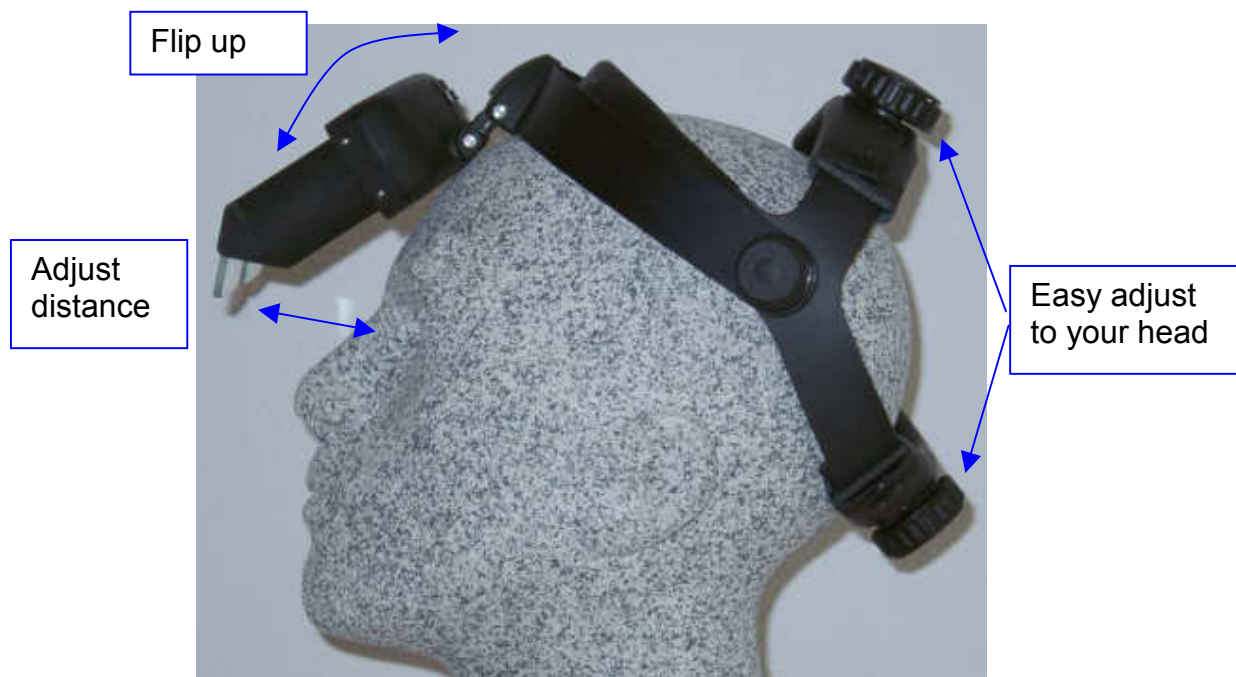
### a) Display Features

The LCD29-HMD offers micro-screens with the following characteristics:

- 800 x 600 resolution, equals 1.4M pixels and full color.
- Displays are Liquid Crystal (LCD), one of the best quality of image. The image has an excellent sharpness, brightness, and contrast which allows a comfortable reading visibility without getting your eyes tired.
- Brightness and contrast are adjusted by computer, through a software, provided for the device.

## b) Attachment and Mechanical Adjustment

- Head Band: The LCD29-HMD



Slide oculars to fit  
IPD (inter pupillary distance)

### c) Connectivity and GPU Support

Any computer, laptop or other video source with digital DVI output is suitable

... to HMD

DVI socket  
Aux = Right channel  
(cable from 2nd DVI  
graphics card output)



DVI socket  
Main=Left channel  
(graphics card or  
extender cable)

USB  
- Power supply 5V/0.5A  
- Audio signals  
- Display adjustments  
- Firmware updates

### d) Stereoscopic Signals

The LCD29-HMD offers two stereo options:

- Passive stereo (two DVI channels)
- Active Stereo

### e) Audio

- Microphone is integrated
- Earphone jack (3.5 mm) for external earphones
- Audio signals by USB

## II) Additional Features and Options

### a) Inertial Motion Sensor

Upon request we can integrate inertial motion sensors:

- Wireless Colibri
- Colibri (with USB cable)



### b) Cable Length

The HMD comes with a basic cable length of 2.2 meters, but can be extended upon request to 5m.

### c) VGA Interface

There will be a variant with analog VGA video interface, final development stage Dec 2010.

### III) Overview

<b>Technical Specifications</b>	Microdisplays 2x	SVGA AMLCD 800x600 color (equals 1,440,000 pixels)
	Display Color	24 bit
	Frame Rate	60fps
	See-through ratio:	50%
	Field of View	29° diagonal (4:3, 23° (H), 17° (V))
	Distortion	0.8% (H), 1.3% (V), 2.1% corner
	Eye distance (IPD)	57-75mm adjustable
	Eye Relief	25mm (edge of beamsplitter)
	Eye Motion Box	6mm (H) x 6mm (V)
	Video Interface	DVI-D
	Stereoscopic Modes	Mono, passive stereo, active stereo
	Audio	Microphone integrated, 3.5mm socket for headset
	Cable Length	2.2m (optional 5m)
	Power Consumption	Display 2.5W (5V, taken from USB port)
	Operating Temperature	0°C to +40°C
Weight	320 g (without headband)	
Dimensions (W/H/D):	145mm x 45mm x 110mm	

Subject to technical modifications

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