

# Panasonic

ideas for life

## PT-DZ110X Series

3-Chip DLP™ Projectors

PT-DZ110XE  
PT-DS100XE  
PT-DW90XE



**A Bright 10,600 lm\* in a Compact Body**

\* The PT-DW90EX has 9,600 lm of brightness.



# Higher Brightness, Picture Quality and Reliability— All in a Compact Body



The Panasonic PT-DZ110X series of 3-chip DLP™ projectors combine high levels of picture quality, reliability, function and system expandability into a compact body. Packed with original, advanced Panasonic technology, these projectors produce a full 10,600 lumens of brightness, and their dual lamp system and Auto Cleaning Filter (ACF) greatly boost reliability. A new and unique multi-unit brightness control function also gives these projectors the flexibility to meet a wide range of applications.

PT-DZ110XE	PT-DS100XE	PT-DW90XE
10,600 lm	10,600 lm	9,600 lm
WUXGA (1920 × 1200)	SXGA+ (1400 × 1050)	WXGA (1366 × 768)
HD/SD-SDI input	HD/SD-SDI input	—
Geometric adjustment	Geometric adjustment	—



# Brightness & Picture Quality

## Compact Yet Bright

Panasonic's original dual-lamp system, with its new 355-W lamp, has helped to make the body approximately 49% smaller than Panasonic's original PT-D10000 Series, while providing a full 10,600 lm\*1 of brightness.

## New Dynamic Iris for a High 10,000:1\*2 Contrast Ratio

Panasonic's new Dynamic Iris uses a scene-linking aperture mechanism to achieve a remarkable 10,000:1\*2 contrast without lowering its high brightness. This helps to reproduce deeper, richer blacks, and provides images with more detailed textures.



## Detail Clarity Processor 3 Brings Depth and Clarity to Details

The frequency of the video signal is analysed for each scene, and distribution data is extracted for the ultrahigh, high, medium and low range frequencies. This unique Panasonic image correction circuit optimally enhances each area of the screen. High-precision detection is applied from 2-dimensional horizontal/vertical data to produce more natural, lifelike images with high definition.



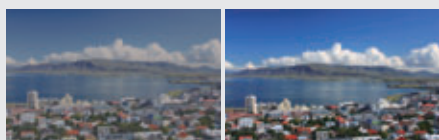
Without Detail Clarity Processor 3



PT-DZ110X series with Detail Clarity Processor 3

## System Daylight View 2 for Enhanced Colour Perception

This original Panasonic technology epitomises image quality to improve colour perception of the projected image in bright rooms. Gamma curves and sharpness, in addition to conventional colour correction, are adjusted to bring a sense of sharp-

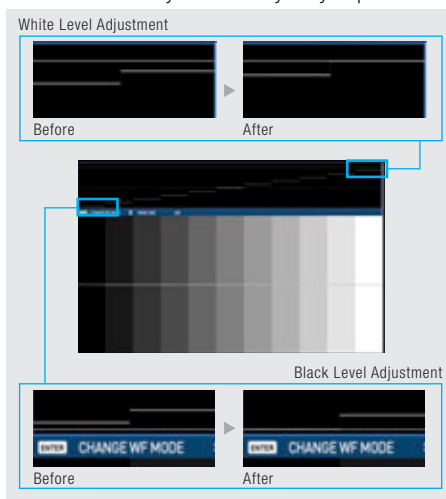


Without System Daylight View 2 PT-DZ110X series with System Daylight View 2

ness to the entire screen and reproduce stunning images with lifelike depth. This results in highly comfortable viewing even in bright lighting, and allows viewers to concentrate easily on the images.

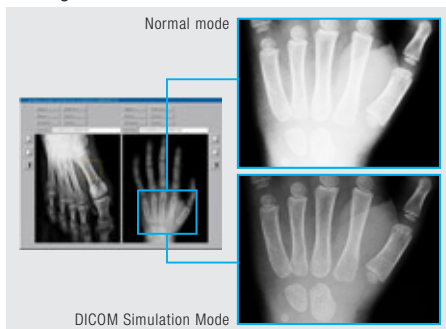
## Waveform Monitor Function (PT-DZ110XE)

When the output level of the source device fluctuates due to the performance of the device or its cable connections, the original black and white levels of the image content cannot be reproduced correctly. With the PT-DZ110XE you can view the waveforms on the screen and adjust the settings either automatically or manually as you prefer.



## DICOM Simulation Mode\*3

This imaging mode is similar to DICOM part 14, which is a medical imaging standard. It reproduces X-ray images with remarkable clarity. It also allows information to be shared by many viewers on a large screen, such as during conferences or training courses.



## Full-HD Ready WUXGA Resolution (PT-DZ110XE)

In response to the increasing popularity of wide-screen image viewing, including Blu-ray content, the PT-DZ110XE features native WUXGA resolution for full-HD viewing. This brings you lifelike projection of intricate, highly detailed images.

## Advanced Technologies for Excellent Image Quality

- 3D colour management system
- Full 10-bit image processing
- Progressive cinema scan (3:2 pulldown)
- Dynamic sharpness control
- Digital noise reduction
- IP conversion
- AI scene control
- 2:2 pulldown mode
- 3D Y/C separation
- sRGB compatibility

# Reliability & Stability

## Panasonic's Original Dual Lamp System

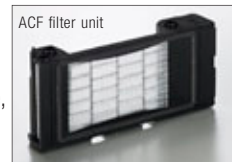
This system eliminates the interruption if a lamp should fail (in dual-lamp operation mode). The Lamp Relay mode also operates the lamps alternately to enable 24/7 projection.

Lamp	Brightness (lumens)		Lamp replacement cycle (hours)*4
	PT-DZ110XE PT-DS100XE	PT-DW90XE	
Two lamps (high)	10,600	9,600	3,000
Two lamps (low)	8,480	7,680	4,000
One lamp (high)	5,300	4,800	6,000
One lamp (low)	4,240	3,840	8,000

## Auto Cleaning Filter Reduces Maintenance Hassles



Panasonic's proprietary Auto Cleaning Filter (ACF) automatically exposes a clean filter surface when it senses that the filter is clogged. The ACF also brushes away dust that adheres to the filter, which helps prevent clogging that can impair operation or cause malfunction. This helps maintain the superior dust-collecting performance of the Micro Cut Filter, which is a highly efficient electrostatic filter. As a result, the filter does not need to be replaced for up to 10,000 hours\*5 or more, greatly reducing the hassle of maintenance.



## Optional Smoke Cut Filter ET-SFD310

The projector can be equipped with an optional, extra-strong air filter to prevent the entry of smoke, such as those used for special effects at events and stage performances.



## Quiet 37-dB\*6 Operation

An original cooling system enhances the compact body and enables the projector to operate at a silent 37 dB.

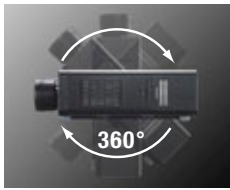
## NOTES

- \*1 The PT-DW90XE has 9,600 lm of brightness.
- \*2 In Dynamic Iris mode 3.
- \*3 This product is not a medical instrument. Do not use it for actual medical diagnosis.
- \*4 The values above are maximum values when they are used in cycles of being turned on for 2 hours and off for 0.25 hour. When the lamps are turned on and off more frequently, the lamp replacement cycle is shortened. It is recommended that the mechanical shutter be used to turn images off for a short period.
- \*5 The usage environment influences the duration of the filter.
- \*6 In dual lamp operation, with lamp low mode. Measurement, measuring conditions, and method of notation all comply with ISO 21118 international standards.

# Enhanced Installation Flexibility

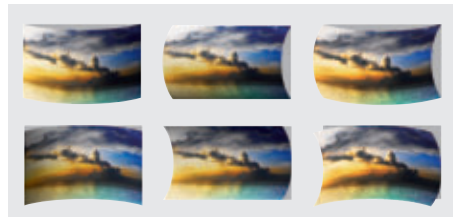
## Flexible Installation

The wide adjustment range of the powered horizontal/vertical lens shift function assures virtually distortion-free images and adds convenience and versatility. It lets you easily make adjustments with the remote control. The unit can also be rotated 360° vertically. This means you can install it at any angle you want, to accommodate different installation conditions. The lens-centred design also contributes to easy installation.



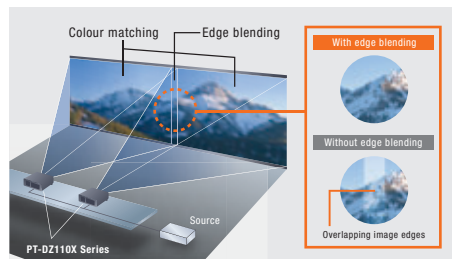
## Geometric Adjustment\*7 for Specially Shaped Screens

This function adjusts the image for projection onto spherical, cylindrical and other specially shaped screens. You can make the adjustment easily using just the remote control, with no external equipment needed. Used together with the multi-screen support system, Geometric Adjustment expands your application possibilities, letting you create a wide range of image effects for digital signage, concerts, performances and other special events.



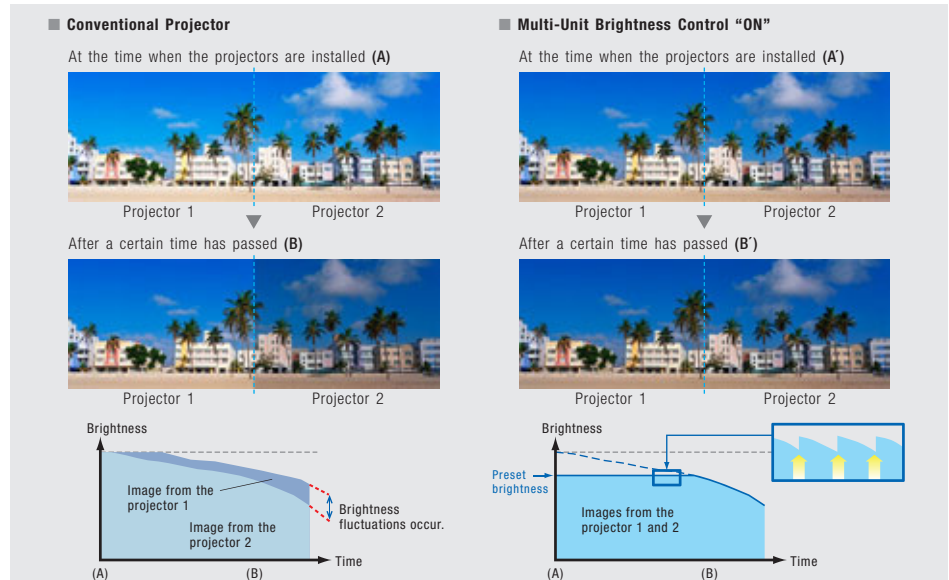
## Multi-Screen Support System Seamlessly Connects Multiple Screens

- Edge Blending**  
 The edges of adjacent screens can be blended and their luminance controlled.
- Color Matching**  
 This function corrects for slight variations in the colour reproduction range of individual projectors. The PC software assures easy, accurate control.
- Multi-Screen Processor**  
 The PT-DZ110X series can project large, multi-screen images without any additional equipment. Up to 100 units (10 × 10) can be edge-blended at a time.



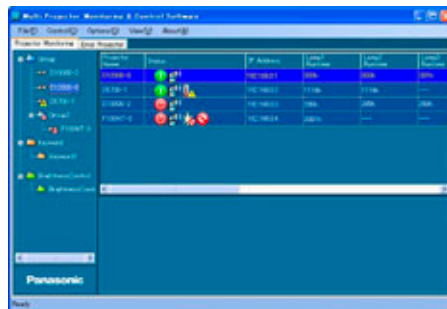
## Multi-Unit Brightness Control

This function automatically corrects the brightness fluctuations that occur over time in the individual projectors of a multi-screen system. A maximum



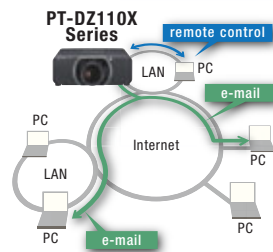
## Multi Projector Monitoring & Control Software Ver. 2

Panasonic's original freeware "Multi Projector Monitoring & Control Software Ver. 2" allows the user to control and monitor multiple projectors at the same time over a wired LAN. When a problem occurs, an alarm message is sent to the monitoring/controlling PC.



## Web Browser Control

The PT-DZ110X series can be easily operated remotely over a LAN network, because it is all done using the computer's familiar web browser. Furthermore, the projector sends an e-mail message to notify the operator when an error has occurred, or a lamp needs to be replaced.



## PJLink™ Compatibility

The LAN terminals support PJLink™ class 1 connection. Control with the same specifications is also possible when used in a multi-projector system with projectors of another brand.



of eight projectors can be controlled by connecting each other via a hub, and this can be increased to a maximum of 2,048 projectors by using "Multi Projector Monitoring & Control Software Ver. 2".

## A Wide Selection of Lenses (optional)

Choose from a wide lineup of lenses for your system, including short-throw, long-throw zoom and fixed-throw lenses for rear projection use. The additional lenses make it easy to adapt your projector to the installation site. The lenses attach and detach with one-touch ease.

## Multiple Terminals with HD-SDI Compatibility\*8

The PT-DZ110X series has an array of terminals, including a DVI-D (HDCP compliant), to support a broad range of projection needs. Using the serial terminal (RS-232C), it is possible to connect and operate AMX and Crestron control systems with ease. In addition, the PT-DZ110XE and PT-DS100XE accommodate the HD/SD-SDI input signals that are widely used in broadcasting.

## Direct Power Off

The cooling fan continues to operate even when the main power switch is turned off after projection is finished. This also allows the power to be turned off by directly switching off the room's main breaker for systems, such as ceiling mounted systems, where the main power switch cannot be reached.

## Scheduling Function

Scheduled operation is possible using the built-in timer function, without having to use a PC and software. For example, when using the projector for digital signage in a store, it can be set to operate with two lamps in the daytime and one lamp at night.

## NOTES

\*7 Featured on the PT-DZ110XE and PT-DS100XE only. \*8 Featured on the PT-DZ110XE and PT-DS100XE only.



## Specifications

Model	PT-DZ110XE		PT-DS100XE	PT-DW90XE
Power supply	220–240 V AC, 5.0 A, 50/60 Hz		220–240 V AC, 4.8 A, 50/60 Hz	
Power consumption	920 W (980 VA at 240 V) (0.3 W with standby mode set to ECO;* <sup>2</sup> 8 W with standby mode set to NORMAL. Both with fan stopped.)		900 W (950 VA at 240 V) (0.3 W with standby mode set to ECO;* <sup>2</sup> 8 W with standby mode set to NORMAL. Both with fan stopped.)	
DLP™ chip	Panel size Display method Pixels	24.4 mm (0.96 in) diagonal (16:10 aspect ratio) DLP™ chip × 3 (R, G, B), DLP™ projection system 2,304,000 (1,920 × 1,200) × 3, total of 6,912,000 pixels	24.1 mm (0.95 in) diagonal (4:3 aspect ratio) DLP™ chip × 3 (R, G, B), DLP™ projection system 1,470,000 (1,400 × 1,050) × 3, total of 4,410,000 pixels	21.6 mm (0.85 in) diagonal (16:9 aspect ratio) DLP™ chip × 3 (R, G, B), DLP™ projection system 1,049,088 (1,366 × 768) × 3, total of 3,147,264 pixels
Lens	Optional powered zoom/focus lenses			
Lamp	355 W UHM lamp × 2 (dual lamp system)			
Screen size (diagonal)	1.78–15.24 m (70–600 in)* <sup>3</sup> (16:10 aspect ratio)		1.78–15.24 m (70–600 in)* <sup>3</sup> (4:3 aspect ratio)	
Brightness* <sup>1</sup>	10,600 lm (dual lamp, high mode)		9,600 lm (dual lamp, high mode)	
Centre-to-corner uniformity* <sup>1</sup>	90 %			
Contrast* <sup>1</sup>	10,000:1 (full on/full off, in dynamic iris 3 mode)			
Resolution	1,920 × 1,200 pixels		1,400 × 1,050 pixels (Input signals that exceed this resolution will be converted to 1,400 × 1,050 pixels.)	
Scanning frequency	SDI	SD-SDI signal: 480i, 576i (SMPTE 259M compliant) Single-link HD-SDI signal: 720/50p, 720/60p, 1035/60i, 1080/50i, 1080/60i, 1080/25p, 1080/24p, 1080/24sF, 1080/30p (SMPTE 292M compliant)		–
	HDMI/DVI-D/RGB YPbPr (YCbCr)	fh 15 kHz–100 kHz, fv 24 Hz–120 Hz, dot clock 162 MHz or lower fh 15.75 kHz, fv 60 Hz [525i (480i)] fh 45.00 kHz, fv 60 Hz [750 (720)/60p] fh 28.13 kHz, fv 50 Hz [1125 (1080)/50i] fh 33.75 kHz, fv 30 Hz [1080/30p] fh 15.63 kHz, fv 50 Hz [625i (576i)] fh 37.50 kHz, fv 50 Hz [750 (720)/50p] fh 28.13 kHz, fv 25 Hz [1080/25p] fh 67.50 kHz, fv 60 Hz [1080/60p] fh 31.50 kHz, fv 60 Hz [525p (480p)] fh 33.75 kHz, fv 60 Hz [1035/60i] fh 27.00 kHz, fv 24 Hz [1080/24p] fh 56.25 kHz, fv 50 Hz [1080/50p] fh 31.25 kHz, fv 50 Hz [625p (576p)] fh 33.75 kHz, fv 60 Hz [1125 (1080)/60i] fh 27.00 kHz, fv 48 Hz [1080/24sF]		
	Video/S-Video	fh 15.75/15.63 kHz, fv 50/60 Hz [NTSC, NTSC4.43, PAL, PAL60, PAL-N, PAL-M, SECAM]		
Optical axis shift	Vertical	±55% from centre of screen (powered) (±44% with the ET-D75LE6)	±50% from centre of screen (powered) (±40% with the ET-D75LE6)	±70% from centre of screen (powered) (±60% with the ET-D75LE6)
	Horizontal	±20% from centre of screen (powered) (±15% with the ET-D75LE6)	±30% from centre of screen (powered) (±20% with the ET-D75LE6)	±30% from centre of screen (powered) (±20% with the ET-D75LE6)
Keystone correction range	Vertical: ±40° (±22° with the ET-D75LE5, ±28° with the ET-D75LE6)* <sup>5</sup> ; horizontal: ±15° (±10° with the ET-D75LE6)* <sup>4</sup>			
Installation	Ceiling/floor, front/rear			
Terminals	SDI IN	BNC × 1 SD-SDI signal (YCbCr 4:2:2 10-bit): SMPTE 259M compliant: 480i, 576i Single-link HD-SDI signal (YPbPr 4:2:2 10-bit): SMPTE 292M compliant: 720/50p, 720/60p, 1035/60i, 1080/50i, 1080/60i, 1080/25p, 1080/24p, 1080/24sF, 1080/30p		–
	HDMI IN	HDMI 19-pin × 1 (Deep Colour, compatible with HDCP, 480p, 576p, 720/60p, 720/50p, 1080/60i, 1080/50i, 1080/24p, 1080/24sF, 1080/25p, 1080/30p, 1080/60p, 1080/50p (non-interlaced signals only), VGA (640 × 480)–WUXGA* <sup>5</sup> (1,920 × 1,200), dot clock: 25–162 MHz		
	DVI-D IN	DVI-D 24-pin × 1 (DVI 1.0 compliant, compatible with HDCP, compatible with single link only, 480p, 576p, 720/60p, 720/50p, 1080/60i, 1080/50i, 1080/24p, 1080/24sF, 1080/25p, 1080/30p, 1080/60p, 1080/50p, VGA (640 × 480)–WUXGA* <sup>5</sup> (1,920 × 1,200), compatible with non-interlaced signals only, dot clock: 25–162 MHz		
	RGB 1 IN RGB 2 IN VIDEO IN S-VIDEO IN SERIAL IN SERIAL OUT REMOTE 1 IN REMOTE 1 OUT REMOTE 2 IN LAN	BNC × 5 (RGB/YPbPr/YCbCr × 1) D-Sub HD 15-pin (female) × 1 (RGB/YPbPr/YCbCr × 1) BNC × 1 (composite video) Mini DIN 4-pin × 1 (S-Video) D-sub 9-pin (female) × 1 (for external control, RS-232C compliant) D-sub 9-pin (male) × 1 (for link control, RS-232C compliant) M3 jack × 1 (for wired remote control) M3 jack × 1 (for link control) D-sub 9-pin (female) × 1 (for external control, contact control) RJ-45 × 1 (for network connection, 10Base-T/100Base-TX, compliant with PLink™)		
Cabinet materials	Moulded plastic			
Dimensions (W × H × D)	530 × 200 × 548.5 mm (20-7/8 × 7-7/8 × 21-19/32 in) (with legs at shortest position, optional lens not included)			
Weight	Approximately 24 kg (52.9 lb) (optional lens not included)			
Operating environment	Operating temperature: 0°C–45°C (32°F–113°F)* <sup>6</sup> , operating humidity: 10%–80% (no condensation)			
Supplied accessories	Power cord with security lock, wireless/wired remote control unit, batteries for remote control (R6/LR6 type × 2), safety wire rope			

\*<sup>1</sup> Measurement, measuring conditions, and method of notation all comply with ISO 21118 international standards. \*<sup>2</sup> With the standby mode set to ECO. When the standby mode is set to ECO, network functions such as power on over the LAN network will not operate, and the serial output terminal cannot be used. Also, only certain commands can be received for external control using the serial terminal. \*<sup>3</sup> 1.78–7.62 m (70–300 inches) with the ET-D75LE5. \*<sup>4</sup> When using only the KEYSTONE correction. When using both the KEYSTONE and ARC corrections of the Geometric Adjustment function: vertical ±5°, horizontal ±5° (vertical ±10° and horizontal ±15° with the ET-D75LE4/D75LE8). \*<sup>5</sup> WUXGA resolution is supported only when the signals are compliant with VESA CVT-RB (Coordinated Video Timing-Reduced Blanking). \*<sup>6</sup> The operating temperature range is 0°C (32°F) to 40°C (104°F) when used in High-Altitude mode (1,400 m (4,593 ft) to 2,700 m (8,858 ft)).

### NOTES ON USE

- Do not install the projector in locations that are subject to excessive water, humidity, steam, or oily smoke. Doing so may result in fire, malfunction, or electric shock.
- The projector uses a high-voltage mercury lamp that contains high internal pressure. This lamp may break, emitting a large sound, or fail to illuminate, due to impact or extended use.
- The projector uses of high-wattage lamp that becomes very hot during operation. Please observe the following precautions.
  - Never place objects on top of the projector while it is operating.
  - Make sure there is an unobstructed space of 500 mm (19-11/16 in) or more around the projector's exhaust openings.
  - Do not stack projector units directly on top of one another for the purpose of multiple (stacked) projection.
  - When stacking projector units, be sure to provide the amount of space indicated between them. These space requirements also apply to installation where only one projector unit is operating at one time and the other unit is used as a backup.
  - If the projector is placed in a box or enclosure, temperature of the air surrounding the projector must be between 0°C (32°F) and 35°C (95°F). Also make sure the projector's intake and exhaust openings are not blocked. Take particular care to ensure that hot air from the exhaust openings is not sucked into the intake.
- If the projector is to be operated continuously 24 hours a day, use the multi-lamp optical system's alternating lamp operation (lamp changer) function. The projector can be operated continuously 24 hours a day in four-lamp operation mode, but it will automatically operate with three lamps for 8 hours of the 24 hours.
- The lamp replacement cycle duration becomes shorter if the projector is operated repeatedly for short periods.
  - The length of time that it takes for the lamp to break or fail to illuminate varies greatly depending on individual lamp characteristics and usage conditions.
  - The brightness of the lamp will gradually decrease with use.
- Because the ET-D75LE5 is a fixed short-throw lens, the lens shift function cannot be used with it.
- Due to natural characteristics of lamps, screen brightness may vary (flicker). This is not an indication of faulty lamp performance.

# Panasonic®

For more information about Panasonic projectors

➤➤➤ <http://panasonic.net/avc/projector>



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