



P-50

Headmounted Display

The P-50 is the first commercially available head-mounted projection display combining the attributes of both a projector and a conventional head-mounted display. Like a projector, images are viewable on screen surfaces, placing virtual images in predetermined regions without overlap into the physical training environment. Like a head-mounted display, each user can view stereoscopic images from their correct perspective. The P-50 projects images towards a thin, inexpensive, retroreflective screen that can be placed virtually anywhere in the surrounding environment. Images are then reflected back towards the user, independent of the viewing angle between the screen and the user.

The P-50 will bring new capabilities to out-the-window simulation environments that were previously not available using either projection displays or HMDs alone. Multiple users can operate a simulated vehicle in the training environment and, with integrated head tracking, each user will see a correct 3D OTW perspective. Because users are viewing reflected images, physical objects and other users correctly occlude virtual images. And since virtual images are only visible when reflected off the retroreflective screens, there will be no registration errors with virtual images appearing misplaced in the physical environment.

Alternative screen sizes and placement allow developers to create fully immersive training environments. The retroreflective screens can be placed in wrap-around configurations or line the walls of a room, creating a multiple user virtual environment for a variety of applications.

PRODUCT SPECIFICATIONS

Optical

Monocular FOV	50°
Overlap	100%
Brightness	10 fL
Arc Minute Per Pixel	< 1.9
Focus	1-2 m
See Thru Transmission	50%

Display

Technology	LCOS Reflective (CRL Opto)
Video Formats	1280x1024 60Hz (analog or DVI)
Color	24 Bit
Stereo	Dual channel support

Mechanical

IPD Adjustment	55-73 mm
Eye Relief	Accommodates eyeglasses
Mounting Configurations	Helmet mounting available
Weight	~ 1kg
Power Input	AC 100V - 240V
Display Control	Brightness