Panasonic

BUSINESS

RZ970 Series
1-Chip DLP™ Projectors

PT-RZ970/RW930/RX110 Series
PT-RZ770/RW730 Series
PT-RZ660/RW620 Series

Unleash the Power of Your Imagination

Worldwide Olympic Partner
Worldwide Paralympic Partner
Engineered for Elite Marathon Performance in Permanent or Temporary Installations

With immersive picture quality and practical features, potential application for Panasonic’s PT-RZ970 Series projectors extends from permanent installation in museums, theaters, and control rooms through roles in exhibition/rental and staging. Powered by the acclaimed SOLID SHINE Laser drive and latest 1-Chip DLP™ technology, these projectors exceed expectations with low-maintenance stability and vivid color performance maintained for longer than competitive products over years of dependable 24/7 operation. The PT-RZ970 Series: made by professionals, for professionals.

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<th>Free 360° Install</th>
<th>Dust-Resistant Optics</th>
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<th>20,000 hours* Maintenance free</th>
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**Engineered for Elite Marathon Performance in Permanent or Temporary Installations**

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<td>PT-RZ970/L</td>
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<td>10,000 lm (Center)</td>
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<tr>
<td>PT-RW930/L</td>
<td>WXGA</td>
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<tr>
<td>PT-RX110/L</td>
<td>XGA</td>
<td>10,400 lm (Center)</td>
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<tr>
<td>PT-RZ660/L</td>
<td>WXGA</td>
<td>6,200 lm (Center)</td>
</tr>
<tr>
<td>PT-RZ620/L</td>
<td>WXGA</td>
<td>6,000 lm*</td>
</tr>
</tbody>
</table>

* Measured according to strict international ISO 21118 standards. Note: PT-R2670L / RZ770L / RX110L / RW930L / RW730L / RW620L / RX110L do not include a lens.
Harnessing Full-Spectrum Color with Up to 10,400 lm (Center)*2 Brightness

With next-generation DLP™ technology delivering high-resolution detail and dual laser modules outputting up to 10,400 lm (Center)*2 of brightness, Quartet Color Harmonizer to reduce energy loss from the light source, and robust head-resistant phosphor wheel, the Panasonic SOLID SHINE Laser system produces scintillating images with unrivaled reliability.

Superior White Balance and Color Reproduction

The Quartet Color Harmonizer wheel mechanism captures a wider color space than comparable projectors, which allows white to be reproduced realistically on screen. Some conventional projectors can’t achieve an accurate white balance, so images can appear with a distracting greenish tint. Not the case with Panasonic SOLID SHINE Laser projectors.

SOLID SHINE Laser Maintains Picture Quality for Longer

Thanks to the long-lasting dual solid-state laser modules, there are no lamps to replace, and image color/brightness degrades very gradually in consistent, linear fashion. As well as reducing maintenance hassle, out-of-the-box picture quality is preserved longer.

See the Advantages of Panasonic’s Laser Technology
Approx. 20,000 Hours*4 of Continuous Operation

In Normal Mode, the PT-RZ970 Series can operate continuously for about 20,000 hours*4. In Eco Mode, this is extended to around 24,000 hours*4 of continuous operation. These modes enhance suitability for education and signage applications.

Stable 24/7 Operation with Light-source Failover Protection

The PT-RZ970 Series\(^8\) optical block is airtight, ensuring consistent, long-lasting image quality for up to 20,000 hours*4 without maintenance. The optical block design passed stringent testing to assure utmost reliability in environments with up to 0.15 mg of particulate matter per cubic meter (based on American Society of Heating, Refrigerating, and Air-Conditioning Engineers [ASHRAE] and Japanese Building Maintenance Association guidelines). The structure prevents brightness degradation from dust intrusion.

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</thead>
<tbody>
<tr>
<td>0.030 mg/m(^3)</td>
<td>0.110 mg/m(^3)</td>
<td>0.150 mg/m(^3)</td>
<td></td>
</tr>
</tbody>
</table>

*3 With Dynamic Contrast Mode set to 3. *4 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 about 20,000 hours. 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.

*5 With Operating Mode set to Long Life 3. Long Life Mode is tested in a non-box projection environment, which is not compliant with ASHRAE. 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.
**Versatile Installation Flexibility**

**Unique Contrast Sync and Shutter Sync Function**

The PT-RZ970 Series is among the world’s first to feature Contrast Sync and Shutter Sync functions (Patent Pending) for multi-screen and mapping applications. Contrast Sync allows the projectors’ digitally modulated contrast function to be synchronized over the network for consistent picture quality across screens, while Shutter Sync incorporates a master/slave principle to synchronize shutter on/off timing between all networked projectors. It includes simultaneous fade-in and fade-out functions.

Note: Use of RS-232C straight cable is necessary for all connections. Consult your sales representative for further information.

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

- **Edge Blending**: Edges of adjacent screens can be blended and their luminance controlled.
- **Color Matching**: Corrects for slight variations in the color reproduction range of individual projectors. PC software assures easy, accurate control.

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**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. Control up to eight projectors connected via hub increasing to a maximum of 2,048 projectors with Multi Monitoring & Control Software.

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**Geometry Manager Pro Software (PT-RZ970/RZ770/RZ660 Only)**

Geometry Manager Pro software expands built-in functionality and makes complex adjustments easy. The free software package includes enhanced color matching and edge blending for multi-screen projection and adjustment of multiple screens over the network.

**Optional ET-UK20 Upgrade Kit for Geometry Manager Pro (PT-RZ970/RZ770/RZ660 Only)**

An optional ET-UK20 Upgrade Kit for Geometry Manager Pro adds creative masking capability using four lines or bitmap data as well as uniformity correction and correction area expansion.

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**Optional ET-CUK10*6 Series Auto Screen Adjustment Upgrade Kit (PT-RZ970/RZ770/RZ660 Only)**

This optional kit activates the Auto Screen Adjustment plug-in software for Geometry Manager Pro, allowing you to set up multiple projectors automatically and simultaneously and save significant amounts of time and money. Performing multi-screen and curved-screen projection calibration in three quick steps using a camera*7 and PC connected to the projector network, this software encompasses geometric adjustment, edge blending, color matching, stacking, brightness, and black level.


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**Reduce Inventory Costs with Shared Lenses**

The PT-RZ970 Series shares optional lenses with the Panasonic 1-Chip DLP™ projector range, including the ET-DLE030 Ultra-Short-Throw Lens and ET-DLE085 Zoom Lens for long throw distances, reducing TCO for staging and event companies with large projector inventories. Lenses attach and detach with one-touch ease.
Easy System Flexibility

Single-Cable DIGITAL LINK Control and Video Connection

Upward HDBase™-compatible DIGITAL LINK supports transmission of uncompressed Full HD video and control commands through a single CAT 6e or higher STP cable for distances of up to 150 m (492 ft)*8. Add an optional DIGITAL LINK Switcher or Digital Interface Box to further simplify installation in large venues while reducing cost and improving reliability at the same time.

 webinar control

Remote 2 input

Backup Input Setting Optimizes Performance

This feature allows smooth switching to a backup input signal should the primary signal be disrupted*, guaranteeing reliability for mission-critical control rooms, projection mapping, staging, and in other applications where image display must be maintained.

*10 Combination of primary/secondary input terminals is fixed. The Backup Input Setting is enabled only when the input signal to the primary and secondary terminals is the same.

Web Browser Control

These Panasonic SOLID SHINE Laser projectors can be easily operated remotely over a LAN network via a computer’s web browser. Projectors can be configured to alert the operator via email if an error has occurred.

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, or when there are symptoms of trouble. This minimizes downtime to provide more stable operation.

Other Valuable Features

DICOM Simulation Mode offers easy-to-view x-ray photo reproduction*11
Rec. 709 mode for HDTV projection to provide accurate colors
Waveform Monitor for simple yet precise calibration
Lens-centered design and a wide horizontal/vertical lens shift
Shutter effect with fade in/out (configurable in 0.5-second intervals from 0.5 to 4.0 seconds, or to 5-, 7-, or 10-second intervals)
PJLink™ compatibility
P-in-P function*12
Image rotation function
On-screen menu rotatable in Portrait Mode

Quick Start and Quick Off

The laser light-source doesn’t require any warm-up, so images appear almost instantly (in about 1 second*9) with PT-RZ970 Series projectors. There’s also no cool-down period needed when turning the power off at the mains—the projector can be turned on and off any time as necessary.

*9 Quick Start Mode set to OFF. Quick Startup Mode resets to OFF after duration set in Available Period expires. When Quick Startup Mode is set to ON, the projector continues to warm up, increasing power consumption. Image appears in about 9 seconds on Normal Standby Mode and about 12 seconds on Eco-Standby Mode.

Multi Monitoring & Control Software

This free Panasonic software offers monitoring and control of up to 2,048 devices over a LAN network from a single PC. For monitoring, status for individual devices can be listed in groups, with more detailed information shown separately. Control functions include power ON/OFF, input switching, scheduling, and command inputs.

Free 360-degree Rotation

Projection is possible in any direction vertically and horizontally, and the unit can be rotated 360 degrees for installation at any angle.

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

The PT-RZ970 Series is compatible with Art-Net DMX protocol for lighting management. This allows the projector to be connected to a lighting console, opening the door to a range of added functionality and control options. The included LAN/DIGITAL LINK terminal also supports Crestron Connected™ and PJLink™ (Class 1) for easy integration of these projectors into an existing AV network utilizing multiple device brands.

Video Connection

Single-Cable DIGITAL LINK Control and Video Connection

Upward HDBase™-compatible DIGITAL LINK supports transmission of uncompressed Full HD video and control commands through a single CAT 6e or higher STP cable for distances of up to 150 m (492 ft)*8. Add an optional DIGITAL LINK Switcher or Digital Interface Box to further simplify installation in large venues while reducing cost and improving reliability at the same time.

- DIGITAL LINK 1
- DIGITAL LINK 2

DIGITAL LINK

CAT5e (STP) cable

Upward HDBase™-compatible DIGITAL LINK supports transmission of uncompressed Full HD video and control commands through a single CAT 6e or higher STP cable for distances of up to 150 m (492 ft)*8. Add an optional DIGITAL LINK Switcher or Digital Interface Box to further simplify installation in large venues while reducing cost and improving reliability at the same time.

Terminals

Terminals for PT-RZ970/RZ770/RZ660 shown.

- Remote 1 input/output
- Remote 2 input
- Serial/Multi Projector Sync input/output
- SDI input (PT-RZ970/RZ770/RZ660 only)
- RGB 1 input
- HDMI input
- LAN/DIGITAL LINK

- 1 2 3 4 5 6 7 8 9

Scheduling function
30 m (98 ft) long-range wireless remote control
Anti-theft features including chain opening and security bar
Customizable start-up logo
ID assignment for up to 64 units
Built-in test pattern
Selectable 10-language on-screen menu (English, German, French, Spanish, Italian, Portuguese, Russian, Japanese, Chinese, Korean)
RoHS Directive-compliant

*11 This product is not a medical instrument. Do not use for actual medical diagnosis. *12 The Picture-in-Picture function cannot be used with certain inputs and input signals.
### Projection Distances

#### Distance to screen (d)

<table>
<thead>
<tr>
<th>Screen size (diagonal)</th>
<th>ET-DLE1050</th>
<th>ET-DLE1500</th>
<th>ET-PK-DL100H</th>
<th>ET-PK-DL100H</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.27 (0&quot;)</td>
<td>0.79 (0&quot;)</td>
<td>0.15 (0&quot;)</td>
<td>2.03 (0&quot;)</td>
<td>2.64 (0&quot;)</td>
</tr>
<tr>
<td>1.52 (0&quot;)</td>
<td>1.00 (0&quot;)</td>
<td>0.19 (0&quot;)</td>
<td>2.25 (0&quot;)</td>
<td>2.96 (0&quot;)</td>
</tr>
<tr>
<td>1.78 (0&quot;)</td>
<td>1.16 (0&quot;)</td>
<td>0.24 (0&quot;)</td>
<td>2.58 (0&quot;)</td>
<td>3.30 (0&quot;)</td>
</tr>
<tr>
<td>2.03 (0&quot;)</td>
<td>1.39 (0&quot;)</td>
<td>0.29 (0&quot;)</td>
<td>2.91 (0&quot;)</td>
<td>3.63 (0&quot;)</td>
</tr>
<tr>
<td>2.29 (0&quot;)</td>
<td>1.39 (0&quot;)</td>
<td>0.35 (0&quot;)</td>
<td>3.13 (0&quot;)</td>
<td>3.86 (0&quot;)</td>
</tr>
<tr>
<td>2.54 (0&quot;)</td>
<td>1.12 (0&quot;)</td>
<td>0.41 (0&quot;)</td>
<td>3.47 (0&quot;)</td>
<td>4.30 (0&quot;)</td>
</tr>
<tr>
<td>2.80 (0&quot;)</td>
<td>0.97 (0&quot;)</td>
<td>0.47 (0&quot;)</td>
<td>3.81 (0&quot;)</td>
<td>4.65 (0&quot;)</td>
</tr>
<tr>
<td>3.05 (0&quot;)</td>
<td>0.85 (0&quot;)</td>
<td>0.53 (0&quot;)</td>
<td>4.16 (0&quot;)</td>
<td>4.99 (0&quot;)</td>
</tr>
<tr>
<td>3.31 (0&quot;)</td>
<td>0.74 (0&quot;)</td>
<td>0.59 (0&quot;)</td>
<td>4.51 (0&quot;)</td>
<td>5.34 (0&quot;)</td>
</tr>
<tr>
<td>3.56 (0&quot;)</td>
<td>0.64 (0&quot;)</td>
<td>0.66 (0&quot;)</td>
<td>4.86 (0&quot;)</td>
<td>5.69 (0&quot;)</td>
</tr>
</tbody>
</table>

#### Optional Accessories

**Notes**
- Use ET-PK-DL100H, ET-PK-DL100, and ET-PK-DL100H in combination with ET-PK-DL100B. ET-PK-DL100H is recommended when used with ET-DLE050.
- Optional Accessories:
  - Projection Distances
  - Zoom lenses
  - Fixed-Focus Lens
  - Bracket

#### Zoom Lens

- ET-DLE200: High Ceiling Mount Bracket
- ET-DLE150: Low Ceiling Mount Bracket
- ET-DLE055: Low Ceiling Mount Bracket with 6-axis Adjustment Mechanism

#### Zoom Lens

- ET-DLE1050: Zoom Lens
- ET-DLE1500: Zoom Lens
- ET-DLE200: Zoom Lens

#### Fixed-Focus Lens

- ET-DLE055: Fixed-Focus Lens

#### Bracket

- ET-DLE1500: Bracket

### ET-DLE200

- ET-DLE200: Digital Interface Box
- ET-DLE200: DIGITAL INPUT Switcher
- ET-DLE200: Auto Screen Adjustment Upgrade Kit
- ET-DLE200: Geometry Manager Pro Upgrade Kit

### Geometry Manager Pro Upgrade Kit

- ET-UK20: Geometry Manager Pro Upgrade Kit

### Note:
- Available worldwide except in the United States.
- ET-UK20: PT-RZ770/RZ770/RZ660 Only
- ET-GUK10 Series: PT-RZ770/RZ770/RZ660 Only
- Auto Screen Adjustment Upgrade Kit

### Optional Accessories

- ET-DLE055: Optional Accessories
- ET-DLE1500: Optional Accessories
- ET-DLE200: Optional Accessories

### Dimension Definitions

- If using lens other than the ET-DLE050
  - 538 (21-3/16)
  - 518 (20-7/8)

- If using the ET-DLE050
  - 538 (21-3/16)
  - 518 (20-7/8)
**Specifications**

**Model**
- PT-RZ970/RZ770/RX110
- PT-RW930/RW730/RW620
- PT-RX110

**Power supply**
- AC 100–240 V, 50/60 Hz

**Power consumption**

**DLP™ chip**
- Panel size: 17.0 mm (0.67 in) diagonal (16:10 aspect ratio)
- Resolution: 2048 x 1080 pixels

**Display method**
- DLP™ chip x 1, DLP™ projector optical

**Plates**
- 1,034,000 (1034 x 1034) pixels

**Lens**
- Powered zoom (three ratio 1.7–2.4:1), powered focus 0–1.7, f 25.6–35.7 mm

**Light source**
- Laser diode laser Class 3R for US models, light source life: 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)**
- 1,219.2 mm (48") or 1,981 mm (78") (with ET-DLE030); 2,540 mm (10") (with ET-DLE085); 1,778 mm (70") (with ET-DLE150); 2,032 mm (80") (with ET-DLE250); 2,133 mm (84") (with ET-DLE300)

**Brightness**
- PT-RZ970: 10,000 lm (Center)* 2 / 9,400 lm (Normal)* 1
- PT-RW930: 10,400 lm (Center)* 2 / 9,800 lm (Normal)* 1
- PT-RX110: 6,200 lm (Center)* 1
- PT-RW930: 5,600 lm (Center)* 1
- PT-RX110: 5,300 lm (Center)* 1

**Contrast**
- PT-RZ970/RX110: 1,000:1 Full Off DR, Dynamic Contrast Mode: 2
- PT-RW930/RW730/RW620: 500:1

**Weight**
- PT-RZ970/RX110: Approx. 41.9 kg (92.1 lbs.) (with ET-DLE030); Approx. 44.9 kg (99 lbs.) (with ET-DLE085); Approx. 46.9 kg (103 lbs.) (with ET-DLE150); 1,050 W, Normal*: 742 W, Eco*: 672 W, Long Life*: 410–588 W
- PT-RW930/RW730/RW620: Approx. 41.9 kg (92.1 lbs.) (with ET-DLE030); Approx. 44.9 kg (99 lbs.) (with ET-DLE085); Approx. 46.9 kg (103 lbs.) (with ET-DLE150); 1,024 W, Normal*: 724 W, Eco*: 654 W, Long Life*: 400–588 W
- PT-RX110: Approx. 41.9 kg (92.1 lbs.) (with ET-DLE030); Approx. 44.9 kg (99 lbs.) (with ET-DLE085); Approx. 46.9 kg (103 lbs.) (with ET-DLE150); 1,050 W, Normal*: 742 W, Eco*: 672 W, Long Life*: 410–588 W

**Dimensions (W × H × D)**
- Black: 498 x 200*6 x 581 mm (19 19/32˝ x 7 7/8˝ x 22 7/8˝) (without lens) / 498 x 200*6 x 538 mm (19 19/32˝ x 7 7/8˝ x 21 3/16˝) (with ET-DLE085)
- White: 498 x 200*6 x 581 mm (19 19/32˝ x 7 7/8˝ x 22 7/8˝) (without lens) / 498 x 200*6 x 538 mm (19 19/32˝ x 7 7/8˝ x 21 3/16˝) (with ET-DLE085)

**Cabinet materials**
- Weight and dimensions shown are approximate. Specifications and appearance are subject to change without notice. Product availability differs depending on region and country. This product may be subject to export-control regulations. DLP, DLP chip and DLP Metallion logos are trademarks or registered trademarks of Texas Instruments. HDMI, the HDMI logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries. The PJLink trademark is an application trademark in Japan, the United States, and other countries and regions or registered trademarks. All other registered trademarks are the property of their respective trademark owners. 36 USC 20506 © 2016 Panasonic Corporation. All rights reserved.

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**Weights**
- 1,034,000 (1034 x 1034) pixels
- 1,024,000 (1024 x 1024) pixels
- 786,432 (1024 x 768) pixels

**Weights and dimensions**
- Model: PT-RZ970series_G1
- Printed in Japan.