

heliodisplay 2010

free-space displays
models 

heliodisplay
life-size mid-air holo-projectors

model **L**
90" / 2.3 meter

model **XL**
120" / 3 meter

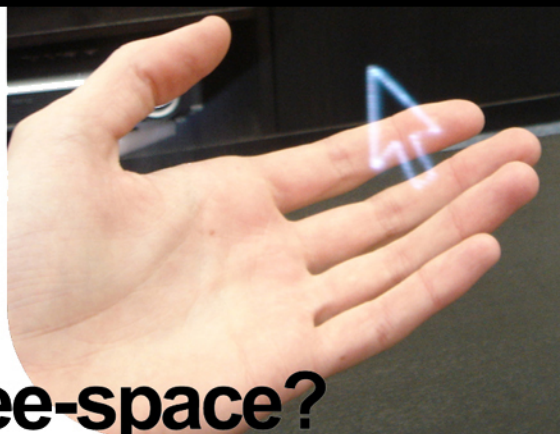
reference guide



At IO2 Technology, we rethink the interface paradigm between computer and people. As digital information increases its presence into our daily lives, the challenge becomes how do we manage information-space. IO2Technology licenses the development of advanced technology interfaces and simulation tools for transparent "augmented reality" platforms, enhancing processes and collaborative data rich manipulative environments.

Our newest released version, the Heliodisplay ,projects TV, streaming video and computer images into free space (i.e.mid-air). It is plug-and-play compatible with most video sources (TV,DVD, computer, videogame, etc.). The Heliodisplay is interactive -- a "floating touch screen"

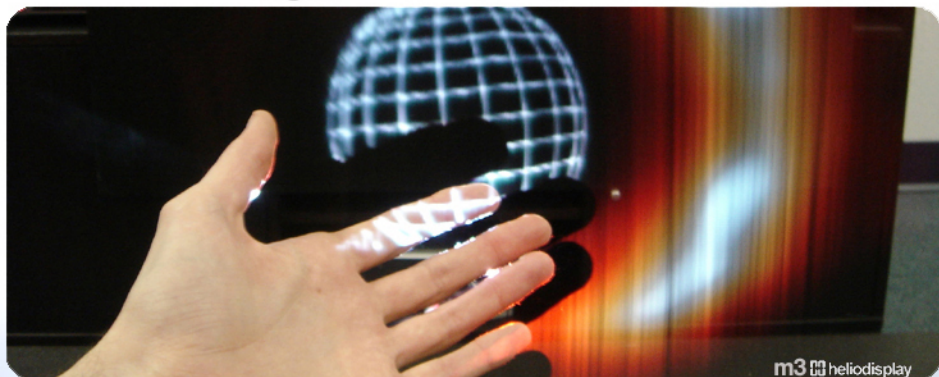
what is free-space?



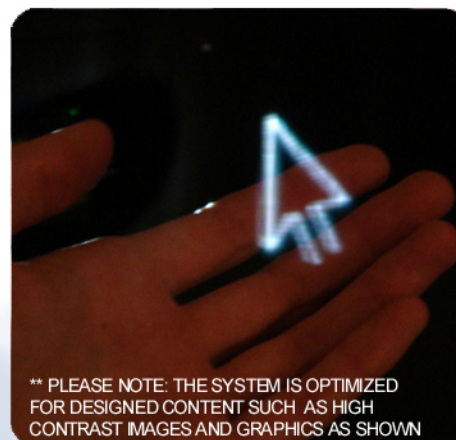
LIGHTS ON

the heliodisplay projects any video or image* into mid air. There is no physical surface, so the image is floating in free-space.

digital information, meet the real world...



m3 heliodisplay



LIGHTS OFF

** PLEASE NOTE: THE SYSTEM IS OPTIMIZED FOR DESIGNED CONTENT SUCH AS HIGH CONTRAST IMAGES AND GRAPHICS AS SHOWN

benefits:

Since the heliodisplay is free-space, you can place the system INTO furniture and have the image appear when you need it. The space normally utilized by other displays is now both a display and AIR.

advertising
publicity
tradeshows
museums
events
retail

there is no fog

just ultrafine invisible particles so you are not affecting the environment such as humidifying or worrying about affecting electronics.



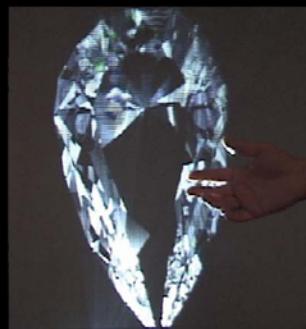
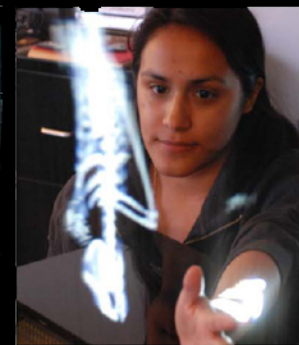
multiFLO
heliodisplay



how does it work?

the heliodisplay uses a proprietary multilayered method to create a micro thin projection medium in which light is forward transmitted to create visible images. You can place your hand through the image and it is completely safe and impactful.





heliodisplay^(tm) mid-air video projector



IMAGE: The Heliodisplay's projected image hovers a few inches above the unit. The top of the image is 28" above the top of the unit.

The Heliodisplay is designed to be hidden (in furniture, behind something, etc.), so that only its projected image is visible. The display connects to a standard video source (such as DVD player or PC) and projects any images that would be viewable on a computer screen or television. No specialized hardware or software is needed to view images. The interactive Heliodisplay allows a finger placed on the floating image to act as a computer pointing device. The user can interact with floating images or video, and manipulate them as you could with a mouse, and comes with HelioCast (tm) software and PC drivers.

Heliodisplays combine the use of our patented as well as proprietary technology to produce mid air display in a complete package including the proprietary projector and base unit in which the image is seen from the front. The system does not require any additional equipment to function and can run continuously or temporarily. Since there is no physical screen and the image is rendered mainly using the ambient air as well as a small tank using no special chemicals or harmful affects to the environment. The equipment comes in an energy-efficient (270 watts), relatively light weight (compared to a plasma), one button on/off controls and no special truss work to install. We do however recommend that the hardware is hidden so only the images are seen. Furthermore, the base unit is simply placed on the floor near a doorway or placed within a cabinet or pedestal with the projector rear mounted. Images or content can run off a normal laptop, standard VGA cable or the integrated media reader. No special software is needed but we do recommend that content be designed specifically for the Heliodisplay such as animations on a black background. You can put your hand through the image, walk through it or pass objects through the image as it is in mid-air.

model **L**
90" / 2.3 meter

model **XL**
120" / 3 meter



IMAGE DIAGONAL SIZE

IMAGE HEIGHT

IMAGE WIDTH

HELIO BASE DIMENSIONS

HELIO BASE WEIGHT

PROJECTION MODULE DIMS

HELIO PROJECTION WEIGHT

TRANSLUCENCY CONTROLS

PROJECTION ANGLE

PROJECTION ORIENTATION

VIEWING ANGLE

POWER CONSUMPTION

BRIGHTNESS

COMPONENTS

COLORS

RESOLUTION

FORMATS

AIRFLOW (IMAGE QUALITY)

MATERIAL

PROJECTION THROW DISTANCE

REFRESH RATE

VOLTAGE

LCD CONTROL PANEL

ON/OFF CONTROLS

LEVEL SENSOR

CONSUMPTION

TANK SIZE

REMOTE TRIGGER ON/OFF

AFFECT ENVIRONMENT

OPERATING TIME

THUMB-DRIVE FILE UPLOAD

SOUND LEVEL

ADDITIONAL INPUTS

ORIENTATION

OPERATING ENVIRONMENT

OPERATING TEMPERATURE

REMOTE CONTROL

RS-232 PROJECTOR

TEMPORARY / INTEGRATION USE

LEAD-TIME

INTERNATIONAL SHIPPING

ACCESSORIES

PROJECTOR/ POWER CERTS

WARRANTY

ONSITE SETUP

FREIGHT COSTS

L (90" / 2.3m)

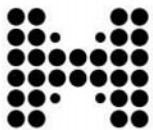
92" (234cm)
81" (206cm)
43" (110cm)
19"x10"x90" (48x25x229 cm)
70 lbs (31 kgs)
13.2"x3.1"x10.2" (33x7.8x26cm)
8lbs (3.6 kgs)
yes
+/- 30 deg
rear
~180 deg front
250 watts (base)
4500 (lumens at source)
base unit & projection unit
16.7 million
1024x768 (supports 1600x1200)
480i/480P/720P/1080i/1080p
NTSC/PAL/SECAM
Three optimized flows
aircraft aluminum & plastic
60-200" (152cm-508cm)
85Hz V, 91KHz H
international 110/240v 50/60 Hz
2 line display
one button
digital
0.17 - 0.2L hr
5G, (25 liter) / 1-3 day run time
(request option)
no
12 hrs, 24 hrs ok
yes
~45dB (@2m)
VGA/Svideo/Flash drive
up or side
0%-99% non condensing RH
40F-95F (4C-35C)
yes
yes
temporary & integration use
3-6 weeks delivery
yes
projector, cables, remote, manuals
CE, FCC, N78, MET / BASE CE
3 yrs limited
separate
aprox \$500 US, \$1,200 International

XL (120" / 3m)




110" (304cm)
87" (221cm)
43-58" (110-147cm)
19"x10"x90" (48x25x229 cm)
75 lbs (34 kgs)
13.2"x3.1"x10.2" (33x7.8x26cm)
8lbs (3.6 kgs)
yes
+/- 30 deg
rear
~180 deg front
280 watts (base)
4500 (lumens at source)
base unit & projection unit
16.7 million
1024x768 (supports 1600x1200)
480i/480P/720P/1080i/1080p
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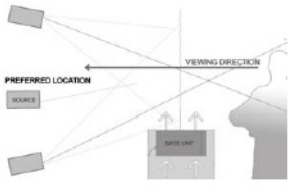




heliodisplay



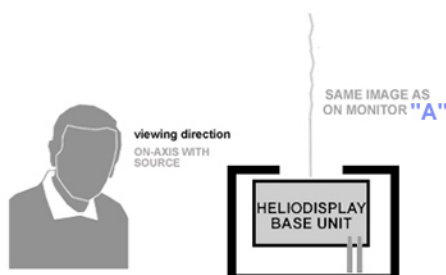
how do I integrate?

1 CONTENT	2 BACKGROUND	3 PLACEMENT	4 LOCATION
<p>Change PC desktop to black Use Images or Video with: High Contrast Motion Black Background Use samples on CD</p> 	<p>CONTRAST RATIO= BEHIND IMAGE: IMAGE Use darker background behind the Heliodisplay to increase the perceptual contrast ratio. (If the walls are white, a white image will have to compete with the white background, minimizing the contrast).</p> 	<p>Maintain Heliodisplay away from strong drafts or air currents, open doors and overhead air-conditioning vents.</p> <p>You can adjust the screen by rotating the two knobs on the top of the Heliodisplay for final adjustments.</p> 	<p>The Heliodisplay hardware including projection source should be preferably hidden into furniture. The best results are when the system is not visible—only the floating images, so find a location to place the base unit, and projector in a rear-projection configuration. Location will be critical to minimize the glare from the projection source. See THE PROJECTION and troubleshooting in the User Manual. Try to maintain projection ON-AXIS with the viewer.</p>

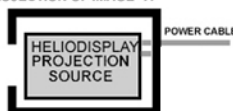
1 SETUP	2 SET UP	3 SETUP SOURCE
<p>Maintain away from air vents, increase background contrast behind the image and dim lights if to improve image contrast. Ensure proper ventilation below the heliodisplay. You can build the base unit into a cabinet or table and have the projection hidden behind. NOTE: MAINTAIN PROJECTOR POINTING AT VIEWER (ACUTE ANGLE WILL DIMINISH PICTURE QUALITY-- LESS BRIGHT, LESS CLEAR)</p> 	<p>Position the Heliodisplay Base unit in relation to the projector so that the projector/projection system is set up as rear projection. The projection beam should be directed above or below the face of the viewer but not too acute of an angle as to create a fluttery image or dimmer picture. Countless other variations exist but it may take time to experiment until a suitable configuration works to minimize the projection glare.</p> 	<p>Black Background & Simple Content Set a black background on your desktop computer before commencing. Use the supplied samples:</p>  <p>A simple logo or object is visually more stunning than an overcomplicated design. Dynamic graphics, logos, video, objects, etc appear floating and images increasing in size appear to be traveling towards you in as well as spinning images appear 3D. Keep the foreground imagery in high contrast colors, and a black background mat to help increase image contrast from behind.</p>

THIS DIAGRAM SHOWS A SIMPLIFIED OVERVIEW OF THE SETUP

what you need:
location, location, location (lighting, wind, etc)
design adequate content (high contrast)
plug in power cables
plug in video cable
charge base unit w/ 1L of regular tap water
turn on system



PROJECTION OF IMAGE "A"



BACKGROUND
(IMAGE CONTRAST RATIO=)
FOREGROUND (BACKGROUND)

just insert your video or image files
with the USB drive (no computer required)



Where can I buy a Heliodisplay?

*Heliodisplays are available for purchase on this website directly and ship worldwide.
<http://www.io2technology.com/salesinquiry.php>

How long do I have to wait?

*If we carry it in stock, we can ship within 24-48 hours, but typically we require 3-6 weeks before your equipment arrives. This includes time of transit from our facility to your door. Shipping costs are standard shipping rates.

Does the Heliodisplay require any special format video or computer files?

*Like a computer monitor or television, the Heliodisplay can display any video signal coming from most sources. What you see on your DVD or computer desktop is what will be projected on the Heliodisplay. We recommend displaying well-defined images such as the example images on our website taken under office lighting, but preferably under controlled lighting.

Does one feel anything in the air when touching the image?

*The image feels just like air and there is no noticeable difference. You can place a tissue paper on top of the grill for an hour without any change to it.

How high above the Heliodisplay do the images hover?

* This depends on the model. See the spec sheet for image dimensions.

How bright is the image?

* Images are visible under typical indoor lighting. Similar to any display on the market, the darker the ambience, the brighter (mainly, higher contrast) the image will be perceived. As with any conventional projector, images become less visible under bright lighting, so using the displays in an office environment is adequate so long they are placed away from bright areas. Heliodisplay images do look best under controlled lighting.

What do I need?

* All the models are fluid-based and models carry a small external water tank (5 gallons, 20 Liters) of regular tap water (no special liquids or gases) to allow the system to run for a full multiple days at a time such as when used in temporary setups. For constant use, the unit can be set up for constant replenishing. POWER: All models work on universal voltage (90-120V or 220V-240V). LIGHTING: Office, tradeshow lighting or lower. PLEASE NOTE THAT THIS SYSTEM IS PREFERABLY USED WHEN CONCEALED SUCH THAT NO HARDWARE IS VISIBLE. ONLY THE FLOATING VIDEO OR IMAGES ARE SHOWN, NOT THE HARDWARE. CONTRAST (Environmental) : Images are free-space so contrast ratio is whatever subject is behind. CONTENT: While you can display any images or video, it is best to design content such as Flash, Photoshop or your desktop. (black background suggested). SETUP (Environmental) : The hardware is designed to be concealed so that only the floating images are visible.

What else do I need to start?

*The proprietary projector comes with a media drive in which you copy any standard movie AVI or JPEG image file and play it. If you need more advanced functionality you can plug it into any PC, laptop or DVD player which works well.

Total Cost of Ownership/Maintenance?

*Our system uses very little power, so the requirements are only the energy, and the minimal amount of regular tap water to operate. There are no special consumables that are required. You can expect to replace the lamp from the projection source every 3000-4000 hours of use, and replace a disk (supplied) every year or 6 months. Small pumps and filters may need to be maintained every few months to a year depending on use.

Do I need any special equipment to connect to a heliodisplay?

*No, the heliodisplay connects to most computers, DVD players, videogame consoles or televisions using a standard supplied video cable. The interactive model is supported on a PC only.

Can the images be viewed from the side and back?

*Images can be viewed from a 180 degree viewing angle from the front. There is no image when seen from the rear although our enterprise solutions allows for custom displays supporting this feature.

Will the heliodisplay project 3D video and images?

*The heliodisplay will display any 3D type video or games from your computer. Images are in fact planar like on your computer or television, but seem three-dimensional depending on the content.

How noisy is the heliodisplay?

*The Heliodisplay during operation is approximately as loud as the fans on a computer server (approx. 45dB) from a two meter distance. This can also be adjusted using the control knob on the top panel.

Is the product CE certified, What types of certification?

The base unit is CE certified. The power adapter is CE, TUV, GS, UL listed. The projection unit is MET, FCC, CE listed. All are RoHS.

Is there a special chemical or refill cartridge?

None. An internal tank needs to be refilled with regular tap water for operation. The tanks lasts a day or can be attached to an external tank for permanent use.

Will it work in a cold/hot/humid/dry bright/dark/smoky room?

The hardware and the free-space images will work in all of those environments. However it is for indoor use only, and will not work in extremes such as near freezing, or over 100deg F, or 38 deg C.

Is this a standard projector? Can I use my own brighter one?

The 2010 system comes with it's own 4500 lumen projector that will work with the heliodisplay. The lamp is a standard part.

Is that smoke? What is in there?

The projection medium is a under 10 micron semi invisible atomized water particle. It is equivalent to the exhaust from one's breath, but controlled in a highly defined manner so it won't affect the environment.

Can I turn it upside down, sideways?

The models are upward oriented as well as (side-wall mounted).

Can we use it semi-outdoors?

The device can be placed anywhere there are no strong breezes and it is not exposed to the elements (rain, sleet, snow dust storms, direct sun, etc).

How long does it last?

The device should last many years, but it is an electronic system and should be maintained and taken care of (not dropped etc).

Interactive--how does the double click work?

Simply select a checkbox in the driver running in the background to switch between dragging are only compatible with Win2000, XP and Vista platforms.

How long does it take to startup?

The base unit and lamp on the projection module requires about 30 seconds to warm up. However you can maintain the system in "hibernation" projecting a black image, so that the resulting response is about two seconds. You will need to tell us if you want the system to be in hibernation mode so we can set up the display for that use.

How long will the system run?

*All models can be ordered with an optional small 5Gal external tank that will run for a few days or set up to run indefinitely.

What is HelioCast (tm) interactivity?

*When the Heliodisplay is connected to a PC using a standard USB cable, and with the supplied IO2 HelioCast software installed, you can use your finger for selecting, dragging, dropping as to navigate and interact with simple content such as content designed in Flash (tm) or any other software package. Although you can click and select on desktop icons and work on a PC style interface, the system is designed for specific designed content such as for advertising or point of information kiosks.

How can I use the interactivity?

*Use your finger, pen, pencil or any object to select and navigate as you would a conventional touch-screen in moving the cursor; the only difference is that there is no physical screen.

Will the heliodisplay project a visible image in a brightly lit room?

*Yes, but like every display, the image will appear brighter in a less well lit room. The heliodisplay was designed to work in typical indoor office lighting. In brighter environment the image may appear dimmer, but introducing a dark background can be employed to compensate for lighting and increasing contrast ratios if necessary.

Will the heliodisplay work in my country?

*Yes. The new Heliodisplay works for regions either in 110V/60Hz, and 220V/50Hz, so that includes worldwide.

Will the heliodisplay work outdoors?

*Wind and bright lights will both interfere with the visibility and stability of the image. Additionally, for electrical safety, the Heliodisplay, like most electronics product, they should be kept away from the elements. Ask about our other products that are not Heliodisplays.

What images can be viewed on a heliodisplay?

*Most images, or videos that can be viewed on a television or computer, can be viewed or a heliodisplay, but some images appear better than others. we recommend a black background, and content designed specifically such as in flash or some other program. Spinning logos, graphics, JPEG, MOV, FLASH, QUICKTIME, etc file can be viewed. Typically, you will design a Flash interface or similar type of content, or use one of the supplied samples.

What kind of the image definition and fidelity can I expect?

*We'll be the first to tell you, it isn't a traditional display, so if you're looking to watch TV you're better off spending a lot less and get what you are used to. If on the other hand you are looking for a unique way of displaying video, images or specific content, Heliodisplays may be the answer for your application. Colors are fully rendered, and text is legible (down to 6 points), although image definition and fidelity are less than on a CRT or LCD. These limitations come from the early stage of our technology, which, unlike CRTs and LCDs, has not had decades to be refined. Images are not physically rigid as on a existing display and there are some vertical lines in the image which you can see in the photos.

How is this system different than other products that I am reading about? Here are just a few examples of some of the differences. Firstly, there is an electronically-controlled multi-layered airflow (3 to 5 separate layers). This translates into individually regulated airflows resulting in a crisper image than other technology. Similarly, since the multiple flows, there is minimal, if not, negligible affect to the environment as we are not adding injecting the air with moisture as with other technologies.

What is the image resolution?

*The Heliodisplay's resolution supports 1024 x768 native and up to 1600x1200 compressed.

Can the heliodisplay be hidden in furniture or display pedestals?

*Yes, the heliodisplay was designed to be hidden and out of view. Ensure that adequate space is allowed for ventilation surrounding the heliodisplay.

What do I do about service or repairs?

*IO2 and IO2 Resellers provide readily available replacement parts and worldwide support. Most replacement parts can ship FedEx overnight if required and most parts are in stock to ship the same day. No tools are required to access the service panels.

Does the system use helium or is it toxic?

*It does not use any gas except the surrounding air that you are already breath; and is not toxic.

Is it safe?

*Both the hardware and the images that the system produce are safe. There are no harmful emissions to user safety. All electronics are Pb free to WEEE standards.

Can it be refilled while running? *Yes. There is both a digital level sensor and analogue port to check the runtime.

Does it need a dark room? Will it show up on photo/video? *The system does not need a dark room, but controlled lighting like any projector is recommended. Images show up very well on photos and videos.

Can I project from the front or with a short throw lens? No. The system only works with the supplied projector in a rear-projection arrangement. The distance can be set closer or farther depending on preference.

What happens if something goes wrong?

*All the systems have either user serviceable or replaceable parts. We can typically ship these within 24 hours once we find the issue at hand. No tools are required to access the service panels.

Why is there a secondary image?

*This is because not all of the light is captured at the viewing area, so light does pass through. Placing the unit at a suitable height and projection angle will minimize this effect.

How long can a video run?

*You can run video indefinitely, (looped) or as large of a file that can be supported on a DVD or video file.

What programs will it work with (3DStudio, Quicktime etc)?

*The system supports all those formats compatible with Win2000, XP and Vista platforms.

Can I use it without the interactivity?

*Just disable the checkbox.

Can the moisture damage my office? *The amount emitted is so minimal that in a standard room, it may affect the environment by about a percent in a medium sized room, or the equivalent of adding a few people into a room.

Can I put it in a floor?

No. You cannot have people walking over the device. You can however have it placed inside a pedestal, side-mounted in a wall, or hanging from above.

Interactive--will it work with Linux or a Mac?

The drivers are only compatible with Win2000, XP and Vista platforms.



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