

# Panasonic

BUSINESS

## PT-RZ21K Series

3-Chip DLP™ Projector

PT-RZ21K  
PT-RS20K



# PROJECT WHAT'S NEXT

More of what you want, less of what you don't.



Lenses sold separately.

Worldwide  
Olympic Partner



Worldwide  
Paralympic Partner



Graphic is simulated.

# The New Gold Standard in 20,000 Im Laser Projection. Compact and Filterless\*<sup>1</sup> for the Toughest Gigs.

Panasonic's groundbreaking PT-RZ21K Series 3-Chip DLP™ SOLID SHINE Laser projector combines flagship picture quality produced by the PT-DZ21K/DZ21K2 Series projector — current leader in multi-screen events staging — with the compact size and incredible durability of our mid-range PT-RZ970 Series laser projector. The PT-RZ21K Series is the world's first 3-Chip DLP™ projector\*<sup>2</sup> to feature a filterless\*<sup>1</sup> cooling system and fully sealed optics, delivering unassailable reliability in dusty conditions. Handling is effortless with just two technicians. With 20,000-hour maintenance-free\*<sup>3</sup> operation and software for expedited multi-screen mapping calibration, the rugged yet lightweight PT-RZ21K Series delivers class-beating color reproduction with dramatically reduced running costs, making it the new first choice for events professionals.

## 3-Chip DLP™ Projector PT-RZ21K Series

<b>PT-RZ21K</b>	Resolution	WUXGA	Brightness	21,000 Im (Center)* <sup>4</sup> / 20,000 Im* <sup>5</sup>	Contrast	20,000:1
<b>PT-RS20K</b>		SXGA+				

\*<sup>1</sup> Light-source lifetime may be reduced depending on environmental conditions. Replacement of parts other than the light source may be required in a shorter period. \*<sup>2</sup> As of October 2017. \*<sup>3</sup> At this time, brightness will have decreased to approximately 50 % of its original level (NORMAL Mode, Dynamic Contrast Mode; 3, Image Mode: Dynamic, IEC62087: 2008 Broadcast Content, dust density of 0.15 mg/m<sup>3</sup>). Usage environment affects light-source lifespan. Replacement of parts other than the light source may be required in a shorter period. Panasonic recommends cleaning or checkup at point of purchase after approximately 20,000 hours. \*<sup>4</sup> Measured at center area of screen. \*<sup>5</sup> Measurement method is in compliance with ISO/IEC 21118: 2012 international standards. Value is average of all products when shipped.



Lenses sold separately.



Graphic is simulated.



# Revolutionizing Multi-projector Staging with SOLID SHINE Laser

## Flagship Picture Quality

### Massive Brightness, Compact Body

Combining SOLID SHINE Laser with next-generation 3-Chip DLP™ processing technology, the PT-RZ21K Series develops 21,000 lumens\* of brightness with truly spectacular color performance superior to other lamp-based products. Dual solid-state laser-light sources and dual heat-resistant phosphor wheels work with three DLP™ modules (R/G/B) for intense brightness, true color accuracy, and high contrast on large screens.

\* Luminance is measured at center of screen in NORMAL Mode.

## Dual-Drive Laser Design for Reliability in Dusty Environments

### Dual-Laser Drive

Solid-state laser diodes are grouped into two discrete modules. A redundancy circuit minimizes brightness- and color-uniformity loss should a laser diode fail, making the PT-RZ21K Series ideal for mission-critical applications.



### Sealed and Dustproof Optical Engine

Hermetically sealed laser modules, durable filtering, and refined air-intake maintain brightness and extend life in dusty location. Product testing against severe guidelines assures stable operation in environments containing 0.150 mg of dust per cubic meter.\*

\* Dustproof tests are conducted to confirm operational effectiveness under conditions with 0.15 mg/m<sup>3</sup> of particulate matter (based on tests by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE), and the Japanese Building Maintenance Association). Measurements are made using acceleration tests.



\* American Society of Heating, Refrigerating, and Air-Conditioning Engineers.

## Supreme Flexibility

### Free 360-degree Orientation

SOLID SHINE Laser enables free 360-degree installation through any axis. Together with powered lens shift and wide range of optional lenses, the PT-RZ21K Series can project images from any orientation without picture distortion.



### Quick Start and Quick Off

No warm-up or cool-down period is required when operating PT-RZ21K Series projectors. Images appear almost instantly, and the projector can be switched on and off whenever desired.

## The World's First\*<sup>1</sup> Filterless\*<sup>2</sup> Large-Venue 3-Chip DLP™ Projector

The Panasonic PT-RZ21K Series is the world's first 3-Chip DLP™ laser projector\*<sup>1</sup> to eliminate need for a consumable air filter, enabling maintenance-free operational life of 20,000 hours\*<sup>3</sup> for the whole projector. This is achieved with a hermetically sealed optical engine and heat-sink-based internal cooling system with a one-way airflow.

The projector can operate continuously for long periods in large-scale event environments without regular maintenance, saving operators considerable time and money. With no filter, light-source lifespan of 20,000 hours, and controlled, linear picture degradation, the PT-RZ21K Series leads the field for low TCO.

### SEALING

Prevents air and dust intrusion

Optical engine's hermetic sealing improved by exclusive Panasonic technologies

### COOLING

Hermetically sealed optical engine maintains stable temperature by emitting internal heat via heat sink

### FILTERLESS\*<sup>2</sup>

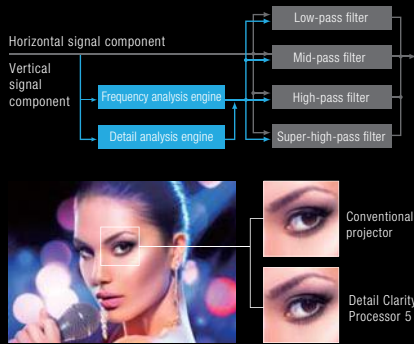
20,000-hour maintenance-free\*<sup>3</sup> for low-TCO operation

\*<sup>1</sup> As of October 2017. \*<sup>2</sup> Light-source lifetime may be reduced depending on environmental conditions. Replacement of parts other than the light source may be required in a shorter period. \*<sup>3</sup> At this time, brightness will have decreased to approximately 50 % of its original level (NORMAL Mode, Dynamic Contrast Mode: 3, Image Mode: Dynamic, IEC62087; 2008 Broadcast Content, dust density of 0.15 mg/m<sup>3</sup>). Usage environment affects light-source lifespan. Replacement of parts other than the light source may be required in a shorter period. Panasonic recommends cleaning or checkup at point of purchase after approximately 20,000 hours.

# Taking Reference Quality Images to the Next Level

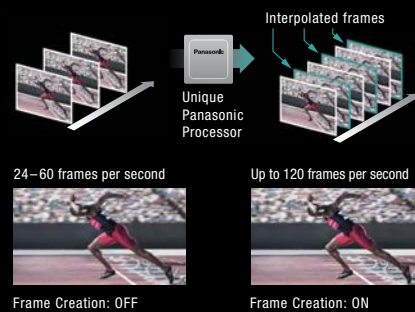
## Detail Clarity Processor 5

Proprietary circuitry analyzes individual video frames to identify and clarify fine details and textures. Algorithms pull information from four frequency bandwidths, from super-high to low, to sharpen outlines, correct contours, and reduce ringing noise.



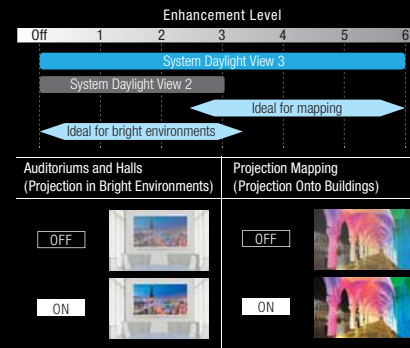
## 120 Hz Real Motion Processor Reduces Motion Blur

Real Motion Processor interpolates images for a 120 Hz\*1 frame-rate. Smooth 120 Hz\*1 reproduction is possible via simultaneous inputs (3G-SDI inputs or DVI-D/HDMI). Together with a refined optical engine to enhance focus, Real Motion Processor delivers a better sense of resolution, contrast, and fluidity.



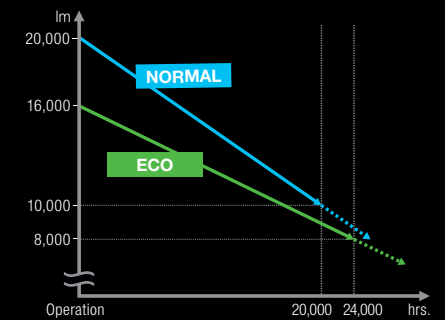
## System Daylight View 3

This premium technology stops pictures washing out in bright light and assures dramatic impact for mapping and multi-projector applications. It uses sensor information to correct sharpness, gamma curves, and colors to suit on-site conditions.



## NORMAL and ECO Modes

The PT-RZ21K is designed for a set 20,000-hour operational lifespan out of the box, with no filter or light-source replacement required. In suitable environments, users can select ECO Mode to arrest brightness decline, useful for permanent installations when the projector is used continuously.



## DIGITAL LINK Connection

DIGITAL LINK transmits uncompressed Full HD video and control commands through a single CAT 5e or higher STP cable for distances of up to 150 m (492 ft)\*2. Optional DIGITAL LINK Switcher or Digital Interface Box further simplifies installation, reduces cabling and associated costs, and enhances reliability.



## Built-in Geometric Adjustment

Geo Adjustment adapts images for projection onto specially shaped screens with fine-tuning via remote control.

## 90 % Brightness Uniformity

SOLID SHINE Laser delivers superior brightness uniformity thanks to accurate white balance control. Brightness uniformity is greater than 90 % when measured at screen corners, edges, and center.

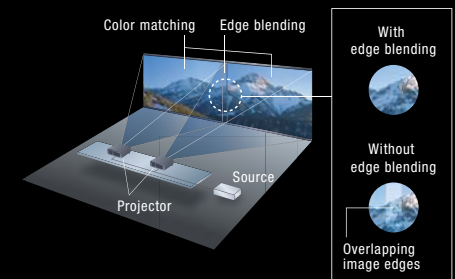
## Guaranteed Laser Safety

SOLID SHINE Laser technology is as safe for eyesight as any lamp-based projector. A diffusing lens reduces the concentration of beam energy, so accidental direct exposure will not result in damage to eyesight.

## Multi-screen Support System

This system optimizes multiple screens with edge blending, color matching, and digital image enlargement functions.

- **Edge Blending:** Edges of adjacent screens can be blended and their luminance controlled.
- **Color Matching:** Corrects color reproduction variations of each projector via PC control software.
- **Digital Image Enlarging:** Digital zoom up to 10x (H/V)\*3, and up to 100 units (10 x 10) can be edge-blended to create large multi-screen images.



\*1 Refresh-rate varies depending on vertical scanning frequency. \*2 150 m (492 ft) transmission available only with ET-YFB200G DIGITAL LINK Switcher for signals up to 1080p. \*3 While input resolution will not change, maintaining image quality is not possible for images enlarged.

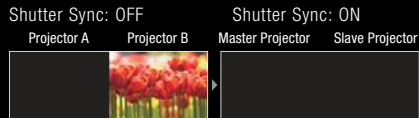
# Engineered for Ultimate Flexibility in Multi-screen Staging Applications

## Contrast and Shutter Sync Function

Contrast Sync allows Dynamic Contrast Control to be synchronized for consistent picture quality across multiple screens. Shutter Sync, meanwhile, synchronizes shutter on/off timing.



Image luminance of all projectors is averaged for unified Dynamic Contrast, rather than each unit setting Dynamic Contrast separately. Step noise is eliminated in edge-blended areas.



If shutter functions are not linked, shutter ON/OFF timing varies. When shutter functions of slave projectors are linked to a master, shutter ON/OFF timing is uniform\*.

\* Includes fade-in and fade-out effects. Projector shutter functions can be set to operate individually if desired.

## Backup Input Guarantees Picture Display

Projectors switch instantly to a backup input\*1 should the primary signal be disrupted, so display is maintained in situations where projection must not be interrupted. No screen-blanking occurs during backup input switching.

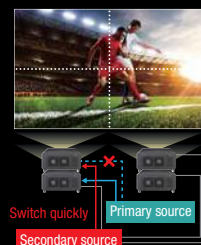
Note: Primary and secondary signals must be the same.

Conventional System Multiple-unit widescreen projection



If the main input signal is disrupted, image display is cut off

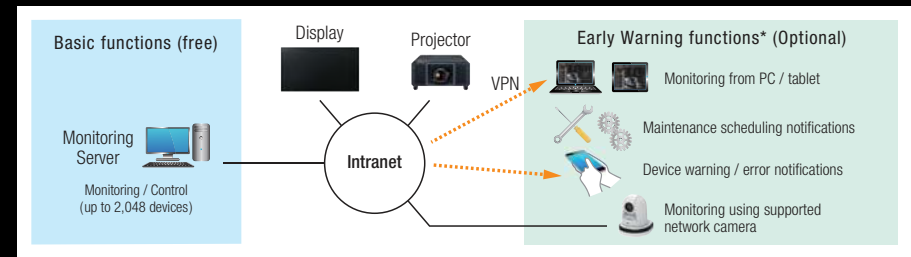
Backup Input Setting Multiple-unit widescreen projection



If primary signal is disrupted, backup signal smoothly engages to maintain image display

## New Multi Monitoring & Control Software

Making its debut with the PT-RZ21K Series, refreshed Panasonic Multi Monitoring & Control Software supports up to 2,048 devices over LAN and features system map visualization or auto-search of devices to be registered. The software is available with Early Warning functions (automatic free 90-day trial is available). These advanced functions enable real-time monitoring, abnormality detection, and advanced notification when servicing is required. Administrators can realize seamless control and real-time monitoring while preventing potential problems before they occur, saving time and enhancing system reliability.



\*Software functionality varies depending on the model.

## Multi-unit Brightness and Color Control

Sensors detect color and brightness apparent on screen. Projectors automatically calibrate for a uniform multi-screen image, adding a layer of convenience and cost saving both in short-term and long-term events.

## Active 3D Projection Capability

This projector series is compatible with active 3D projection technology. It supports an external transmitter and active-shutter glasses, or an active filter and passive glasses\*2 for viewing 3D images.

## Geometry Manager Pro Software and Upgrade Kits

Geometry Manager Pro software expands onboard functionality and simplifies multi-screen setup. The free software enables multi-screen color-matching, edge-blending, and more via networked PC. Two optional plug-in kits are available: ET-UK20, which adds screen uniformity correction and creative masking functions, and ET-CUK10, which activates Auto Screen Adjustment for simultaneous and automatic setup of multiple projectors.

The latter performs multi-screen and curved-screen calibration in three steps using a camera\*3 and networked PC, simplifying adjustment, edge blending, color matching, stacking, brightness, and black level setup.

## Compatible with Panasonic PT-DZ21K/DZ21K2 Series 3-Chip DLP™ Projectors

The PT-RZ21K Series joins the Panasonic 3-Chip DLP™ projector family in sharing a range of mutually compatible optional accessories including frames and ultra-short-throw and zoom lenses. This reduces upgrade or replacement costs for events and staging companies with large inventories.

## Supports Art-Net DMX, Crestron Connected™, and PJLink™

Art-Net DMX protocol for lighting management enables connection with lighting consoles for added functionality and control options. Crestron Connected™ and PJLink™ (Class 2) streamline integration into existing AV infrastructure.

\*1 Combination of primary/secondary input terminals is fixed. Switching to secondary input (or primary input) occurs automatically when the input signal for primary input (or secondary input) is disrupted. The Backup Input Setting is enabled only when the input signal to primary and secondary terminals is the same. \*2 Please contact your sales representative for further information. \*3 Supported cameras: Nikon D5200/D5300/D5500.



## Specifications

Model	PT-RZ21K	PT-RS20K	
Power supply	AC 200 V–240 V, 7.7 A, 50/60 Hz (Light output will decrease to approximately 50 % when using the projector with AC 100 V to AC 120 V [96 A].)		
Power consumption	1,510 W (0.3 W with Standby Mode set to ECO*, 4 W with Standby Mode set to NORMAL)		
DLP™ chip	Panel size	24.4 mm (0.96 inches) diagonal (16:10 aspect ratio)	
	Display method	DLP™ chip × 3, DLP™ projection system	
	Pixels	6,912,000 (1920 x 1200 x 3) pixels	
Refresh rate	120 Hz**		
Lens	Optional (no lens included with this model)		
Light source	Laser Diode (Laser class: Class 1)(Class 3R for US models), Light source life: 20,000 hours (NORMAL Mode, brightness decreases to approx. 50 %) / 24,000 hours (ECO Mode, brightness decreases to approx. 50 %)		
Screen size (diagonal)	1.78–25.4 m (70–1,000 in) with 16:10 aspect ratio	1.78–25.4 m (70–1,000 in) with 4:3 aspect ratio	
	1.78–15.24 m (70–600 in) with the ET-D75LE8, 16:10 aspect ratio	1.78–15.24 m (70–600 in) with the ET-D75LE8, 4:3 aspect ratio	
	3.05–15.24 m (120–600 in) with the ET-D75LE95, 16:10 aspect ratio	3.05–15.24 m (120–600 in) with the ET-D75LE95, 4:3 aspect ratio	
Brightness	21,000 lm (Center)*3 / 20,000 lm*4		
Center-to-corner uniformity	90 %		
Contrast	20,000:1 (Full On/Full Off, Dynamic Contrast Mode: 3)		
Resolution	1920 x 1200 pixels	1400 x 1050 pixels	
Scanning frequency	SD-SDI	SMPTE ST 259 compliant, [YCbCr 4:2:2 10-bit] 480/60i, 576/50i	
	HD-SDI	SMPTE ST 292 compliant, [YPbPr 4:2:2 10-bit] 720/60p, 720/50p, 1080/60i, 1080/50i, 1080/25p, 1080/24p, 1080/24sf, 1080/30p	
	Dual-link HD-SDI	SMPTE ST 372 compliant, [YPbPr 4:2:2 10-bit] 1080/50p, 1080/60p [RGB 4:4:4 12-bit/10-bit] 1080/60i, 1080/50i, 1080/25p, 1080/24p, 1080/24sf, 1080/30p, 2048 x 1080/24p, [X'Y'Z' 4:4:4 12-bit] 2048 x 1080/24p	
	3G-SDI	SMPTE ST 424, 425–2 compliant, [RGB 4:4:4 12-bit/10-bit] 1080/60i, 1080/50i, 1080/25p, 1080/24p, 1080/24sf, 1080/30p, 2048 x 1080/24p, 2048 x 1080/30p, [YPbPr 4:2:2 10-bit] 1080/60p, 1080/50p, 2048 x 1080/48p, 2048 x 1080/50p, 2048 x 1080/60p, [X'Y'Z' 4:4:4 12-bit] 2048 x 1080/24p, 2048 x 1080/25p, 2048 x 1080/30p	
	Dual-link 3G-SDI	SMPTE ST 425–3 compliant, [YPbPr 4:4:4 12-bit/10-bit] 1080/60p, 1080/50p, 2048 x 1080/60p, 2048 x 1080/50p, 2048 x 1080/48p, [RGB 4:4:4 12-bit/10-bit] 1080/60p, 1080/50p, 2048 x 1080/60p, 2048 x 1080/50p, 2048 x 1080/48p	
	HDMI/DVI-D/DIGITAL LINK	480/60*5, 576/50*5, 480/60p, 576/50p, 720/60p, 720/50p, 1080/60i, 1080/50i, 1080/24p, 1080/24sf, 1080/25p, 1080/30p, 1080/60p, 1080/50p, 640 x 400–WUXGA (1920 x 1200) (compatible with non-interlaced signals only), dot clock: 25–162 MHz	
	RGB	fH: 15–100 kHz, fV: 24–120 Hz, dot clock: 162 MHz or less	
YPbPr (YCbCr)	fH: 15.73 kHz, fV: 59.94 Hz [525i (480i)], fH: 15.63 kHz, fV: 50 Hz [625i (576i)], fH: 31.47 kHz, fV: 59.94 Hz [525p (480p)], fH: 31.25 kHz, fV: 50 Hz [625p (576p)], fH: 45.00 kHz, fV: 60 Hz [750 (720/60p)], fH: 37.50 kHz, fV: 50 Hz [750 (720/50p)], fH: 33.75 kHz, fV: 60 Hz [1125 (1080/60i)], fH: 28.13 kHz, fV: 50 Hz [1125 (1080/50i)], fH: 28.13 kHz, fV: 25 Hz [1125 (1080/25p)], fH: 27.00 kHz, fV: 24 Hz [1125 (1080/24p)], fH: 27.00 kHz, fV: 48 Hz [1125 (1080/24sf)], fH: 33.75 kHz, fV: 30 Hz [1125 (1080/30p)], fH: 67.50 kHz, fV: 60 Hz [1125 (1080/60p)], fH: 56.25 kHz, fV: 50 Hz [1125 (1080/50p)]		
Video/YC	fH: 15.73 kHz, fV: 59.94 Hz (NTSC/NTSC4.43/PAL-M/PAL60), fH: 15.63 kHz, fV: 50 Hz (PAL/PAL-N/SECAM)		
Optical axis shift*6	Vertical (from center of screen)	±55 % (±44 % with ET-D75LE6, +68 % – +78 % with ET-D75LE95) (powered)	
	Horizontal (from center of screen)	±20 % (±15 % with ET-D75LE6, ±12 % with ET-D75LE95) (powered)	
Keystone correction range	Vertical: ±40 ° (±22 ° with ET-D75LE50, ±28 ° with ET-D75LE6), Horizontal: ±15 °		
Keystone correction range with optional Upgrade Kit ET-UK20	Vertical: ±45 ° (±40 ° with ET-D75LE10/20, ±22 ° with ET-D75LE50, ±28 ° with ET-D75LE6), Horizontal: ±40 ° (±15 ° with ET-D75LE50/6), Up to a total of ±55 ° during simultaneous horizontal and vertical correction		
Installation	Horizontal/vertical, free 360-degree installation		
Terminals	SDI IN 1	BNC × 1: 3G/HD/SD-SDI input, Dual-link HD-SDI (Link-A), Dual-link 3G-SDI (Link 1)	
	SDI IN 2	BNC × 1: 3G/HD/SD-SDI input, Dual-link HD-SDI (Link-B), Dual-link 3G-SDI (Link 2)	
	HDMI IN	HDMI × 1 (Deep Color, compatible with HDCP)	
	DVI-D IN	DVI-D 24-pin × 1 (DVI 1.0 compliant, compatible with HDCP) (Single-link only)	
	RGB 1 IN	RGB × 1 (BNC × 5): RGB/YPbPr/YC/VIDEO	
	RGB 2 IN	D-sub HD 15-pin (female) × 1: RGB/YPbPr	
	MULTI PROJECTOR SYNC IN / 3D SYNC 1 IN/OUT	BNC × 1	
	MULTI PROJECTOR SYNC OUT / 3D SYNC 2 OUT	BNC × 1	
	SERIAL IN	D-sub 9-pin (female) × 1 for external control (RS-232C compliant)	
	SERIAL OUT	D-sub 9-pin (male) × 1 for link control	
	REMOTE 1 IN / OUT	M3 × 1 for wired remote control, link control	
	REMOTE 2 IN	D-sub 9-pin (female) × 1 for external control (parallel)	
	DC OUT	USB (Type A) × 2, DC 5 V, total of 2 A	
	LAN/DIGITAL LINK	RJ-45 × 1 for network, DIGITAL LINK connection, 100Base-TX, compatible with Art-Net, PjLink™ (Class 2), Deep Color, HDCP	
Dimensions (W × H × D)	598 × 270 × 725 mm (23 17/32" × 10 5/16" × 28 17/32") (not including protruding parts)		
Weight	49.0 kg (108 lbs)		
Operation noise*4	46 dB		
Cabinet materials	Molded plastic		
Operating environment	Operating temperature: 0–50 °C (32–122 °F)*; Operating humidity: 10–80 % (no condensation)		
Applicable software	Logo Transfer Software, Multi Monitoring & Control Software, Early Warning Software, Geometry Manager Pro (ET-UK20 Upgrade Kit, ET-CUK10 Auto Screen Adjustment Kit), Smart Projector Control		

\*1 When Standby Mode is set to ECO, network functions such as power on over LAN will not operate. Additionally, only certain commands can be received for external control using the serial terminal. \*2 Refresh rate varies depending on scanning frequency. \*3 Measured at center area of screen. \*4 Measurement, measuring conditions, and method of notation all comply with ISO 21118 international standards. \*5 Only compatible with dot-clock frequency of 27 MHz (pixel repetition signal). \*6 Optical axis shift is not supported on the ET-D75LE50. \*7 Operating temperature is 0–45 °C (32–113 °F) when used in locations from 1,400 m to 4,200 m (4,593 ft to 13,779 ft) above sea level.

## Optional Accessories

### ET-D75LE50

Fixed-Focus Lens



### ET-D75LE95

Fixed-Focus Lens



### ET-D75LE6

Zoom Lens



### ET-D75LE10

Zoom Lens



### ET-D75LE20

Zoom Lens



### ET-D75LE30

Zoom Lens



### ET-D75LE40

Zoom Lens



### ET-D75LE8

Zoom Lens



### ET-PKD520H

Ceiling Mount Bracket for High Ceilings

### ET-PKD520S

Ceiling Mount Bracket for Low Ceilings

Note: Use ET-PKD520H Ceiling Mount Bracket (for high ceiling) and ET-PKD520S Ceiling Mount Bracket (for low ceiling) in combination with ET-PKD520B Projector Mount Bracket.

### ET-PKD520B

Projector Mount Bracket

### ET-PFD510\*

Frame

Note: ET-PKD520B Projector Mount Bracket can optionally be used with an existing ET-PKD510H/PKD510S Projector Mount Bracket.

\* This frame cannot be used when the separately sold ET-D75LE95/ D75LE90 Fixed-Focus Lens is attached to the projector. Please contact your sales representative for information on portrait orientation.

### ET-UK20

Geometry Manager Pro Software Upgrade Kit

### ET-CUK10 / ET-CUK10P

Auto Screen Adjustment Upgrade Kit

### ET-SWA100 Series\*

Early Warning Software

Note: Part number suffix may differ depending on the license type.

\* Multi Monitoring & Control Software Ver. 2.0 or later is required.

Please download from the following website:

<https://panasonic.net/cns/projector/download/application/>

### ET-D75MKS10\*

Stepping Motor Kit

\* Projector may require the latest firmware update. Calibration is required each time the lens is mounted.

### ET-PLF10\*

Lens Fixed Attachment

\* This attachment may be required in some installation environments.

### ET-YFB200G

DIGITAL LINK Switcher



### ET-YFB100G

Digital Interface Box



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# Panasonic®

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YouTube – [www.youtube.com/user/PanasonicProjector](https://www.youtube.com/user/PanasonicProjector)

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