## projection design®



SXGA+ (1400 x 1050) DLP™ technology 3000 ANSI lumens 24 / 7 warranty RealColor 2.9 kg

## projection design®

## F2 sx+ professional grade DLP™ projector

The F2 sx+ professional grade DLP™ projector has been developed to meet requirements in graphically challenging applications, but at a fraction of the cost of competitors' offerings. It's features include SXGA+ (1400 x 1050) DLP™ technology, our revolutionary RealColor colour management suite, and optional lenses. It's small size and ability to custom fit in a number of applications, combined with it's unique 24 / 7 guarantee, makes it ideal for a wide range of professional applications.



#### SXGA+ resolution

The projectiondesign F2 sx+ features SXGA+ resolution at 1400 x 1050 pixels. Offering 87% resolution increase over XGA, and 12% over SXGA, SXGA+ offers brilliantly detailed imaging, detailing images standard projectors can never resolve. In simulators and visualisation systems, as well as for medical purposes, SXGA+ ensures more detailed and natural images than any other resolution.

#### DLP™ technology - chosen for reliability

At the core of the F2 sx+ lies DLP™ technology from Texas Instruments®. It has been chosen for it's unique combination of image quality – high brightness and contrast, and natural colours - compact

system size possibilites, and most importantly, it's unmatched reliability. Thorough, independent testing has proven DLP<sup>TM</sup> technology to be the most reliable of all microdisplays. Inorganic by design, it does not degrade when subjected to UV light, inherent in all projectors. Unlike competing technologies, showing severe image quality degradation after only a few thousand hours, DLP<sup>TM</sup> technology remains constant over hundreds of thousands of hours.

### RealColor enables easy seamless matching



Each F2 sx+ projector is uniquely characterised and calibrated during the last stages of it's manufacture. Unique optical performance values are recorded and

matched to the electronics processing in order to secure perfect on-site calibration. With RealColor, it is possible to match any number of projectors, and ensure they all project the same primaries and grey scale, without going through a very complicated process.

#### High brightness - and highly configurable

Featuring up to 3000 ANSI lumens, the F2 sx+ features enough brightness for almosty any installation. With several optional configurations, it can be had to display any brightness desired, and for instance optimised for more saturated colours and video instead of computer graphics.



#### Precision projection lens optics at all levels

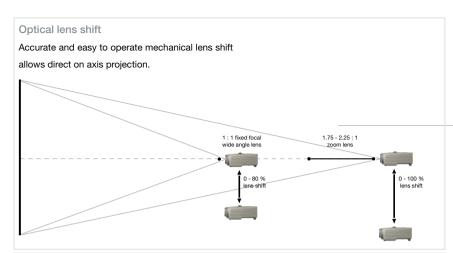
Designed purely with HQ low dispersion glass, two projection lenses are available; a standard zoom lens, and an accurate wide angle lens designed for rear projection applications and special require-

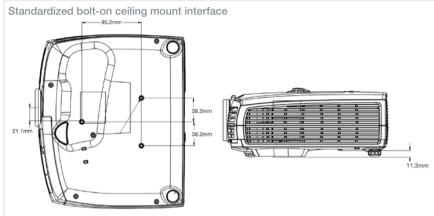




actual installation,
Germany, countesy of
Frauenhofer Institute







ments. The wide angle lens features as low as <0.5 pixels optical distortion for undistorted imaging.

#### Simple service – simple lamp replacement

Replacing the lamp is done directly from the front of the projector, and unlike most comeptitors, the F2 sx+ does not need to be unmounted



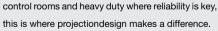
when replacing it. The front panel comes off, so mechanical and optical adjustments are left intact. This is particularly important in installations where accuracy in installation is key.

#### Small size and light weight

The F2 sx+ has been designed to be as small and light as possible. With low unsprung weight, it fits into motion platform simulators without having to take special notice of mounting hardware to cope with high forces during operation. Its' light component weight ensures there is little stress internally, and this further enhances the F2 sx+'s mode of operation.

## 24 / 7 operation guaranteed

All our professional projectors are offered with a limited 24/7 operation guarantee. Applicable to and process



#### Security and network managable

Fully networkable, most projector settings and feature can be set through the built-in web page,

thus allowing remote asset management. Like the TCP/IP interface, the projector itself features a PIN (Personal Identification Number) lock, so that unauthorised users cannot take advantage of it, thus preventing theft.

#### Fully customisable

Like with all our professional projectors, we offer a range of customisation options, for instance different colour wheels, specially designed for various applications, such as graphics visualisation and simulation, presentation, medical imaging, and public display purposes.

#### Built-in Real Time Clock and timer

The built-in real time clock and timer enables the F2 sx+ to be programmed to perform any desired operation at any one time. Examples include automatic switching on and off or swtiching between various sources at set intervals. Up to 10 different programmes can be stored individually.



# projection design®

technical specifications		F2 sx+
projector	•••••	SXGA+ DLP™ digital projector
display	technology	LVDS DMD™ with DarkChip3™
	concept	Sealed all-glass lens shift optical design
	resolution	1400 x 1050 pixels
	brightness	3000 ANSI lumens (typ) (configurable)
	contrast ratio	2500 : 1 (typ on/off) (configurable)
	aspect ratio	4:3,5:4 and 16:9 compatible
	displayable colours	24-bit colour resolution
	image processing latency	~ 1 input frame on graphics port
compatibility	computer	UXGA, SXGA+, SXGA, XGA, SVGA, VGA 1920 x 1080 - 640 x 480 pixel resolution RGBHV, RGBS, RGsB
	horizontal scan frequency	15 - 150 kHz
	vertical scan frequency	48 - 190 Hz
	video	HDTV (1080i, 720p, 576i/p, 480i/p) NTSC, NTSC4.43, PAL, PAL-M, PAL-N, SECAM
	bandwidth	205 MHz on analog RGB 165 MHz on digital RGB over DVI
optics and lamp	standard lens (101-0120-08)	f = 34.1 - 42.7 mm, F/2.6
	throw ratio	1.75 - 2.25 : 1 (distance : width)
	image size (diagonal)	0.85 - 7.3 m (2.8 - 24 ft)
	focusing distance	1.5 - 10 m (5 - 33 ft)
	optical lens shift	0 - 100% (customizable to 110%)
	wide angle lens (101-0137-08)	f = 19 mm, F/2.6
	throw ratio	1 : 1 (distance : width)
	image size (diagonal)	1 - 4 meters (3 - 13 ft)
	focusing distance	1.5 - 10m
	optical lens shift	0 - 80% (designed for on axis projection)
	colour wheel options	RGBW - high brightness RGBW - graphics display RGB - visualisation and simulation
	lamp	170 - 220W UHP™,
	1. 1.0	continuously adjustable
	lamp life	3000 hours (eco mode), 2250 hours (full power mode)
connectivity	computer	1x DVI-D (digital RGB) 1x 15 pin HDDSUB (analog RGB)
	video inputs	1x DVI-D (HDCP compatible) (digital RGB) (shared with
		computer) 3x RCA (component YUV) 1x 4-pin Mini DIN (S-video Y/C) 1x RCA (composite video)
	audio inputs	1x 3.5 mm stereo mini jack
	control and communication	1x RJ45 TCP/IP network port 1x RS232 9-pin DSUB 1x USB (mouse control and firmware upgrade)
		2x IR receivers (front / back)
supplied accessories	speaker cables	1x 2W speaker, adjustable volume control 2m DVI-D cable 2m VGA cable, 15pin HDDSUB 2m USB cable 2m AV cable, 3x RCA - 1x RCA + 3.5 mm mini jack
		stereo audio cable 3.5mm mini jack - 3.5 mm mini jack
	other	backlit IR remote control
general	operating noise level (typ)	24 dB (A) at 20°C/ 68°F, sea level
	dimensions (dwh)	234 x 278 x 94 mm (9.2" x 10.9" x 3.7")
	weight	2.980 g / 6.0 lbs
	timer	built-in, real time clock with ten programming options
	power requirements	100 - 240 VAC, 50/60 Hz, +/- 10% 350 W power consumption
	conformances operating temperature	CE, CSA "C/US", FCC Class A, CCC 0 - 40C / 32 - 104F, 0 - 1500 m
		0 - 35C / 32 - 95F, 1500 - 3000 m
	operating humidity	20 - 90% RH
	storage conditions	20 - 90% RH
	available colour	black metallic / gun metal grey metallic
	warranties	2 years, 500 hours or 90 days on lamp optional 3-year, 24/7 warranty, conditions apply

### Key features



Lamp replacement from the front eases maintenance and does not require the projector to be unmounted in a service situation



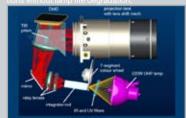
Vertical lens shift makes installations easy, and allows a direct, on-axis rear projection setup with a patient of the patient



Unique UniBoard™ video processing incorporat ing Faroudja® technology ensures professional video quality.



The F2 sx+ can display portrait images in for instance medical and desktop publishing installations with our large life descendation.



credibly small projector that can placed in portrai mode without affecting reliability.







Distributed by:





