Panasonic

ideas for life

Professional Plasma Display

with 3D Technology

85-inch | 103-inch | 152-inch

3D FULL HD

Achieving the Ultimate Reality with Large-Screen FULL HD 3D Images. Opening New Business Possibilities.

4K2K Plasma Display
TH-152UX1W

Full-HD Plasma Display
TH-85VX200W

Full-HD Plasma Display
TH-103VX200W

3D FULL HD

Images take on new dimensions of depth and texture.

Step into the 3D World.

Large-screen, FULL HD 3D realism brings some exciting new possibilities to business

High-speed, alternating, FULL HD signals for each eye — Frame Sequential technology

The technology in which the left-eye and right-eye 3D images are sent to the viewer is the key to 3D image quality. For this, FULL HD 3D uses something called the Frame Sequential technology. The left and right images are alternately displayed at high speed (60 frames per second for each eye x 2 = 120 frames per second*). When viewed with special glasses that open and close shutters in sync with the displayed frames, the brain creates the sensation of depth from the visual disparity to form 3D images.

* The frame rate varies depending on the 3D image signal being reproduced. For example, 3D images are reproduced at 120 fps (frames per second) for a 60 Hz input signal, and 100 fps for a 50 Hz input signal.

Compatible with Various 3D Imaging Methods
In addition to the Frame Sequential method, Panasonic professional FULL HD 3D plasma displays are compatible with both the Side-by-Side and Top-and-Bottom methods.

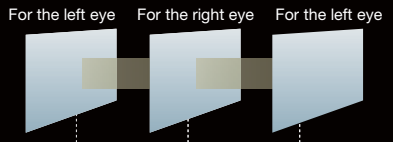
- Someone in authority should responsibly convey the precautions for use of the 3D Eyewear to the user.
- Be sure to read the safety precautions and usage precautions in the User's Manual to ensure correct, comfortable viewing.
- In the event that you experience dizziness, nausea, or other discomfort while viewing 3D images discontinue use and rest your eyes.
- Parents/guardians should monitor children's viewing habits to avoid their prolonged use without rest periods.
- Use only the 3D Eyewear recommended Panasonic 3D displays.

3D FULL HD
3D Eyewear

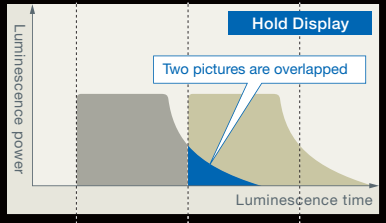
3D FULL HD
Plasma Display

Ultra-high-speed drive technology achieves clear 3D with minimal double images

FULL HD 3D images require a display speed of 120 frames per second (fps), which is twice the ordinary speed. A panel with slow response simply cannot keep up with the necessary image processing. As a result, a double image will appear when the images for the left and right eyes overlap on the screen (also called crosstalk). In addition to new short-decay-time phosphors that reduce the afterglow time to 1/3, a high-precision Motion Vector Prediction function helps to achieve highly precise illumination. Ultra-high speed drive technology, which shortens the luminous time to 1/4 compared to previous models, also minimizes double images even on large screens to produce clear and detailed 3D images.

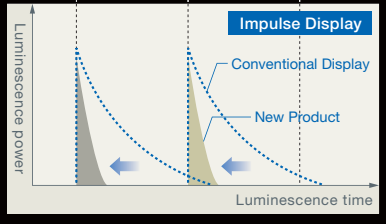


■ Device with slow response



Blurred 3D image

■ Panel with utrahigh-speed drive

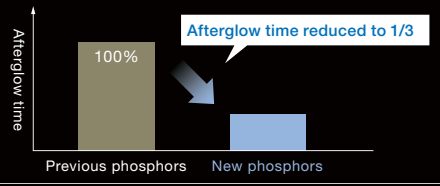


Crisp 3D image

Newly developed Fast-Decay Phosphors are used for the red and green phosphors

This reduces the afterimage time to 1/3 that of conventional phosphors while simultaneously expanding the scope of colour reproduction. As a result, brighter, sharper images are produced for 3D content.

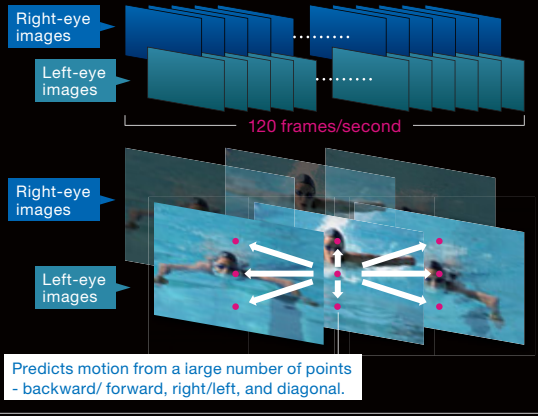
■ Image of the new phosphor afterglow characteristics



High-speed illumination achieved with high-precision Motion Vector Prediction

The VX200 Series features the world's first* high-precision Motion Vector Prediction function. Its precise luminous control predicts front/back movement as well as left/right and diagonal movement to increase the drive speed and produce clear 3D images even on a large screen.

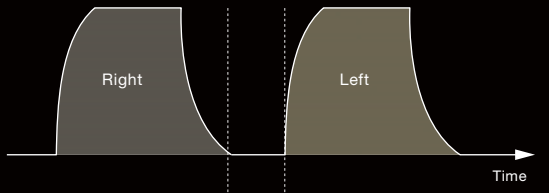
* According to a Panasonic survey, as of June 9, 2010, for a FULL HD 3D-compatible flat-panel display.



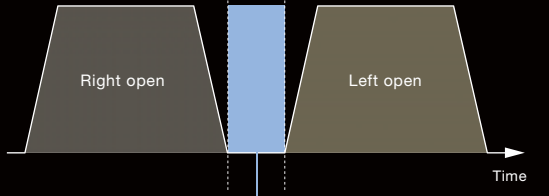
High-precision 3D Eyewear control technology

Highly precise timing control for the opening and closing of the shutters minimises unwanted light leakage to enable clear 3D viewing. The remarkable beauty of the FULL HD 3D images is further ensured by employing only Panasonic components — both a 3D plasma display and 3D Eyewear— to achieve precisely linked operation.

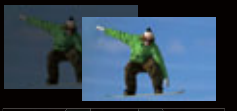
■ Plasma emission



■ Panasonic's 3D Eyewear



Both shutters close completely to match the luminescence characteristics of the plasma display.



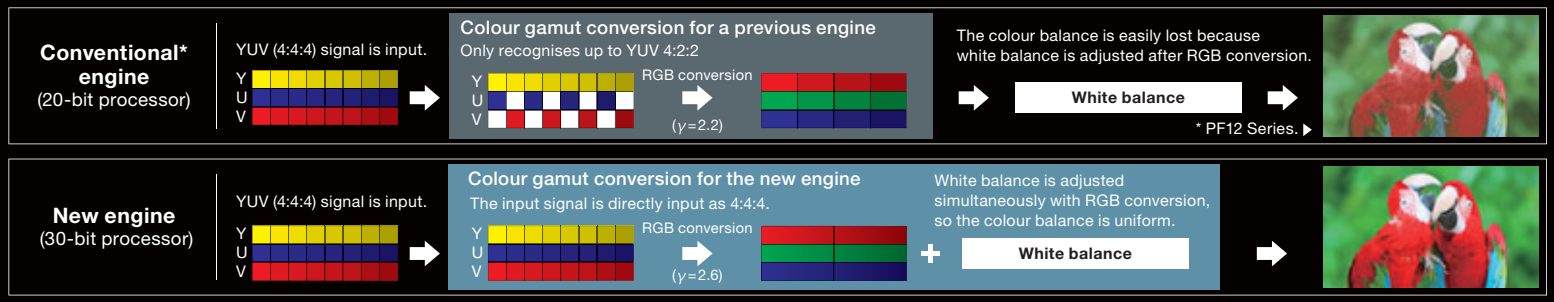
Minimising the shading ratio (Over 1/1000)

Achieving Large-Screen Displays with Naturally Colourful High-Resolution Images

Newly developed Professional-quality engine doubles colour reproduction capability

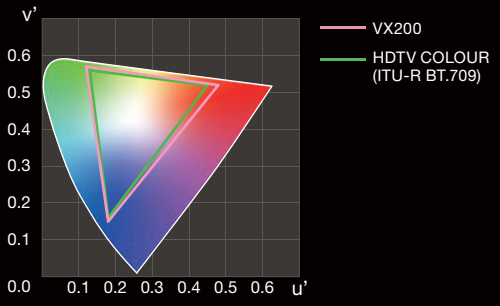
The new professional-quality engine raises the colour processing of each pixel from the conventional* 20-bit level to 30-bit processing. By faithfully reproducing all of the colour and luminance signals output by image sources, it produces smooth, vibrant colours across the entire screen.

* PF12 Series.



A Wide colour gamut faithfully reproduces the colours and textures required by professionals

Professional displays require a level of colour reproduction that portrays various materials in their natural colours for product designs and image applications. With the wide colour gamut of this panel, the natural colours and textures of materials can be faithfully reproduced, meeting versatile market needs.



DIGITAL CINEMA COLOUR

Colours are decompressed to widen the colour gamut, by using a process that is the opposite of that used by Hollywood colourists when they apply detailed compression to original colours. This wide colour gamut approaches that of Digital Cinema*, to enable colouring that was previously not possible.

* The colour gamut used in current digital cinemas, which is also based on demand specifications compiled by major Hollywood movie companies for Digital Cinema standards.

HDTV COLOUR (ITU-R BT.709)

This sets the display to the HDTV standard colour gamut.

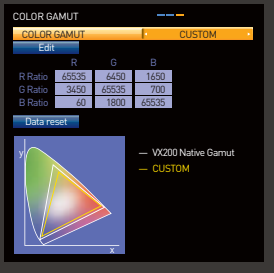
NATIVE

Expressing the natural colour gamut of the VX200 Series.

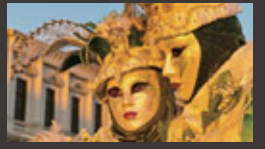
CUSTOM

This lets you set the hue for each RGB colour from the HDTV colour gamut of the initial settings. You can adjust the colours while viewing a simplified chroma diagram.

* The Colour Gamut screen is simulated. It may vary from actual specifications.



A chroma diagram is displayed, enabling you to set the colour gamut for each RGB colour



You can adjust the colour gamut as desired to match the type of image.

A Wide Range of Applications Benefit from Large-Screen FULL HD 3D Images

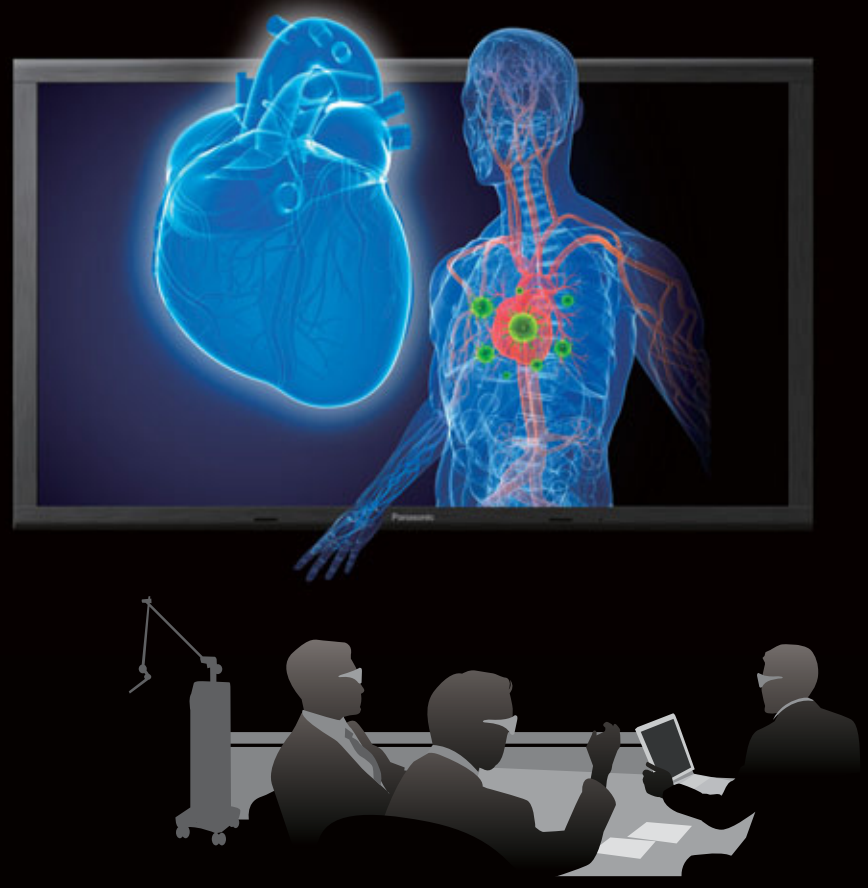
Ultra large-screen Panasonic plasma displays faithfully express colours with their meticulous image quality.
The stereoscopic effect with 3D characteristics gives a realistic perception.
These displays are extremely effective for professional applications that support business activities.

CAD/CAM design previews

- Use for CAD/CAM and architectural designing and for reviewing completed designs.
- Reproduce large-scale objects with life-size images on large 3D screens.
- Faithful colour and texture reproduction increases accuracy in design review.

Educational use

- Use life-size 3D to display images such as the human anatomy, which cannot be properly visualised from a 2D image.
- Virtually experience surgeries that are difficult to perform in real life.
- The large screen allows everyone to share information in group study sessions.

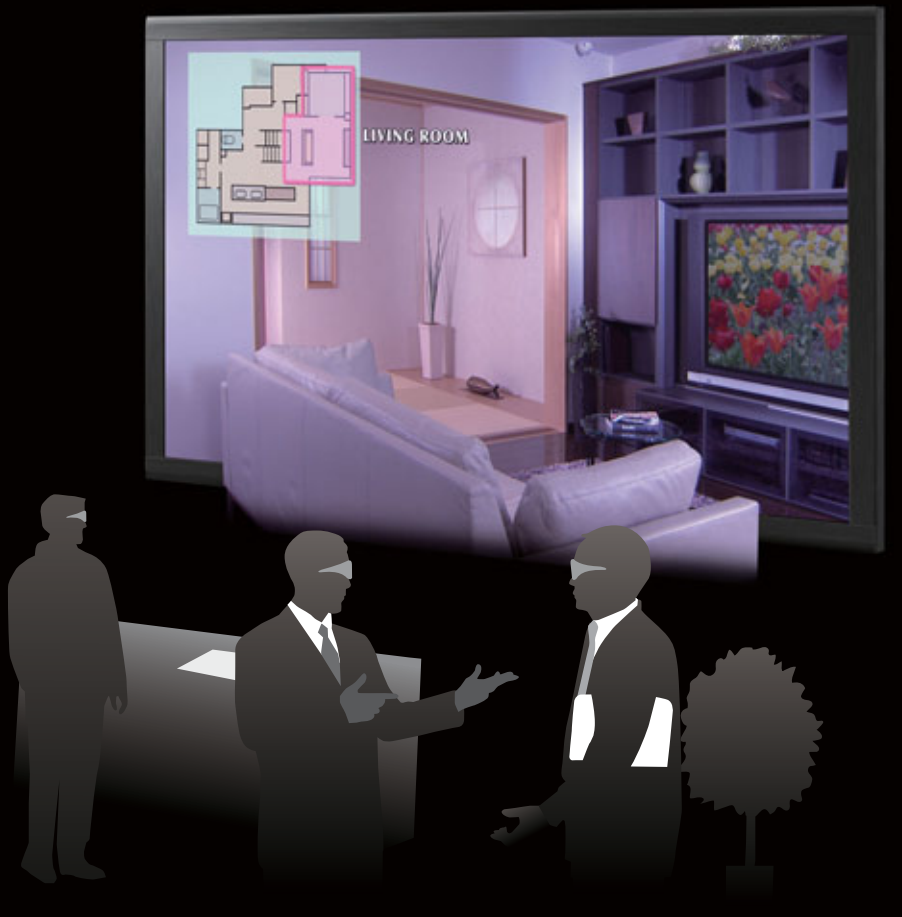


Driving schools

- Can be used as a training device for piloting airplanes or driving cars.
- Enables a realistic simulation experience.
- Various types of training can be conducted by switching image content.

Showrooms

- Can be used to display the full colour variations of products in a space that is too small to display the actual products in all colours.
- Realistic 3D images enable customers to feel as if they are looking at actual products.
- The large screen allows customers to check small details that are otherwise easy to miss.



Museum highlights

- Enables virtual display of invaluable artwork.
- Allows visitors to see details of artwork which they cannot see clearly through a showcase.
- Can be used to display artwork that is lent out.

New museum services

- Display finely detailed items that are invisible to the naked eye.
- Easily provide virtual experiences using photographic images or computer graphics.
- Networking with other facilities offers a wider range of image-based exhibits.

Amusement facilities

- Can be used to display content dynamically on the large screen.
- Attracts customers during events by serving as a highlight of the facility.
- Provide new services, such as encounters with life size characters.

Native contrast of 5,000,000:1* gives you high-quality images with rich textures

A high native contrast of 5,000,000:1* clearly distinguishes light areas from dark areas in the image. Even the tiniest stars in a night sky are strikingly rendered, in images with stunning detail. Textures are meticulously reproduced, right down to fine nuances in brightness and colour.

■ Conventional (PF12 Series) panel

■ Panel with 5,000,000:1 Native Contrast

* The dark-room contrast ratio of the panel unit that can be displayed simultaneously on the same screen. Measured in “Dynamic” picture mode using a white signal in a 4% window.

8,192 equivalent steps of gradation boost detailed expression

The extremely high performance that makes it possible to display FULL HD 3D images also translates to a remarkably high level of performance when displaying 2D images. The colour expression that is achieved by 8,192 equivalent steps of gradation, and the smoothness with which it renders intermediate colours, combine to create tonal nuances that have never before been possible.

Smooth, natural gradation.

Moving-picture resolution of 1,080 lines. Clear motion images in sports and action movies.

By shortening the display time for each frame, these displays achieve a high, 1,080 lines of moving-picture resolution.* This clearly shows detailed motion even in fast-action scenes, and lends greater beauty to the high-resolution images that are unique to full-HD displays. Moving-picture resolution is also constant for images that include both slow and fast motion, to produce uniform, finely detailed images.

■ Moving-picture resolution

1 FULL HD LCD with double-speed drive

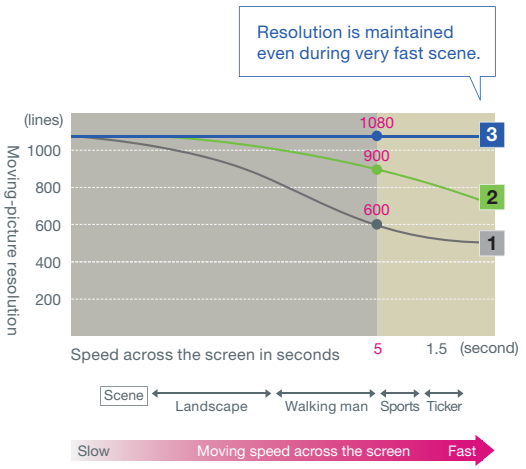
600 lines (at 5-second measurement point)

2 Conventional (PF11 Series)

900 lines (at 5-second measurement point)

3 VX200 Series

1080 lines (at 5-second measurement point)

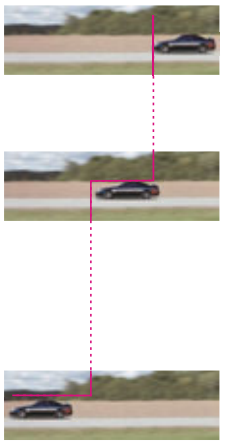


*According to the method for measuring moving-picture resolution to indicate motion-image display performance that was developed by the Advanced PDP Development Centre Corporation (APDC). For 3D images, the left and right images are each measured.

3D 24p Smooth Film enhances 3D image depth

In order to show smooth images that are displayed at 24 frames per second, like those in film-based movies, the 3D 24p Smooth Film function is used to predict movements and create new frames between the original frames. This naturally reproduces smoother 2D images, and by creating new frames between the original frames for both left- and right-eye 3D images, it produces exceptional three-dimensional depth.

■ 24p Imaging (24 frames/sec × 2)

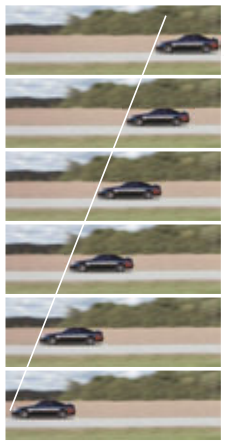


■ 2:3 Pull-Down (60 frames/sec × 2)

The moving image blurs.

The depth suddenly changes, causing an unnatural image.

■ 3D 24p Smooth Film (60 frames/sec × 2)



Naturally flowing image.

Smooth movement is displayed in 3D, greatly improving depth.

152-inch Super Resolution 4K2K Panel

This is the world's first* 4K2K self-illuminating panel. Ultrahigh-speed drive technologies, based on the inherent, super-high efficiency of self-illuminating plasma displays, provide 4 times the amount of information of Full-HD (1,920 x 1,080 pixels) to display remarkable 4,096 x 2,160-pixel images. Bright, highly detailed images are rendered in all their natural beauty, so viewers experience the sweeping ambience of images filling the screen.

* As a FULL HD 3D-compatible flat panel display, as of June 9, 2010. Panasonic studies.

Easily save preferred settings with **Picture Profile**

The Picture Profile lets you save custom settings that you have made for colors and other image preferences. You can retrieve the settings at any time, to enjoy images just the way you want them. You can make up to 16 original settings, and customize your display by locking the memory and editing the titles.

Designing

Provides CG-like colours for CAD design of automobiles and other applications.

Academic

Faithfully reproduces the colours of the materials in ancient monuments, antiques, etc.

Entertainment

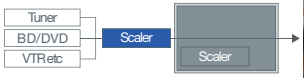
Reproduces bright, vivid colours to add excitement to games and attractions.

* The TH-152UX1 is not equipped with Memory Lock.

Process images with **External Scaler Mode***

With this advanced function, you can process images exactly the way you want them. It lets you convert the image with an external scaler instead of using the display's built-in scaler.

External Scaler Mode [ON]



Direct reproduction of image adjusted with the scaler.

External Scaler Mode [OFF]

Image created with the VX200 Series.

* VX200 Series only

Blue-Only Mode

A Blue-Only Mode, which is essential for monitor adjustment, is included. It allows the red and green signals to be cut, and displays only the blue signal as a monochrome image. This mode is used mainly for adjusting the colour density (chroma) and colour phase. By monitoring VTR noise, the signal level of each colour can be accurately set.

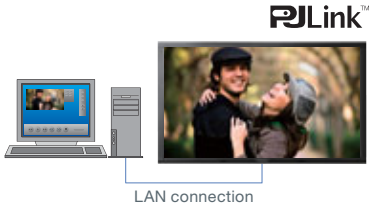
Blue-Only Mode [OFF]

Blue-Only Mode [ON]

Web Browser Control*1

This network function lets you operate displays by remote control and monitor their status through a LAN connection. Since it supports the "PJLink™*2 Class 1" industry standard, existing infrastructure can be used for effective plasma display operation. You can also control the display from a web browser, making it even easier to use. The network function also uses the same protocol as Panasonic projectors, so other video devices can be combined to upgrade the system.

*1: VX200 Series only
*2: Unified standards for a telecommunications protocol for operating and managing multiple projectors.

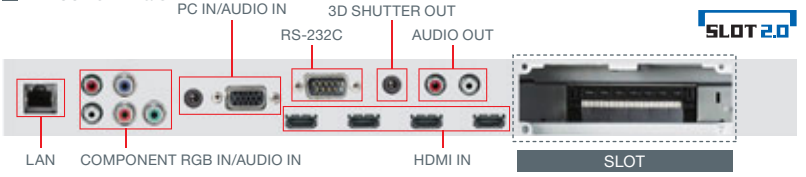


- When using the network function, be sure to set "Control I/F Select" in "Network Setup" to "LAN."
- Applications for the PJLink trademark have been filed in Japan, the United States, and other countries and regions.

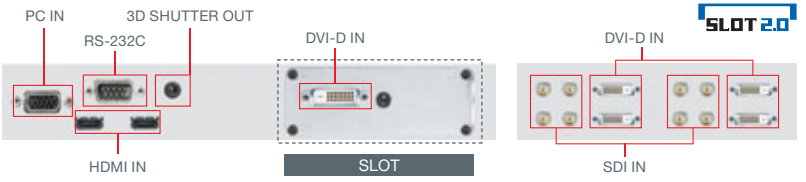
Customize your system **SLOT 2.0**

Greater display convenience and system flexibility are gained with standard HDMI and DVI terminals compliant network function.

VX200 Terminals



UX1 Terminals



- The pre-installed terminal board can be replaced.

4K2K Plasma Display
TH-152UX1W

NeoPDP SLOT 2.0 NANODRIFT

Full-HD Plasma Display
TH-103VX200W

3D FULL HD NeoPDP SLOT 2.0 NANODRIFT PJLink™

Full-HD Plasma Display
TH-85VX200W

3D FULL HD NeoPDP SLOT 2.0 NANODRIFT PJLink™

Specifications

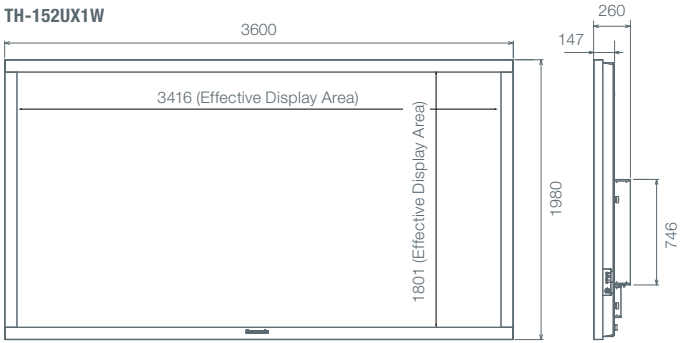
		4K2K Plasma Display **TH-152UX1W**	FULL HD 3D Plasma Display **TH-103VX200W**	FULL HD 3D Plasma Display **TH-85VX200W**
DISPLAY	Screen Size (Diagonal)	152-inch (3,862 mm)	103-inch (2,603 mm)	85-inch (2,167 mm)
	Aspect Ratio	17:9	16:9	16:9
	Effective Display Area (W × H)	3,416 × 1,801 mm	2,269 × 1,276 mm	1,889 × 1,062 mm
	Resolution (H × V)	4,096 × 2,160 pixels	1,920 × 1,080 pixels	1,920 × 1,080 pixels
	Pixel Pitch (H × V)	0.834 × 0.834 mm	1.182 × 1.182 mm	0.984 × 0.984 mm
	Native Contrast*1	5,000,000:1	5,000,000:1	5,000,000:1
	Gradation	8,192 steps (equivalent)	8,192 steps (equivalent)	8,192 steps (equivalent)
	Panel Life*2	Approx. 100,000 hours	Approx. 100,000 hours	Approx. 100,000 hours
	Full HD 3D	Yes*3	Yes	Yes
CONNECTION TERMINAL	Dual Link HD-SDI	Dual Link HD-SDI × 4*4 (Compatible with HDCP 1.1)	—	—
	DVI In	DVI-D × 4*4	—	—
	HDMI In	HDMI × 2 : Ver. 1.4a (Compatible with Deep Colour)	HDMI × 4 : Ver. 1.4a (Compatible with Deep Colour)	HDMI × 4 : Ver. 1.4a (Compatible with Deep Colour)
	Component In	—	RCA × 3	RCA × 3
	Audio In (L/R)	—	RCA × 1 set	RCA × 1 set
	PC In	Mini D-sub 15-pin × 1 (Female) Plug & Play (VESA DDC 2B)	Mini D-sub 15-pin × 1 (Female) Plug & Play (VESA DDC 2B)	Mini D-sub 15-pin × 1 (Female) Plug & Play (VESA DDC 2B)
	Audio In (L/R)	—	M3 jack × 1	M3 jack × 1
	Audio Line Out (L/R)	—	RCA × 1 set, variable(-∞ to 0 dB)	RCA × 1 set, variable(-∞ to 0 dB)
	Function Slot : SLOT 2.0	DVI-D 24-pin × 1 (Audio input is not available.)	SLOT2.0 × 1 (Vacant)	SLOT2.0 × 1 (Vacant)
CONTROL TERMINAL	Serial	D-Sub 9-pin × 1 (RS-232C Compatible)	D-Sub 9-pin × 1 (RS-232C Compatible)	
	LAN	—	RJ45 10 BASE-T/100 BASE-TX, Compatible with PJLINK™	
	3D Shutter Out	M3 Jack × 1 (for Optional 3D IR Transmitter)	M3 Jack × 1 (for Optional 3D IR Transmitter)	
ELECTRICAL	Power Requirements	200 - 240 V AC, 50 Hz/60 Hz	200 - 240 V AC, 50 Hz/60 Hz	200 - 240 V AC, 50 Hz/60 Hz
	Power Consumption	3,700 W	1,450 W	1,200 W
	On Mode Average Power Consumption*5	Approx. 2,620 W	Approx. 942 W	Approx. 739 W
	Power off Condition	0.3 W	0.3 W	0.3 W
	Stand-by Condition	0.5 W	0.5 W	0.5 W
MECHANICAL	Dimensions (W × H × D)	3,600 × 1,980 × 147*6 mm	2,412 × 1,419 × 129*7 mm	2,015 × 1,195 × 99 mm
	Weight	Approx. 577.0 kg	Approx. 199.0 kg	Approx. 117.0 kg
OPERATING ENVIRONMENTAL	Cabinet Colour	Black	Black (Aluminum Hairline Finish)	
	Temperatures	0°C to 35°C	0°C to 40°C	
	Humidity	20% to 80% (Non condensation)	20% to 80% (Non condensation)	
	Altitude	0 to 1,500 m	0 to 2,400 m	
SAFETY REGULATIONS		UL60065, CAN/CSA-22.2No60065:03, EN60065 AS/NZS60065, SASO, IEC60065/SS, IEC60065/PAI, IEC60065, GOST	UL60065 ,CAN/CSA-22.2No60065:03, SASO, IEC60065, EN60065, AS/NZS60065, IEC60065/SS, IEC60065/PAI, GOST, NOM approval	
RADIATION REGULATIONS		FCC Part 15 Class-B, ICES-003, CISPR22 Class-B, EN55022 Class-B, EN55024, EN61000-3-11, EN61000-3-12	CISPR22 Class-B, EN55022 Class-B, EN55024, EN61000-3-2, EN61000-3-3	

*1: The dark-room contrast ratio of the panel unit that can be displayed simultaneously on the same screen. Measured in "Dynamic" picture mode using a white signal in a 4% window. *2: Guideline operating hours before the panel brightness is reduced to half when the panel is used to display motion pictures in the Standard mode. Afterimages (burned-in images) and malfunctions are not taken into consideration. *3: An optional 3D IR Transmitter and 3D Eyewear are required for viewing 3D images. *4: 4 inputs is set and only for one 4K signal. You can not input 4 different signal to each inputs. *5: Based on IEC 62087 Ed.2 measurement method. *6: Exclusive of portion (260 mm when including the protruding portion of the slot) *7: Exclusive of portion (141 mm when including the protruding portion of the slot)

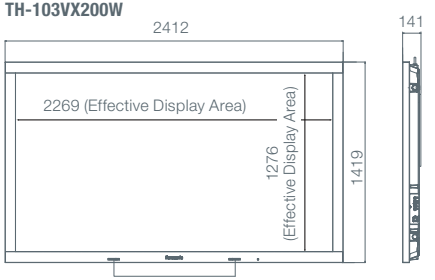
Dimensions

Cautions: This drawing is not a scale
Units: mm

TH-152UX1W

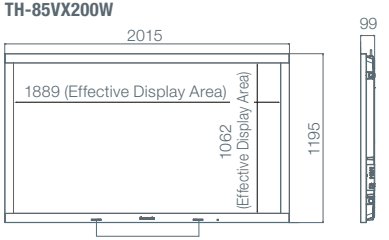


TH-103VX200W



Infrared transmitter for 3D Eyewear

TH-85VX200W



Infrared transmitter for 3D Eyewear

Optional Accessories

Mounting Options

Pedestal

TY-ST152UX1 (for 152-inch model)
TY-ST103PF9 (for 103-inch model)
TY-ST85P12 (for 85-inch model)

Wall-Hanging Bracket (Vertical)

TY-WK152UX1 (for 152-inch model)
TY-WK103PV9 (for 103-inch model)
TY-WK85PV12 (for 85-inch model)

Floor Stand

TY-ST85PF12 (for 85-inch model)

Function Boards

BNC Dual Video Terminal Board

TY-FB9BD[*1]

HD-SDI w/Audio Terminal Board

TY-FB10HD[*2 *3]

Dual HD-SDI Terminal Board

TY-FB11DHD[*2]

DVI-D Terminal Board

TY-FB11DD[*2 *3]

Peripherals

3D IR Transmitter

TY-3DTRW[*4]

Optional 3D Eyewears

L size

TY-EW3D2L

M size

TY-EW3D2M

S size

TY-EW3D2S

Included Accessory

Remote Control Transmitter
Illuminated Buttons
light up for easy access and
operation in the dark.

3D Eyewear

TY-EW3D10*

* VX200 Series only
* Included with each VX200 Series is one pair of 3D Eyewear necessary to view the 3D content.
* 3D Eyewear are also available as optional accessories.

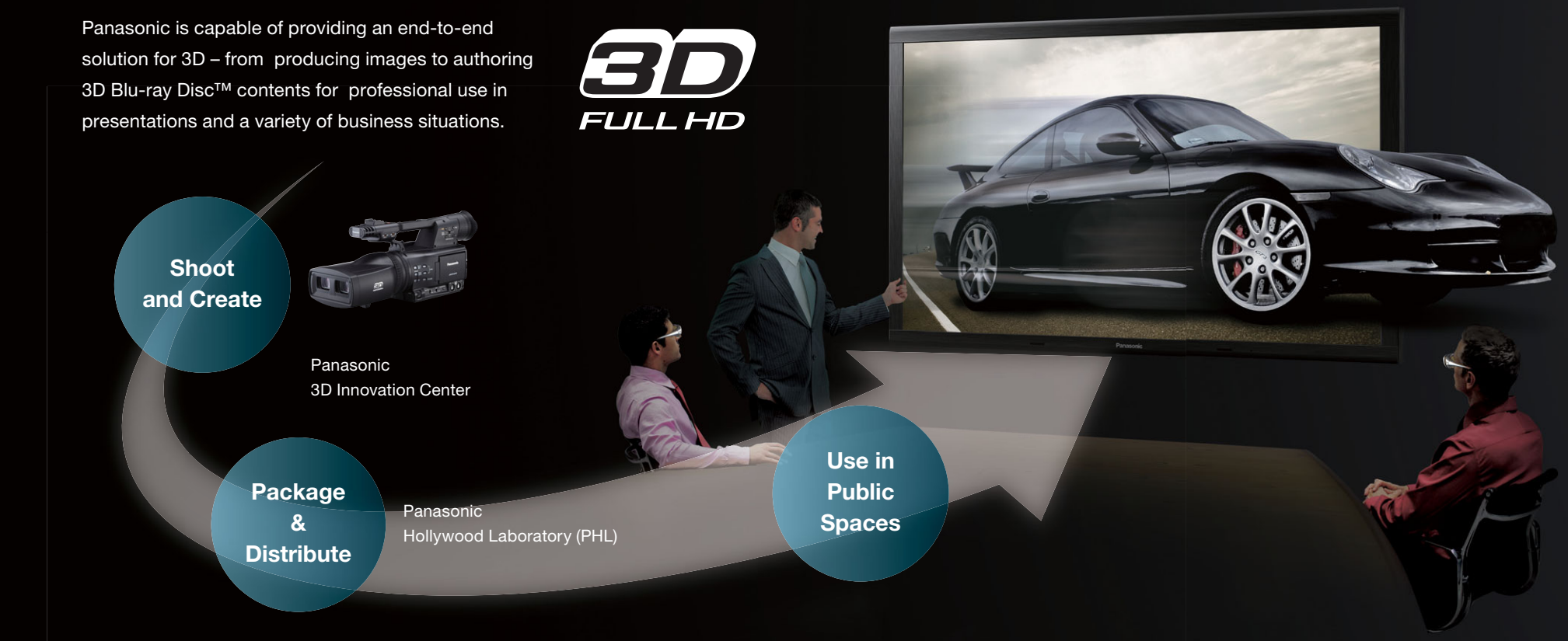
*1: VX200 Series only. *2: Also compatible with 3D input signals (Side by Side/Top and Bottom format). *3: Audio input is not available for 152-inch model. *4: Will be available early in 2011.

1. Use the appropriate optional accessories for installation, and install in a manner that facilitates maintenance and safe use. 2. In addition to the cost of the main unit, expenses are incurred for shipping, transport, installation, construction, etc. 3. Because this product uses 200-VAC power, power source construction may be required. 4. The TH-152UX1, TH-85VX200 and TH-103VX200, and the special installation options that they require, are all built to order.

Panasonic brings a total solution to 3D imaging

Panasonic is capable of providing an end-to-end solution for 3D – from producing images to authoring 3D Blu-ray Disc™ contents for professional use in presentations and a variety of business situations.

3D FULL HD



Panasonic 3D Innovation Center

The Panasonic 3D Innovation Center was established to accelerate the development and expansion of 3D businesses. By taking full advantage of the collective strengths of the Panasonic Group to spur the evelopment of its 3D-related technologies and services, we are thus committed to creating new business models and strengthening total solutions to meet customer needs ahead of the times.

3D INNOVATION CENTER

Panasonic

panasonic.net/proplasma

Simulated pictures on screen.
Specifications are subject without notice.

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