

# PT-RZ31K Series

3-Chip DLP™ Projectors

# PT-RZ31K PT-RS30K

NAME ADDRESS OF TAXABLE PARTY.

**Evolution Reaches a New Peak** 

Worldwide Olympic Partner Worldwide Paralympic Partner <del>GSS</del>





# BOOST PERFORMANCE, EFFORTLESSLY

The evolution of 3-Chip DLP™ SOLID SHINE Laser culminates in the PT-RZ31K Series, a flagship forged by end-user experience with 31,000-lumen (Center/High Mode)\*1 of brightness for rental/staging events. Convenient on-site rigging and dust-resistant optics push service-free projection beyond 20,000 hours\*2 in Normal Mode for permanent installations. In every detail, these flagships make elite performance last longer.

# PT-RZ31K SERIES

3-Chip DLP<sup>™</sup> Projectors

	PT-RZ31K	PT-RS30K			
Resolution	WUXGA	SXGA+			
Brightness	31,000 lm (Cente	er)*1/ 30,000 lm*3			
Contrast	20,000:1				

\*1 Lumiance measured at center of screen in High Mode. Operation in High Mode may reduce maintenance timing in comparison to use in Normal Mode. \*2 At this time the brightness will have decreased to approximately 50 % of its original level (Normal Mode, Opmanic Contrast Mode: 3, mage Mode: Dynamic, EC62047: 2008 Broadcast Content, dust density of 0.15 mg/m?). Optical Long Life Filter is required for continuous 20,000 hours operation. In High Mode, no maintenance required for 4,000 hours. \*3 Luminance measured in High Mode. Operation in High Mode may reduce maintenance timing in comparison to use in Normal Mode.



As Official Worldwide Olympic Partner, Panasonic supplied about 110 projectors—including a prototype PT-RZ31K Series SOLID SHINE Laser projector—to light up the Opening Ceremony at the Rio 2016 Olympic Games. Chosen for high brightness, brilliant color performance, and advanced mapping capabilities, the projectors performed flawlessly throughout the event.





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## Outstanding Picture Quality

### Stable, Reliable Operation

#### Superior Brightness Meets True-to-Life Color Accuracy

Combining 3-Chip DLP™ imaging with original SOLID SHINE Laser Phosphor technology, the PT-RZ31K Series produces detail-rich and vividly colored pictures with best-in-class\*1 31,000 lumens brightness (Center)\*2 in High Mode. Dual solid-state laser light-sources and specially engineered heat-resistant phosphor wheels work together with three DLP™ modules (R/G/B) for outstanding brightness, color accuracy, and contrast in large venues.

\*1 Claim for Laser Phosphor projectors in its class accurate as of April 2017. \*2 Luminance measured at center of screen in High Mode. Operation in High Mode may reduce maintenance timing in comparison to use in Normal Mode.

#### **Operational Mode Brightness**

Operational Mode	Brightness	Operational Hours	
High Mode	31,000 lm (Center)*2 / 30,000 lm	70 % brightness after 8,000 hours	
Normal Mode	26,000 lm (Center) / 25,000 lm	50 % brightness after 20,000 hours	

Mode is 20.000 hours (Dynamic Contrast Mode: 3, Image Mode: Dynamic, IEC62087: 2008 Broadcast Content, dust density of 0.15 mg/m<sup>3</sup>). Optional Long Life Filter is required for 20,000 hours continuous operation. In High Mode, brightness will have decreased to approximately 70 % of its original level after 8,000 hours operation.

# **Dual-Laser Optical Engine Assures**

Failsafe Reliability

Dual-Drive Laser Optical Engine groups laser diodes into two discrete modules. A redundancy circuit works to minimize brightness- and color-uniformity loss should a laser diode fail, making the PT-RZ31K Series ideal for mission-critical applications where picture presentation must be maintained.

#### **Dustproof Optics Extend Longevity**

The PT-RZ31K Series has hermetically sealed laser modules, durable filtering, and a new air-intake system to extend life and maintain picture quality in dusty locations. SOLID SHINE Laser products are tested against more severe guidelines than other projectors for 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.

Clean Environment	WHO Europe Guideline for Dust Resistance	Japanese Building Maintenance Association ASHRAE
0.030 mg/m²	0.110 <sub>mg/m<sup>3</sup></sub>	0.150 mg/m²

### Flexible Installation

#### Flexible 360-degree Installation

SOLID SHINE Laser enables free 360-degree installation through any axis. Together with powered lens shift and a wide range of optional lenses, the projector can be mounted in any way desired without picture distortion temporarily or in permanent applications.



#### **Quick Start, Quick Off**

The laser light-source doesn't require any time to warm up, so images appear almost instantly with PT-RZ31K Series projectors. There's also no cool-down period when turning the power off at the mains-the projector can be turned on and off any time as necessary.





# **Next-Generation Systems Present Amazing Images**

### 120 Hz\*1 Drive Reduces Motion Blur

Real Motion Processor interpolates images for a 120 Hz<sup>\*1</sup> frame-rate. Smooth, stutter-free 120 Hz<sup>\*1</sup> reproduction is also possible using simultaneous inputs (two 3G-SDI inputs or DVI-D/HDMI combination). Together with a refined optical engine that enhances focus, Real Motion Processor delivers a better sense of resolution, contrast, and fluidity of motion, particularly with fast-paced scenes.



# Detail Clarity Processor 5 Provides Pin-sharp Insight

Proprietary circuitry analyzes individual frames to clarify areas of the image containing fine details and textures. Algorithms pull information from the super-high, high, medium, and low frequency bands of the signal, sharpening outlines, correcting contours, and reducing ringing noise.



## System Daylight View 3 Optimizes for Mapping and Bright Conditions

Panasonic's premium System Daylight View 3 stops pictures washing out in bright light and enhances impact in mapping and multi-projector applications. It uses sensor information to adjust sharpness, manipulate gamma curves, and correct colors to suit on-site conditions.



### Selectable Operational Modes

Select your preferred operational mode to control brightness decline according to application. High Mode maintains 70 % brightness over 8,000 hours\*<sup>2</sup> with linear declination and minimal fluctuation. In Normal Mode, linear brightness decline is about 50 % over 20,000 hours\*<sup>3</sup> of continuous operation with no maintenance required.



#### Dynamic Contrast Adds to Depth and Realism

Digital frame-by-frame scene-linking modulation ensures precise laser light output adjustment for 20,000:1<sup>44</sup> contrast even when bright and dark scenes frequently interchange, all while reducing power consumption.

#### Leads the Class with 90 % Brightness Uniformity

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

#### Power Management Reduces Downtime

Auto power management compensates for voltage fluctuations. Image display is maintained at a reduced brightness even if voltage drops below specified requirements, rather than shutting the projector off.

#### Efficient Cooling System Enhances Reliability

The light source's liquid-cooling system features a redesigned air intake and solid aluminum radiator to suppress temperature rises, allowing stable operation in temperatures up to 45 °C (113 °F)\*5 and reducing noise to 49 dB.

#### Optional Long Life Filter for 20,000-hour\*6 Service-free Operation

Long Life Filter includes an electrostatic Micro Cut Filter that collects minute dust particles with an ion effect. With dust-resistant cabinet, this enables 20,000 hours<sup>46</sup> of projection in Normal Mode with no maintenance.

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Filler Type	High	Normal
Supplied Filter	2,000 hours	4,000 hours
Long Life Filter (Optional ET-EMFU330)	4,000 hours	20,000 hours

\*\*\* Refresh-rate varies depending on vertical scanning frequency. \*2 In High Mode. Filter replacement is required after 4,000 hours for optional Long Life Filter; and 2,000 hours for supplied filter. Measured in Dynamic Contrast Mode 3 with IEC62097; 2008 Broadcast Content and dust density of 0.15 mg/m<sup>3</sup>. Performance results may differ depending on environmental conditions. \*3 In Mormal Mode. Diploma Long Life Filter required for continuous 20,000 hours operation. Filter replacement required after 4,000 hours operation. Filter replacement required after 4,000 hours for supplied filter/optional replacement filter (FI-LMF330). Measured in Dynamic Contrast Mode 3 with IEC62087; 2008 Broadcast Content and dust density of 0.15 mg/m<sup>3</sup>. Performance results may differ depending on environmental conditions. \*4 Mores 4 mg/main Contrast Mode 4 and 1.5 Light output may be reduced by nortex or supplied resplacement filter individual projector models for details on operating temperatures in various conditions. \*6 in Normal Mode. 4,000 hours for High Mode. Usage environment and supplied filter, 4,000 hours for High Mode.

# Quick Installation, Easy Mapping, Simple Multi-screen Setup

# Contrast Sync Function for Multi-screen Configurations

Contrast Sync function for multi-screen applications allows the dynamic contrast control to be synchronized for consistent picture quality across screens, while Shutter Sync synchronizes shutter on/off timing.





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.

# Single-Cable DIGITAL LINK Video and Control 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)\*1. Optional DIGITAL LINK Switcher or Digital Interface Box further simplifies installation, reduces cabling and associated costs, and enhances reliability.

SINGLE CABLE SOLUTION



## Backup Input Setting Assures Reliability

Projectors smoothly switch to a backup input signal should the primary input signal be disrupted\*<sup>2</sup>, enhancing reliability in mission critical control rooms and in applications such as projection mapping displays and staging events where image display must be maintained.

Backup Input Setting

Multiple-unit widescreen projection

Conventional System Multiple-unit widescreen projection

Partially blankl



ed, If primary signal is disrupted, back-up signal smoothly engages to maintain image display

# Multi-screen Support System Seamlessly Connects Multiple Screens

- 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)\*<sup>3</sup>. Up to 100 units (10 x 10) can be edge-blended to create large multi-screen images



#### 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 for long-term events.

#### Built-in Geo Adjustment for Unique Screen Surfaces

Geo Adjustment adapts images for projection onto specially shaped screens with fine-tuning via remote control. Enhanced with Multi-Screen Support System, Geo Adjustment makes creative mapping presentations easy.

#### Geometry Manager Pro Software and Upgrade Kits

Geo software expands image adjustment and simplifies multi-screen setup. The free software performs color matching, edge blending, and other functions via network. Optional upgrades and plug-ins further streamline and automate setup.

#### Common Lenses Cut Your Inventory Costs

The PT-RZ31K Series share optional lenses with Panasonic's 3-Chip DLP™ projector range, potentially reducing inventory for rental/staging professionals, while also supporting the ET-D75LE95 Ultra-Short Throw Lens.

#### **Terminals for Every Application**

image display is cut off

Connect any source device to the PT-RZ31K Series via its array of terminals including 3G-SDI, DIGITAL LINK, DVI-D, and HDMI.

#### Active 3D Projection Capability

The PT-RZ31K Series is compatible with active 3D projection technology. It supports an external transmitter and active-shutter glasses, or an active filter and passive glasses\*<sup>4</sup> for viewing 3D images.

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

The PT-RZ31K Series supports Art-Net DMX protocol for lighting management. This enables connection with lighting consoles for added functionality and control options. Crestron Connected™ and PJLink™ (Class 1) also streamline integration into existing AV infrastructure.

\*1 150 m (492 ft) transmission available only with ET-YFB200G DIGITAL LINK Switcher for signals up to 1080p. \*2 Combination of primary/secondary input terminals is fixed. Supported combinations are DVI-D (primary) and HDMI (secondary) terminals, or SD1 1 (primary) and SD12 (secondary) terminals. The Backup Input Setting is enabled only when the input signal to the primary and secondary terminals is the same. \*3 While the input resolution will not change, maintaining image quality is not possible for images enlarged horizontally and vertically with the digital zoom function. \*4 Please contact your sales representative for further information.

### Eyebolt-ready for Crane Installations

Eyebolts allow the PT-RZ31K Series to hang from a crane, simplifying rigging at large-scale events for rental/staging professionals.





## **Projection Distance**

PT-RZ31K (	(16:10 aspect ratio)							PT-RS30K (4:3 aspect ratio)						Unit:	meters (feet)											
Diseasel	Throw distance (A)											Th	row dist	ance (A)												
image size	ET-D	'5LE6	ET-D7	5LE10	ET-D7	5LE20	ET-D7	5LE30	ET-D7	5LE40	ET-D	75LE8	ET-D75LE50	ET-D	75LE6	ET-D7	75LE10	ET-D7	5LE20	ET-D7	5LE30	ET-D7	5LE40	ET-D	75LE8	ET-D75LE50
- <b>- - -</b>	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.		min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	
1.78 [70'']	1.35 (4.4)	1.62 (5.3)	1.90 (6.2)	2.46 (8.1)	2.46 (8.1)	3.58 (11.7)	3.56 (11.7)	6.94 (22.8)	6.87 (22.5)	11.04 (36.2)	10.78 (35.4)	20.56 (67.5)	1.01 (3.3)	1.39 (4.6)	1.66 (5.4)	1.95 (6.4)	2.52 (8.3)	2.52 (8.3)	3.66 (12.0)	3.64 (11.9)	7.10 (23.3)	7.02 (23.0)	11.28 (37.0)	11.09 (36.4)	21.14 (69.4)	1.03 (3.4)
2.54 [100"]	1.96 (6.4)	2.34 (7.7)	2.76 (9.1)	3.56 (11.7)	3.55 (11.6)	5.17 (17.0)	5.13 (16.8)	9.99 (32.8)	9.88 (32.4)	15.85 (52.0)	15.57 (51.1)	29.53 (96.9)	1.47 (4.8)	2.01 (6.6)	2.41 (7.9)	2.82 (9.3)	3.64 (11.9)	3.63 (11.9)	5.28 (17.3)	5.24 (17.2)	10.21 (33.5)	10.10 (33.1)	16.19 (53.1)	16.01 (52.5)	30.36 (99.6)	1.50 (4.9)
3.05 [120"]	2.36 (7.7)	2.82 (9.3)	3.32 (10.9)	4.30 (14.1)	4.28 (14.0)	6.22 (20.4)	6.18 (20.3)	12.03 (39.5)	11.89 (39.0)	19.05 (62.5)	18.76 (61.5)	35.50 (116.5)	1.78 (5.8)	2.43 (8.0)	2.90 (9.5)	3.40 (11.2)	4.39 (14.4)	<b>4.37</b> (14.3)	6.36 (20.8)	6.31 (20.7)	12.29 (40.3)	12.15 (39.9)	19.46 (63.8)	19.29 (63.3)	36.50 (119.8)	1.82 (6.0)
3.81 [150"]	2.96 (9.7)	3.55 (11.6)	4.18 (13.7)	5.40 (17.7)	5.37 (17.6)	7.81 (25.6)	7.75 (25.4)	15.08 (49.5)	14.90 (48.9)	23.85 (78.2)	23.54 (77.2)	<b>44.47</b> (145.9)	2.24 (7.3)	3.05 (10.0)	3.65 (12.0)	4.27 (14.0)	5.52 (18.1)	5.49 (18.0)	7.98 (26.2)	7.92 (26.0)	15.41 (50.6)	15.23 (50.0)	24.37 (80.0)	24.21 (79.4)	45.72 (150.0)	2.29 (7.5)
5.08 [200'']	3.97 (13.0)	4.75 (15.6)	5.60 (18.4)	7.24 (23.8)	7.19 (23.6)	10.45 (34.3)	10.38 (34.1)	20.16 (66.1)	19.92 (65.4)	<b>31.86</b> (104.5)	31.52 (103.4)	59.41 (194.9)	3.01 (9.9)	4.08 (13.4)	4.89 (16.0)	5.72 (18.8)	7.39 (24.2)	7.34 (24.1)	10.67 (35.0)	10.60 (34.8)	20.60 (67.6)	25.35 (83.2)	32.54 (106.8)	32.40 (106.3)	61.08 (200.4)	3.08 (10.1)
6.35 [250"]	<b>4.98</b> (16.3)	5.96 (19.6)	7.02 (23.0)	9.07 (29.8)	9.00 (29.5)	13.09 (42.9)	13.00 (42.7)	25.25 (82.8)	24.95 (81.9)	<b>39.86</b> (130.8)	39.49 (129.6)	74.36 (244.0)	3.78 (12.4)	5.12 (16.8)	6.13 (20.1)	7.17 (23.5)	9.27 (30.4)	9.20 (30.2)	13.37 (43.9)	13.28 (43.6)	25.79 (84.6)	25.48 (83.6)	<b>40.72</b> (133.6)	40.60 (133.2)	76.44 (250.8)	3.87 (12.7)
7.62 [300']	5.99 (19.7)	7.17 (23.5)	8.44 (27.7)	10.91 (35.8)	10.82 (35.5)	15.73 (51.6)	15.62 (51.2)	30.34 (99.5)	29.97 (98.3)	<b>47.87</b> (157.1)	<b>47.47</b> (155.7)	<b>89.30</b> (293.0)	4.56 (15.0)	6.15 (20.2)	7.37 (24.2)	8.62 (28.3)	11.14 (36.5)	11.06 (36.3)	16.07 (52.7)	15.96 (52.4)	30.99 (101.7)	30.61 (100.4)	<b>48.89</b> (160.4)	<b>48.80</b> (160.1)	91.79 (301.1)	4.65 (15.3)
10.16 [400'']	8.00 (26.2)	9.58 (31.4)	11.28 (37.0)	14.58 (47.8)	14.46 (47.4)	21.01 (68.9)	20.86 (68.4)	<b>40.51</b> (132.9)	<b>40.01</b> (131.3)	63.87 (209.5)	63.42 (208.1)	119.19 (391.0)	6.10 (20.0)	8.22 (27.0)	9.85 (32.3)	11.52 (37.8)	14.90 (48.9)	14.77 (48.5)	21.46 (70.4)	21.31 (69.9)	<b>41.38</b> (135.8)	<b>40.87</b> (134.1)	65.25 (214.1)	65.19 (213.9)	122.51 (401.9)	6.23 (20.4)
12.70 [500"]	10.01 (32.8)	11.99 (39.3)	14.12 (46.3)	18.25 (59.9)	18.09 (59.4)	26.29 (86.3)	26.11 (85.7)	50.68 (166.3)	50.05 (164.2)	79.88 (262.1)	79.37 (260.4)	149.08 (489.1)	7.64 (25.1)	10.29 (33.8)	12.33 (40.5)	14.42 (47.3)	18.65 (61.2)	18.48 (60.6)	26.86 (88.1)	26.67 (87.5)	51.77 (169.8)	51.12 (167.7)	81.60 (267.7)	81.59 (267.7)	153.23 (502.7)	7.80 (25.6)
15.24 [600']	12.03 (39.5)	14.40 (47.2)	16.96 (55.6)	21.92 (71.9)	21.73 (71.3)	31.58 (103.6)	31.35 (102.9)	60.85 (199.6)	60.09 (197.1)	95.89 (314.6)	95.32 (312.7)	178.96 (587.1)	9.18 (30.1)	12.36 (40.6)	14.81 (48.6)	17.33 (56.9)	22.40 (73.5)	22.19 (72.8)	32.25 (105.8)	32.03 (105.1)	62.15 (203.9)	61.38 (201.4)	97.95 (321.4)	97.98 (321.5)	183.95 (603.5)	9.38 (30.8)
17.78 [700']	14.04 (46.1)	16.82 (55.2)	<b>19.80</b> (65.0)	25.60 (84.0)	25.36 (83.2)	36.86 (120.9)	36.60 (120.1)	71.02 (233.0)	70.13 (230.1)	111.90 (367.1)	111.27 (365.1)		10.72 (35.2)	14.43 (47.3)	17.29 (56.7)	20.23 (66.4)	26.15 (85.8)	25.91 (85.0)	37.65 (123.5)	37.38 (122.6)	72.54 (238.0)	71.64 (235.0)	114.30 (375.0)	114.38 (375.3)		10.96 (36.0)
20.32 [800"]	16.06 (52.7)	19.23 (63.1)	22.64 (74.3)	29.27 (96.0)	29.00 (95.1)	42.14 (138.3)	<b>41.84</b> (137.3)	81.19 (266.4)	80.17 (263.0)	127.91 (419.7)	127.23 (417.4)	-	12.27 (40.3)	16.50 (54.1)	19.77 (64.9)	23.13 (75.9)	29.90 (98.1)	29.62 (97.2)	43.04 (141.2)	42.74 (140.2)	82.93 (272.1)	81.89 (268.7)	130.65 (428.6)	130.77 (429.0)	-	12.53 (41.1)
22.86 [900"]	18.07 (59.3)	21.64 (71.0)	25.48 (83.6)	32.94 (108.1)	32.63 (107.1)	47.42 (155.6)	47.09 (154.5)	91.36 (299.7)	90.21 (296.0)	143.92 (472.2)	143.18 (469.8)	-	13.81 (45.3)	18.57 (60.9)	22.25 (73.0)	26.03 (85.4)	33.65 (110.4)	33.33 (109.4)	48.44 (158.9)	48.10 (157.8)	93.32 (306.2)	92.15 (302.3)	147.00 (482.3)	147.17 (482.8)	-	14.11 (46.3)
25.40 [1000"]	20.08 (65.9)	24.06 (78.9)	28.33 (92.9)	36.61 (120.1)	36.27 (119.0)	52.70 (172.9)	52.33 (171.7)	101.53 (333.1)	100.25 (328.9)	159.93 (524.7)	159.13 (522.1)	-	15.35 (50.4)	20.64 (67.7)	24.73 (81.1)	28.93 (94.9)	37.40 (122.7)	37.05 (121.6)	53.83 (176.6)	53.45 (175.4)	103.71 (340.3)	102.41 (336.0)	163.36 (536.0)	163.56 (536.6)	-	15.68 (51.4)

#### PT-BZ31K (16:10 aspect ratio

PT-RZ31	K (16:1	0 aspect	ratio)						PT-RS30	)K (4:3 as	spect rat	tio)			Unit: me	ters
				ET-D75	LE95							ET-D75	E95			
Diagonal image size	(A)	(B)	(C)	(D)	(	E)	(	F)	(A)	(B)	(C)	(D)	(	E)	(	F)
Ť					min.	max.	min.	max.					min.	max.	min.	т
3.05	0.94	0.97	0.68	-0.39	0.17	0.33	0.59	0.75	0.96	0.99	0.70	-0.37	0.18	0.25	0.59	0.
[120]	(3.1)	(3.2)	(2.2)	(-1.3)	(0.6)	(1.1)	(1.9)	(2.5)	(3.1)	(3.2)	(2.3)	(-1.21)	(0.6)	(0.8)	(1.9)	(2
3.81	1.18	1.20	0.91	-0.16	0.24	0.44	0.66	0.86	1.20	1.23	0.94	-0.13	0.25	0.34	0.67	0.
[150]]	(3.9)	(3.9)	(3.0)	(-0.5)	(0.8)	(1.5)	(2.2)	(2.8)	(3.9)	(4.0)	(3.1)	(-0.4)	(0.8)	(1.1)	(2.2)	(2
5.08	1.56	1.59	1.30	0.23	0.37	0.63	0.79	1.05	1.59	1.62	1.33	0.26	0.38	0.50	0.80	0
[200]]	(5.1)	(5.2)	(4.3)	(0.8)	(1.2)	(2.1)	(2.6)	(3.4)	(5.2)	(5.3)	(4.4)	(0.9)	(1.2)	(1.6)	(2.6)	(3
6.35	1.95	1.97	1.68	0.61	0.49	0.82	0.91	1.24	1.99	2.01	1.72	0.65	0.50	0.66	0.92	1
[250]]	(6.4)	(6.5)	(5.5)	(2.0)	(1.6)	(2.7)	(3.0)	(4.1)	(6.5)	(6.6)	(5.6)	(2.1)	(1.6)	(2.2)	(3.0)	(3
7.62	2.33	2.36	2.07	1.00	0.62	1.02	1.03	1.43	2.38	2.41	2.12	1.05	0.63	0.81	1.05	1.
[300]]	(7.6)	(7.7)	(6.8)	(3.3)	(2.0)	(3.3)	(3.4)	(4.7)	(7.8)	(7.9)	(7.0)	(3.4)	(2.1)	(2.7)	(3.4)	(4
8.89	2.72	2.74	2.45	1.38	0.74	1.21	1.16	1.62	2.77	2.80	2.51	1.44	0.76	0.97	1.18	1.
[350]]	(8.9)	(9.0)	(8.0)	(4.5)	(2.4)	(4.0)	(3.8)	(5.3)	(9.1)	(9.2)	(8.2)	(4.7)	(2.5)	(3.2)	(3.9)	(4
10.16	3.10	3.13	2.84	1.77	0.86	1.40	1.28	1.81	3.17	3.19	2.90	1.83	0.88	1.13	1.30	1.
[400"]	(10.2)	(10.3)	(9.3)	(5.8)	(2.8)	(4.6)	(4.2)	(5.9)	(10.4)	(10.5)	(9.5)	(6.0)	(2.9)	(3.7)	(4.3)	(5
12.70	3.87	3.90	3.61	2.54	1.11	1.78	1.53	2.20	3.95	3.98	3.69	2.62	1.14	1.44	1.56	1.
[500]	(12.7)	(12.8)	(11.8)	(8.3)	(3.6)	(5.8)	(5.0)	(7.2)	(13.0)	(13.1)	(12.1)	(8.6)	(3.7)	(4.7)	(5.1)	(6
15.24	4.64	4.67	4.38	3.31	1.36	2.16	1.78	2.58	4.74	4.77	4.48	3.41	1.39	1.76	1.81	2.
[600]	(15.2)	(15.3)	(14.4)	(10.9)	(4.5)	(7.1)	(5.8)	(8.5)	(15.6)	(15.6)	(14.7)	(11.2)	(4.6)	(5.8)	(5.9)	(7

**Dimension Definitions** 

(feet)

#### If using lens other than the ET-D75LE95 SCREEN TOP ÷CIÉ PROJECTOR SCREEN +CI SCREEN BOTTOM PROJECTOR

If using the ET-D75LE95



Terminals 1 2 3 4 5 6 7 8 9	
	1. REMOTE 1 2. REMOTE 1 3. REMOTE 2 4. SERIAL IN 1 5. SERIAL OUT
	6. MULTI PRO 3D SYNC 1 7. MULTI PRO 3D SYNC 2
10 11 12 13 14 15 16	

E 1 IN terminal	8. DC 1 OUT terminal
E 1 OUT terminal	9. DC 2 OUT terminal
E 2 IN terminal	10. SDI 1 IN terminal
IN terminal	11. SDI 2 IN terminal
OUT terminal	12. RGB 1 IN terminal
PROJECTOR SYNC IN/	13. RGB 2 IN terminal
C 1 IN/OUT terminal	14. DVI-D IN terminal
PROJECTOR SYNC OUT/	15. HDMI IN terminal
C 2 OUT terminal	16. DIGITAL LINK/LAN terminal





6

#### Specifications

**Optional Accessories** 

Model	ļ	PT-RZ31K	PT-RS30K						
Power supply		AC 200-240 V, 50/60 Hz; AC 100-200 V, 50/60 Hz (brightness is restricted with lower voltage)							
Power consur	nption	2,870 W (0.3 W with Standby Mode set to Eco*1, 4 W with Standby Mode set to Normal) [2,870 VA, AC 200 V] Average Power Consumption: 2,310 W (High Mode), 1,890 W (Normal Mode), 1,040–1,680 W (Long Life 1 Mode), 924–1,580 W (Long Life 2 Mode), 794–1,460 W (Long Life 3 Mode) [Operating temperature: 25 °C (77 °F), attitude: 700 m (2,297 ft), IEC627087: 2008 Broadcast content, Image Mode: Standard, Dynamic Contrast Mode: 2]							
DLP™ chip	Panel size	24.4 mm (0.96 inches) diagonal (16:10 aspect ratio)	24.1 mm (0.95 inches) diagonal (4:3 aspect ratio)						
	Display method	DLP™ chip × 3, DLP™ projection system							
	Pixels	912,000 (1920 x 1200 x 3) pixels 4,410,000 (1400 x 1050 x 3) pixels							
Refresh rate		120 Hz*2							
Lens		Optional (no lens included with this model)							
Light source		Laser diode (laser class: Class 1), Light-source life: 18,000 hours (High Mode, brightness decreases to approx 43,800 hours (Long Life 1 Mode, consistent brightness), 61,320 hours (Long Life 2 Mode, consistent brightne [IEC627087: 2008 Broadcast content, Image mode: Standard, Dynamic Contrast Mode: 3]	x. 50 %) <sup>,3</sup> , 20,000 hours (Normal Mode, brightness decreases to approx. 50 %), sss), 87,600 hours (Long Life 3 Mode, consistent brightness)						
Filter		With supplied filter: 4,000 hours (Normal Mode), 2,000 hours (High Mode), 20,000 hours (Long Life 1/2/3 Mode);	With Long Life Filter: 20,000 hours (Normal Mode), 4,000 hours (High Mode), 40,000 hours (Long Life 1/2/3 Mode)						
Screen size (	fiagonal)	1.78-25.4 m (70-1,000 in) with 16:10 aspect ratio 1.78-15.2 m (70-600 in) with the E1-705LE9 16:10 aspect ratio 3.05-15.24 m (120-600 in) with the E1-705LE95, 16:10 aspect ratio	1.78-25.4 m (70-1.000 in) with 4/3 aspect ratio 1.78-15.24 m (70-60 in) with the ET-D75LE8, 4/3 aspect ratio 3.05-15.24 m (120-600 in) with the ET-D75LE95, 4/3 aspect ratio						
Brightness		31,000 im (Center)"4"5/30,000 im"4"5 (High Mode), 26,000 im (Center)"4"5/25,000 im"4"5 (Normal Mode), 12	2,000 Im (Long Life 1 Mode), 10,000 Im (Long Life 2 Mode), 8,000 Im (Long Life 3 Mode)						
Center-to-cor	ner uniformity* <sup>5</sup>	90 %							
Contrast*5		20,000:1 (Full On/Full Off, Dynamic Contrast Mode: 3)							
Resolution		1920 x 1200 pixels	1400 x 1050 pixels						
Scanning	SD-SDI	SMPTE ST 259 compliant, [YCBCR 4:2:2 10-bit] 480/60i, 576/50i							
nequency .	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, [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, 2048 x 1080/25p						
	3G-SDI	SMPTE ST 424 compliant, [RGB 4:4:4 12-bit/10-bit] 1080/60i, 1080/50i, 1080/25p, 1080/24p, 1080/24F, 10 [YPBPR 4:2:2 10-bit] 1080/60p, 1080/50p, 2048 x 1080/48p, 2048 x 1080/50p, 2048 x 1080/50p	80/30p, 2048 x 1080/24p, 2048 x 1080/25p, 2048 x 1080/30p, :4 12-bil) 2048 x 1080/24p, 2048 x 1080/25p, 2048 x 1080/30p						
	Duai-link 3G-SDI	SMPTE ST 425 compliant, [YPaPs 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 1080/48p							
	HDMI/DVI-D/DIGITAL LINK	48/J/b/d/ - Norkoum - Alauroup, 5/b/sup, / zuroup, / zur							
	RGB	H: 15-100 kHz, W: 24-120 Hz, dot clock. 152 MHz or lower							
-	YPBPr (YCBCr)	H: 15.73 kHz, N: 59.94 Hz [480/60], H: 15.63 kHz, N: 50 Hz [576/50], H: 31.47 kHz, N: 59.94 Hz [480/60] H: 37.50 kHz, N: 50 Hz [72:05:00], H: 33.75 kHz, N: 60 Hz [1080/60], H: 23.13 kHz, N: 50 Hz [1080/50], H H: 27.00 kHz, N: 48 Hz [1080/24sF], H: 33.75 kHz, N: 30 Hz [1080/30p], H: 67.50 kHz, N: 60 Hz [1080/60p	), Ht: 31.25 kHz, Vt: 50 Hz (576/50p), Ht: 45.00 kHz, IV: 60 Hz (720/60p), 1: 28.13 kHz, IV: 25 Hz (1900/250p), Ht: 27.00 kHz, IV: 24 Hz (1080/24p), ), IH: 56.25 kHz, IV: 50 Hz (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	Vertical (from center of screen)	±55 % (±44 % with ET-D75LE6, +68 % - +78 % with ET-D75LE95) (powered)	±50 % (±40 % with ET-D75LE6, +67 % - +71 % with ET-D75LE95) (powered)						
axis shift*9	Horizontal (from center of screen)	±20 % (±15 % with ET-D75LE6, ±12 % with ET-D75LE95) (powered)	±30 % (±20 % with ET-D75LE6, ±8 % with ET-D75LE95) (powered)						
Keystone corr	rection range	Vertical: ±40 $^{\circ}$ (± 22 $^{\circ}$ with ET-D75LE50, ±28 $^{\circ}$ with ET-D75LE6), Horizontal: ±15 $^{\circ}$							
Keystone corr	ection range with optional Upgrade Kit ET-UK20	Vertical: ±45 $^{\circ}$ (± 40 $^{\circ}$ with ET-D75LE10/20, ±22 $^{\circ}$ with ET-D75LE50, ±28 $^{\circ}$ with ET-D75LE6), Horizontal: ±	+40 ° (±15 ° with ET-D75LE50/6), Up to a total of ±55 ° during simultaneous horizontal and vertical correction						
Installation		Ceiling/floor, front/rear, free 360-degree installation							
Terminals	SDI 1 IN	BNC × 1: 3G/HD/SD-SDI input, Dual-link HD-SDI (Link-A), Dual-link 3G-SDI (Link 1)							
	SDI 2 IN	BNC × 1: 3G/HD/SD-SDI input, Dual-link HD-SDI (Link-B), Dual-link 3G-SDI (Link 2)							
	HDMI IN	HDMI 19-pin × 1 (Deep Color, compatible with HDCP)							
	DVI-D IN	DVI-D 24-pin × 1 (single link, DVI 1.0 compliant, compatible with HDCP)							
	RGB 1 IN	RGB × 1 (BNC × 5): RGB/YPbPr/YCbCr/YC/VIDEO							
	RGB 2 IN	D-sub HD 15-pin (female) × 1: RGB/YPBPr/YCBCr							
	MULTI PROJECTOR SYNC IN/3D SYNC 1 IN/OUT	BNC × 1							
-	MULTI PROJECTOR SYNC OUT/3D SYNC 2 OUT	BNC × 1							
-	SEBIAL IN	D-sub 9-pin (female) × 1 for external control (BS-232C compliant)							
-	SEBIAL OUT	D-sub 9-pin (male) × 1 for link control							
-	BEMOTE 1 IN	M3 x 1 for wired remote control							
	REMOTE 1 OUT	M3 × 1 for link control							
	REMOTE 2 IN	Mo x 1 tot link culturoi D-sub 9-pin (female) x 1 for external control (staralle)							
-		U-Sub 9-pn (temate) x - 1 ror external control (parallel) BL45 x - 1 (ror external control (parallel) BL45 x - 1 (ror external x - 1 rot external - 100 Rase-TX control tible with drt-Net P Link <sup>TM</sup> (class 1). Deen Color. HDCP							
		USP Type A x 2 for newer supply (DC 5 V, max 000 mÅ)							
Cohinet mete	viele .	Matel melded electic							
Dimonoiore d		Wicka, Molecu prastite	$72 \text{ mm}^{*11} \times 1.070 \text{ mm} (97.9)$ , $\frac{\pi}{2} \times 14.11$ , $\frac{\pi}{2} \times 40.1$ , $\frac{\pi}{2}$ (not including protociling ports)						
China di di	W × T × U)	Too min x 410 min ~ x 1,200 min (27 29/32 X 10 19/32 X 49 7/32 ) (including protroung parts); 700 mm X 3	COE mm v1 400 mm (25 <sup>37</sup> /6 X 14 <sup>17</sup> /16 X 42 <sup>1</sup> /8 ) (not including protroughly parts)						
Shipping dim	ensions (W x H x D)	P1-RZ31K/KUY: 914 mm x 625 mm x 1,488 mm (35 31/32 x 24 19/32 x 58 19/32 ); P1-RZ31KE: 914 mm x 1	625 mm x 1,488 mm (35 <sup>31</sup> /32 x 24 <sup>19</sup> /32 x 58 <sup>19</sup> /32 )						
weight*12		Approx. 79 kg (174 lbs.)							
Shipping weig	gnt	PT-RZ31K/KUY: 100.7 kg (222.0 lbs.), PT-RZ31KE: 97.5 kg (214.9 lbs.)							
Operation noi	se*5	49 dB							
Uperating env	nronment	Uperating temperature: 0-50 °C (32-122 °F)*13 [altitude: up to 1,400 m (4,593 ft), High/Normal Mode]; 0-4 Long Life1/2/3 Mode]; 0-40 °C (32-104 °F) [altitude: up to 1,400 m (4,593 ft) with Smoke Cut Filter]; Operat	t5 °C (32–113 °F) <sup>713</sup> [altitude: up to 4,200 m (13,780 ft), High/Normal/Standby/Eco/ ting humidity: 10–80 % (no condensation)						
Cupplied ages	essories	Power cord x 2, wireless/wired remote control unit, batteries (R6/AA type x 2), lens drop-prevention screw, replac	sement filter units v 4 (ET_EME220) long hole cover, software CD_POM (Long Transfer Software						

\*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 vertical scanning frequency. \*3 Brightness will have decreased to approximately 70 % of its original level after 5,000 hours operation. \*4 With leves other than ET-075LE95 and power supply of AC 200 V. \*5 Measurement, measuring conditions, and method of notation all comply with ISO/IEC 21118: 2012 international standards. Value is average of all products when shipped. \*0 hours operation. \*4 With leves other than ET-075LE95 and power supply of AC 200 V. \*5 Measurement, measuring conditions, and method of notation all comply with ISO/IEC 21118: 2012 international standards. Value is average of all products when shipped. \*0 hours operation. \*4 With leves other than ET-075LE95 and power supply of AC 200 V. \*5 Measurement, when shipped. \*0 hours operation with optical concept with ISO/IEC 21118: 2012 international standards. Value is average of all products when shipped. \*0 hours operation with optical concept vertical control with optical concept vertical context when shipped. \*0 hours operation with optical concept vertical vertical



Geometry Manager Pro Upgrade Kit

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

ET-CUK10 Series Auto Screen Adjustment Upgrade Kit (Except in the United States)

ET-YFB200G DIGITAL LINK Switcher



ET-YFB100G Digital Interface Box

# Panasonic

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