



New 5,200 lm<sup>1</sup> PT-FRQ50 1-Chip DLP™ 4K Projector Delivers Smooth, Detailed Images for an Insightful Visual Experience

### ■ Main Features

## 01 | Smooth and Detailed 4K Image Quality

Quad Pixel Drive, Panasonic's original 2-axis pixel-quadrupling technology, creates crisp, sharp, and smooth 4K images. Frame rates up to 240 Hz/1080p are supported with 8 ms latency or less<sup>2</sup>. Rich Color Enhancer produces deep, accurate color for artwork. Together, these technologies deliver insightful visual experiences in museums and STEM classrooms.

## 02 | Flexible, Simple to Use, and Easy to Integrate

Wide-range V/H Lens-Shift and 2.0x zoom enhance installation flexibility while two CEC-compatible HDMI® inputs and DIGITAL LINK simplify operation and integrate the projector into 4K system infrastructure. Preactivated upgrade kits for Geo Pro<sup>3</sup> and Remote Preview Lite<sup>4</sup> secure an effortless 4K experience.

## 03 | Highly Reliable Low-Maintenance Projection

Heat-pipe cooling system enables implementation of full hermetic sealing for the airtight optical block, eliminating need of a filter for 20,000 hours<sup>5</sup> of maintenance-free projection. Multi Monitoring & Control Software with optional Early Warning<sup>6</sup> functions enhances reliability and prevents unexpected downtime by sending an alert before problems occur.



### PT-FRQ50 1-Chip DLP™ Projector

	PT-FRQ50
Light Output	5,200 lm <sup>1</sup>
Resolution	4K (3840 x 2160 pixels <sup>7</sup> ), 16:9

1 Measurement, measuring conditions, and method of notation all comply with ISO/IEC 21118: 2020 international standards. Value is average of all products when shipped. When [PICTURE MODE] is set to [DYNAMIC] and [LIGHT POWER] is set to [NORMAL]. 2 Display frame rate corresponds to the input signal frame rate. Geometric adjustment features must be disabled. 3 Register your projector at PASS to download free Geometry Manager Pro software for Windows® PC. Feature only available after May 2022. 4 Requires Multi Monitoring & Control Software Version 3.2 or later. 5 Around this time, light output will have decreased to approximately 50% of its original level ([PICTURE MODE]: [DYNAMIC], [DYNAMIC CONTRAST] set to [2], temperature 30 °C (86 °F), elevation 700 m (2,297 ft) with 0.15 mg/m<sup>3</sup> of particulate matter). 6 Early Warning functions are bundled with free Multi Monitoring & Control Software (license required after 90-day trial period). 7 With Quad Pixel Drive.

## Filmlike 4K with Vivid Color

Quad Pixel Drive provides smooth, gridless 4K resolution for precise reproduction of digital artwork, CAD drawings, architectural designs, and other detailed images. Rich Color Enhancer features a Standard/Graphic Mode that optimizes red-channel output for deep and natural color expression, and Dynamic Mode to balance brightness and color for clearest visibility in well-lit environments.

## Smooth Playback of 240 Hz Content

PT-FRQ50 supports frame rates up to 240 Hz/1080p with input-to-output latency of 8 ms or less<sup>1</sup> for applications where smooth motion is important. The projector also works with ET-SWR10<sup>2</sup>, a ready-to-use tracking projection-mapping SDK that enables image projection onto fast-moving objects at up to 240 fps to add lifelike interactivity to your museum exhibit.

1 Display frame rate corresponds to the input signal frame rate. Geometric adjustment features must be disabled. 2 ET-SWR10 is a Software Development Kit used in conjunction with third-party devices (sold separately). Compatibility with third-party devices cannot be guaranteed. Other limitations apply. Visit [panasonic.net/cns/projector/products/swr10](http://panasonic.net/cns/projector/products/swr10) for more information. 3 Register your projector at PASS to download free Geometry Manager Pro software for Windows® PC. Feature only available after May 2022. 4 Compatible cameras: Nikon D5200/D5300/D5500/D5600/D7500. 5 Around this time, light output will have decreased to approximately 50% of its original level ([PICTURE MODE]: [DYNAMIC], [DYNAMIC CONTRAST] set to [2], temperature 30 °C (86 °F), elevation 700 m (2,297 ft) with 0.15 mg/m<sup>3</sup> of particulate matter). 6 In QUIET Mode. Brightness is reduced when operating the projector in QUIET Mode. Operating noise is 35 dB in NORMAL/ECO Mode. 7 Requires Multi Monitoring & Control Software Version 3.2 or later.

## Flexible and Adaptable to Your Application

Flexible 2.0x optical zoom, V/H Lens-Shift, and Geometric Adjustment with Free Grid give freedom to correct image position and distortion without a PC. Preactivated upgrade kits for Geometry Manager Pro<sup>3</sup> automate edge-blending via camera<sup>4</sup>, expand the range of software adjustment, and add sophisticated creative masking capabilities.

## Reliable, Cost-Effective Operation

Filterless heat-pipe cooling system draws heat from the hermetically sealed optical block, enabling 20,000 hours<sup>5</sup> of maintenance-free projection and reducing operating noise to a comfortable 28 dB<sup>6</sup>. Remote Preview Lite<sup>7</sup> enables input-video checks on a remote PC before projection. These technologies deliver unbeatable peace of mind in mission-critical situations.

## Other Features

- Multi-Screen Support System with Multi-Unit Brightness & Color Control
- Supports Crestron Connected™, Art-Net DMX, AMX DD, and PJLink™
- DICOM Simulation Mode
- Quick On/Quick Off
- Free 360° installation and 24/7 operation

## Specifications

Model		PT-FRQ50
Projector type		1-Chip DLP™ projector
DLP™ chip	Panel size	16.5 mm (0.65 in) diagonal (16:9 aspect ratio)
	Display method	DLP™ chip x 1, DLP™ projection system
	Number of pixels <sup>1</sup>	1920 x 1080 pixels (If a signal other than 120 Hz/240 Hz is input, it cannot be displayed at this resolution.)
Light source		Laser diodes
Light output <sup>2,3</sup>		5,200 lm
Time until light output declines to 50 % <sup>4</sup>		20,000 hours (NORMAL/QUIET)/24,000 hours (ECO)
Resolution		4K (3840 x 2160 pixels) (With Quad Pixel Drive)
Contrast ratio <sup>2</sup>		20,000:1 (Full On/Full Off) (When [PICTURE MODE] is set to [DYNAMIC] and [DYNAMIC CONTRAST] is set to [1]. HDMI signal input)
Screen size (diagonal)		1.02–7.62 m (40–300 in), 16:9 aspect ratio
Center-to-corner zone ratio <sup>2</sup>		90 %
Lens		2.0x manual zoom (throw ratio: 1.46–2.93:1), manual focus, F 2.0–3.4, f 21.5–43.0 mm
Lens shift (From the origin point of the lens mounter)	Vertical	+71 %, -48 % (manual)
	Horizontal	+34 %, -27 % (manual)
Keystone correction range		Vertical: ±40 °, Horizontal: ±20 °
Terminals	HDMI IN 1/2	HDMI 19-pin x 2 (Compatible with HDCP 2.3, Deep Color, 4K/60p signal input <sup>5</sup> ), CEC supported
	COMPUTER IN	D-sub HD 15-pin (female) x 1 (RGB/Y/PaPr/YCaCr)
	MONITOR OUT	D-sub HD 15-pin (female) x 1 (RGB/Y/PaPr/YCaCr)
	AUDIO IN/OUT	M3 stereo mini-jack x 2
	SERIAL IN	D-sub 9-pin (female) x 1 for external control (RS-232C compliant)
	DIGITAL LINK/LAN	RJ-45 x 1 for network and DIGITAL LINK connection (video/network/serial control) (HDBaseT™ compliant), 100Base-TX (Compatible with PJLink™ [Class 2], Art-Net, HDCP 2.3, Deep Color, 4K/60p signal input <sup>5</sup> )
	LAN	RJ-45 x 1 for network connection, 10Base-T, 100Base-TX (Compatible with PJLink™ [Class 2], Art-Net)
	USB	USB connector (Type A) x 1 for optional AJ-WM50 Series Wireless Module, for USB memory, and for power supply (DC 5 V, maximum 2 A)
Power supply		AC 100–240 V, 50/60 Hz; AC 110 V, 60 Hz (Taiwan)
Power consumption		480 W
Operation noise <sup>2</sup>		35 dB (NORMAL/ECO) / 28 dB (QUIET)
Dimensions (W x H x D) <sup>7</sup>		498 x 168 x 492 mm (19 5/8" x 6 5/8" x 19 3/8")
Weight <sup>8</sup>		Approx. 16.1 kg (35.5 lbs)
Operating environment		Operating temperature: 0–45 °C (32–113 °F) <sup>9</sup> , operating humidity: 10–80 % (no condensation)
Applicable software		Logo Transfer Software, Multi Monitoring & Control Software, Early Warning Software, Geometry Manager Pro <sup>10</sup>

1 If a signal other than 120 Hz/240 Hz is input, it cannot be displayed at this resolution. 2 Measurement, measuring conditions, and method of notation all comply with ISO/IEC 21118:2020 international standards. Value is average of all products when shipped. 3 When [PICTURE MODE] is set to [DYNAMIC] and [LIGHT POWER] is set to [NORMAL]. 4 Around this time, light output will have decreased to approximately 50% of its original level ([PICTURE MODE]: [DYNAMIC], [DYNAMIC CONTRAST] set to [2], temperature 30 °C (86 °F), elevation 700 m (2,297 ft) with 0.15 mg/m<sup>3</sup> of particulate matter). Estimated time until light output declines to 50% varies depending on environment. 5 4K/60p signals are converted to the projector's resolution upon projection. 6 4K/60p signal input is converted to projector's resolution, supports YPaPr 4:2:0 format only. 7 With legs fully retracted. 8 Average value. May differ depending on the actual unit. 9 When optional AJ-WM50 Series wireless module is attached, operating temperature range becomes 0–40 °C (32–104 °F). 10 Feature only available after May 2022.

## Optional Accessories

- **Ceiling Mount Bracket**  
ET-PKD120H (for high ceilings)  
ET-PKD120S (for low ceilings)  
Note: PKD120H/PKD120S used in combination with ET-PKD130B (sold separately).
- **DIGITAL LINK Switcher / Digital Interface Box**  
ET-YFB200G / ET-YFB100G  
Note: Not compatible with 4K signals.
- **Early Warning Software**  
ET-SWA100 Series  
Note: Part number suffix may differ depending on the license type.
- **Real-Time Tracking Projection Mapping System**  
ET-SWR10  
Note: Conditions apply. Availability may vary by country or region. Visit [panasonic.net/cns/projector/products/swr10](http://panasonic.net/cns/projector/products/swr10) for more information.
- **Wireless Presentation System PressIT**  
TY-WPS1 (basic set)  
Visit [panasonic.net/cns/prodisplays/pressit](http://panasonic.net/cns/prodisplays/pressit) for more information.
- **Wireless Module**  
AJ-WM50 Series  
Note: Product availability may vary by country or region. Operating Temperature: 0–40 °C (32–104 °F).

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Note: Pursuant to the Panasonic Group's transition to a holding company system, Panasonic Corporation, Connected Solutions Company will change its name to Panasonic Connect Co., Ltd. in April 2022.