

Grand Cinema™ C3X Technical specifications

LIGHT ENGINE

DLP™ Type: 3 Chip DMDs HD2+ DC3
Resolution: 1280x720 pixels
Lens: High Quality, high resolution improved optics for higher contrast and better black level with both motorized zoom and focus adj.
Lamp power consumption & life time*: 250W, 1500 hours

INSTALLATION

Throw ratio: 1.5-2.0:1 (standard lens - type T1) or 2.0-3.0:1 (type T2 - on request)
Lens shift, half up picture +/-50%
Digital keystone adjustment
Picture size (inches diagonal): 50-300
Aspect ratio: 4:3, 16:9 Anamorphic, LetterBox, panoramic,
pixel to pixel + 3 custom-user adjustments

ELECTRONICS

Horizontal & vertical scan freq.: 15-80kHz/48-100Hz
SDTV: PAL (B,G,H,I,M,N,60); SECAM; NTSC 3.58;
NTSC 4.43 automatically selected
HDTV: ATSC (480p, 720p, 1080i, 1080p);
576p + 1080 60Hz
PC graphic standard: VGA, SVGA, XGA, SXGA, UXGA @ 65Hz
On Board Video Processing
Contrast ratio (Full ON/ Full OFF): >6500:1
Brightness: >2500 Ansl Lumens

INPUTS/OUTPUTS

1 x S-Video (mini DIN 4 pins)
1 x Composite Video (RCA)
1 x RGBS-YCrCb (4 RCA)
1 x RGBHV (D-Sub 15 pin)

(*) Lamp life: the hours quoted have been calculated under strict test conditions. Misuse or improper use may later it.

1 x HDMI™-HDCP compliant
1 x OUT Digital Audio (Toslink)
1 x USB connector
1 x RS232 (D-Sub 9 pin)
2 x 12 V 100 mA (via jack)
1 x Input External IR sensor

INPUTS/OUTPUTS on DigiOptic™ Image Processor

2 x S-Video (mini DIN 4 pins)
2 x Composite Video (RCA)
3 x RGBHV/YCrCb (5 RCA)
1 x RGBHV/YCrCb (5 BNC)
2 x RGBHV (D-Sub 15 pin)
1 x HDMI™-HDCP compliant
1 x OUT Digital Audio (Toslink)
1 x DVI (DVI-D)
1 x RS232 (D-Sub 9 pin)
2 x 12 V 100 mA (via jack)
1 x Input External IR sensor

GENERAL SPECIFICATIONS

Software control: upgradable via RS232 serial interface and USB
Weight: lbs 19.4 (8.8 Kg.)
Dimensions (WxHxD): 17,13"x7,48"x16,93"
(435x190x430 mm)

SUPPLIED ACCESSORIES

Installation and User Manual;
AC power cords 6.6 ft. (2m);
Backlit remote control and batteries;
HDMI™ cable - 6.6 ft. (2m).
LINK model only:
DigiOptic™ Image Processor;
Fiber optics cable - 65.6 ft. (20m)

SIM2 GRAND CINEMA SERIES



HTL



HT



RTX



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CINEMA! REVOLUTION!



Due to constant product development, specifications and design might be subject to change without notice. C3X USA - July 2005

GRAND CINEMA™ C3X

Simply the world's smallest, top performance 3-chip projector for home theater applications.

A home theatre creates an exclusive domain within your living space, where you're immersed in a total entertainment experience. This is best achieved by using a 3-chip DLP™ technology-based projector, that offers the best result in front projection applications. SIM2's Grand Cinema™ C3X series has been created to fulfill the needs and dreams of discerning customers seeking to enjoy a truly high end "ultimate real cinema experience". All this from the lighter, smaller and more elegant 3-chip projector ever made. This was achieved after a lengthy, thorough study of projector design and significant investment in R&D. The Grand Cinema™ C3X is not just another 3-chip projector! SIM2's engine and electronics solutions make the difference. SIM2's R&D inventive has made it possible to reduce the size and increase performance creating such a sophisticated and innovative product.



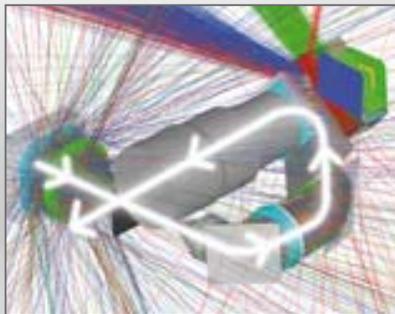
COMPACT 3-CHIP DLP™-BASED LIGHT ENGINE BY SIM2:

The core and most critical component in a Home Cinema Front Projection unit has always been its light engine. Image accuracy of a projector is governed by the quality of this piece of precision optical engineering. A delicate balance is required between light engine, DLP™ chipset and control electronics, in order to optimize the performance of each. Building on its heritage of high-end light engine design, SIM2 developed a new innovative system to re-size the illumination optical path whilst maintaining BOTH its length (necessary for correct picture aberration control) AND its compactness (required for installation and interior-design constraints).

This folded light path, patented and named ALPHA Path™, is the result of SIM2's advanced R&D optical and thermal analysis. Perfect management of the internal light path, without any kind of scattering or thermal dispersion, is achieved by utilizing a special coating on the inner surface, together with the prisms' TIR (Total Internal Reflection) control and optimized Relay Optics. SIM2 customized optical components: lenses and prisms. This combination defines the amazing contrast ratio achieved by the C3X.

RAYTRACING

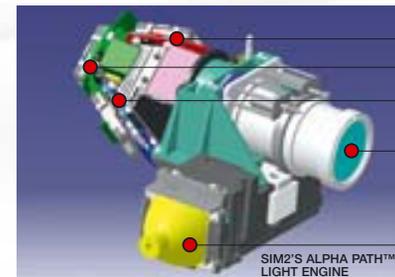
The picture illustrates raytracing used to identify stray light sources inside the optical path and prism assembly. Accurate simulations modeling ON and OFF DMD states and coating on prisms surfaces have been performed to evaluate DMD diffraction and risk of ghost images, as well as to optimize contrast. Color splitting and recombining has been fully modeled to guarantee highest efficiency and purity of colors.



EXTRAORDINARILY VIBRANT COLORS

AND INKY BLACKS: The Grand Cinema™ C3X blends outstanding sharpness and image stability with terrific black depth and contrast. The images are jaw-dropping, so rich that you feel able to reach in and touch.

The DarkChip™3, coupled with SIM2's light engine, offers an excellent contrast of >6500:1 and image richness: it paints an inky blackness, colors are stunning, each shade drenched in eye-catching opulence. Sometimes meeting customers' needs is as simple as knowing the right tool to use. Progressive scan support from any incoming signal is provided by the latest Pixelworks deinterlacer.



DMD CHIP (RED)

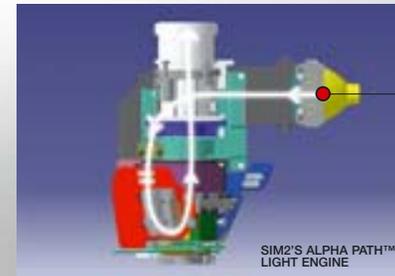
DMD CHIP (GREEN)

DMD CHIP (BLUE)

HIGH QUALITY, SPURIOUS PARTICLES-FREE GLASS LENS

LAMP

SIM2'S ALPHA PATH™ LIGHT ENGINE



LAMP

SIM2'S ALPHA PATH™ LIGHT ENGINE

A basic feature of SIM2's system is its neat compact structure, which is obtained by overlapping the optical light-path to the projection lens (hence the name of ALPHA-type structure).

THREE-CHIP SYSTEM:

HOW IT WORKS AND ADVANTAGES

DLP™ technology-enabled projectors for very high image quality or high brightness applications such as cinema and large venue displays rely on a 3-DMD-chip configuration to produce stunning images, whether moving or still. In a 3-chip system, the white light generated by the lamp passes through a prism that divides it into red, green and blue. Each DMD chip is dedicated to one of these three colours; the coloured light that the micromirrors reflect is then combined and passed through the projection lens to form an image.



GRAND CINEMA™ C3X

SELECTION OF 2 HIGH QUALITY LENSES:

For ease of installation, the projector sports the supreme flexibility of two, new spurious particles-free, high quality glass lens options, namely T1 (standard lens with long throw ratio: 1,5-2:1) and T2 (optional long throw ratio: 2-3:1), making it possible to project an immaculate image on a big screen. More zoom lenses with a variety of throw ratios will be available soon to fit the customers' necessities.

Grand Cinema™ C3X

SOLAR BRIGHTNESS: The Grand Cinema™ C3X is an exceptionally flexible projector, designed to optimize lamp efficiency and lifetime despite the contained size of the cabinet. Featuring a 250W lamp, the image displayed reaches a peak of >2500 ANSI Lumens and is bright enough to overcome normal levels of background lighting. Also, the Grand Cinema™ C3X has been designed also to minimize maintenance operations: a detachable lamp unit eases replacement of the lamp. Just extract the lamp case holder from the base of the projector and replace it with a new one: an activity that any Customer Service can manage without difficulties.

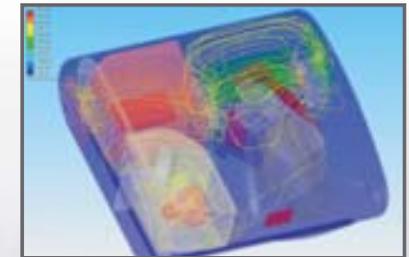
SIM2'S LIVE COLOR MANAGEMENT AND GAMMA CORRECTION:

The Grand Cinema™ C3X is loaded with smart software options for adjusting picture quality and has plenty of memory locations to store different preferences. SIM2's Live Color Management offers complete control over color temperature via 36 predefined adjustments corresponding to specific points on the CIE chart that defines color hue and saturation. The horizontal lines set the low (right side, red component, 6.500°K) and high temperature values (left side, blue component, 10.000°K). The points along the lower horizontal line represent colors that belong to the black body curve. Along the vertical lines the color temperature is constant but differs from the black body curve; for instance if you select a point from the higher part of the diagram you will increase the green component, while the lower part will increase the purple component. In addition to having 8⁷ preset memories (1 for each input) that can be adjusted, saved, and recalled with the press of a button, the Grand Cinema™ C3X also provides 24⁷ additional memory positions worthy of the most discerning home theater enthusiast. The Grand Cinema™ C3X also includes features such as Gamma Correction which determines the system's response to the gray scale; the higher the gamma the faster the brightness decreases with signal intensity. SIM2's C3X projector has 12 gamma curves available to optimize image based on variations in the source material, ambient lighting, and individual preferences: 5 STANDARD for movies, 5 ENHANCED to fully exploit the advantages of DLP™ technology, and 2 GRAPHICS for PC and graphic sources.

(*) The C3X LINK model will feature additional memories.

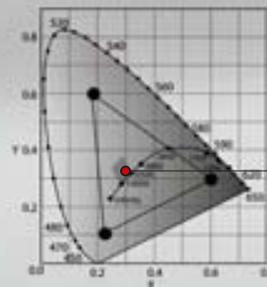
SIM2'S THERMAL MANAGEMENT-

THE BASIC CONCEPT: Accurate thermal and fluid-dynamics analysis has been done by SIM2 R&D to design the Grand Cinema™ C3X, avoiding light spill and overheating of light path. The cooling fan's intake and exhaust are on the unit's side; a special "auto" function allows the Grand Cinema™ C3X to adapt and optimize the speed of the fans depending on the external room temperature. Fan activity is minimized, hence reducing annoying noise level.



THERMAL AND FLUID-DYNAMICS ANALYSIS

THE C3X CHIPSET: The Grand Cinema™ C3X 3-chip projector series adopts the new generation HD2+ DarkChip™3, commonly referred to as the DC3 chip. The DC3 chip embraces a series of refinements aimed at enhancing performance, including a light absorbent coating on its rear to boost contrast and color uniformity. The surface of the chip is flatter and more reflective than its predecessors, while smaller mirror hinges and closer mirror spacing help to reduce the pixel structure and increase brightness. DLP™ technology comes closer than any other display solution to reproducing the exact mirror image of its source material without the pixellation or "screen door" effect apparent in other technologies. Also, while most other technologies lose a certain amount of light in transit, the microscopic mirrors in a DLP™ projection system bring more light from lamp to screen.



CIE CHART

BLACK BODY CURVE

GRAND CINEMA™ C3X

FUTURE-PROOF INPUTS:

The Grand Cinema™ C3X back panel reveals to have everything you need. Video inputs are exemplary with HDMI™ - HDCP compliant connection on top of the list! And, as with all products in the Grand Cinema™ line, consumers can keep the C3X as up-to-date as possible. In fact, the RS232 and the new USB ports allow enthusiasts to easily download the latest control software, and customers may integrate their Unique Remote systems with the projector thanks to the C3X IR sensor jack.

But this is not all! The Grand Cinema C3X series will also sport a LINK model, equipped with SIM2's DigiOptic™ Image Processor, the remote unit featuring a wide choice of inputs and linked to the projector through a thin digital fiber optic cable (0,14" diameter - 3,5mm). SIM2's DigiOptic™ Image Processor can be installed next to the customer's equipment and up to 12 individual products can be connected at any one time. This concept simplifies installation problems, issues with interference or losses from long cable runs, electrical interference from telecommunications, power cables and lighting dimmers etc..



DIGI OPTIC™



STANDARD RESOLUTION



HD RESOLUTION

**HD
ready**

UNLOCKING THE POWER OF HD:

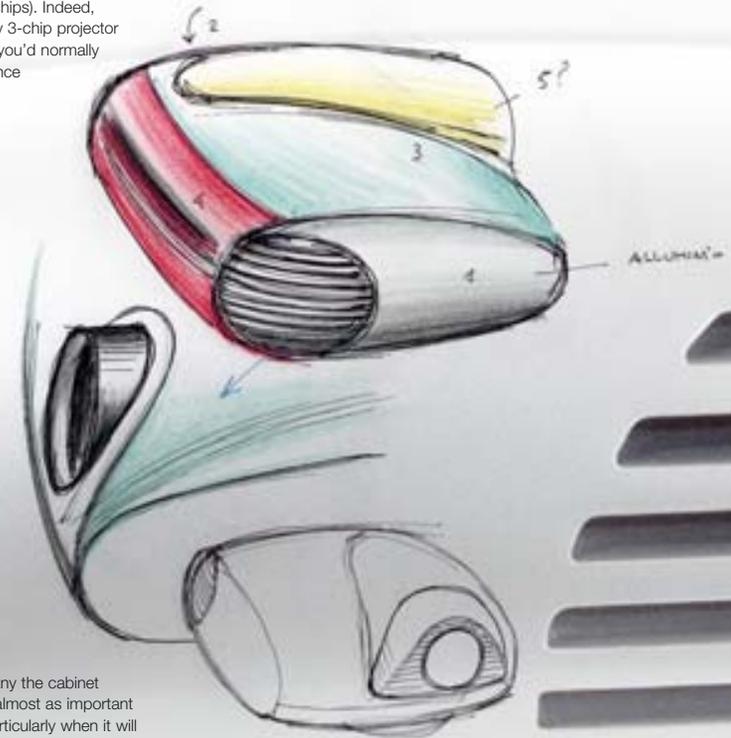
HD Ready - What does it mean?

It means that the projector is truly compatible with forthcoming high definition television broadcast; or in other words that it is capable of delivering a minimum native resolution of 720 lines in wide aspect ratio, accept high definition input via component analogue or HDMI™-HDCP digital inputs, and accept both 1280x720 pixels 50/60Hz progressive (720p) and 1920x1080 50/60 Hz interlaced (1080i) inputs.

It's basically all about lines and pixels:

NTSC is the lowest resolution TV systems with 525 lines (480 of which make the full frame), PAL with 625 lines and finally the HD system with up to 1080 lines. With SIM2's C3X projector you will see a much better picture with a fantastic level of detail, sharpness and vitality.

THINK SLIMMER: Big, bulky, 3-chip projectors are in their waning days thanks to SIM2's new Grand Cinema™ C3X projector. The C3X is extremely compact, measuring only 17,13"x7,48"x16,93 or 435x190x430mm (WxHxD) and weighting a mere 19.4 lbs or 8.8 Kg (-70% and -60% respectively compared to other 3-chips). Indeed, a full blown, top quality 3-chip projector in a case half the size you'd normally expect such performance levels to come from.



AMAZINGLY

ATTRACTIVE: For many the cabinet design of a product is almost as important as its performance, particularly when it will be placed in the middle of a living room. The Grand Cinema™ C3X is elegance at its best; a projector that deserves to be placed on view. Featuring a new, more aggressive design, its smooth curves are in trend with previous Grand Cinema™ models and are easy on the eye. No need to conceal it; the C3X can be happily left out in the room where it is guaranteed to attract envious praise from visiting friends.