

# PLC-XF60 | PLC-EF60 Specifications

Panel	3 x 1,4" TFT p-Si (micro lens)	
Brightness	5,800 ANSI lumens (PLC-EF60)	6,500 ANSI lumens (PLC-XF60)
Projection Lamp	2 x 300 W UHP	
Lamp Service Life	1,500 hours or 3,000 hours in Eco Mode   10,000 hours with LongLife Lamp	
Lens	Depending on lens (delivery does not include lens)	
Aspect Ratio	Depending on lens (delivery does not include lens)	
Throw Distance	Depending on lens (delivery does not include lens)	
Contrast Ratio	1,300 :1	
Resolution in Pixels	S-XGA+, 1,400 x 1,050 pixels	
Horizontal Resolution	1,100 TV lines (PLC-EF60)	800 TV lines (PLC-XF60)
Bandwidth   Frequency	230 MHz   Horizontal: 15 ~ 120 kHz   Vertical: 50 ~ 120 Hz	
Uniformity	90 %	
Keystone Correction	Vertical +/- 35°	
Color Systems	PAL / SECAM / NTSC / NTSC4.43 / PAL-M/N	
Computer Compatibility	U-XGA / S-XGA+ / S-XGA   XGA / S-VGA / VGA / MAC	
Zoom / Focus	Depending on lens	
Connections	Input 1: DVI-D (digital / HDCP), Audio: 3.5 mm Stereo Jack Input 2: D-Sub15 (RGB), Audio: shared with Input 1 Input 3: 5x BNC (RGBHV / Video/Y-Pb/Cb-Pr/Cr), Audio: 3.5 mm Stereo Jack Input 4: 3x RCA (Video / Y-Pb / Cb-Pr / Cr), Audio: 2x RCA (R/L-Mono) Input 5: Mini-DIN 4-pin (S-Video), Audio: shared with Input 4 Monitor Output: D-Sub15 Input 6: DVI-D/D-Sub9 (Warp and Blending Board) Input 7: Freely configurable with optional interface boards Control Input Jack 1: D-Sub 9 (RS232) Control Input Jack 2: USB Type B (Mouse Control) Control Input Jack 3: 3.5 mm Stereo Jack (Wired Remote) Control Output: D-Sub 9 (RS232) Other: USB Type A (USB Key)	
Optional Adapter Boards	DVI Board (POA-MD18DVI) D-Sub15 Board (POA-MD04VGA) Network Board (POA-MD19NET)	5 BNC Board (POA-MD16VD1) Progressive Video Board (POA-MD09VD3) Dual SDI Board (POA-MD17SDID)
Sound	3 W Stereo	
Voltage / Power Consumption	100 – 240 V / 900 W	
Guarantee	3 years	
Dimensions (W x H x D)	518 x 252 x 606 mm	
Weight	25 kg	
Standard Accessories	Wireless remote control, batteries, DVI cable, D-Sub15 cable, Mac/VGA adapter, power cable, remote control cable, dust cover, operating manual, 2 lens adapter	
Optional Accessories	11 interchangeable lenses, 6 adapter boards, smoke resistant box	

Technical specifications are subject to change without notice. Date 09/2004

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PLC-XF60 | PLC-EF60

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PLC-XF60 | PLC-EF60  
High-End Performance.

# PLC-XF60 | PLC-EF60

The utmost in perfection and flexibility.

SANYO's high-end projectors play the lead role wherever light needs to be an unforgettable experience for large audiences. At trade fairs, events and congresses as well as POS or in the arts and sciences. They offer everything that discriminating experts treasure for major appearances: trend-setting technology, high-quality components, loads of useful accessories and a wide variety of interface boards and interchangeable lens for completely customized requirements.

With the new PLC-XF60 and PLC-EF60 high-performance LCD projectors, you'll always be presenting your creative ideas in the best light – with complete independence from the actual surrounding lighting conditions. Thanks to their extremely high brightness of up to 6,500 ANSI lumens, the projectors are ideal for large, bright rooms as well as open-air events. And they come with everything you need to turn projections into multi-media masterpieces, like 10-bit color technology or a Warp & Blending board for seamless projections on spherical and curved surfaces.

But ANSI lumens and pixels are not the only values you can measure our projectors by. After all, SANYO would not be the leader in presentation technology and the number one name in high-performance multi-media projectors if we didn't bring our entire experience to bear on what really matters: the economic benefits for our customers. We make certain that our high-end projector lenses and interface boards can be used on all current units as well as previous models too.

Discover just how personalized high-end performance can be.





## Benefits at a Glance

- Integrated warp and blending board for projections on curved screens and digital edge blending
- Brightness:  
6,500 ANSI lumens (PLC-XF60)  
5,800 ANSI lumens (PLC-EF60)
- Contrast ratio 1,300 : 1
- 10-bit color technology
- Mechanical shutter
- Optional smoke resistant box with dust and smoke filter
- 11 Interchangeable lenses
- 6 Adapter boards
- Lens shift (horizontal / vertical)
- Lens memory
- Multi Lamp System
- Numerous security features
- Control pad
- Wireless remote control

# PLC-XF60 | PLC-EF60

## IMAGE QUALITY

The best images originate in the mind. The best projections through careful deliberation.

Your profession is fascinating audiences through creativity and fantasy. Our profession is perfection based on experience and innovation.

Reason enough to reflect time and again on how images can be projected with ever greater quality using new technology and refinements. We are only satisfied when color depth, resolution, sharpness and contrast not only please your most discerning audience but your expert eye in every aspect as well.



8-bit color reproduction simulation



Greater three dimensional quality in dark shadows and pastel colored transitions with 10-bit color technology.

Outstanding contrast and brightness – down to the last pixel.

The PLC-XF60 and PLC-EF60 deliver image quality that will mesmerize even the most discerning viewers.

With an outstanding brightness of 6,500 ANSI lumens (PLC-XF60) and 5,800 ANSI lumens (PLC-EF60), these units deliver dazzling images even outdoors. Thanks to their extremely high 1300:1 contrast ratio, the sense of plasticity and three-dimensional depth is unparalleled, with bright, vivid colors and sharp details even in dark scenes.

SANYO's newly implemented micro lens technology contributes to the incredibly powerful output.

The microscopic lenses in front of the panels bundle the light and pass it through each pixel with absolute precision. Unlike normal LCD panels, no brightness is lost.

**1 billion colors, four times more grayscales, a new standard: 10-bit color technology.**

By using true 10-bit image processing, the PLC-XF60 and PLC-EF60 show just what visual masterpieces high-end projectors are capable of today. Compared to conventional 8-bit technology, this new technology can display four times more grayscales (1,024 instead of 256) and over one billion colors instead of just 16.6 million.

In practice, this digital revolution means that gradual color transitions – like those in sunsets, underwater scenes or shadows – are rendered with completely new intensity, subtlety and detail.

You can rely on it – the Multi Lamp System.

Reliable technology is absolutely critical for large events. The two lamp system on the PLC-XF60 and PLC-EF60 guarantees that a defective lamp will not have serious consequences. Should one of the lamps fail, the system automatically switches to the second, intact lamp. Any resulting differences in color reproduction and contrast are automatically corrected by the projector's electronics.



With the two lamp system, the second, intact lamp is used if one lamp fails.



Maximum brightness in dual lamp mode

Increased service life in single lamp mode

Of course the projectors can also be operated deliberately in energy-saving mode by using just one lamp – for uninterrupted operation, for example. Although maximum brightness is not available, the service life of the 300 watt UHP bulbs is increased from 1,500 to 3,000 hours.

In addition, the projectors can be equipped with 100-watt LongLife bulbs. Although they reduce the brightness to 2,200 ANSI lumens, lamp life is increased to an astonishing 10,000 hours.

# FLEXIBILITY

You face new challenges every day – your projector should be able to handle them too.

One of the characteristics of a major appearance is that it always takes place somewhere new. For you this means that although your requirements may be changing, your expectations remain constant. Our high-performance projectors are designed to meet these requirements from the very outset. Because flexibility is always a question of interfaces, the PLC-XF60 and PLC-EF60 offer an extensive range of interface boards. And, of course, numerous useful features that will simplify your task in every aspect.

## Fascination á la carte with a wide selection of interface boards.

The PLC-XF60/EF60 projectors will readily convince any practical specialist. For one, the front-mounted interface boards simplify operation considerably, give you greater flexibility during installation and reduce the usual jumble of cables.

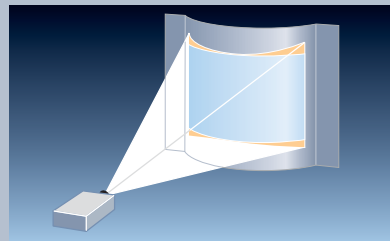


They also offer a wide range of connection options too. In addition to the available interface options for DVI, 5 BNC, D-Sub15, Composite, S-Video, Component and Warp & Blending, you can use an additional terminal to install optional features to meet your specific requirements.

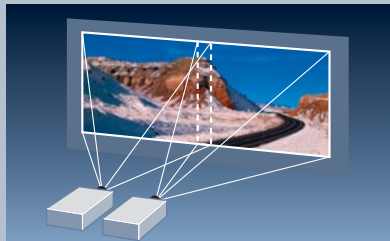
## Warp & Blending Board

Whether for POS or art installations, the preinstalled Warp & Blending board opens up a whole new range of creative possibilities.

Thanks to this new adaptor board, the PLC-XF60/EF60 delivers where other projectors cannot: on convex, concave and spherical projection surfaces. The special trick: the Warp function corrects the image electronically, eliminating distortions.



The Blending function is certain to make the hearts of all multi-media experts beat faster too. It permits seamless image projection using multiple, side-by-side projectors by applying electronic brightness and image synchronization compensation in the overlapping image areas.



In addition, the warp and blending functions can be combined as well.



## Network Board (optional)

This board makes you independent of time and space. It integrates the projector in any TCP/IP-based network, be it a corporate LAN or the Internet. The available options range from remote maintenance and control, real-time transmission of screen contents, ftp server downloads or the control of peripheral devices such as DVD players. The Network Board allows you to monitor and operate a large number of projectors more efficiently – all without the necessity of having technicians onsite to eliminate problems or reconfigure units.



## Faroudja Board (optional)

This intelligent video processor improves the input signals. The Faroudja Board recognizes edges in moved images and corrects them, making the video image sharper and clearer, for example. Annoying jitter effects are eliminated by the integrated deinterlacer. In addition, the Film Mode Processing technology ensures that annoying aliasing is kept to a minimum. The board consists of three Faroudja video processing chips and a SANYO 3D-Y/C separation chip that allow you to process all video signals just like you would with the Faroudja Set Top Box.

## Optionale Boards

Product Name	Dual SDI Board	5-BNC Board	DVI-I Board	D-Sub15	Faroudja Board	Network Board
Product Code	POA-MD17SDID	POA-MD16VD1	POA-MD18DVI	POA-MD04VGA	POA-MD09VD3	POA-MD19NET
Video: Signal	SMPT292M SMPT259M-C	RGBHV, Sync. to RGB and Component	T.M.D.S.	RGBHV, Sync. to RGB and Component	Composite and Y/C, Component	-
Jacks	2x SDI Input (BNC) 1x SDI Output (BNC)	5 BNC	DVI	5 BNC	3 BNC and Mini-DIN 4-pin	-
Sound: Signal	-	500 mVrms (47 KΩ)	500 mVrms (47 KΩ)	500 mVrms (47 KΩ)	500 mVrms (47 KΩ)	-
Jacks	-	2x RCA	2x RCA	2x RCA	2x RCA	-
Other: Control Input	-	Mini-DIN 8-pin	Mini-DIN 8-pin	-	-	D-Sub9 pin
LAN Input	-	-	-	-	-	RJ45



# FLEXIBILITY

The right lens for every use – thanks to a wide range of interchangeable lenses.

Because you can choose between 11 optional lenses, the projector can be easily customized for any room condition. The lenses range from an extreme wide-angle lens for large images at short projection distances to an extreme telephoto lenses for long distances. This way you will always have the perfect lens on hand and will never have to compromise. Cost-effectiveness is increased as well because the lenses can also be used with most other high-end projectors from SANYO.

Fast lens switching – with the One Touch Lens Change System.



Simple and fast: To change lenses, simply remove the front cover (four screws), insert the lens and then lock it into place. Thanks to SANYO's One Touch Lens Change System, the entire operation takes just a few minutes.

## Flexible Setup with Lens Shift Function

The fact alone that the projector does have to be set up in the middle of the screen is ample proof that the PLC-XF60 and PLC-EF60 were made by professionals for professionals.



A horizontal and vertical shift lens allows the projected image to be shifted horizontally and vertically without having to move the projector. This

eliminates the risk of unwanted keystone effects.

This feature also simplifies the adjustment of image height in double projections tremendously. Because this shift function is performed optical, the full panel resolution always remains available. No electronic signal correction is required.

The exact shift range values for each individual lens are listed in the table below.

## Perfect projector switching thanks to the mechanical shutter.

If you have ever worked with multiple projectors, then you will be familiar with this problem: Even though a projector is not currently projecting an image it may still be noticeable. In fact the residual light it projects on the screen can be quite annoying for the audience. Thanks to the mechanical shutter in the PLC-XF60/EF60, anyone who has to work with multiple projectors and quickly switch between one image and another is absolutely safe.

## Optimal Image and Projection Freedom

The freely selectable format ratio makes you completely independent of standard image sizes such as 4:3, 16:9 and 5:4. But even with the projection type you have all of the freedom you need. Rear, ceiling and double projection are all possible with the PLC-XF60/EF60 as well.

## Foolproof double projection with the easy mount mechanism.

Even with double projections you can rest assured. Four mounting points on the top of the projector help ensure the solid positioning of a second projector.

There is no need to buy an extra mounting system.

Type	Wide-angle	Wide-angle Zoom	Extreme Wide-angle	Wide-angle Zoom	Wide-angle Zoom	Standard Zoom 1	Standard Zoom 2	Compact Telephoto Zoom	Extreme Telephoto	Telephoto Zoom	Extreme Telephoto Zoom
	LNS-W01Z	LNS-W02Z	LNS-W03	LNS-W04	LNS-W05	LNS-S02Z	LNS-S03	LNS-M01Z	LNS-T01Z	LNS-T02	LNS-T03
Focal Length	45 mm	52 – 68 mm	30 mm	58 – 76 mm	36 – 50 mm	76 – 98 mm	97 – 131 mm	125 – 162 mm	253 mm	158 – 221 mm	224 – 325 mm
Aspect Ratio	1.5 : 1	1.8 – 2.3 : 1	1.0 : 1	2.0 – 2.6 : 1	1.2 – 1.7 : 1	2.6 – 3.3 : 1	3.3 – 4.5 : 1	4.5 – 5.8 : 1	8.9 : 1	5.6 – 8.0 : 1	8.1 – 11.6 : 1
Throw Distance	0.87 – 15.90 m	1.0 – 24.10 m	0.57 – 10.64 m	1.10 – 26.90 m	n/a	1.40 – 35.0 m	1.90 – 46.52 m	2.76 – 57.90 m	5.36 – 90.37 m	36.16 – 79.50 m	50.97 – 116.62 m
Image Size	0.76 – 12.70 m	0.76 – 12.70 m	0.76 – 12.70 m	0.76 – 12.70 m	0.76 – 12.70 m	0.76 – 12.70 m	0.76 – 12.70 m	0.76 – 12.70 m	0.76 – 12.70 m	0.76 – 12.70 m	0.76 – 12.70 m
Vertical Lens Shift	10 : 0 – 0 : 10	10 : 0 – 0 : 10	1 : 1	10 : 0 – 0 : 10	10 : 0 – 0 : 10	10 : -1 – -1 : 10	10 : 0 – 0 : 10	10 : 0 – 0 : 10	10 : 0 – 0 : 10	10 : 0 – 0 : 10	10 : 0 – 0 : 10
Horizontal Lens Shift	2 : 3 – 3 : 2	2 : 3 – 3 : 2	2 : 3 – 3 : 2	2 : 3 – 3 : 2	2 : 3 – 3 : 2	2 : 3 – 3 : 2	2 : 3 – 3 : 2	2 : 3 – 3 : 2	2 : 3 – 3 : 2	2 : 3 – 3 : 2	2 : 3 – 3 : 2
Aperture	2.5	2.5 – 2.9	2.6	1.7 – 2.3	2.0 – 2.6	2.0 – 2.3	1.7 – 2.6	2.0 – 2.6	2	2.0 – 2.8	2.2 – 2.5
Diameter	175 mm	114 mm	175 mm	122 mm	122 mm	116 mm	137 mm	95 mm	158 mm	130 mm	169 mm
Zoom	Fixed	Powered (1.3x)	Fixed	Powered (1.3x)	Powered (1.4x)	Powered (1.3x)	Powered (1.3x)	Powered (1.3x)	Fixed	Powered (1.4x)	Manual
Focus	Manual	Powered	Manual	Powered	Powered	Powered	Powered	Powered	Manual	Powered	Manual
Weight	5.8 kg	2.2 kg	3.1 kg	2.8 kg	n/a	1.9 kg	3.7 kg	1.9 kg	3.8 kg	3.1 kg	7.3 kg

## USER FRIENDLINESS



Projectors are designed for the future. They should make your life much easier today as well though.

Throughout the development of our high-end projectors, SANYO's engineers not only have the future in mind but today's users as well. And because ease-of-use begins at the design stage, they place special emphasis on the simplest possible operation. From an easy-to-understand user interface to easy-to-use security and safety features. Thanks to their efforts, even non-specialized users can achieve excellent results without great effort.

### Always perfect images thanks to the Lens Memory function.

The Lens Memory function eliminates unnecessary lens configurations, delivering rapid and precise image zooming and focusing. Thanks to this feature you only need save your settings for a specific lens once.

The Lens Memory function is also interesting for projections in which you need to use different image formats (4:3, 16:9) yet still make use of the entire screen effortlessly.

### Maximum ease-of-use from the start with the signal search and user logo functions.

No more time-consuming adjustments. The projector automatically recognizes which input the signal is received on. This eliminates manual configuration of the input terminal.

Another major benefit for users: the user logo function can be used to display your own custom logo when the projector is turned on.

### With the Control Pad, everything is under control.

The control pad on the top of the projector permits quick access to the entries in the onscreen menu. In dark rooms this feature can be extremely valuable.



### Comprehensive security with PIN code, USB & key lock features.

The PLC-XF60/EF60 includes all of SANYO's exemplary security measures:

- PIN Code Lock: The projector can only be started when the correct PIN code is entered.
- USB Lock (optional): The projector can only be started using a registered USB key. The USB key is available as an optional accessory.
- Key Lock: To prevent unauthorized use of the device, the menu buttons on the projector as well as the remote control can be blocked.



### Higher, faster, farther – with intelligent wireless remote control.

Because it uses radio transmission, the remote control of the PLC-XF60/EF60 is vastly superior to any infrared remote. You now have much greater freedom because the radio signal can traverse solid objects. This means that you no longer have to worry about maintaining direct visual contact to the projector.

In addition, the remote control offers a much greater effective range. Instead of the maximum distance of six meters for infrared signals, the new wireless remote now provides a range of twenty meters from the front and ten meters from the back of the projector.

Furthermore, the remote control includes a touch panel that can be used to control the cursor in the onscreen display. Now you will always be able to hit the right key even in dark rooms – all without having to look at the remote control.

### Optional Smoke and Dust Resistant Case

The optional smoke-proof box is ideal for use in bars, discos, and other locations where air pollution would otherwise negatively affect the filter and operating life of the panels.

It is extremely easy to install because it simply fits over the air intake on the side.

