Panasonic

BUSINESS

PT-**RQ13K**
3-Chip DLP™ Projector

A Small Box of Big Ideas for Picture-Perfect 4K⁺

4K PROFESSIONAL *

* Resolution 5120 x 3200 Pixels (QUAD PIXEL DRIVE: ON)

SOLID SHINE LASER

Lenses sold separately.

PICTURE BY **DLP** A TEXAS INSTRUMENTS TECHNOLOGY

Worldwide Olympic Partner

Worldwide Paralympic Partner

Image is simulated.

The World's Smallest and Lightest**
3-Chip DLP™ 4K+ Laser Phosphor Projector

*
PROFESSIONAL
* Resolution 5120 x 3200 Pixels
(QUAD PIXEL DRIVE: ON)

Add breathtaking 4K+ projection to any venue with the PT-RQ13K, the world's most compact** 3-Chip DLP™ projector. With Quad Pixel Drive rendering pixels invisible in film-like 5120 x 3200 video, and 10,000 lm of consistently bright SOLID SHINE Laser power, performance is nothing short of spectacular. Pair with any lens from Panasonic's 3-Chip DLP™ family (including those in your current inventory) and see how the PT-RQ13K's small size, powered lens shift, and 360 ° multi-axis rotation saves you time and money in permanent or temporary installations. In fact, you can expect up to 20,000 hours*1 of continuous maintenance-free operation at full power—just one of many reasons to choose Panasonic.

** Weight and size claim is accurate as of November 2015 among 10,000 lm-class projectors with 4K or higher resolution.

RQ13K
Clear and natural images without visible pixels
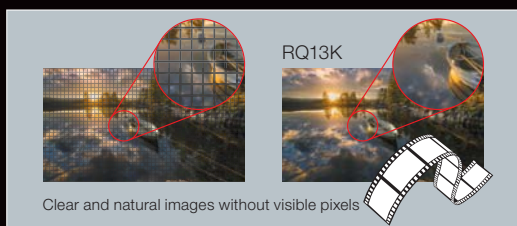
3-Chip DLP™ Projector

PT-**RQ13K**
Lenses sold separately.

10,000 lm	4K+

*1 At 20,000 hours, projector brightness will have decreased to approximately half of its original level (Dynamic Contrast Mode: 3, Image Mode: Dynamic). Panasonic recommends cleaning or checkup at point of purchase after every 20,000-hour period (approximately). 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.

SOLID SHINE Laser Technology Meets 3-Chip DLP™ Projection

Bright and Vivid Picture Quality

Combining 3-Chip DLP™ imaging with Panasonic's original SOLID SHINE Laser technology, the PT-RQ13K achieves lifelike 4K+ resolution with a high 10,000 lm of brightness. Two powerful solid-state laser light source modules and three independent DLP™ chips for red, green, and blue ensure outstanding brightness, color accuracy, and contrast.

More Accurate Color Reproduction

The PT-RQ13K captures a more accurate Rec. 709-compliant color space than comparable laser projectors. A blue laser ensures greater precision while an expanded color gamut improves white balance accuracy.

Heat-resistant phosphor wheel ensures high brightness and excellent reliability for long periods.

Ultra-Durable Laser Optical Engine for Continuous 24-hour Operation

Dual-Drive Laser Optical Engine uses two discrete light sources grouping laser diodes into modules. A laser light source redundancy circuit ensures minimal reduction in brightness and color uniformity in the event of laser diode failure, making the PT-RQ13K ideal for applications where maintaining vision is critical. Further, brightness decreases gradually and in a linear rather than exponential fashion (as is common to lamp-based projectors) over its 20,000-hour[1] maintenance-free service life.
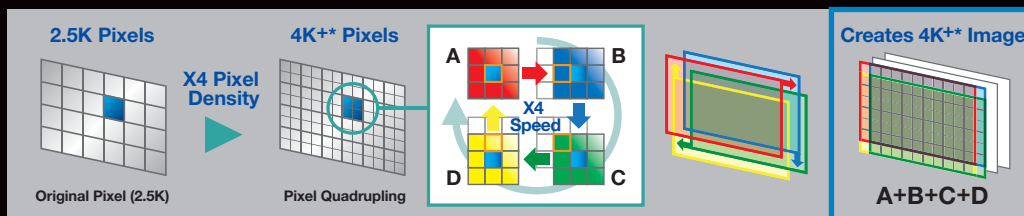
Scintillating Picture Quality in 4K+ Resolution

Quad Pixel Drive Goes Beyond 4K

The PT-RQ13K achieves better-than-4K resolution by employing a high-speed 2560 x 1600-pixel (WQXGA) DMD chip that shifts each pixel vertically and horizontally, effectively quadrupling the pixel count. Working together with Real Motion Processor 240 Hz frame-creation technology, Quad Pixel Drive produces stunningly detailed 5120 x 3200-pixel (4K+, 16:10) images that retain natural sharpness and clarity when upscaling from a native Full HD source. As well as producing liquid-smooth and accurate video, the added detail also makes small text clearly legible on images used in presentations and lectures.
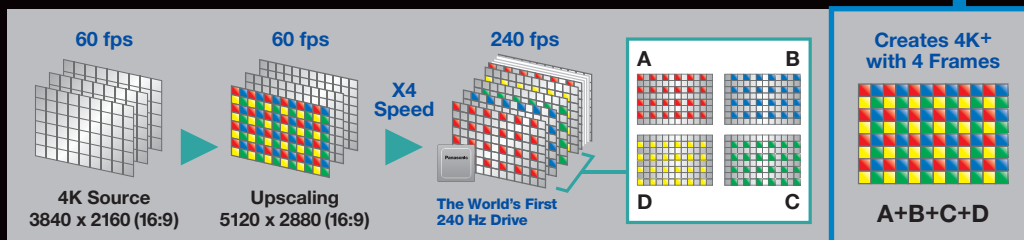
Pixel Quadrupling Technology
Shifting pixels vertically and horizontally creates ultra-high-resolution pictures that exceed standard UltraHD.

2.5K Pixels	4K+* Pixels		Creates 4K+* Image
	X4 Pixel Density	A B / **X4 Speed** / D C	
Original Pixel (2.5K)	Pixel Quadrupling		A+B+C+D

New Real Motion Processor
Panasonic's unique high-speed 240 Hz frame-creation technology for up to 5120 x 3200-pixel (16:10) images ensures the smoothest reproduction of fast-moving 4K+ sequences.

60 fps	60 fps	240 fps	Creates 4K+ with 4 Frames
		X4 Speed / The World's First 240 Hz Drive	A B / D C
4K Source 3840 x 2160 (16:9)	Upscaling 5120 x 2880 (16:9)		A+B+C+D

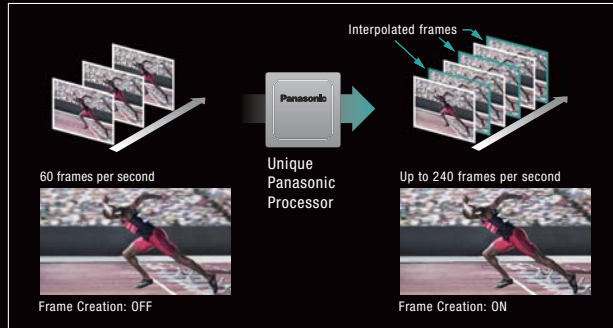**Synchronize**

Screen Resolution

4K+

Beyond UltraHD 5120 x 3200*

* Maximum physical resolution.

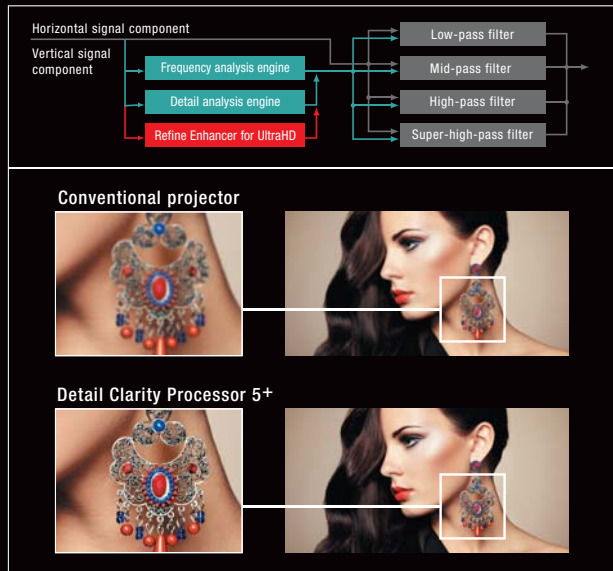# Powerful Features to Deliver Consistently Brilliant Images

Original Panasonic Technology Reduces Motion Blur

Real Motion Processor uses sophisticated algorithms to create three additional frames for each image, boosting native 60 fps footage to 240 frames per second. The result is incredibly smooth and realistic motion rendering, particularly useful for the broadcast of sporting events and other fast-paced video. Further, images of up to 240 Hz[*2] can be displayed with SDI, DVI-D, and HDMI simultaneous inputs[*3*4]. A refined optical engine enhances focus performance for a lifelike sense of resolution, contrast, and fluidity.

Interpolated frames

60 frames per second
Unique Panasonic Processor
Up to 240 frames per second

Frame Creation: OFF   Frame Creation: ON

Detail Clarity Processor 5+ Clarifies and Enhances Fine Details

Panasonic's new generation circuit technology analyzes each individual image frame by frame to clarify areas containing fine details and textures. Powerful algorithms extract hidden information from the super high, high, medium, and low frequency video bands, sharpening outlines, correcting contours, and reducing ringing noise to improve the sense of resolution. The PT-RQ13K adds an exclusive Refine Enhancer algorithm designed to clean and enhance the finest details in 4K+ images.
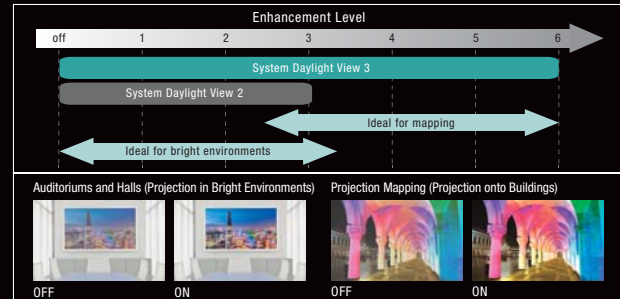

Horizontal signal component
Vertical signal component
Frequency analysis engine
Detail analysis engine
Refine Enhancer for UltraHD
Low-pass filter
Mid-pass filter
High-pass filter
Super-high-pass filter

Conventional projector

Detail Clarity Processor 5+

Dynamic Contrast Function for High 20,000:1[*5] Contrast

The PT-RQ13K projector directly modulates laser power output to enable high contrast while reducing power consumption. Digitally controlled frame-by-frame scene-linking modulation ensures highly precise light output adjustment, and accurate 20,000:1[*5] contrast is achieved even when bright and dark scenes suddenly or frequently interchange. There is also almost no drop in contrast after extended use.

System Daylight View 3 Improves Color Perception

This proprietary technology optimizes image quality to improve color perception of images projected onto walls and other exotic surface materials (ideal for mapping applications) as well as in environments with bright ambient light. Combined with high 10,000 lm brightness, the PT-RQ13K delivers clear and comfortable viewing in the most challenging applications.

Enhancement Level
off 1 2 3 4 5 6
System Daylight View 3
System Daylight View 2
Ideal for mapping
Ideal for bright environments

Auditoriums and Halls (Projection in Bright Environments)   Projection Mapping (Projection onto Buildings)
OFF   ON   OFF   ON

Waveform Monitor Function

When source device output level fluctuates due to the performance of the device or its cable connections, the original black and white levels of the image cannot be reproduced correctly. The PT-RQ13K displays the waveforms on screen where they can be adjusted either automatically or manually as preferred.
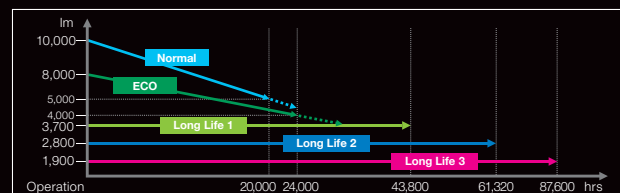
DICOM Simulation Mode[*6]

This imaging mode is similar to the DICOM Part 14 medical imaging standard. It lends a film-like resolution to X-ray images, making the PT-RQ13K ideal for medical presentations and training.

Normal Mode   DICOM Simulation Mode

Selectable Operational Modes Maintain Image Quality Longer

• **Approx. 20,000 Hours[*7] of Continuous Operation (Normal Mode)**
In Normal Mode with a maximum 10,000 lm brightness, PT-RQ13K can operate continuously for approximately 20,000 hours[*7]. In Eco Mode at 8,000 lm, this is extended to approximately 24,000 hours[*7] of continuous operation. These modes are ideal for education or signage applications.

• **Up to 10 Years[*8] Operation with Constant Brightness Modes**
In environments where very high brightness is not necessary, such as surveillance, control, and simulation rooms, constant operation modes extend light source replacement to up to 87,600 hours[*8] in Long Life 3 Mode—about 10 years of 24/7 projection—with consistent brightness and color.

lm
10,000
Normal
8,000
ECO
5,000
4,000
3,700 Long Life 1
2,800 Long Life 2
1,900 Long Life 3
Operation   20,000 24,000   43,800   61,320   87,600 hrs

• **User Operating Mode**
In addition to preset operating modes, the PT-RQ13K can be customized to achieve your preferred balance of brightness or extended life. Brightness can be set from 1,900 to 10,000 lm or the lifetime set to a maximum of 10 years.

*2 Refresh rate varies depending on vertical scanning frequency. Note that 240 Hz frame rate is downsampled back to 60 Hz when projecting at 4K+ resolution. *3 HDMI and DVI-D terminals available only on optional SLOT NX boards. Two boards of the same kind are required when displaying images at 240 Hz via simultaneous inputs. *4 Geometric Adjustment and Upgrade Kit functions are not supported with simultaneous video signal input. *5 With Dynamic Contrast Mode set to 3. *6 This product is not a medical instrument. Do not use for actual medical diagnosis. *7 At this time the brightness will have decreased to approximately half of its original level (Dynamic Contrast Mode: 3, Image Mode: Dynamic). Panasonic recommends cleaning or checkup at point of purchase after every 20,000-hour period (approximately). 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. *8 With Operating Mode set to Long Life 3, in which mode brightness is lowered to 1,900 lm. 24 hours/day x 365 days/year x 10 years = 87,600 hours. Replacement of parts other than the light source may be required in a shorter period.

High Reliability, Low TCO, and Easy Maintenance

Efficient Cooling System Assures Reliable Operation

The PT-RQ13K employs a newly developed direct liquid cooling system for the laser light source that features a redesigned air intake and a solid aluminum heat sink to suppress temperature rises. This allows stable operation in ambient temperatures of up to 45 °C (113 °F)*9 while reducing operating noise to just 46 dB.

Dustproof for Ultimate Endurance

The PT-RQ13K has hermetically sealed laser modules, a long-life Eco Filter, and a new air-intake system to extend life and maintain picture quality in dusty locations. SOLID SHINE Laser products exceed rigorous dustproofing requirements for operation in environments containing 0.150 mg of dust per cubic meter*10.

Eco Filter Extends Replacement Cycle to 20,000 Hours*11

The Eco Filter includes an electrostatic Micro Cut Filter that collects minute dust particles with an ion effect. It joins with a dust-resistant cabinet to enable long-term use even in punishing conditions. A long maintenance cycle of up to 20,000 hours*11 reduces hassle, while the eco-friendly washable filter*12 can be reused to reduce cost and waste.
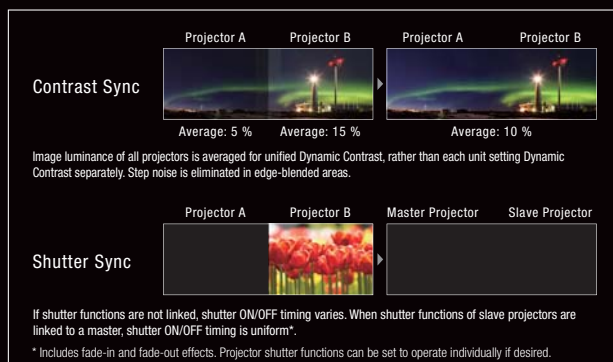
Optional Smoke Cut Filter

The optional Smoke Cut Filter captures fine dust particles contained in smoke used for special effects.

Flexibility and Functionality for Professional Users

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.

Contrast Sync	Projector A	Projector B	Projector A	Projector B
	Average: 5 %	Average: 15 %	Average: 10 %	

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.

Shutter Sync	Projector A	Projector B	Master Projector	Slave Projector

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.

Flexible Setup and Smooth Operation

Unlike conventional lamp-based projectors, the PT-RQ13K's SOLID SHINE Laser system allows free 360-degree installation through any axis. Together with extra-wide-range powered lens shift and a big range of optional lenses shared by Panasonic's 3-Chip DLP™ projector family, the PT-RQ13K can be mounted in any way desired without picture distortion.

Vertical 360 ° Horizontal 360 °

Single-Cable 4K DIGITAL LINK Connection

Based on HDBaseT™ technology, DIGITAL LINK supports transmission of 4K video signals and control commands through a single cable for distances of up to 50 m (164 ft)*13. An optional ET-YFB200G DIGITAL LINK Switcher or ET-YFB100G Digital Interface Box further simplifies installation in large venues while reducing cost and improving reliability.

Note: ET-YFB100G/ET-YFB200G is not compatible with 4K signals. Transmission of 1080/60p signals (1920 x 1080 pixels, dot clock frequency 148.5 MHz) for up to 150 m (492 ft) is available in Long Reach Mode with the optional ET-YFB200G DIGITAL LINK Switcher (requires CAT 5e cable or above). Transmission distance is up to 100 m (328 ft) in other cases.

Geometric Adjustment for Specially Shaped Screens*4

This function adjusts the image for projection onto spherical, cylindrical, and other specially shaped surfaces. Adjustments can be easily made using only the remote control, with no external equipment needed. New 4-Corner Adjustment and Keep Aspect Off functions also simplify fine adjustment.
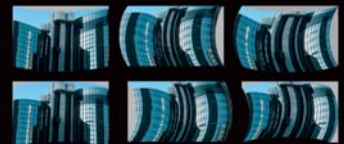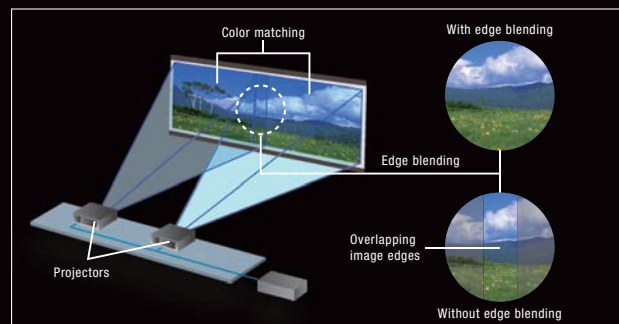
Quick Start and Quick Off

The laser light source does not require any warm-up time, so images appear almost instantly with PT-RQ13K projectors. There's also no cooling time required when turning the power off. Users can turn the projector on and off immediately as many times as necessary.

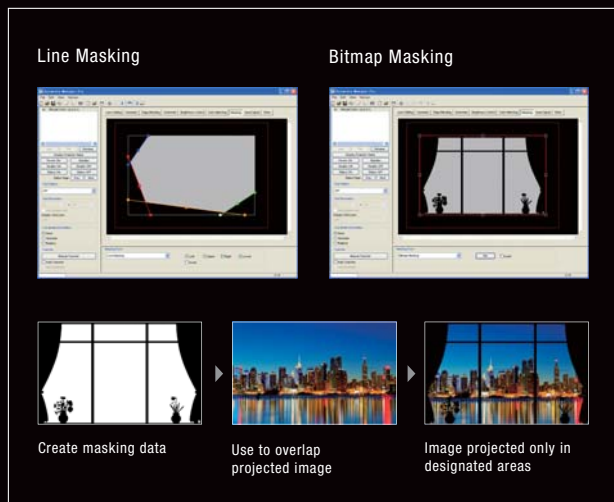### Multi-Screen Support System Seamlessly Connects Multiple Screens

- **Edge Blending:** The edges of adjacent screens can be blended and their luminance controlled.

- **Color Matching:** This function corrects for slight variations in the color reproduction range of individual projectors. PC software assures easy, accurate control.

- **Digital Image Enlarging:** PT-RQ13K features a digital zoom function that allows images to be enlarged up to approximately 10 times (horizontally and vertically)*14. Up to 100 units (10 x 10) can be edge-blended at a time to create large multi-screen images.

Color matching
With edge blending
Edge blending
Projectors
Overlapping image edges
Without edge blending

*9 When operational mode is set to Normal, operating temperature is from 0 °C (32 °F) to 45 °C (113 °F), and operating temperature is from 0 °C (32 °F) to 40 °C (104 °F) when used in locations from 1,400 m to 4,200 m (4,593 ft to 13,780 ft) above sea level. When operational mode is set to Eco or Long Life 1/2/3, operating temperature is from 0 °C (32 °F) to 40 °C (104 °F). When used with Smoke Cut Filter, operating temperature is from 0 °C (32 °F) to 35 °C (95 °F). Projector cannot be used in locations over 2,700 m (8,858 ft) with operational mode set to Eco or Long Life 1/2/3. When used with Smoke Cut Filter, the projector cannot be used in locations over 1,400 m (4,593 ft). Light source brightness may decrease depending on operating temperature. When projector is operating at high temperature, brightness will decrease correspondingly. *10 Dustproof tests are conducted to confirm operational effectiveness under conditions with 0.15 mg/m³ 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. *11 Usage environment may affect filter maintenance cycle. *12 Please follow the procedures listed in the operating instructions when washing the filter with water. Replacement is recommended after filter has been washed and reused twice, or if filter is not sufficiently clean after washing. *13 Audio transmission not supported on PT-RQ13K projectors. When using CAT 5e/6 cable or above, transmission of 4K signals up to 50 m (164 ft) is supported. *14 While the input resolution will not change, maintaining image quality is not possible for images enlarged horizontally and vertically via the digital zoom function.
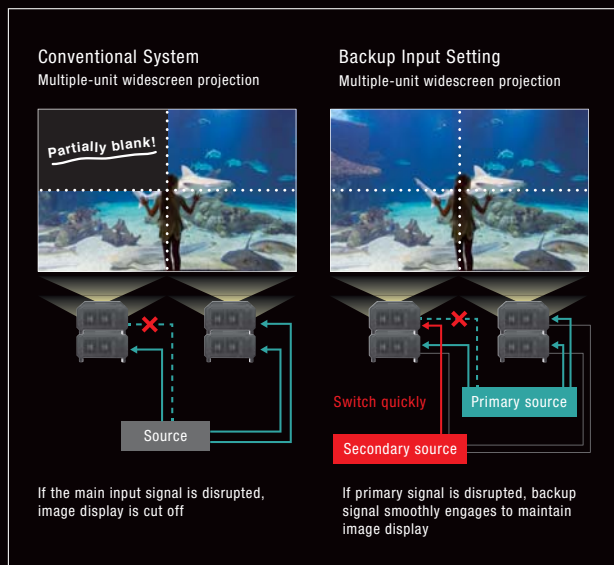
Geometry Manager Pro and Optional Upgrade Kit (ET-UK20 Series)*4

Geometry Manager Pro software enables more flexible and complex adjustment to expand built-in geometric adjustment functionality. The free software package includes functions such as color matching and edge blending for multi-screen projection and easy adjustment of multiple screens over the network. An optional ET-UK20 Upgrade Kit adds creative masking capability using four lines or bitmap data as well as uniformity correction. Further, the PT-RQ13K projector supports optional ET-CUK10 Auto Screen Adjustment Upgrade Kit*15.

Line Masking

Bitmap Masking

Create masking data

Use to overlap projected image

Image projected only in designated areas

Backup Input Setting Assures Reliability and Optimizes Performance

In the event of signal disruption, a Backup Input Setting allows the primary signal to be switched to a backup input signal*16. This function ensures high reliability and is ideal for mission-critical control rooms, projection mapping, staging, and other applications where image display should not be interrupted.

Conventional System
Multiple-unit widescreen projection

Partially blank!

Backup Input Setting
Multiple-unit widescreen projection

Switch quickly

Primary source

Source

Secondary source

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

If primary signal is disrupted, backup signal smoothly engages to maintain image display
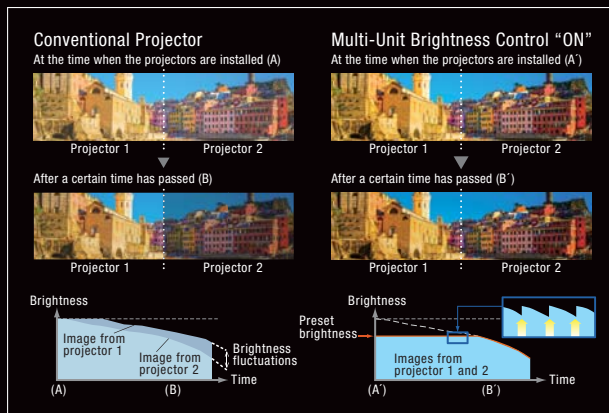
Multi Monitoring & Control Software

This software lets you control and monitor multiple projectors at the same time over wired LAN. If a problem occurs, an alert is sent to the monitoring/controlling PC.
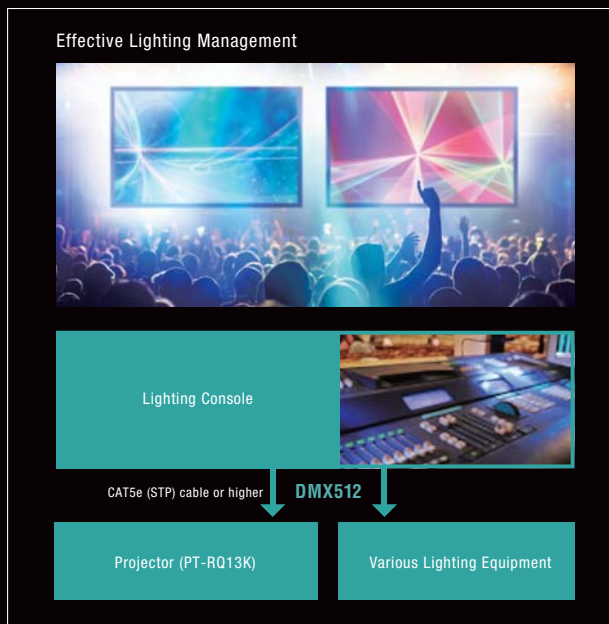
Multi-Unit Brightness and Color Control

This function automatically corrects brightness and color fluctuations that occur over time in individual projectors in a multi-screen system. Up to eight projectors connected by a hub can be controlled increasing to a maximum of 2,048 projectors with Multi Monitoring & Control Software.

Conventional Projector
At the time when the projectors are installed (A)

Projector 1   Projector 2

After a certain time has passed (B)

Projector 1   Projector 2

Multi-Unit Brightness Control "ON"
At the time when the projectors are installed (A′)

Projector 1   Projector 2

After a certain time has passed (B′)

Projector 1   Projector 2

Brightness

Image from projector 1

Image from projector 2

Brightness fluctuations

Time

(A)   (B)

Brightness

Preset brightness

Images from projector 1 and 2

Time

(A′)   (B′)

Art-Net DMX Compatible

The PT-RQ13K is compatible with Art-Net DMX protocol for lighting management. Art-Net compatibility allows the projector to be connected to a lighting console with easy control of functions such as shutter on/off, input change, power on/off, etc., together with lighting control.

Effective Lighting Management

Lighting Console

CAT5e (STP) cable or higher   DMX512

Projector (PT-RQ13K)   Various Lighting Equipment

Extensive Connectivity

The PT-RQ13K features four built-in 3G-SDI inputs and a DIGITAL LINK terminal. The projector also features Panasonic's convenient SLOT NX to accommodate optional terminal boards that offer a range of connections including HDMI, DVI, and SDI*17.

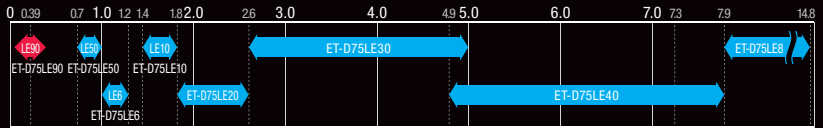## Early Warning Software ET-SWA100 Series (Optional)

Early Warning Software monitors the status of projectors and displays connected to an intranet, and informs the operator when an abnormality is detected or predicted, and when there are symptoms of trouble. This minimizes downtime to provide more stable operation.

Shares Common Lenses

The PT-RQ13K shares optional lenses with the Panasonic 3-Chip DLP™ projector range, including the ET-D75LE90 Ultra-Short-Throw Lens and ET-D75LE8 Zoom Lens for long throw distances, reducing cost of ownership for staging and event companies with extensive projector inventories.

Throw Ratio

0	0.39	0.7	1.0	1.2 1.4	1.8	2.0	2.6	3.0	4.0	4.9	5.0	6.0	7.0 7.3	7.9	14.8

LE90 — ET-D75LE90
LE50 — ET-D75LE50
LE10 — ET-D75LE10
LE6 — ET-D75LE6
ET-D75LE20
ET-D75LE30
ET-D75LE40
ET-D75LE8

Projection Distance

PT-RQ13K (16:10 aspect ratio)　　　　　　　unit: meters (inches)

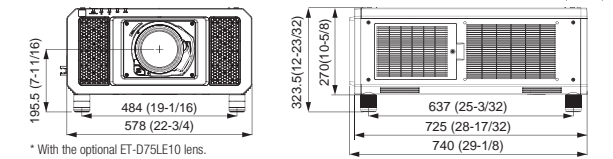| Diagonal image size	ET-D75LE6 min.	ET-D75LE6 max.	ET-D75LE10 min.	ET-D75LE10 max.	ET-D75LE20 min.	ET-D75LE20 max.	ET-D75LE30 min.	ET-D75LE30 max.	ET-D75LE40 min.	ET-D75LE40 max.	ET-D75LE8 min.	ET-D75LE8 max.	ET-D75LE50
1.78 [70″]	1.46 (57.5)	1.75 (68.9)	2.05 (80.7)	2.65 (104.3)	2.64 (103.9)	3.85 (151.6)	3.82 (150.4)	7.45 (293.3)	7.37 (290.2)	11.85 (466.5)	11.65 (458.7)	22.20 (874.0)	1.09 (42.9)
2.03 [80″]	1.68 (66.1)	2.01 (79.1)	2.35 (92.5)	3.04 (119.7)	3.03 (119.3)	4.41 (173.6)	4.38 (172.4)	8.54 (336.2)	8.45 (332.7)	13.56 (533.9)	13.37 (526.3)	25.42 (1000.8)	1.25 (49.2)
2.29 [90″]	1.90 (74.8)	2.27 (89.3)	2.65 (104.3)	3.43 (135.0)	3.42 (134.6)	4.98 (196.1)	4.94 (194.5)	9.63 (379.1)	9.52 (374.8)	15.28 (601.6)	15.09 (594.1)	28.64 (1127.6)	1.42 (55.9)
2.54 [100″]	2.11 (83.1)	2.53 (99.6)	2.96 (116.5)	3.83 (150.8)	3.81 (150.0)	5.54 (218.1)	5.51 (216.9)	10.72 (422.0)	10.60 (417.3)	16.99 (668.9)	16.81 (661.8)	31.86 (1254.3)	1.58 (62.2)
3.05 [120″]	2.55 (100.4)	3.05 (120.1)	3.57 (140.6)	4.61 (181.5)	4.59 (180.7)	6.67 (262.6)	6.63 (261.0)	12.90 (507.9)	12.75 (502.0)	20.42 (803.9)	20.25 (797.2)	38.31 (1508.3)	1.91 (75.2)
3.81 [150″]	3.20 (126.0)	3.83 (150.8)	4.48 (176.4)	5.79 (228.0)	5.76 (226.8)	8.37 (329.5)	8.32 (327.6)	16.17 (636.6)	15.98 (629.1)	25.57 (1006.7)	25.41 (1000.4)	47.97 (1888.6)	2.41 (94.9)
5.08 [200″]	4.29 (168.9)	5.13 (202.0)	6.00 (236.2)	7.76 (305.5)	7.71 (303.5)	11.20 (440.9)	11.12 (437.8)	21.62 (851.2)	21.36 (840.9)	34.14 (1344.1)	34.01 (1339.0)	64.08 (2522.8)	3.23 (127.2)
6.35 [250″]	5.37 (211.4)	6.43 (253.1)	7.52 (296.1)	9.73 (383.1)	9.65 (380.0)	14.03 (552.4)	13.93 (548.4)	27.07 (1065.7)	26.74 (1052.8)	42.72 (1681.9)	42.61 (1677.6)	80.19 (3157.1)	4.06 (159.8)
7.62 [300″]	6.46 (254.3)	7.73 (304.3)	9.05 (356.3)	11.70 (460.6)	11.60 (456.7)	16.86 (663.8)	16.74 (659.1)	32.51 (1279.9)	32.12 (1264.6)	51.30 (2019.7)	51.21 (2016.1)	96.31 (3791.7)	4.89 (192.5)
8.89 [350″]	7.54 (296.9)	9.03 (355.5)	10.57 (416.1)	13.66 (537.8)	13.55 (533.5)	19.69 (775.2)	19.55 (769.7)	37.96 (1494.5)	37.50 (1476.4)	59.87 (2357.1)	59.81 (2354.7)	112.42 (4426.0)	5.71 (224.8)
10.16 [400″]	8.63 (339.8)	10.33 (406.7)	12.09 (476.0)	15.63 (615.3)	15.50 (610.2)	22.52 (886.6)	22.36 (880.3)	43.41 (1709.1)	42.88 (1688.2)	68.45 (2694.9)	68.40 (2692.9)	128.53 (5060.2)	6.54 (257.5)
12.70 [500″]	10.80 (425.2)	12.93 (509.1)	15.13 (595.7)	19.56 (770.1)	19.39 (763.4)	28.18 (1109.4)	27.98 (1101.6)	54.31 (2138.2)	53.63 (2111.4)	85.60 (3370.1)	85.60 (3370.1)	160.75 (6328.7)	8.19 (322.4)
15.24 [600″]	12.97 (510.6)	15.53 (611.4)	18.18 (715.7)	23.50 (925.2)	23.29 (916.9)	33.84 (1332.3)	33.60 (1322.8)	65.21 (2567.3)	64.39 (2535.0)	102.75 (4045.3)	102.80 (4047.2)	192.97 (7597.2)	9.84 (387.4)
25.40 [1000″]	21.66 (852.8)	25.94 (1021.3)	30.35 (1194.9)	39.24 (1544.9)	38.86 (1529.9)	56.48 (2223.6)	56.08 (2207.9)	108.79 (4283.1)	107.43 (4229.5)	171.36 (6746.5)	171.59 (6755.5)	- -	16.45 (647.6)

PT-RQ13K (16:10 aspect ratio)　　　　　　　unit: meters (inches)

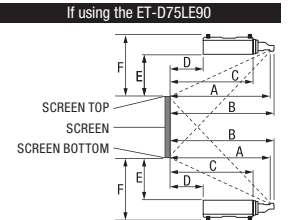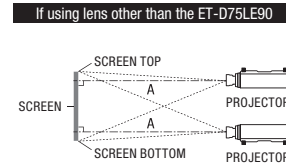| Diagonal image size	ET-D75LE90 (A)	(B)	(C)	(D)	(E) min.	(E) max.	(F) min.	(F) max.
3.05 [120″]	1.01 (39.8)	1.04 (40.9)	0.73 (28.7)	0.01 (0.4)	0.27 (10.6)	0.42 (16.5)	0.59 (23.2)	0.74 (29.1)
3.81 [150″]	1.26 (49.6)	1.29 (50.8)	0.98 (38.6)	0.26 (10.2)	0.37 (14.6)	0.56 (22.0)	0.69 (27.2)	0.88 (34.6)
5.08 [200″]	1.68 (66.1)	1.70 (66.9)	1.39 (54.7)	0.67 (26.4)	0.53 (20.9)	0.78 (30.7)	0.86 (33.9)	1.11 (43.7)
6.35 [250″]	2.08 (81.9)	2.11 (83.1)	1.81 (71.3)	1.08 (42.5)	0.70 (27.6)	1.01 (39.7)	1.02 (40.2)	1.34 (52.8)
7.62 [300″]	2.50 (98.4)	2.52 (99.2)	2.22 (87.4)	1.49 (58.7)	0.86 (33.9)	1.24 (48.8)	1.18 (46.5)	1.56 (61.4)
8.89 [350″]	2.91 (114.6)	2.94 (115.7)	2.63 (103.5)	1.91 (75.2)	1.03 (40.6)	1.47 (57.9)	1.35 (53.1)	1.79 (70.5)
10.16 [400″]	3.32 (130.7)	3.35 (131.9)	3.04 (119.7)	2.32 (91.3)	1.19 (46.9)	1.70 (66.9)	1.51 (59.4)	2.02 (79.5)
12.70 [500″]	4.15 (163.4)	4.17 (164.2)	3.87 (152.4)	3.14 (123.6)	1.52 (59.8)	2.15 (84.6)	1.84 (72.4)	2.48 (97.6)
15.24 [600″]	4.97 (195.7)	5.00 (196.9)	4.69 (184.6)	3.97 (156.3)	1.85 (72.8)	2.61 (102.8)	2.17 (85.4)	2.93 (115.4)

Terminals
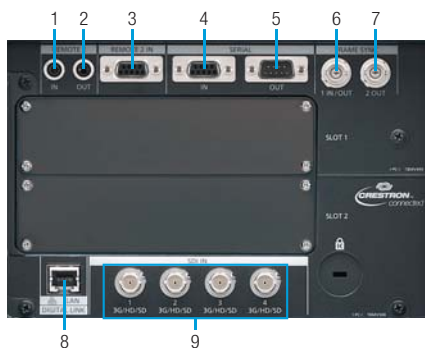
1. REMOTE 1 IN terminal
2. REMOTE 1 OUT terminal
3. REMOTE 2 IN terminal
4. SERIAL IN terminal
5. SERIAL OUT terminal
6. FRAME SYNC 1 IN/OUT terminal
7. FRAME SYNC 2 OUT terminal
8. DIGITAL LINK/LAN terminal
9. SDI IN terminal

Dimensions

unit: mm (inches)

195.5 (7-11/16)
484 (19-1/16)
578 (22-3/4)
323.5(12-23/32)
270(10-5/8)
637 (25-3/32)
725 (28-17/32)
740 (29-1/8)

* With the optional ET-D75LE10 lens.

Dimension Definitions

If using lens other than the ET-D75LE90	If using the ET-D75LE90

Optional Accessories

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-D75LE50 Fixed-Focus Lens

ET-D75LE90 Fixed-Focus Lens

ET-D75MC1 Lens Motor Cover

ET-PLF10* Lens Fixed Attachment
* This attachment may be required in some installation environments.

ET-PFD510* Frame
* This frame cannot be used when the separately sold ET-D75LE90 Fixed-Focus Lens is attached to the projector.

ET-EMF330 Replacement Filter Unit

ET-SFR330 Smoke Cut Filter

ET-PKD520H*² Ceiling Mount Bracket (for high ceiling)

ET-PKD520S*² Ceiling Mount Bracket (for low ceiling)

ET-PKD520B*³ Projector Mount Bracket

ET-UK20 Series Geometry Manager Pro Upgrade Kit

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

ET-SWA100 Series Early Warning Software

ET-MDNDV10 Interface Board for DVI-D 2 Input (Input x 2)

ET-MDNHM10 Interface Board for HDMI 2 Input (Input x 2)

TY-TBN03G*¹ 3G-SDI Terminal Board (Input x 4)

ET-YFB200G DIGITAL LINK Switcher

ET-YFB100G Digital Interface Box

*1 Projector firmware and board firmware must be updated to Version 2.0 or later before using the optional 3G-SDI Terminal Board (TY-TBN03G). Contact your sales representative for more information. *2 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. *3 ET-PKD520B Projector Mount Bracket can optionally be used with an existing ET-PKD510H/PKD510S projector mount bracket.

Specifications

Model	PT-RQ13K
Power supply	AC 100–240 V, 50/60 Hz
Power consumption	1,270 W (0.3 W with Standby Mode set to Eco, 4 W with Standby Mode set to Normal) Normal Mode: 913 W, Eco Mode: 782 W, Long Life 1 Mode: 531–732 W, Long Life 2 Mode: 477–702 W, Long Life 3 Mode: 423–665 W (Operating temperature: 25 °C, Altitude: 700 m, IEC62087: 2008 Broadcast Content, Image Mode: Dynamic, Dynamic Contrast Mode: 3)

DLP™ chip	Panel size	22.9 mm (0.9 inches) diagonal (16:10 aspect ratio)
	Display method	DLP™ chip × 3, DLP™ projection system
	Pixels	49,152,000 (12,288,000 x 4) pixels with Quad Pixel Drive set to ON, 12,288,000 (2560 x 1600 x 3) pixels with Quad Pixel Drive set to OFF

Refresh rate	240 Hz[*1]
Lens	Optional (no lens included with this model)
Light source	Laser diodes laser Class 1 (Class 3R for US models) Light source life[*2]: 20,000 hours (Normal Mode) / 24,000 hours (Eco Mode). At this time the brightness will have decreased to approximately half of its original level.
Screen size (diagonal)	1.78–25.4 m (70–1,000 in) with 16:10 aspect ratio 3.05–15.24 m (120–600 in) with the ET-D75LE90, 16:10 aspect ratio
Brightness[*2]	10,000 lm
Center-to-corner uniformity[*2]	90 %
Contrast[*2]	20,000:1 (Full On/Full Off, Dynamic Contrast Mode: 3)
Resolution	5120 x 3200 pixels (Quad Pixel Drive: ON, RGB signal input)

Scanning frequency	SD-SDI: SMPTE ST 259 compliant, [YCвCʀ 4:2:2 10-bit] 480i, 576i
	Single link HD-SDI: SMPTE ST 292 compliant, [YPвPʀ 4:2:2 10-bit] 720/60p, 720/50p, 1035/60i, 1080/60i, 1080/50i, 1080/25p, 1080/25sF, 1080/24p, 1080/24sF, 1080/30p, 1080/30sF
	Single link 3G-SDI: SMPTE ST 424 compliant, [YPвPʀ 4:2:2 10-bit] 1080/60p, 1080/50p, 2048 x 1080/48p, 2048 x 1080/50p, 2048 x 1080/60p, [RGB 4:4:4 12-bit/10-bit, YPвPʀ 4:4:4 12-bit/10-bit] 1080/60i, 1080/50i, 1080/25p, 1080/25sF, 1080/24p, 1080/24sF, 1080/30p, 1080/30sF, [RGB 4:4:4 12-bit/10-bit, YPвPʀ 4:4:4 12-bit/10-bit, X'Y'Z' 4:4:4 12-bit[*3]] 2048 x 1080/24p, 2048 x 1080/24sF, 2048 x 1080/25p, 2048 x 1080/25sF, 2048 x 1080/30p, 2048 x 1080/30sF
	Dual link HD-SDI: SMPTE ST 372 compliant, [YPвPʀ 4:2:2 10-bit] 1080/50p, 1080/60p, [RGB 4:4:4 12-bit/10-bit, YPвPʀ 4:4:4 12-bit/10-bit] 1080/60i, 1080/50i, 1080/24p, 1080/24sF, 1080/25p, 1080/25sF, 1080/30p, 1080/30sF, 2048 x 1080/24p, 2048 x 1080/24sF, 2048 x 1080/25p, 2048 x 1080/25sF, 2048 x 1080/30p, 2048 x 1080/30sF, [X'Y'Z' 4:4:4 12-bit[*3]] 2048 x 1080/24p, 2048 x 1080/24sF, 2048 x 1080/25p, 2048 x 1080/25sF, 2048 x 1080/30p, 2048 x 1080/30sF
	Dual link 3G-SDI: SMPTE ST 425 compliant, [YPвPʀ 4:4:4 12-bit/10-bit] 1080/50p, 1080/60p, 2048 x 1080/48p, 2048 x 1080/50p, 2048 x 1080/60p, [RGB 4:4:4 12-bit/10-bit] 1080/50p, 1080/60p, 2048 x 1080/48p, 2048 x 1080/50p, 2048 x 1080/60p, [YPвPʀ 4:2:2 10-bit] 3840 x 2160/24p, 3840 x 2160/25p, 3840 x 2160/30p, 4096 x 2160/24p, 4096 x 2160/25p, 4096 x 2160/30p
	Quad link HD-SDI: [YPвPʀ 4:2:2 10-bit] 3840 x 2160/24sF, 3840 x 2160/24p, 3840 x 2160/25sF, 3840 x 2160/25p, 3840 x 2160/30sF, 3840 x 2160/30p, 4096 x 2160/24sF, 4096 x 2160/24p, 4096 x 2160/25sF, 4096 x 2160/25p, 4096 x 2160/30sF, 4096 x 2160/30p
	Quad link 3G-SDI: SMPTE ST 425 compliant, [YPвPʀ 4:2:2 10-bit] 3840 x 2160/60p, 3840 x 2160/50p, 4096 x 2160/60p, 4096 x 2160/50p, [YPвPʀ 4:2:2 12-bit, YPвPʀ 4:4:4 10/12-bit, RGB 10/12-bit] 3840 x 2160/24sF, 3840 x 2160/24p, 3840 x 2160/25sF, 3840 x 2160/25p, 3840 x 2160/30sF, 3840 x 2160/30p, 4096 x 2160/24sF, 4096 x 2160/24p, 4096 x 2160/25sF, 4096 x 2160/25p, 4096 x 2160/30sF, 4096 x 2160/30p
	SDI 1/SDI 2 simultaneous input (x 2 speed)[*4]: 1080/60p, 1080/50p (1st frame: SDI 1, 2nd frame: SDI 2)
	SDI 1/SDI 2/SDI 3/SDI 4 simultaneous input (x 4 speed)[*4]: 1080/60p, 1080/50p (1st frame: SDI 1, 2nd frame: SDI 2, 3rd frame: SDI 3, 4th frame: SDI 4)
	DIGITAL LINK: Video signal resolution: 480i[*5]/576i[*5]–4096 x 2160, still image signal resolution: 640 x 400–2560 x 1600 (non-interlace), dot clock: 25 MHz–297 MHz

Optical axis shift[*6]	Vertical (from center of screen)	±59 % (±56 % with ET-D75LE6, +74 % – +84 % with ET-D75LE90) (powered)
	Horizontal (from center of screen)	±29 % (±19 % with ET-D75LE6, -12 % – +16 % with ET-D75LE90) (powered)

Keystone correction range	Vertical: ±40 ° (± 22 ° with ET-D75LE50, ±28 ° with ET-D75LE6, +5 ° with ET-D75LE90), horizontal: ±15 ° (0 ° with ET-D75LE90)
Keystone correction range with optional Upgrade Kit ET-UK20[*4]	Vertical: ±45 ° (± 40 ° with ET-D75LE10/20, ±22 ° with ET-D75LE50, ±28 ° with ET-D75LE6, +5 ° with ET-D75LE90), horizontal: ±15 ° with ET-D75LE6/10/50, ±20 ° with ET-D75LE20, ±25 ° with ET-D75LE30, ±30 ° with ET-D75LE40, ±40 ° with ET-D75LE8, 0 ° with ET-D75LE90, Up to a total of ±30 ° 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 input (LINK-A), Dual-link 3G-SDI input (LINK-1), Quad-link 3G/HD-SDI input (LINK 1)
	SDI IN 2	BNC × 1: 3G/HD/SD-SDI input, Dual-link HD-SDI input (LINK-B), Dual-link 3G-SDI input (LINK-2), Quad-link 3G/HD-SDI input (LINK 2)
	SDI IN 3	BNC × 1: 3G/HD/SD-SDI input, Dual-link HD-SDI input (LINK-A), Dual-link 3G-SDI input (LINK-1), Quad-link 3G/HD-SDI input (LINK 3)
	SDI IN 4	BNC × 1: 3G/HD/SD-SDI input, Dual-link HD-SDI input (LINK-B), Dual-link 3G-SDI input (LINK-2), Quad-link 3G/HD-SDI input (LINK 4)
	Frame Sync IN/OUT[*7]	BNC × 1: Frame-synchronizing timing signal
	Frame Sync OUT[*7]	BNC × 1: Frame-synchronizing timing signal
	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	M3 × 1 for wired remote control
	REMOTE 1 OUT	M3 × 1 for link control (for wired remote control)
	REMOTE 2 IN	D-sub 9-pin (female) × 1 for external control (parallel)
	DIGITAL LINK/LAN	RJ-45 × 1 for network, DIGITAL LINK connection (HDBaseT™ compliant), 100Base-TX, compatible with Art-Net, PJLink™ (class 1), Deep Color, HDCP 2.2
	Expansion Slot	x 2 (SLOT 1, SLOT 2) (Compatible with optional Input Board/Terminal Board)

Cabinet materials	Molded plastic
Dimensions (W × H × D)	578 x 270 x 725 mm (22 3/4″ × 10 5/8″ × 28 17/32″) (Not including legs or protruding parts) 578 x 323.5 x 740 mm (22 3/4″ × 12 23/32″ × 29 1/8″) (Including legs at shortest position and protruding parts)
Weight[*8]	Approximately 49 kg (108 lbs.) (optional lens not included)
Operation noise[*2]	46 dB
Operating environment	Operating temperature: 0–45 °C (32–113 °F)[*9], 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 and ET-CUK10[*10] Auto Screen Adjustment Upgrade Kit)[*4]
Supplied accessories	Power cord x 2, wireless/wired remote control unit, batteries (R6/AA type × 2), Lens drop-prevention screw, software CD-ROM (Logo Transfer Software, Multi Monitoring & Control Software)

*1 Refresh rate varies depending on vertical scanning frequency. *2 Measurement, measuring conditions, and method of notation all comply with ISO 21118 international standards. *3 Optional 3G-SDI Terminal Board (TY-TBN03G) is not compatible with this signal. *4 Geometric Adjustment and Upgrade Kit functions are not supported with simultaneous video signal input. *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 When using Frame Sync In/Out terminals, projector firmware must be updated to Version 2.0 or later (scheduled February 2016). Contact your sales representative for more information. *8 Average value. May differ depending on the actual unit. *9 When operational mode is set to Normal, operating temperature is from 0 °C (32 °F) to 45 °C (113 °F), and operating temperature is from 0 °C (32 °F) to 40 °C (104 °F) when used in locations from 1,400 m to 4,200 m (4,593 ft to 13,780 ft) above sea level. When operational mode is set to Eco or Long Life 1/2/3, operating temperature is from 0 °C (32 °F) to 40 °C (104 °F). When used with Smoke Cut Filter, operating temperature is from 0 °C (32 °F) to 35 °C (95 °F). Projector cannot be used in locations over 2,700 m (8,858 ft) with operational mode set to Eco or Long Life 1/2/3. When used with Smoke Cut Filter, the projector cannot be used in locations over 1,400 m (4,593 ft). Light source brightness may decrease depending on operating environment. *10 Available worldwide except in the United States.

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All information included here is valid as of April 2017.

PT-RQ13KG3 Printed in Japan.