

professional projector series

F12

WUXGA, 1080p or SXGA+ resolution

DLP[®] technology

RealColor colour management

24/7 operation warranty



Professional projector series

The projectiondesign professional series of projectors include high resolution, high performance products made and conceived especially for graphically challenging applications such as scientific visualisation, motion simulation, medical imaging, and public displays.

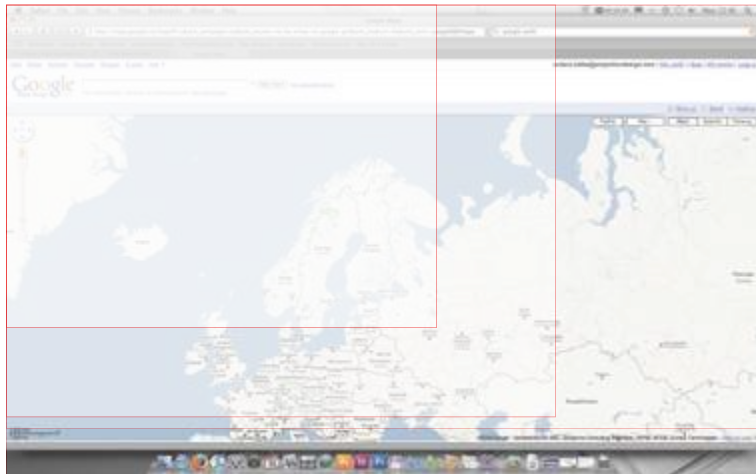
As our utmost concern is image quality and operational reliability, all professional series projectors are available with 24/7 operation warranties, and a wide range of configuration options to ensure the best possible application fit and customer satisfaction.

F12 series

The F12 is a professional grade DLP® projector that offers a unique blend of features and benefits in reliability, image quality, and unbelievably small size for demanding applications.

Markets and applications

The F12 series is designed with several applications in mind, and it is especially suitable for inclusion in motion simulators, scientific visualization applications, and applications that require an ultra reliable projector that can handle rough handling and at the same time provide the ultimate in image quality.



WUXGA resolution relative to 1080p, SXGA+, and XGA.

WUXGA, 1080p, or SXGA+ resolution

The projectiondesign F12 can be configured with both WUXGA, 1080p and SXGA+ resolution for computer or video centric applications. Where computer based image generation with maximum detail and accuracy is the primary concern, 1920x1200 pixels (WUXGA) is the obvious choice, and fully compatible with the legacy 1600x1200 format. Furthermore, for video centric applications, the 1920x1080 (1080p) pixel resolution perfectly fits HD video and data. Whether computer or video, wide screen or legacy 4:3, there is a model with the right resolution available. In fact, with this range of resolutions, the F12 covers nearly any requirement in virtually any professional AV installation.





DLP technology – chosen for reliability

The DLP technology from Texas Instruments® is chosen for its unmatched reliability performance, and its unique coupling with long lasting image quality. With a widely recognized and proven reliability record, and high brightness and contrast, all whilst displaying utterly natural colours, it is the obvious choice for heavy duty applications, or applications that are that run continuously, or are mission critical. Independent testing has proven DLP technology to be the most reliable of all microdisplays; not degrading when subjected to UV light, inherent in all projectors. Unlike competing technologies, showing severe image quality degradation after only a few thousand hours, DLP technology remains constant over hundreds of thousands of hours.

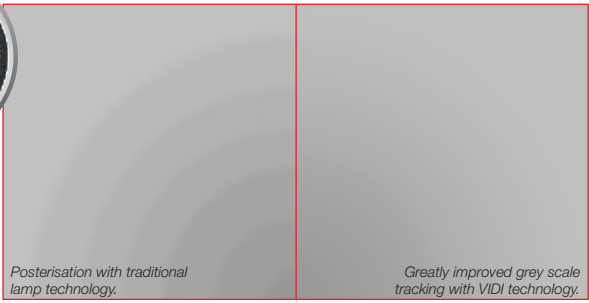
RealColor colour management

RealColor provides a unique and quick way to calibrate and set up perfect images for any number of projectors. RealColor can alter imagery by changing simple characteristics such as the colour temperature of the image – perfectly along the black body curve, or very complex attributes such as each colour's relative saturation and x/y coordinates. In fact, it is perfect to within 0.002 along all axis of measurement. RealColor works by mathematically calculating each colour independently.



VIDI™ technology improves grey scale

VIDI™ technology from Philips enables dynamic lamp driving over time, and enhances image quality. It greatly reduces grey scale artefacts, adds to colour saturation, enhances contrast, and improves lamp stability. Each projector configuration's lamp runs differently from that of others, and ensures a lamp that is specifically tailored to the application it is used for. Unlike non-VIDI based projectors, the lamp power is digitally controlled, as is its performance over time.



Posterisation with traditional lamp technology.

Greatly improved grey scale tracking with VIDI technology.



Low Total Cost of Ownership

Thanks to its robust build and construction, the F12 series requires close to no maintenance and in-life servicing. There are no user serviceable parts inside, and it does not have any filters or other parts that need periodical replacement. That means it does not require a costly and high frequency maintenance contract. Typical lamp replacement cost is low*, and typical lamp life is long. In total, the F12 is a very cost effective projector over time, resulting in a fully predictable and very low Total Cost of Ownership.



Original VID1 lamp with projectiondesign optimised fixture mechanics.

* When replacing lamps, it is advised to use only original parts and accessories, as aftermarket lamps may reduce performance, and damage the projector.

Designed for full 24/7 operation

All projectiondesign professional projectors feature full 24/7 operation warranties. That means they are designed to operate continuously. There is no fine print. Designing for 24/7 operation requires a lot of attention to detail. Some technologies are better than others when it comes to withstand the abuse of time. We use only components that have predictable behaviours, for instance fans, colour wheel motors, and electronic components that are designed by their respective manufacturers to do the same - withstand time. There are no off-the-shelf components. That is why we also closely monitor the creation of every detail, apply dedicated thermal management, and use specific materials in all parts of the process.



The innards of the F12 series is packed with technology to provide the best possible projector.

Designed for use in multi-channel systems

With the unique colour matching and calibration tools provided in the RealColor colour management suite, the F12 series is virtually made for matching of images, edge blending and multi-channel installations. No matter whether the process is done electronically in software or by using external hardware solutions. Deep black levels and a high level of black and white level uniformity, add to the impressive performance. As a custom option, projectiondesign also offers industry unique manual optical colour matching.



Low Frequency Maintenance programme

Our Low Frequency Maintenance programme can be set to automatically notify of required service and maintenance. When run continuously, moving parts such as fans and colour wheels require periodic replacement in order to secure and enable heavy duty continuous operation. With the F12, the duty cycle of any one component is as long as 8000 hours, meaning a full year's operation in 24/7 without any maintenance.

Technical specifications

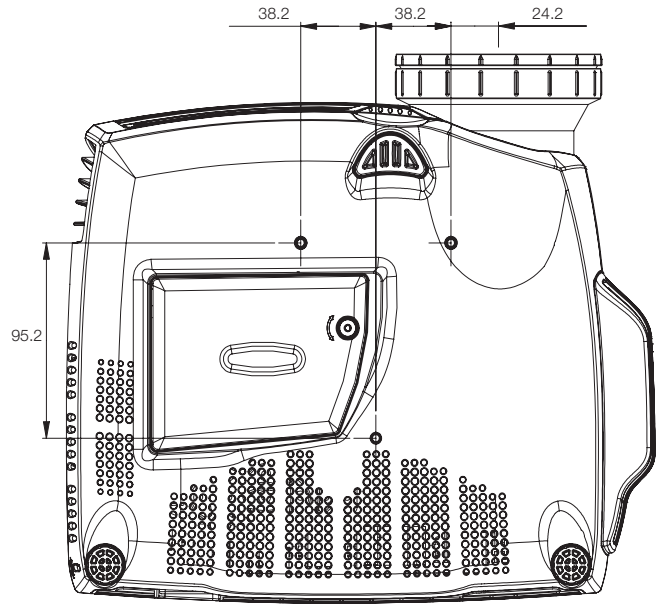
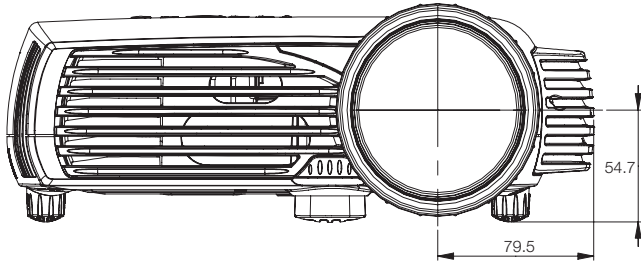
projector	DLP® digital projector		
display	technology	single chip DMD™ (Digital Micromirror Device™)	
	concept	sealed, all-glass optical design with fixed offset	
	available resolutions	1920x1200	1920x1080 1400x1050
	brightness ¹	HighBrightness	3500/2600 3500/2600 3900/2900
		Graphics	2400/1800 2400/1800 2600/2000
		VizSim	1800/1400 1800/1400 2000/1500
	contrast ratio	up to 4000 : 1 (on/off)	
	colours	30-bit	
	colour management accuracy	± 0.002 on x, y, z axis	
	image processing latency	~ 22 ms on graphics port	
input signal compatibility	computer	up to 1920 x 1200 pixels	
		RGBH-V, RGBS, RGsB	
	horizontal scan frequency	15 - 150 kHz	
	vertical scan frequency	48 - 190 Hz	
	video	HDTV (1080p, 1080i, 720p), 24p, 25p, 30p	
		NTSC 3.56/4.43, PAL, BGHL, M, N, SECAM	
	bandwidth	205 MHz analog RGB	
		165 MHz digital RGB (DVI or HDMI)	
optics	available lenses	fixed focal wide angle	EN10 (503-0035-00)
		standard zoom	EN08 (503-0034-00)
	focusing distance	1.5 - 10m	
	lens offset	WUXGA: 110% (standard) or 115% (optional)	
		1080p: 110% (standard) or 123% (optional)	
		SXGA+: 109%	
	colour wheel options	VizSim (RGBRGB)	
		Graphics (RGBCMY)	
		High Brightness (RGBCYW)	
	lamp	300W UHP or 220W UHP	
	lamp life	2000 hrs / 2250 hrs (max typical)	
		2500 hrs / 3000 hrs (eco mode)	
	replacement lamp part no.	300W: 400-0401-00	
		220W: 400-0600-00	

1) brightness for 300W/220W option

connectivity	computer	1x HDMI
		1x DVI-D
		2x VGA (15-pin DSUB)
	video	1x HDMI (HDCP)
		1x DVI-D (HDCP)
		1x RCA x3 YPbPr (component video)
		1x 4-pin mini DIN Y/C (S-video)
		1x RCA composite video
	communications	1x RJ45 TCP/IP network port
		2x RS232 9-pin DSUB (in / out)
		1x USB – mouse control & firmware upgrade
		2x 12V (60mA) triggers (screen drop / aspect)
		1x RC repeater, 3.5mm mini jack
supplied accessories	cables	complete cable kit
	other	backlit IR remote control
		quick start product documentation, safety guidelines
general	dimensions (dwh)	268 x 300 x 104 mm (with standard zoom lens)
	weight	about 3.5 kg (with standard zoom lens)
	environmental	RoHS, WEEE
	security	4-digit PIN code, Kensington lock
	power requirements	100 – 240 VAC, 50/60 Hz, +/- 10%
		< 450W power consumption
		BTU/hr
		< 1650
	conformances	CE, CSA *C/US*, FCC Class A, CCC
	operating temperature	10 – 40°C / 32 – 104°F, 0 – 1500 m
		10 – 35°C / 32 – 95°F, 1500 – 3000 m
	operating and storage	20 – 90% RH
	available colours	black metallic, pearl white
	warranties	standard 2 years, full 24/7 operation
		500 hours or 90 days on lamp
		up to 5 years total extended warranty available.
		conditions apply.

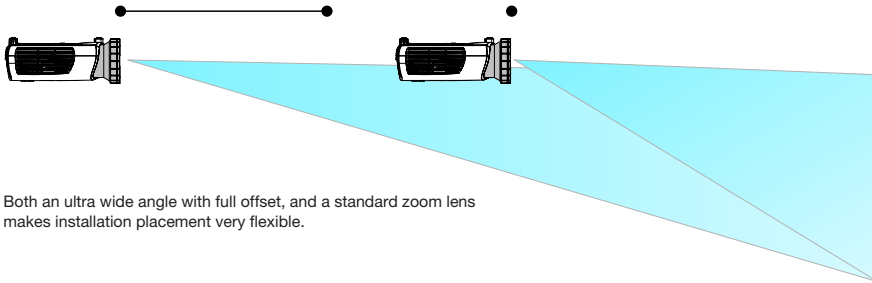


Standard bolt-on ceiling mount interface



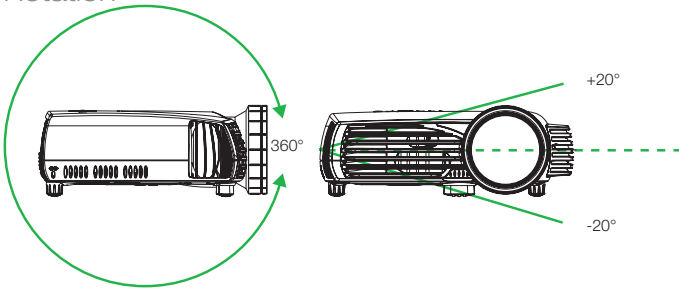
3x M4 thread holes for ceiling mount fixation.

High resolution projection lenses



Both an ultra wide angle with full offset, and a standard zoom lens makes installation placement very flexible.

Rotation



The F12 can be rotated 360 degrees around the side-to-side axis, and for instance project straight down or up, as well as +20/-20 degrees around the lens axis.

Throw ratios

	WUXGA	1080p	sxga+
wide angle	0.95 : 1	0.95 : 1	1.03 : 1
standard zoom	1.6 - 2.0 : 1	1.6 - 2.0 : 1	1.70 - 2.20 : 1
± 5% accuracy			

Fixed lens offset

	WUXGA	1080p	sxga+
wide angle	110% (115% option)	110% (123% option)	109% (116% option)
standard zoom	110% (115% option)	110% (123% option)	109% (116% option)
± 5% accuracy			

Standard available versions

Model	Lamp	Colour Wheel	Wide Angle Lens	Standard Zoom Lens
F12 wuxga	300W	High Brightness	101-1150-xx	101-1148-xx
		Graphics	101-1145-xx	101-1141-xx
		VizSim	101-1144-xx	101-1140-xx
	220W	High Brightness	-	-
		Graphics	101-1147-xx	101-1143-xx
		VizSim	101-1046-xx	101-1142-xx
F12 1080	300W	High Brightness	101-1137-xx	101-1132-xx
		Graphics	101-1136-xx	101-1131-xx
		VizSim	101-1135-xx	101-1130-xx
	220W	High Brightness	-	-
		Graphics	101-1139-xx	101-1134-xx
		VizSim	101-1038-xx	101-1133-xx
F12 sx+	300W	High Brightness	101-1094-xx	101-1092-xx
		Graphics	101-1098-xx	101-1096-xx
		VizSim	101-1090-xx	101-1088-xx
	220W	High Brightness	-	-
		Graphics	101-1057-xx	101-1052-xx
		VizSim	101-1056-xx	101-1051-xx

Available colours: -08 Black Metallic (standard), -05 Pearl White (option). Extra Offset on request. See separate documentation for 3D stereoscopic model options and variants.