Installation Projector

\Orchestrating a brighter world NEC

4K UHD installation projector with a laser phosphor light source

PX1005QL

HDBT™ HDMI® HIGH-DEFINITION MULTIMEDIA INTERFACE ™

The NEC PX1005QL laser phosphor projector provides high durability projection for various vertical markets, delivering pixel-free visualization with 4K UHD resolution and a brightness of 10,000 lumens.

Outstanding Picture Quality with High Resolution and Advanced Laser Technology

High Resolution and High Brightness

This projector realises projection of images in a resolution 3,840 × 2,160 pixels (4K UHD), an aspect ratio of 16:9, and a brightness of 10,000 lumens and achieves outstanding picture quality with resolution enhancement by pixel shift technology – a whole new visualisation experience with high brightness, up to a 4K input signal and unique picture and colour processing technology based on the latest NEC scaler chip and DMD.

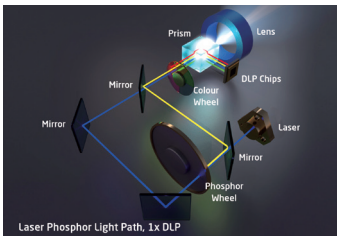
Dustproof Design Supported by Closed-loop Cooling

This projector has a dustproof design to prevent the staining of optical components from the ingress of dust and the deterioration of brightness and image quality.

Light Source - No More Lamp Replacements

Up to 20,000 hours* of maintenance-free operation is possible due to the laser light source while enjoying a Lower TCO. This projector has the ability to control brightness, creating a stable image over longer time periods.

* Actual hours may vary depending on usage conditions.

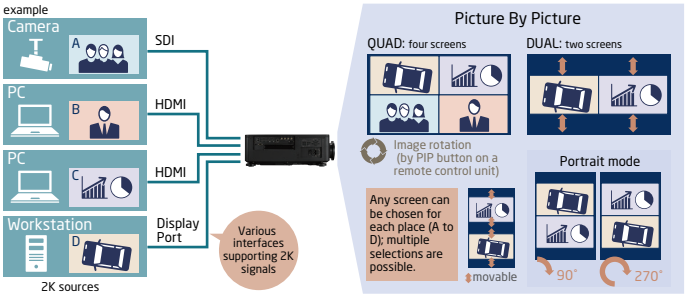


Laser Phosphor Light Path, 1x DLP

Enable Image Flexibility with Multi-Source Input and Multi-Screen Function

Multi-Display Multi-Source Input

Multi-display capabilities are integrated. This projector can display dual and quad images of picture by picture with 3G-SDI and other input terminals. This feature enables to set [QUAD], [DUAL] and [Single] settings to display flexible images of 2K signal with various interfaces.



Multi-screen Projection and Edge Blending Function

This function seamlessly blends multiple projected images to display a single high-resolution image.

Compatible with Diverse Signal Sources

Equipped with a wide range of inputs and supports many kinds of 4K input terminals, such as 4K 60Hz support on 2×HDMI®, 2×DisplayPort™, Quad 3G-SDI and HDBaseT™ inputs for connection to multiple 4K sources plus an optional slot for 4K/UHD OPS Slot-in PCs provides "pixel-free viewing" on a large scale. Also, each interfaces support the YUV4:4:4 colour format and 12 bit signals.

Dual HDMI Inputs (with HDCP) and Dual DisplayPort

Among the PX Series' wide selection of inputs are dual HDMI with HDCP and dual DisplayPort with HDCP for connecting to high-denition sources such as Blu-ray™ players, cable boxes, satellite receivers and personal computers.

HDBaseT Support

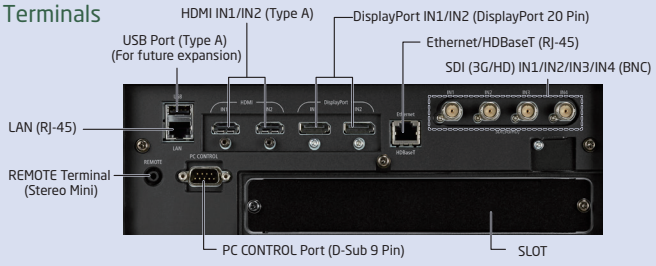
Simplify your installations with HDBaseT, which is optimized for video applications and supports uncompressed full HD digital video, audio, Ethernet, power and various control signals.

Expansion Slot

The slot technology allows for the integration of Open Pluggable Specification (OPS*) boards and other option slot products without the need to store additional external equipment.

*OPS is a standard established by Intel Corporation.

Terminals



High Quality Image with Fantastic Cinema Quality Picture

High Quality Pictures Using Cinema Quality Picture Technology

The device displays high-resolution pictures with its rich gradation expression capability with 10-bit signal processing and improves the contrast in the picture boundary area using developmental technology for digital cinema projectors and NEC's unique video processor for image processing.

Cinema Quality Picture

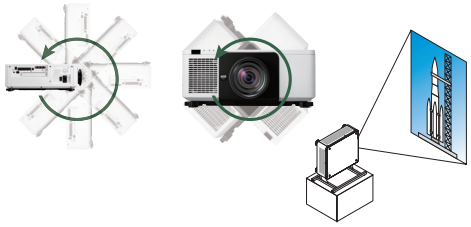
Advanced Installation Capabilities

Geometric Correction

Projection is not confined to a standard flat screen or wall. Geometric correction allows this model to project an image on spheres, cylinders, corner angles and many more non-standard surfaces.

Highly Flexible Installation Options with 360 ° Positioning in Any Direction

This projector can be installed universally at any angle. Tilt-free, roll-free and portrait installations are supported. The projector can be rotated freely (360°) to point up or down depending on the installation requirements and can be rotated and installed on its side to create a portrait image.

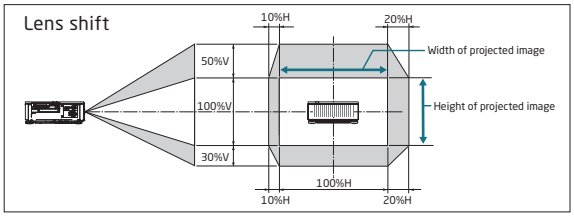


Stacking Correction

This feature allows the projectors to boost an image's brightness up to 20,000 lumens, which is ideal for larger-sized screens and environments with heavy ambient light. This feature also prevents the complete loss of an image, which can happen when using only one projector.

Easy Installation

Eight types of optional lenses, including an ultra short throw lens are available with motorised zoom/focus and a memory function. A selection of wide zoom lenses with wide vertical and horizontal lens shift (+50%/-30% of vertically and +20%/-10% of horizontally) is available. In addition, the lenses can be mounted and removed in one touch, which allows for quick and easy lens exchange.



		NP39ML-4K	NP16FL-4K	NP31ZL-4K	NP17ZL-4K	NP18ZL-4K	NP19ZL-4K	NP20ZL-4K	NP21ZL-4K
Option lens									
Lens type		Mirror Lens (Ultra Short)	Fixed Lens (Short)	Zoom Lens (Short)	Zoom Lens (Standard)		Zoom Lens (Long)		Zoom Lens (Ultra Long)
Zoom / Focus		Powered focus		Powered zoom and focus					
Zoom ratio		–		1.25	1.41	1.30	1.65	1.50	1.55
Throw Ratio		0.38:1	0.76:1	0.74-0.93:1	1.24-1.78:1	1.71-2.25:1	2.20-3.67:1	3.54-5.36:1	5.25-8.28:1
F		2.00	1.85	1.96-2.30	1.85-2.50	1.70-1.90	1.86-2.48	1.85-2.41	1.85-2.48
f (mm)		5.64	11.6	11.3-14.1	18.7-26.5	26.0-34.0	32.9-54.2	52.8-79.1	78.5-121.9
Screen size		100-350 inches	50-300 inches						
Light output *1	Wide	7,900 lumens	9,600 lumens	8,800 lumens	9,200 lumens	10,000 lumens	9,100 lumens	9,000 lumens	9,100 lumens
	Tele	–		7,500 lumens	6,700 lumens	9,300 lumens	6,600 lumens	6,900 lumens	6,600 lumens
Lens Shift	Vertical	–		+0.5V / -0.3V					
	Horizontal	–		Refer to "Throw distance chart" file for details (0.1H and other side 0.2H (refer to the image))					
Weight		2.7kg	0.9kg	1.3kg	1.1kg	0.8kg	1.0kg	1.0kg	1.35kg

*1: [PRESET] mode is [HIGH-BRIGHT]

Other Useful Functions and Features

- HDR compatibility with 4K signal input
- Eco mode and light source power adjustment
- Centre lens design for easy setup
- Program timer with real time clock / off timer
- Remote control ID
- Direct power on/off, auto power on/off
- Carbon meter
- Cornerstone
- PIN security / control panel lock / security bar / security slot

Network Control

NaViSet Administrator 2 / PC control / Alert mail / CRESTRON ROOMVIEW™ / AMX BEACON / PJLink / HTTP server (projector adjustment)

NaViSet Administrator 2

PX1005QL-B

PX1005QL-W

PICTURE BY DLP TEXAS INSTRUMENTS

PX1005QL

10,000 lumens | 4K UHD | 31.2 kg

Brightness using PX1005QL with NP18ZL-4K.
Weight does not include lens.

Specifications

Model			NP-PX1005QL-W / NP-PX1005QL-B
Projector Type			1 chip DMD reflection type
Specifications of main parts	Main panel	Size	0.66 inch DMD (aspect ratio: 16:9)
		Resolution	4K UHD (3,840 dots × 2,160 lines), (DMD Native : 2,716 dots × 1,528 lines)
		Pixels Numbers*1	8,294,400 pixels, (DMD Native : 4,150,048 pixels)
	Projection lenses*2	Zoom/Focus	Power-adjustable
		Lens shift	Power, Horizontal: L10%/R20%, Vertical: +50%/-30%
	Light source		Laser diode
	Light source (laser diode) life*3		20,000 hours (50% brightness)*3
	Optical unit	C/W type (DLP)	Colour separation by colour wheel; time-multiplexing colour wheel method
Light output*4*5		Normal mode	10,000 lumens (NP18ZL-4K)
		ECO1/ECO2	Approx. 80%/Approx. 50%
Contrast ratio*5 (all white/all black)			10,000:1 with dynamic contrast
Screen size			Please refer to the specifications of option lens
Colour reproduction			10-bit signal processing (approx. 1.07 billion colours)
Quietness (ECO2/ECO1/Normal mode)			37 dB/39 dB/42 dB
Scanning frequency (Synchronization)		Horizontal	15 kHz, 24 to 153 kHz
		Vertical	24 Hz, 25 Hz, 30 Hz, 48 Hz, 50 to 85 Hz, 100 Hz, 120 Hz
Max. display resolution (horizontal × vertical)			Digital: 4,096 × 2,160 Pixel clock frequency: less than 594 MHz
Keystone Correction		Horizontal	Manual, Approx. ± 40 Max degrees
		Vertical	Manual, Approx. ± 40 Max degrees
Input/output connectors	HDMI® input terminals	Video input	Type A 19-pin HDMI® connector with HDCP (V1.4/2.2) × 2 Enables: 18Gbps, Deep Colour (8 bit, 10 bit, 12 bit), HDR, Colourimetry Support: RGB, YCbCr444, YCbCr422, YCbCr420, REC2020, REC709, REC601, HDCP*6, 4K (30/60 Hz)
	Ethernet/ HDBaseT™ port	Video input	RJ45 with HDCP (V1.4/2.2) × 1 (IEEE 802.3/802.3u/100BASE-TX), shared with Ethernet Deep Colour (8 bit, 10 bit, 12 bit), Colourimetry Supports: RGB, YCbCr444, YCbCr422, YCbCr420, REC2020, REC709, REC601 HDCP*6, 4K (30/60 Hz)
	DisplayPort™	Video input	DisplayPort 20-pin connector with HDCP (V1.4) × 2 Enables: 21.6Gbps, Main link rates: HBR2/HBR/RBR per lane, Main Link: 1/2/4 lane Link rate, Deep Colour (8 bit, 10 bit, 12 bit), Colourimetry Support: RGB, YCbCr444, YCbCr422, REC709, REC601 HDCP*6, 4K (30/60 Hz)
	3G SDI	Video input	3G/HD SDI, BNC 1-pin × 4 (Single/Dual/Quad input) Input signal: SMPTE292M, SMPTE424M, Colorimetry: RGB, YCbCr444, YCbCr422
	PC control connector		D-Sub 9-pin × 1 (4,800/9,600/19,200/38,400/115,200 bps)
	USB port		USB type A × 1 <For future expansion>
	LAN port		RJ-45 × 1, (IEEE 802.3/802.3u 10BASE-T/100BASE-TX), shared with Ethernet
	Remote connector		Stereo mini jack × 1
Option slot			OPS SBC unit × 1
Usage environment			Operating temperature: 5 to 40°C*7, operating humidity: 0 to 80% (with no condensation)
			Storage temperature: -10 to 60°C, storage humidity: 0 to 90% (with no condensation)
			Operating altitude: 0 to 3,000 m
Power requirement			110-240 V AC, 50/60 Hz
Power consumption	Normal		1,181 W (110-130 V AC), 1,222 W (200-240 V AC)
	ECO1		1,002 W (110-130 V AC), 977 W (200-240 V AC)
	ECO2		658 W (110-130 V AC), 648 W (200-240 V AC)
	STANDBY (NORMAL)		0.33 W (110-130 V AC), 0.35 W (200-240 V AC)
	STANDBY (NETWORK)*8		0.88 W (110-130 V AC), 0.92 W (200-240 V AC)
Input current			12.5 A - 5.5 A
Cabinet colour			White: -W, Black: -B
Dimensions (W × H × D)			500 × 216 × 583 mm (not including lens)
			500 × 211 × 577 mm (not including protruding parts)
Weight			31.2 kg (not including lens)

*1: Effective pixels are more than 99.99%.
*2: Refer to Lens Specifications
*3: Time at which the laser light source is at half brightness; not a guarantee time.
*4: This is the light output value (lumens) mounting the lens unit, NP18ZL-4K, when the [PRESET] mode is set to [HIGH-BRIGHT].
The light output values will be dropped according to the setting of [LIGHT MODE].
If any other mode is selected as the [PRESET] mode, the light output value may drop slightly.
*5: Compliance with ISO21118-2012
*6: If you are unable to view material via the HDMI, DisplayPort and HDBaseT input, this does not necessarily mean the projector is not functioning properly. With the implementation of HDCP, there may be cases in which certain content is protected with HDCP and might not be displayed due to the decision/intention of the HDCP community. (Digital Content Protection, LLC).
*7: Depending on the altitude and temperature, the projector goes into "Forced ECO Mode" in the state [NORMAL] or [ECO1] has been selected for [LIGHT MODE].
*8: Internal measured value. All wired network ports are connected and active.
• These specifications and the product's design are subject to change without notice.

Throw distance and screen size

Screen size (W × H)	Lens model name							
	NP39ML-4K	NP16FL-4K	NP31ZL-4K	NP17ZL-4K	NP18ZL-4K	NP19ZL-4K	NP20ZL-4K	NP21ZL-4K
50" (1.11×0.62)	-	0.8	0.8-1.0	1.4-1.9	1.9-2.5	2.4-4.0	3.9-5.9	5.7-9.0
60" (1.33×0.75)	-	1.0	1.0-1.2	1.6-2.3	2.3-3.0	2.9-4.9	4.7-7.1	6.9-10.9
80" (1.77×1.00)	-	1.3	1.3-1.6	2.2-3.1	3.0-4.0	3.9-6.5	6.3-9.5	9.3-14.7
100" (2.21×1.25)	0.8	1.7	1.7-2.1	2.8-3.9	3.8-5.0	4.9-8.1	7.9-11.9	11.7-18.4
120" (2.66×1.50)	1.0	2.0	2.0-2.5	3.3-4.7	4.6-6.0	5.9-9.8	9.5-14.3	14.1-22.1
150" (3.32×1.87)	1.2	2.6	2.5-3.1	4.2-5.9	5.7-7.5	7.4-12.2	11.9-17.9	17.7-27.7
180" (3.98×2.24)	1.4	3.1	3.0-3.8	5.0-7.1	6.9-9.1	8.9-14.7	14.3-21.5	21.3-33.3
200" (4.43×2.49)	1.6	3.4	3.3-4.2	5.6-7.9	7.7-10.1	9.8-16.4	15.9-23.9	23.7-37.1
250" (5.53×3.12)	2.0	4.3	4.2-5.2	7.0-9.9	9.6-12.6	12.3-20.5	19.9-29.9	29.7-46.4
300" (6.64×3.74)	2.4	5.2	5.0-6.3	8.4-11.9	11.5-15.1	14.8-24.6	23.9-36.0	35.6-55.7
350" (7.75×4.36)	2.8	-	-	-	-	-	-	-

*Stated projection distances are standard values from lens or mirror surface to screen centre.
*For a stack installation, the recommended projection distances will be different.
*The values in the table are design values and may vary.

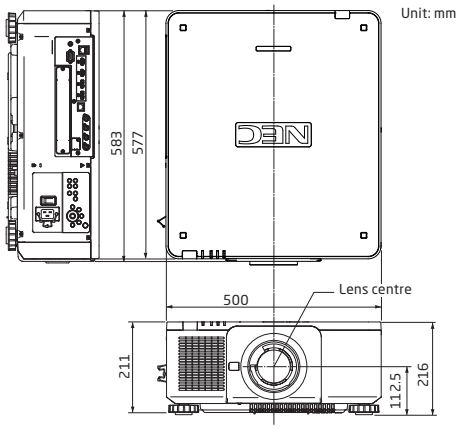
Remote control

(included accessory)

Options

Lenses
NP39ML-4K (Throw ratio 0.38)
NP16FL-4K (Throw ratio 0.76)
NP31ZL-4K (Throw ratio 0.74 - 0.93)
NP17ZL-4K (Throw ratio 1.24 - 1.78)
NP18ZL-4K (Throw ratio 1.71 - 2.25)
NP19ZL-4K (Throw ratio 2.20 - 3.67)
NP20ZL-4K (Throw ratio 3.54 - 5.36)
NP21ZL-4K (Throw ratio 5.25 - 8.28)

Cabinet dimensions



- Do not stare into the lens while in use.
- The laser module is equipped in this product.
  The PX1005QL is categorized in the risk group 2 of IEC62471-5: 2015.
- The projector can be unplugged during its cool down period after it is turned off.
  Parts of the projector become heated during operation.
  Use caution when picking up the projector immediately after it has been operating.

NEC Display Solutions, Ltd.
4-28, Mita 1-chome, Minato-ku, Tokyo 108-0073, Japan

https://www.nec-display.com/ap/

Cat. No. WDPJ-1808-0012N