

projectiondesign as

3D stereoscopic range

3D stereoscopic projectors
passive and active
up to 1920 x 1200 resolution
24/7 warranties



high performance projectors

projectiondesign is located in Fredrikstad, Norway, a center in the projection industry since the mid 80's. We are dedicated to designing, manufacturing and marketing a wide range of high performance projectors for various challenging applications. The entire range of products is specially conceived to offer a better price to performance ratio than any competing offering in our target markets. The dedicated staffs of experienced scientists and engineers have life long experience in complete electronic, optical, mechanical and system design of high performance projectors. The approach to integrated product design and manufacture in house assures the best attention to detail and quality. All products are designed in close cooperation with our customers in order to assure the best functionality according to the actual requirements.

philosophy

projectiondesign designs and manufactures high performance projectors for professional and residential applications. Our products are used in high profile installations where performance and reliability are key aspects of the presentation, and we understand the impact a high performance display solution makes in business decisions and demanding applications. In order to meet our clients' requirements, projectiondesign always seeks to offer the best possible performance for any single installation by providing the best possible fit for any one product. This must be seen in relation to the rapid development of display technologies over the past few years and decades. We seek to offer users of our products the benefit of this change for the better at a minimal cost. All projectiondesign projectors are built to order. By doing so, we guarantee that the latest software and hardware will be in any one product shipped, reducing the risk of receiving a projector that has been sitting on a shelf for months, where new projectors in the same model range ultimately have had upgrades to its performance in the mean time.

achievements

Since projectiondesign was founded in 2001, we have achieved a tremendous amount of industry firsts.

Our first ever product was the F1 SXGA, a product that shook the entire AV industry. The brightest single chip DLP projector ever at the time, it was also the first to use the high resolution SXGA (1280 x 1024) DMD™ (Digital Micromirror Device™). It was unmatched in the market for more than three years, when a competing product appeared with a similar specification. This was followed by our introduction of the F1+ SXGA+, the first projector in the market to utilise DLP technology with SXGA+ (1400 x 1050) resolution. At CEDIA, in September 2005, projectiondesign was first in showcasing and promoting the new 0.95" 1080p DLP technology, with native 1920 x 1080 resolution. In 2008, the revolutionary F10 AS3D was introduced. A complete rethinking of active 3D stereoscopic imaging, it is revolutionary in every way, from the small size, to compatibility, to performance. Our 2010 professional product lineup includes the smallest ever professional SXGA+ and WUXGA projectors, the F22 series, as well our first 3-chip DLP projector in the F80 series, and our best selling F32 series of professional single chip projectors. Additionally, recent world premieres technology introduction include the FL32 series, a solid state LED illumination based projector, and the F35 series, the world's first WQXGA (2650 x 1600) resolution projector.

The French Navy uses an F32 sx+ passive stereoscopic projector solution for their submarine development (left). IC:IDO's demo centre in Stuttgart, Germany, with multiple F10 AS3D projectors for drivers' education (right).



3D stereoscopic projectors

projectiondesign offers a broad range of professional projectors for 3D stereoscopic visualisation. At projectiondesign we believe 3D stereoscopic images have the power to increase business value and turn images into assets. Stereoscopic projection is used in many industries to wipe out the borders between illusion and reality, and to enhance understanding of graphically presented data.

The 3D stereoscopy principle is simple. Two images, each with a slightly different viewpoint, are projected onto a screen, and presented to each eye individually. The human brain interprets them as if they are a single image, allowing the user to experience depth by combining the result of the images in a three dimensional picture. 3D stereoscopic visualization is used in various applications to dramatically improve the understanding of complex objects, and better understand visual data.

3D stereoscopic imaging is used in many industries, such as oil and gas exploration, design and manufacturing, film and entertainment, medical imaging, and many others to improve on profitability by shortening decision processes, and increasing efficiencies within projects.

Technologies for 3D stereoscopic imaging

There are two ways of displaying 3D stereoscopic images from a projector. Common to both is that they require the use of glasses.

Active 3D stereoscopy uses glasses with built in electronic components, and alternates the left eye / right eye information by showing them sequentially at a rate of 60 images per second per eye or more. LCD shutter glasses are synchronized with the projected image via either an external IR transmitter interface, or by using DLP Link® technology, where synchronisation information is embedded in the projected image. Active 3D stereo is considered by many as the premier technology.



Passive stereoscopy uses lower cost glasses without electronic components, and presents images to each eye by altering the appearance of the left eye / right eye with filters of various kinds. Images are presented to each eye continuously, but are often reduced in visual quality, either by separating colours, or by introducing other artefacts. Passive 3D stereo is suitable for larger audiences, where cost of glasses is a major concern. Passive 3D stereo is often realised using two projectors, one for each eye's information.

projectiondesign solutions

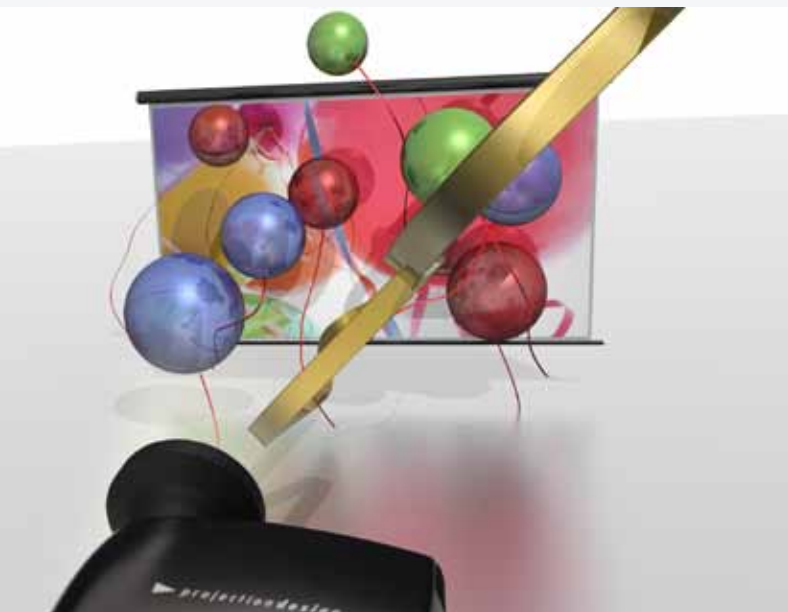
Active stereo

The F10 AS3D uses patented technologies for displaying full Dual Head 3D Stereographic content from digital or analogue computer sources – available from a wide range of standard systems. It features double the bandwidth of competing projectors in order to display a full 120 frames per second, providing a flicker-free image without colour alterations or viewing angle restrictions seen with some passive 3D stereo technologies. Independent of projection surface, it provides the highest performance imaging. Single lens optics ensures ultra simple setup. Active stereo solutions are widely used in single projector installations, such as planning rooms, portable applications, as well as in multiple projector applications and CAVE® (Computer Aided Visual Environment). The F10 AS3D works as well with 2D imaging as it does with 3D, as it has no filters or other limiting factors.

Passive stereo

projectiondesign offers a wide range of passive 3D stereo projector solutions, from small and semi-portable, to large, fixed installation types. All our models are specifically designed to work in dedicated pairs, with optical corrections and modifications to provide the best possible performance. All our models use the INFITEC™ Wavelength Multiplex Imaging technology, recognized from technology used in digital cinema applications. All models have built-in filters for increased stability and reliability, and a minimum hassle. The F32 and F80 series feature motorized INFITEC™ filters, enabling them to be removed from the image processing at the flick of a switch, providing very flexible projectors that can be used both for 2D and 3D images. projectiondesign projectors can also be used for Linear and Circular polarization systems, where the polarizing filters are mounted externally.

The F10 AS3D (left). The ZKM Centre for Art and Media in Karlsruhe uses numerous F22 sx+ and F10 AS3D projectors in their exhibits to visualize media and arts to a huge audience (right).



3D stereoscopic projectors



F22 series (stacking frame example)



F12 series (stacking frame example)

model

description

technology	single chip DLP® technology	single chip DLP® technology
concept	small sized installable projector kit for small to medium sized imaging and installations	small sized installable projector kit for small to medium sized imaging and installations
INFITEC™ passive stereo option	yes	yes
user activated 2D/3D modes	-	-
resolutions options, native	1400 x 1050 / 1920 x 1080 / 1920 x 1200	1400 x 1050 / 1920 x 1080 / 1920 x 1200
Input resolution, max	1920 x 1200	1920 x 1200
brightness lm approx (single projector)	1600 / 1400 / 1400	2000 / 1800 / 1800
brightness lm with 3D enabled, approx - dual projector (not AS3D)	1000	1200
contrast ratio	up to 2500 : 1	up to 2500 / 3000 / 4000 : 1
custom colour correction	yes	yes
recommended image size	up to 250 cm wide	min 200 cm, up to 300 cm wide
colour wheel options	VizSim	VizSim

optics, lenses, and lamps

ultra wide angle lens	0.80 : 1 / 0.74 : 1	-
wide angle lens	1.0 : 1 / 0.92 : 1	1.03 : 1 / 0.95:1
wide angle zoom lens	-	-
standard zoom lens	1.73 - 2.39:1 / 1.60 - 2.21 : 1	1.70 - 2.20 : 1 / 1.6 - 2.0
short tele zoom lens	2.70 - 4.20 : 1 / 2.5 - 3.90 : 1	-
long tele zoom lens	-	-
lens operation (for fixed lenses no zoom option)	manual zoom and focus, vertical lens shift	manual zoom and focus
lens shift / offset, wide angle lenses For passive stack set, lower unit set limit for maximum image offset	0 to 80% / 0 to 93% / 0 to 83%	109 and 123%
lens shift / offset, standard / short tele zoom For passive stack set, lower unit set limit for maximum image offset	+ 10 to 110% / 0 to 110% / 0 to 104%	109 and 123%
lamp options	220W VIDU UHP™	300W VIDU UHP™
lamp life full power / eco (typical)	2250 / 3000 hrs	2000 / 2500 hrs

inputs and connectors

computer connectivity	HDMI, DVI-I, VGA	HDMI, DVI-D, 2 x VGA
video connectivity	HDMI 1.3, component, S-video, composite	HDMI 1.3, component, S-video, composite
HD-SDI	-	-
control	TCP/IP, RS232, 1x 12V trigger, RC	TCP/IP, RS232, 1x 12V trigger, RC
stereo sync	-	-
XPort™ expandable I/O	-	-
ProNet compatible	yes	yes

general

weight	about 3.0 kg	about 3.5 kg
dimensions in mm (d w h)	234 x 278 x 94	278 x 300 x 104

availability	now	now
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F10 AS3D



F32 series



F80 series

	single chip DLP® technology	single chip DLP® technology, dual lamp	three chip DLP® technology, dual lamp
small sized imaging	small sized active stereo projector for installation and portable usage	fail safe high resolution professional projector with full lens shift for scientific visualization and simulation	high performance projector with ultra high accuracy and outstanding performance
	-	yes	yes
	-	yes	yes
1000	1400 x 1050 / - / -	1400 x 1050 / 1920 x 1080 / 1920 x 1200	- / 1920 x 1080 / 1920 x 1200
	1920 x 1200	1920 x 1200	1920 x 1200
	2000	3100 / 2900 / 2900	8000/8500
	2000	2000	4800
	up to 2500 : 1	up to 7500 : 1	up to 15000 : 1
	yes, through RealColor colour management suite	yes	yes
	up to 300 cm wide	up to 450 cm wide	up to 600 cm wide
	VizSim	VizSim	-
	-	0.84 : 1 / 0.79 : 1	0.74 : 1
	1.03 : 1	1.25 : 1 / 1.16 : 1	-
	-	1.34 - 1.74 : 1 / 1.24 - 1.60 : 1	1.20 - 1.70 : 1
	1.70 - 2.20 : 1	1.74 - 2.51 : 1 / 1.60 - 2.32 : 1	1.70 - 2.55 : 1
	-	2.56 - 4.10 : 1 / 2.37 - 3.79 : 1	2.50 - 4.00 : 1
	-	4.10 - 7.10 : 1 / 3.80 - 6.50 : 1	3.90 - 6.24 : 1
	manual zoom and focus	motorized zoom and focus, vertical and horizontal shift	motorized zoom and focus, vertical and horizontal shift
	fixed 109% vertical (standard)	vertical: ± 110% / ± 125% / ± 117% (not EN12 lens) horizontal: ± 90% / ± 84% (not EN12 lens)	vertical: ± 124% / ± 117% (not EN22 lens) horizontal: ± 89% / ± 84% (not EN22 lens)
	220W VIDU UHP™	330W VIDU UHP™ (2x)	330W VIDU UHP™ (2x)
	2250 / 3000 hrs	2000 / 2500 (5000 in relay mode) hrs	1700 / 2000 (4000 in relay mode) hrs
	HDMI, DVI-D, 2x VGA	HDMI, DVI-D, BNC, VGA	HDMI, DVI-D, BNC, VGA
site	HDMI 1.3, component,S-video, composite	HDMI 1.3, component,S-video, composite	HDMI 1.3, component,S-video, composite
	-	tba.	tba.
	TCP/IP, RS232, 2x 12V trigger, RC	TCP/IP, RS232, 2x 12V trigger, RC	TCP/IP, RS232, 2x 12V trigger, RC
	IR emitter output; 3-pin DIN, BNC	-	-
	-	yes	yes
	yes	yes	yes
	about 3.5 kg	about 12,6 kg (excluding lens)	about 26 kg (excluding lens)
	278 x 278 x 104	375 x 507 x 218	603 x 505 x 250
	now	now	now

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