Panasonic
ideas for life

2008/Later

Professional
Plasma Displays

Continuous Evolution

Panasonic
ideas for life

CERTIFIED
CRESTRON
Integrated Partner

AMX

Control 4

Professional
Plasma Displays

Europe

A Fusion of Accumulated Expertise and Leading-Edge Technologies: Professional Plasma Displays

Incorporating an Abundance of State-of-the-Art Imaging Technologies Developed by the Leading Plasma Display Manufacturer
Panasonic has been involved in developing plasma displays for many years. By incorporating numerous imaging technologies accumulated through our relentless pursuit of advanced technologies, we've created large-screen panels that are capable of displaying images that mirror the originals. Now, by adding even more advanced expression capabilities, we deliver images with true emotional impact in our Professional Plasma Display Series.

Panasonic Quality and Performance — Recognized the World Over
Panasonic performs all plasma display production processes in-house, including development and production of the panels, design and development of the circuits and drive systems, and assembly of the final products. Panasonic's uncompromising production policy has earned our customers' trust. Panasonic products are widely used in a host of professional applications around the world.

Original Triple Function Slots Increase Application Diversity
Panasonic professional plasma displays feature Triple Function Slots, which allow terminal boards to be swapped according to the video source. By using a wide range of available options, such as function boards and touch panels, each display can be tailored to suit specific needs.

103

65

58

50

42

TH-50PH11ES

50

TH-42PH11ES

50

42

42

TH-103PF10EK
TH-103PF10EL (Low-reflection model)

TH-65PF11EK
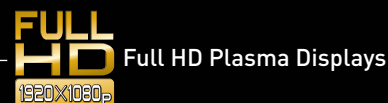
TH-58PF11EK

TH-50PF11EK

TH-42PF11EK

TH-50PH11EK

TH-42PH11EK

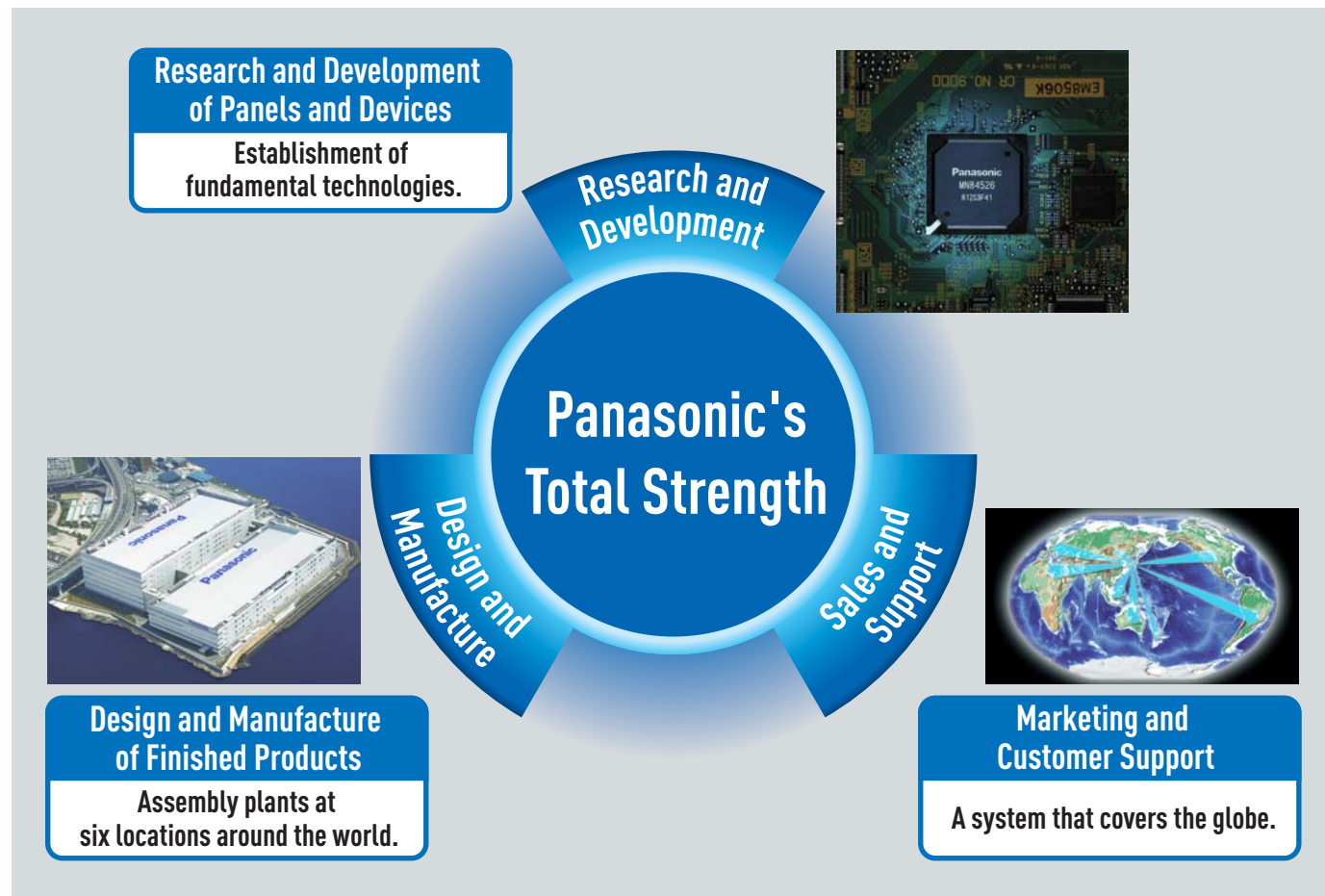**FULL HD** 1920×1080p Full HD Plasma Displays

High Definition Plasma Displays

Panasonic Plasma Displays — The Brand Preferred and Trusted around the Globe

In-House Development and Production of Everything from Devices to Finished Products

Panasonic conducts all activities related to its plasma displays in-house, such as its research and development of the panels and devices that form the key components of the plasma display, the development of circuits and drive systems, and the assembly of finished products.
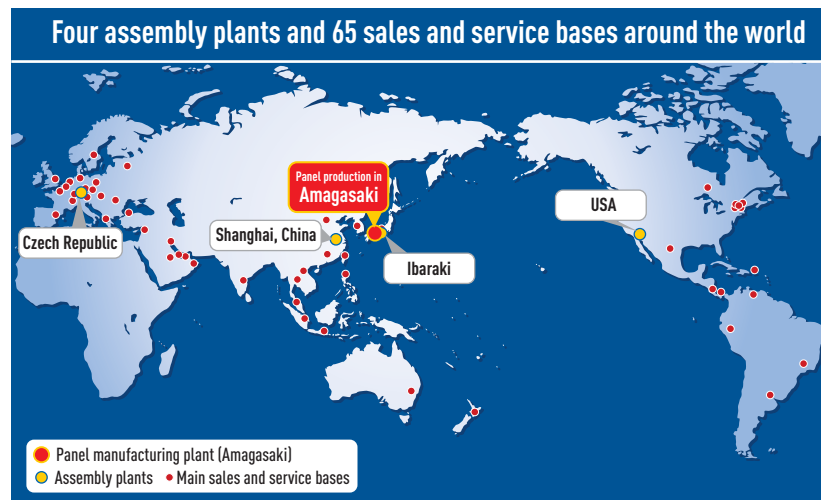
In order to quickly reflect feedback from customers worldwide into production, Panasonic operates assembly plants at six locations around the globe. The company's commitment and devotion to the production of superior products are the basis for the high popularity and trust that Panasonic products have earned across the world.

Research and Development of Panels and Devices
Establishment of fundamental technologies.

Research and Development

Panasonic's Total Strength

Design and Manufacture

Sales and Support

Design and Manufacture of Finished Products
Assembly plants at six locations around the world.

Marketing and Customer Support
A system that covers the globe.
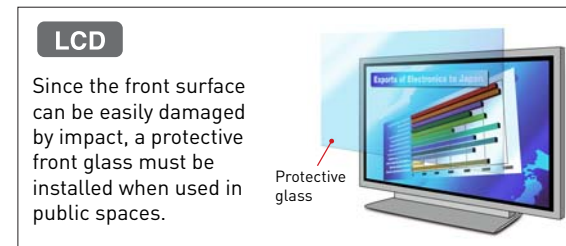
Panasonic's Global Network

With its plasma displays widely used around the world, Panasonic has established sales and service bases at 65 locations around the world to meet the requirements and service requests demanded by users, and particularly those of professional users.

The production of plasma display panels, which are core devices for these display products, requires stringent quality control. Therefore, Panasonic manufactures all plasma display panels at its Amagasaki Plant and operates assembly plants at four locations around the world. Panasonic's global network is designed to achieve optimum production efficiency in each stage of manufacturing, and responds to growing worldwide demand for plasma display panels.

Four assembly plants and 65 sales and service bases around the world

Panel production in **Amagasaki**

Shanghai, China

USA

Czech Republic

Ibaraki

- ● Panel manufacturing plant (Amagasaki)
- ● Assembly plants ● Main sales and service bases

Tough Body Withstands Use in Public Spaces

Plasma displays feature a pane of tempered glass on the front. This front glass does not break easily even when an external impact is applied. Therefore, it can be used in public spaces where many people walk by, such as crowded passageways or lobbies, without having to install a special protective material on the front.

LCD

Since the front surface can be easily damaged by impact, a protective front glass must be installed when used in public spaces.

Protective glass

Plasma The front glass is about **10 times stronger** than the LCD surface.

Protected by this robust front glass, plasma displays can be used safely in public spaces.

No damage to the display

Displays Beautiful Images for a Long Time

The Panasonic Professional Plasma panel offers a long life[1] of approximately 100,000 hours. And because there are hardly any consumables[2] that need to be replaced periodically, running costs are low. Dust and dirt can be easily wiped off with a soft cloth. Plasma display panels continue to provide beautiful pictures for a long time, with minimum maintenance.

[1]: 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. (Note that products are set to Dynamic mode at the factory before shipment. When inputted PC signal from the PC In terminal, they are set to the Standard mode.)
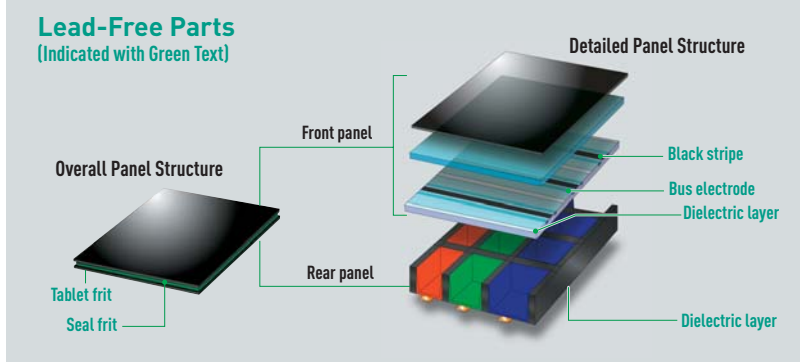
[2]: The heat radiating fan is a consumable part.

Displays beautiful pictures for about 100,000 hours.[1]

Long life means added economy and ecology.

The World's First[3] Lead-Free Plasma Display Panels — Gentle to the Environment

Panasonic was the first in the world to develop and mass produce lead-free plasma display panels. Panasonic proclaimed a "lead-free" design in all plasma display models from 2006 onward, thus reducing the possibility of pollution caused by environmentally hazardous substances in disposed products. In addition to lead, Panasonic also stopped using mercury, cadmium hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE) in panels, thus eliminating the use of all six specified hazardous substances in compliance with the RoHS Directive (excluding exempted items). Panasonic actively promotes the production of environmentally conscious products.

Lead-Free Parts (Indicated with Green Text)

Detailed Panel Structure

Overall Panel Structure

Front panel

Black stripe
Bus electrode
Dielectric layer

Rear panel

Tablet frit

Seal frit

Dielectric layer

[3]: Announced on November 2, 2006. Achieved lead-free designs in all 140 models for worldwide markets.

The Amagasaki Plant, which manufactures all Panasonic plasma display panels, uses a variety of environment-friendly systems and technologies, such as a photocatalytic coating on building exteriors, the "Kaze-Kamome" (Wind-Seagull) hybrid wind and solar power tower system, and sprinklers that use rainwater.

Artist's rendering of completed Amagasaki Plant No. 5

Exterior wall with photocatalytic coating

"Kaze-Kamome"

Sprinkler using rainwater

Advanced Image-Processing Technologies Precisely Reproduce Large-Screen Image Details and Textures
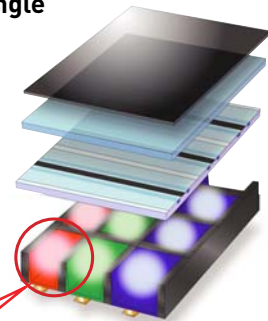
1,920 x 1,080p Panel for High-Resolution Displays

Full HD plasma display panels with 1,920 horizontal pixels and 1,080 vertical pixels reproduce clear, detailed images. Panasonic's high-resolution technologies are maximized to achieve superb expression on large screens.

1,920 pixels

1,080 pixels

FULL HD 1920X1080p

Conventional HD Plasma Display*[1]

Full HD Plasma Display

*[1]: TH-50PH10
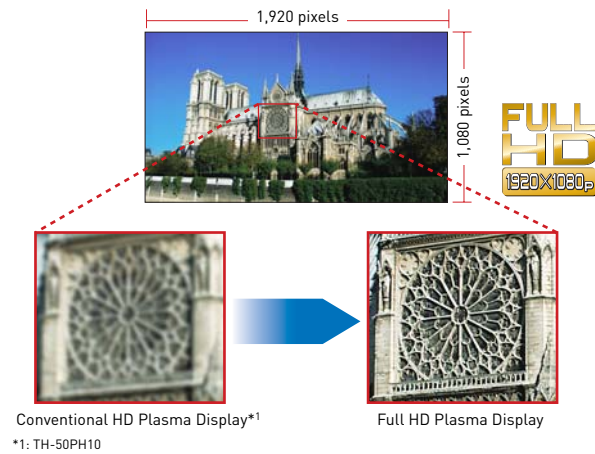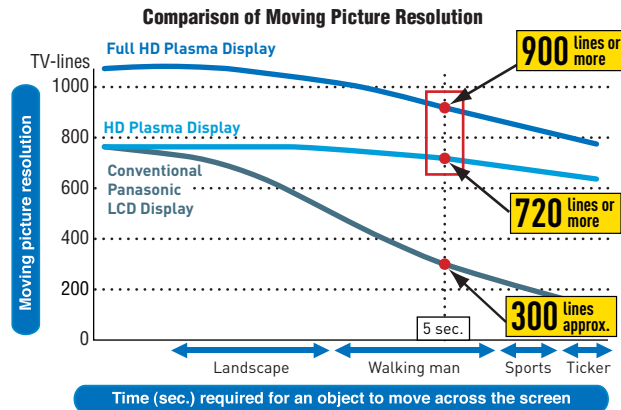
• A Beautiful Picture from Any Angle

On a plasma display panel, each pixel is self-illuminating. This is why plasma displays provide vivid color and sharp images that never appear whitish even when viewed from an angle. Panasonic plasma displays deliver high-resolution images without losing the original quality of the video source.

Each pixel is self-illuminated.

New Plasma Panels with the World's Highest*[2] Contrast of 30,000:1*[3] Reproduce Even the Blackest Blacks

Panasonic's newly developed Dynamic Black Layer has reduced pre-discharge, which is a common cause of unwanted graying, to 1/3 that in conventional plasma displays.*[4] This technology has achieved the world's highest*[2] contrast of 30,000:1*[3] (dynamic contrast of 1,000,000:1*[5]), to reproduce images with enhanced depth that seems to pull the viewer in.

A new structural layer with new material in place of the conventional protection layer
Dynamic Black Layer

Rear glass substrate
Address electrode
Dielectric layer
Phosphor
Dielectric layer
Transparent electrode
Bus electrode
Black stripe
Front glass

New Narrow Ribs*[6] + New phosphors

Brighter

New Narrow Ribs*[6] + New phosphors
Greatly improved luminous efficiency

Conventional

New plasma panel

Blacker

Dynamic Black Layer
Pre-discharge **reduced to 1/3** that of conventional models

*[2]: In comparison with other plasma displays, as of October 1, 2008, according to a Panasonic study.
*[3]: Dark-area contrast that can be displayed simultaneously on the same screen. The contrast ratio of the TH-50PH11 and TH-42PH11 is 15,000:1, and that of the TH-103PF10 is 5,000:1.
*[4]: Panasonic PZ750 Series
*[5]: The ratio of the brightness of a screen displaying an all-white signal to the brightness of a screen displaying an all-black signal.
*[6]: The TH-50PF11 and TH42PF11 feature New Narrow Ribs.

Sharp and Clear Display of Fast-Moving Action

The superb motion picture resolution of the plasma display panel ensures that even fast-moving action is displayed clearly with full detail and with minimum afterimages. Panasonic Professional Plasma Displays deliver beautiful, high-resolution images from Full HD sources.

Comparison of Moving Picture Resolution

TV-lines
Moving picture resolution
1000 Full HD Plasma Display
800 HD Plasma Display
600 Conventional Panasonic LCD Display
400
200
0
Landscape   Walking man   Sports   Ticker

900 lines or more
720 lines or more
300 lines approx.
5 sec.

Time (sec.) required for an object to move across the screen

* Motion picture resolution is a quantitative measurement of detail in displayed motion pictures discernible by the human eye. It is expressed by the number of lines. Using a measurement method developed and applied by the APDC (Advanced PDP Development Center Corporation).

• Motion Picture Resolution of More Than 900 Lines for Producing a Greater Range of Content
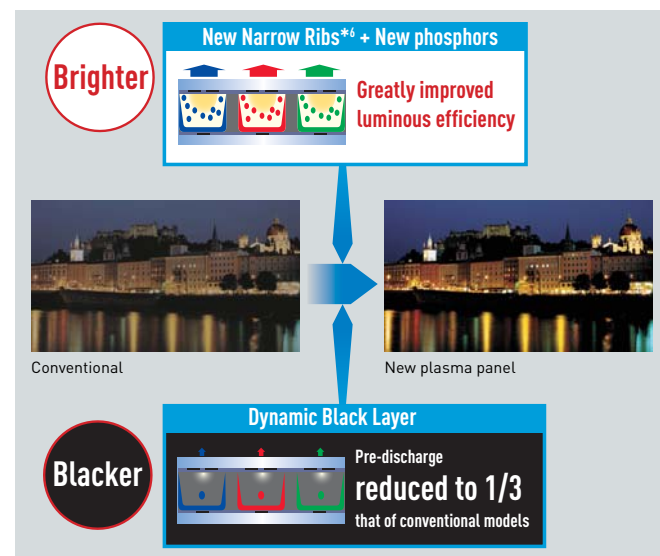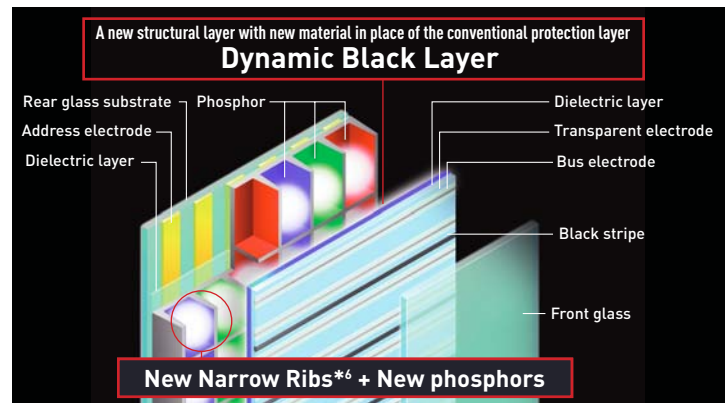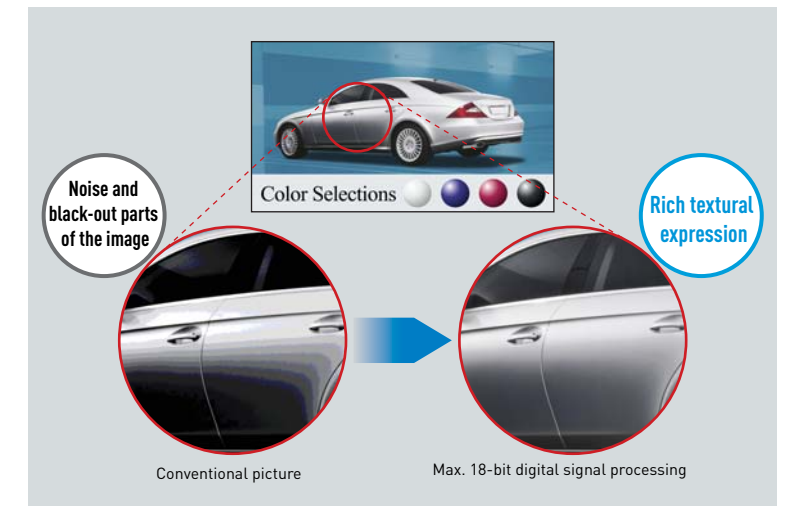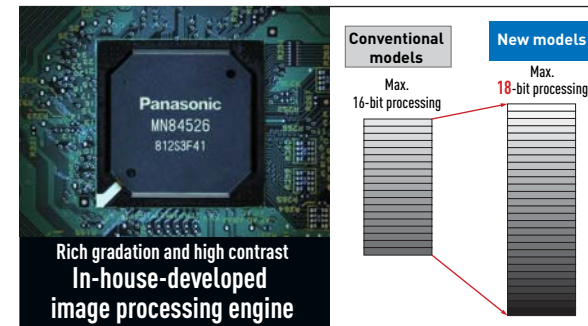
Since high motion picture resolution enables a clear, blur-free display of tickers commonly used in digital signage, easy-to-read text content can be displayed.

au fromage, la meilleure recette du

Blur-free tickers are easy to read.

Rich 5,120 Equivalent Steps*[7] of Gradation with the World's Highest,*[2] 18-Bit Digital Processing*[8]
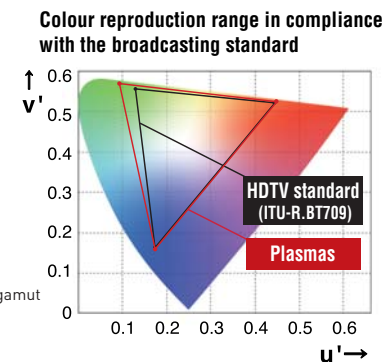
Real Gamma Control technology achieves rich shading with 5,120 equivalent steps*[7] of gradation in all scenes by using a maximum 18-bit digital signal processing. This technology faithfully reproduces the original textural quality of the video source.

*[7]: The TH-103PF10, TH-50PH11 and TH-42PH11 have 4,096 equivalent steps of gradation.
*[8]: The TH-103PF10 uses 16-bit digital signal processing.

Rich gradation and high contrast
In-house-developed image processing engine

Panasonic MN84526 812S3F41

Conventional models
Max. 16-bit processing

New models
Max. 18-bit processing

Color Selections

Noise and black-out parts of the image

Rich textural expression

Conventional picture

Max. 18-bit digital signal processing

Approx. 110%*[9] of the Colour Gamut of the HDTV Standard

High-definition broadcasts are based on the HDTV standard, rather than the conventional PAL standard. With the improved properties of their phosphors, Panasonic plasma displays reproduce a wide colour gamut exceeding the entire colour range specified in the HDTV standard (ITU-R, BT.709). This results in a natural and faithful colour reproduction on a large screen. Digital Colour Reality technology also assures images with immaculate details.

*[9]: Comparison based on colour gamut

Colour reproduction range in compliance with the broadcasting standard

v'
0.6
0.5
0.4
0.3
0.2
0.1
0
0.1 0.2 0.3 0.4 0.5 0.6
u'

HDTV standard (ITU-R.BT709)
Plasmas

Detail Accuracy that Rivals Studio Monitors — Digital Colour Reality

In Cinema mode, Digital Colour Reality boosts precision in the digital control of chrominance and luminance video data. By continuously adjusting the white balance and performing gamma correction as scenes change, this technology accurately creates the kind of faithful ambience that was difficult for previous systems to deliver.

Expresses the natural warmth of sunlight, and conveys subtle colour differences in bright and shaded areas.

Faithfully expresses subtle colour differences in bright and shaded areas.

Less Digital-Video Noise

Noise reduction circuitry suppresses the block noise and mosquito noise that are specific to HDTV broadcasts and other digital video signals (MPEG video). This allows images to be faithfully reproduced in all their original beauty.

• Block Noise Reduction

The noise reduction circuit detects and eliminates block noise that is generated when compressing motion images with an inadequate bit rate.

Block NR OFF   Block NR ON

• Mosquito Noise Reduction

The noise reduction circuit reduces mosquito noise that is generated when compressing motion images, particularly at the edges of characters and in parts where rapid color changes occur.

Mosquito NR OFF   Mosquito NR ON

# Dynamic Images Draw Attention and Provide Strong Appeal to Viewers

Life-Size Digital Signage Displays
The 103-inch plasma display is large enough to display people in life-size scale. The Portrait Zoom function can be used to create extremely eye-catching window displays with richly shaded images.

Multi-Screen Video Wall Applications
The advanced multi-screen capability gives you a powerful, eye-catching way to present visual information at aquariums, shopping malls, and other large facilities. You can create a system that packs an incredible visual punch.

Portrait Zoom Function — Useful for Vertical Mounting (PF series only)

By dividing the content from a video source into three vertical segments and displaying one segment on a portrait-position plasma display, a desired section of an image can be displayed dynamically. When three plasma display units are combined in portrait orientation, the entire image can be displayed dynamically on an extra-large screen.
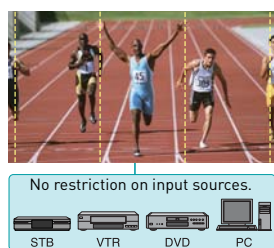
No restriction on input sources.

STB   VTR   DVD   PC

One of the three divided segments can be selected for display.

A full-screen image displayed on three plasma display units.

Useful Functions in Multi-Screen Systems

• Power-On Delay Function
This function automatically shifts the power-on time slightly for each display unit in the system, so there's less load on the power supply.

• Seam Hides Video Off Mode
This mode displays a full-screen image, including the edges (the width of the frame) of the display panel. This is especially suitable for displaying text information, since no words are hidden by the frame.

TU_IP   TU_IP

• Multi AI Control Function
By applying AI control to the brightness signal of the entire input signal using the same video processing as for a single-screen image, this new function achieves a uniform brightness level over the entire image.

Because video information is processed individually for each display unit, images may appear darker than on other display units.

Since video information is processed for the entire input signal, there is no brightness difference from other display units.

• Display ID Control Function
The remote control that comes with the display is equipped with a "Display ID Control" function that allows you to control up to 100 displays with the one remote.
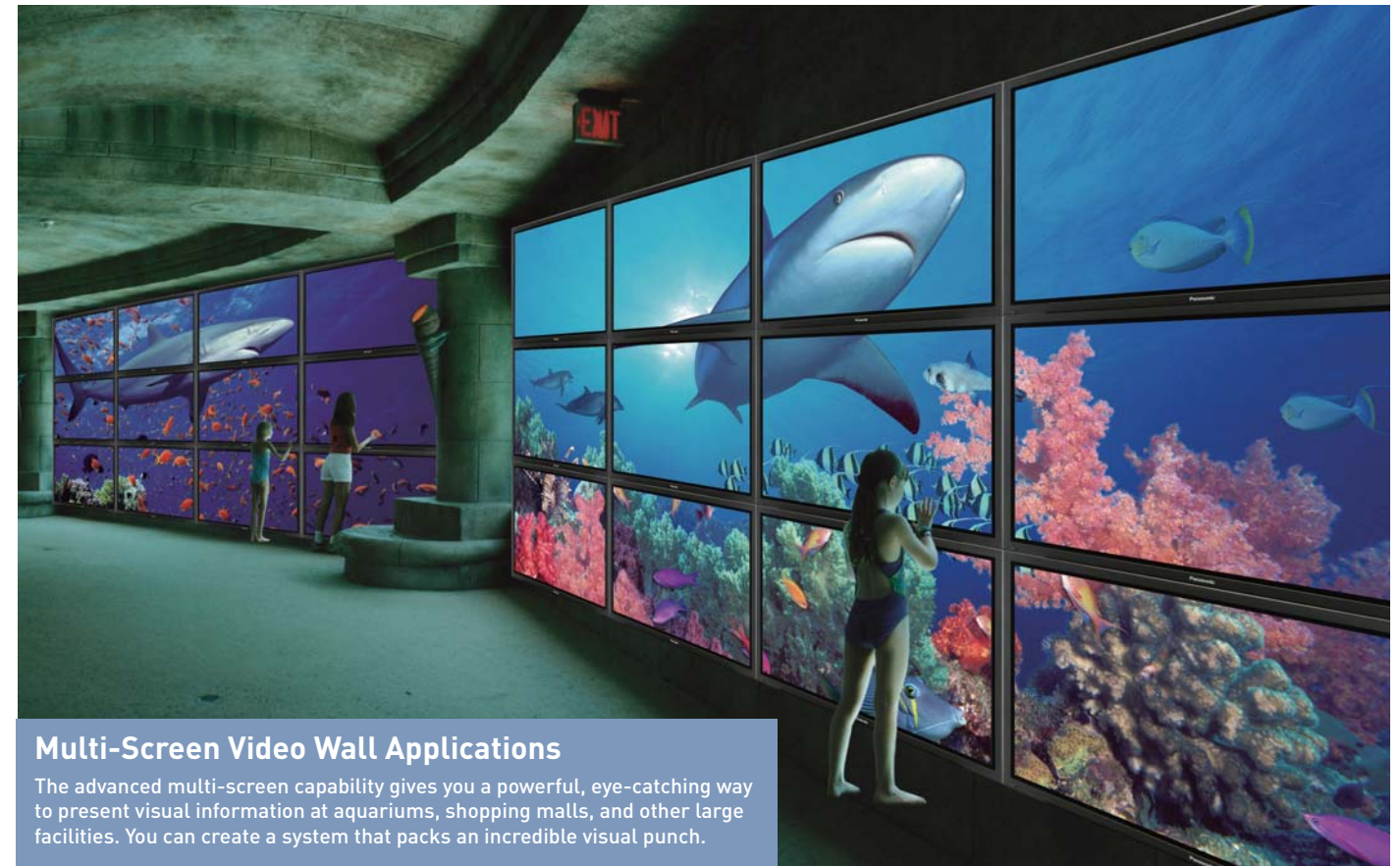
Multi Display Function

This built-in image-enlarging function makes it easier to set up multi-screen systems with as many as 25 displays (5x5 configuration).
A new function lets you enlarge the image up to 5x vertically and horizontally independently, making it easy to set up a multi-screen system with up to five displays arranged either vertically or horizontally. For example, expand the image horizontally to 5x and leave it unchanged vertically, and you can create a system with five units side-by-side.

Note: Images of SXGA resolution or higher from a PC or RGB source may not enlarge correctly.
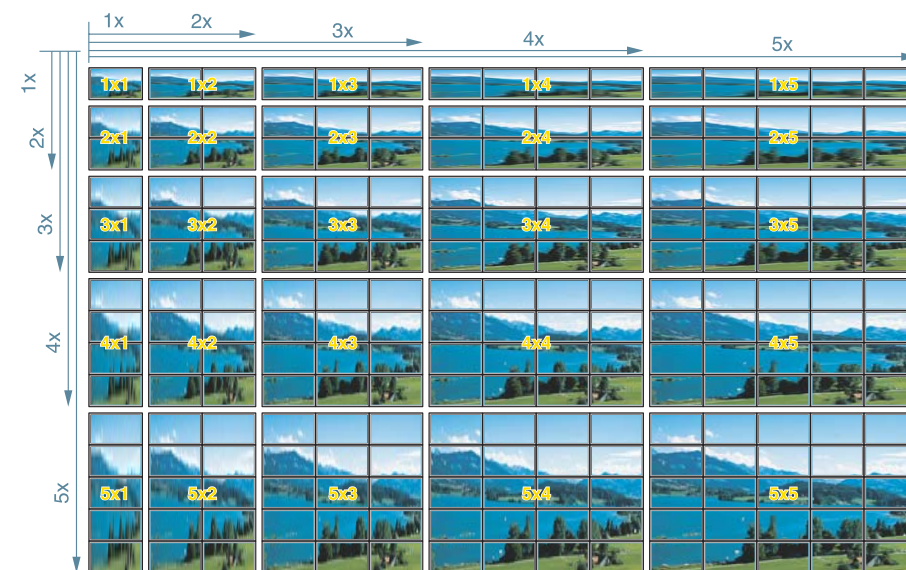
Digital Banners Utilize Vertical Space
Multi-screen systems can be easily configured to make effective use of the vertical space in locations such as entranceways and lobbies. These digital banners catch widespread attention with their unique combination of sophistication and visual appeal.

Advanced Functions Help Create Effective Digital Signage

Effective Storefront Advertising with Blend Dual Picture

The PF11 Series features a Blend Dual Picture function to enable easy superimposition of motion images and text. It adds impact to your message and draws substantial attention to your product, service, event or whatever you are marketing or communicating.

Distribution and Display of Various Types of Information via Networks

An optional plug-in PC board and CAT5e system with software applications let you schedule and deliver rich, multimedia content to your targeted audience at any time.

Blend Dual Picture Function (PF11 Series only)

The Blend Dual Picture function overlays text information produced with a PC onto base motion images. It also enables superimposing of a motion image onto a text message. The transparency of the overlay image can be flexibly adjusted between 0% and 100%. This function makes it easy to produce subtitles without requiring expensive editing equipment.

Note: Please be aware that using this function to process images without the permission of the copyright holder for commercial display or for public viewing may infringe upon the rights of the copyright holder.
Following combinations of two analog signals cannot be displayed: Component - Component, Component - PC (RGB), PC (RGB) - Component, PC (RGB) - PC (RGB).

Moving picture

Text information

STB, DVD

PC

Dual Picture Mode

You can simultaneously display images from any two different kinds of AV sources connected. When displaying two separate images, you can select the audio output from either source. Playing back the audio from the sub-source can be useful in teleconferencing, for example.

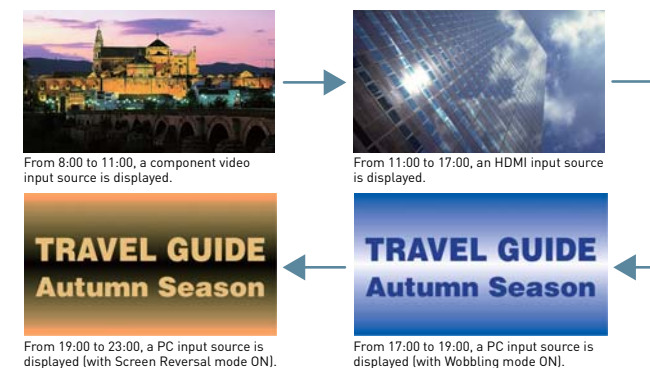• **Advanced Dual Picture Mode — Useful in Digital Signage**
This mode lets you overlay a video image onto a full-screen PC image. For example, you can combine a video clip with text information from a PC, giving you a more effective way to present information.

Motion images, text messages and tickers   Motion images and text messages   Motion images and tickers

Note: Following combinations of two analog signals cannot be displayed:
Component - Component, Component - PC (RGB), PC (RGB) - Component, PC (RGB) - PC (RGB).

Text Overlay Function (PF11 & PH11 series)

Using an RS-232C interface enables you to overlay and display text onto video images. The display position, text and background colors, and text size can be set. When used in combination with the Weekly Command Timer, text can be registered in advance and displayed at predetermined times, making it ideal for digital signage applications.
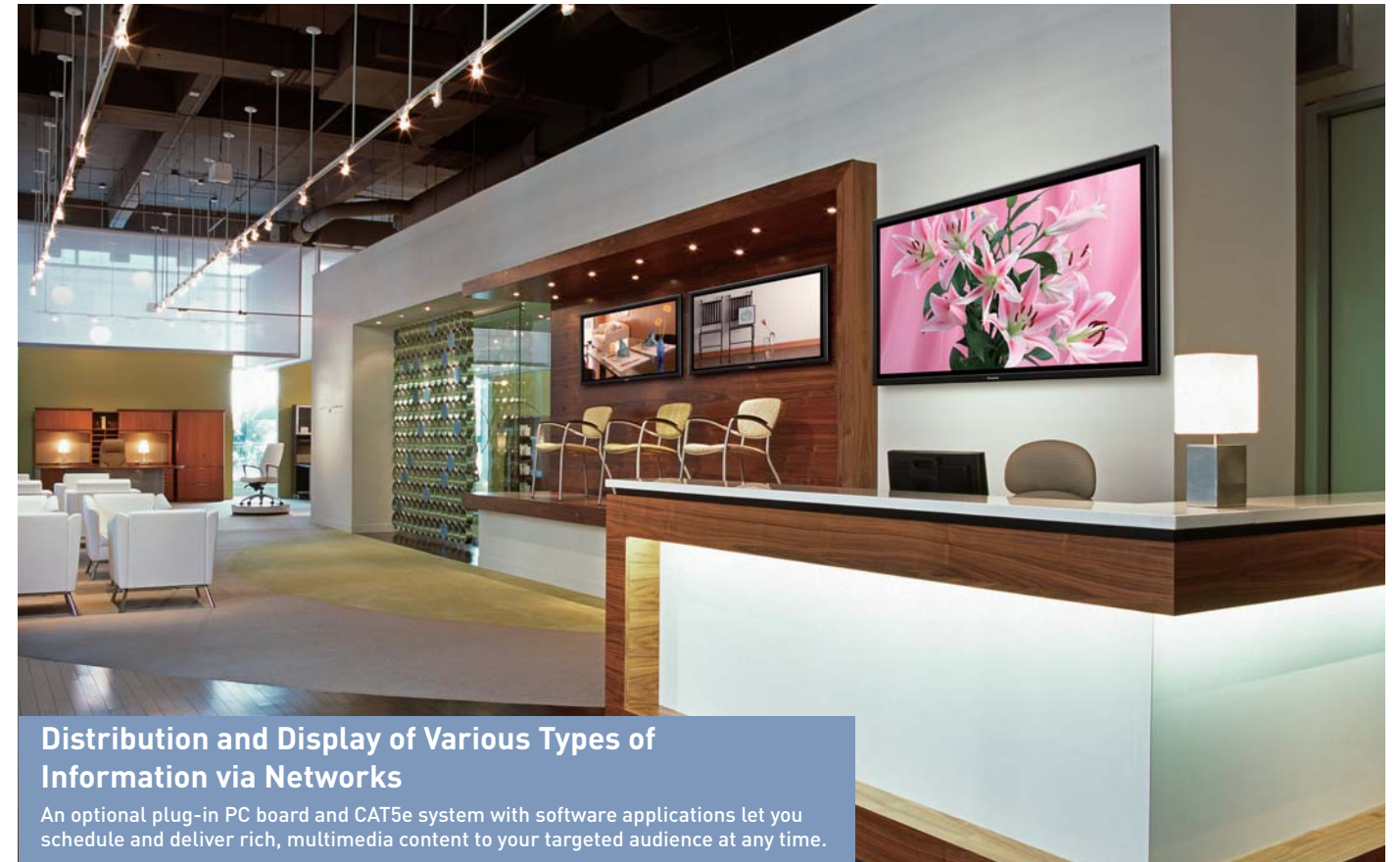
Text data transmission via RS-232C

PC

DVD

Weekly Command Timer

This function makes it easy to automate display operation so there's no need to use an external scheduler. You can set a variety of operations — power on/off, image source selection, screen saver functions and more — to activate at specific times on specific days of the week.

From 8:00 to 11:00, a component video input source is displayed.

From 11:00 to 17:00, an HDMI input source is displayed.

From 19:00 to 23:00, a PC input source is displayed (with Screen Reversal mode ON).

From 17:00 to 19:00, a PC input source is displayed (with Wobbling mode ON).

Remote System Monitoring

In addition to the conventional display control command and power supply/input selection check command, Panasonic plasma displays feature a monitor command that lets you check the signal from a distant location. In conventional systems, you had to install a monitoring camera to check the images displayed on an advertising display panel or digital signage system. This monitor command, on the other hand, lets you monitor images by simply connecting a PC via a serial cable.

Vertical Mounting

Panasonic professional plasma displays can be positioned vertically to display portrait images, allowing them to serve as effective storefront signboards. There's no need to install an optional fan kit. And the on-screen display can easily be rotated 90° for proper viewing*.

* The TH-103PF10 is not equipped with this function.

Enhanced Screen Saver Functions

A variety of screen saver functions help lower the risk of uneven phosphor aging.

• **SIDE PANEL ADJUSTMENT:** Brightens the black bands on the sides of the screen when displaying images in the 4:3 format.
• **WOBBLING:** Shifts the image's position by several pixels at fixed time intervals or according to the detected screen condition.
• **PEAK LIMIT MODE:** Lowers the peak brightness level (image contrast).
• **NEGATIVE IMAGE:** A negative image will be displayed on the screen.
• **SCROLLING BAR ONLY:** A white bar will scroll from left to right. The image won't be displayed.
• **OVERLAY SCROLLING BAR*:** The brightness of the image will be decreased and a white bar will scroll on it.
• **WHITE SCREEN*:** White will be displayed on full screen.

Note: OVERLAY SCROLLING BAR is not effective during Dual Picture Mode.
* The TH-103PF10 is not equipped with this function.

Multi-Presentation System Using the Wireless Presentation Board

Mounting the Wireless Presentation Board to a conference display unit allows wireless connection of up to eight displays and four PCs. This is enough to show images in every area of a conference hall. It also eliminates the bothersome task of removing and reconnecting cables when using multiple PCs.

HD-SDI System for Broadcast Use

The Full HD plasma model adapts easily to systems that use HD-SDI, the digital interfaces used in broadcasting and video production. Simply plug the HD-SDI terminal board into the function slot, and you get crisp, clear HD images for the studio or control room.

Wireless Presentation Board (Option)

• No More Complicated Wiring
Simply install Wireless Manager software and make the network settings to set up your wireless network. There is no need for bothersome wiring. You can also connect up to four PCs to multiple displays for effective, interactive use by groups or for presentations.

• High-Speed Wireless Transmission
High-speed wireless transmission provides smooth display of video clips, animation, and other types of large-volume data. Audio tracks are sent simultaneously, enabling dynamic presentations with active images and sounds.
* Sound is produced only when using a single, full-screen display of a single PC image.

• Versatile Display Methods for Impressive Presentations

The Secondary Display Transmission (wireless prompter) function lets you show presentation content on the display and a copy of your speaking notes on a PC.

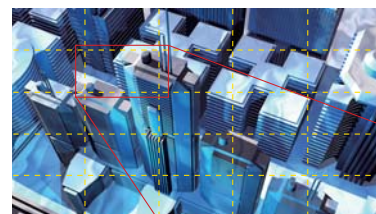Display window
Market Share 2008
2001   2008
PC
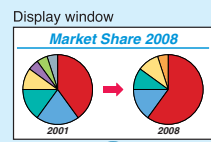
You can use the Area-Specific Transmission function to display any part of the PC window that you want, or to enlarge and display certain parts for emphasis.

Display window
PC

4x Digital Zoom

This function lets you enlarge a portion of an image by up to four times normal size and display it on the full screen. Use this function to give your presentations greater impact.
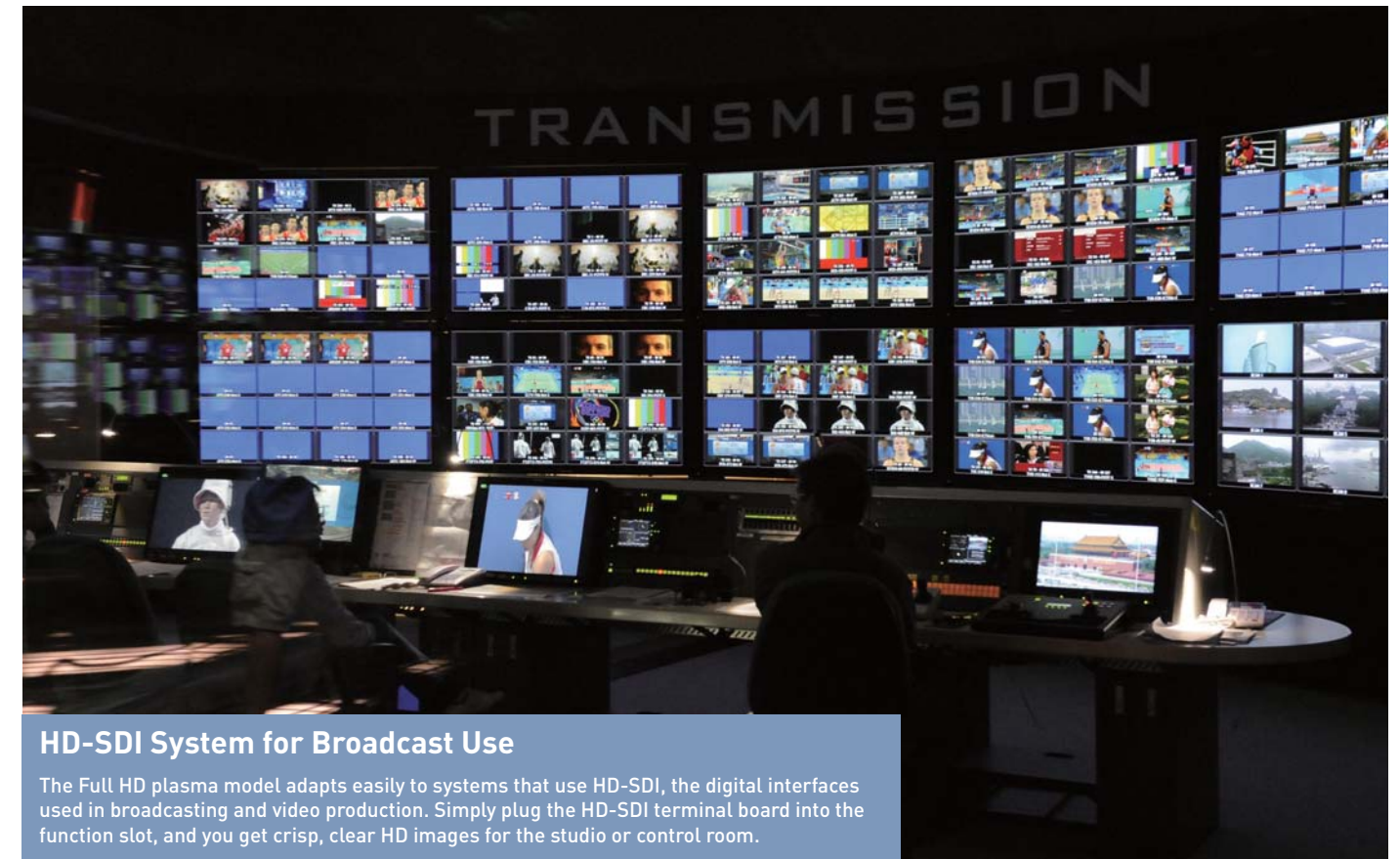**Note:** Digital Zoom does not work in Dual Picture mode. Images of SXGA resolution or higher from a PC or RGB source may not enlarge correctly. Some degradation occurs when images are enlarged.

Automatic Picture Positioning

This function automatically corrects the horizontal and vertical picture positions, clock phase, and dot clock when an analog RGB signal is input. The adjustment results in optimal standard values for the horizontal and vertical picture sizes.

Monitor Mode

This mode displays images without changing the brightness within the same signal level range even if the average picture level (APL) of the screen varies. Since this mode maintains white balance regardless of the size of bright areas in the image, it is suitable for use in broadcasting stations and image production studios in which precise color reproduction is essential.
Note: This mode is not provided on the TH-103PF10, TH-50PH11 and TH-42PH11.

1:1 Pixel Mode (PF series only)

The 1:1 Pixel mode maps the 1920 x 1080 video content to Full HD panel pixels to display 100% of the original content. By skipping the scaling process, this mode is able to produce high-definition images in their original, 1:1 pixel form.

Ideal as a Studio Monitor for News Programs

By combining an HD plasma display model with a touch-panel and HD-SDI terminal board, you can construct a studio monitor system for effectively displaying meteorological information. By using the touch-panel, the weather forecaster can add hand-written information and marks to the clear image displayed on the plasma display panel. This ushers in a brand new style of easy-to-understand weather forecasts.

Studio W/B Mode

This lets you set the color temperature that best matches applications in broadcast stations and studios.

Studio Gain Mode

This mode increases the contrast to eliminate whiteout.

Energy-Saving Functions
A broad range of environment-friendly functions help minimize energy consumption.
• DPMS (Display Power Management Signaling): Power is automatically turned on or off in response to a sync signal from the PC connected to the built-in PC input terminal.
• Auto Power Off: When you're using a device connected to the multi-function slots, the display panel goes into standby mode after about 10 minutes if no sync signal is received.
• Power Save Mode: Reduces the display's brightness.
• Standby Power Save Mode: Reduces power consumption when on standby. (Start-up may take a few moments once the display is in this mode.)

List of Compatible Functions

	Portrait Zoom	Multi Display	Power-On Delay	Multi AI Control	Blend Dual Picture	Dual Picture Mode	Text Overlay	Weekly Command Timer	Remote System Monitoring	Vertical Mounting	Screen Saver	4x Digital Zoom	Automatic Picture Positioning	Monitor Mode	1:1 Pixel Mode	Studio W/B Mode	Studio Gain Mode	Energy-Saving Functions
TH-103PF10	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●
TH-65PF11	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TH-58PF11	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TH-50PF11	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TH-50PH11	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●
TH-42PF11	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TH-42PH11	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●	●

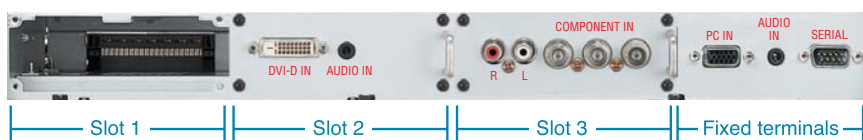● : Compatible

Industry's Best Expandability

Multi-Function Slots

In addition to the fixed input interface, the Panasonic plasma display has three interchangeable slots that let you add different combinations of optional terminal boards. This gives you the flexibility to add digital or analog capabilities, as necessary, and to customize your system for specific needs.
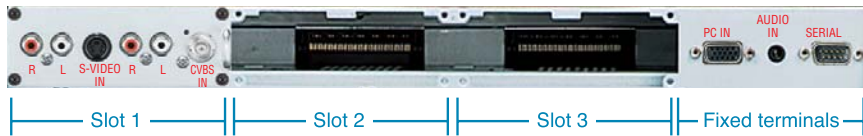
Standard-Equipped Terminals

You can mount optional terminal board in a vacant slot. Or, you can remove the standard terminal boards and mount optional boards.

TH-103PF10EK
TH-65PF11EK
TH-58PF11EK
TH-50PF11EK
TH-42PF11EK

DVI-D IN   AUDIO IN   COMPONENT IN   R L   PC IN   AUDIO IN   SERIAL

Slot 1 — Slot 2 — Slot 3 — Fixed terminals

TH-50PH11EK/ES
TH-42PH11EK/ES

R L   S-VIDEO IN   R L   CVBS IN   PC IN   AUDIO IN   SERIAL

Slot 1 — Slot 2 — Slot 3 — Fixed terminals

Optional Terminal Boards

Dual HDMI Terminal Board
(mounts in slot 1 or 2)
TY-FB10HMD

HDMI   HDMI

HDMI Terminal Board
(mounts in slot 1 or 2)
TY-FB8HM

HDMI

・ Enables fully digital connection of signals from HDMI-compatible DVD players and other digital equipment for blur-free images with no color bleeding.
・ Provides simultaneous video and audio signal transmission using a single cable.

RGB Active Through Terminal Board
(mounts in slots 1 & 2)
TY-42TM6G

PC IN   PC OUT   SERIAL (RS232C)

・ Sends the signal that's input via the PC IN terminal to a second display connected to the PC OUT terminal. This connectability adds convenience when configuring a multi-screen system.

The characters in red are added for explanation.

DVI-D Terminal Board
(mounts in slot 1 or 2)
TY-FB11DD (for PH11/PF11 series)
TY-FB9FDD (for PF10 series)
TY-42TM6D (for PH11 series)

DVI-D IN   AUDIO IN

* Photo shows TY-FB11DD.

・ Lets you connect a PC or other compatible digital equipment that outputs digital RGB signals (DVI-D compliant).
・ Supports HDCP.
・ TY-FB9FDD is compatible with UXGA/WUXGA signals (compressed display).

Ir Through Terminal Board
(mounts in any slot)
TY-FB9RT

IR OUT   IR OUT   IR OUT

Note: Only one terminal board can be used per display. Also, it can be used to control only Panasonic AV equipments.

PC Input Terminal Board
(mounts in any slot)
TY-42TM6P

AUDIO IN   RGB/COMPONENT IN

* Does not support the DPMS function.

BNC Dual Video Terminal Board
(mounts in slot 1 or 2)
TY-FB9BD

R L   S-VIDEO IN   R L   CVBS IN

BNC Component Video Terminal Board (mounts in any slot)
TY-42TM6A

COMPONENT IN   R L

BNC Composite Video Terminal Board (mounts in slot 1 or 2)
TY-42TM6B

IN   OUT   R L   S-VIDEO   CVBS

Composite/Component Video Terminal Board
(mounts in slots 1 & 2, or slots 2 & 3)
TY-42TM6Y

IN   OUT   RGB/COMPONENT IN   R L   S-VIDEO IN   CVBS   R L

RCA Component Video Terminal Board (mounts in any slot)
TY-42TM6Z

COMPONENT IN   R L

RCA Composite Video Terminal Board (mounts in slot 1 or 2)
TY-42TM6V

CVBS IN   R L   S-VIDEO IN

SCART Terminal Board
(mounts in slots 1 or 2)
TY-FB8SC

U/V Tuner Board (mounts in slots 2 & 3)
TY-FB8TE

Applicable models: PH series

AUDIO IN   R L   S-VIDEO   CVBS   IN   OUT   AUDIO OUT   R L   Hospitality Port   RF   IR OUT

* This board cannot be used in the UK.

・ Hotel Mode allows you to set the Volume Limit and Initial Input/Channel.
・ Receiving system: PAL B,G, SECAM B,G; SECAM L/L´; PAL D,K, SECAM D,K; PAL 525/60; M.NTSC; NTSC (AV input only)
・ Remote control unit included.
・ The Ir Through terminal lets you use the IR sensor on the PDP to control both the PDP and video device.

Dual Link HD-SDI Board (mounts in slot 1 or 2)
TY-FB11DHD

Dual B In   Dual B Out   Dual A/HD-SDI In   Dual A/HD-SDI Out
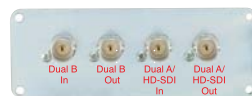
・ Supports the high-resolution, high-quality Dual Link HD-SDI (in compliance with SMPTE372M) and the HD-SDI (in compliance with SMPTE292M) used in broadcasting.
・ Allows direct input of 2K digital cinema signals* in compliance with DCI (Digital Cinema Initiatives) without using a converter.
* Compatible with RGB 4:4:4/YPBPR 4:2:2@60p, 50p/2K digital cinema signals in compliance with DCI.
・ Provides simultaneous video and embedded audio (max. 16 channels)* signal transmission using a single cable.
* Only when signals are multiplexed in Dual Link HD-SDI Link A.

Max Transimission Distance/Recommended Cable
100 m*/75-ohm coaxial cable 5C-FB
* When using a cable with less than 20dB/328 ft. (750 MHz)

HD-SDI Terminal Board with Audio (mounts in slot 1 or 2)
TY-FB10HD

HD-SDI Terminal Board (mounts in slot 1 or 2)
TY-FB9HD

SDI Terminal Board (mounts in slot 1 or 2)
TY-FB7SD

OUT   IN

Max Transmission Distance/Recommended Cable
SD-SDI: 200 m/75-ohm coaxial cable 5C-2V
HD-SDI: 100 m/75-ohm coaxial cable 5C-FB

・ Supports the serial digital interface (SDI) used in broadcasting.
・ The TY-FB10HD provides simultaneous video and audio signal transmission using a single cable.
・ The TY-FB10HD and TY-FB9HD support HDTV.

Specifications

	TY-FB10HD	TY-FB9HD	TY-FB7SD
Standards compliance	SMPTE292M, SMPTE259M-C		SMPTE259M-C
Compatible video format	525/59.94i, 625/50i, 750/60p: 59.94p, 750/50p, 1125/30p, 1125/25p, 1125/24p, 1125/60i: 59.94i, 1125/50i, 1125/24sF: 23.98psF		525/59.94i 625/50i

Specifications

	TY-FB11DHD
Standards compliance	Video: SMPTE372M, SMPTE292M; Audio: SMPTE299M, SMPTE272M
Applicable displays	PF11 seires

Compatible Video Signal

Signal format	Sampling structure/Number of pixel bits	SDI name
750 (720)/60p: 59.94p		
750 (720)/50p		
1,125 (1,080)/60i: 59.94i		
1,125 (1,080)/50i		
1,125 (1,080)/30p: 29.97p	YCBCR (4:2:2)/10-bit	HD-SDI
1,125 (1,080)/25p		
1,125 (1,080)/24p: 23.985p		
1,125 (1,080)/24sF: 23.985sF		
1,125 (1,080)/60i: 59.94i		
1,125 (1,080)/50i	RGB (4:4:4), RGB + A (4:4:4:4)[*1]/10-bit	
1,125 (1,080)/30p: 29.97p	YCBCR (4:4:4), YCBCR + A (4:4:4:4)[*1]/10-bit	
1,125 (1,080)/25p	RGB (4:4:4), YCBCR (4:2:2), YCBCR (4:4:4)/12-bit[*2]	
1,125 (1,080)/24p: 23.985p		Dual-Link
1,125 (1,080)/24sF: 23.985sF		HD-SDI
1,125 (1,080)/60p	YCBCR (4:2:2)/10-bit	
1,125 (1,080)/50p		
2,048 x 1,080/24p: 23.985p	RGB (4:4:4), X'Y'Z' (4:4:4)/12-bit[*2]	

*1: A (Alpha channel) is not supported. This data cannot be output.
*2: A 12-bit signal can be received, but it will be converted to a 10-bit signal for the display of images.

Wireless Presentation Board (mounts in slots 1 & 2, or slots 2 & 3)
TY-FB10WPE

・ Wireless connection (IEEE 802.11b/11g) eliminates the need to connect any cables between the display and a PC.
・ High-speed wireless transmission produces smooth motion images.
・ Images from one PC can be displayed in real-time on as many as eight displays.
・ Images from up to 16 PCs can be simultaneously displayed onto a single screen.
・ Plasma displays can be controlled using a Web browser.
・ The Wireless Presentation Board also accepts component video and audio inputs.

COMPONENT IN

Wireless Card (A protective cover is included for wireless card use.)

Note
・ Normal operation may not be possible when the board is combined with another application (such as an image rotating utility) using the image data.
・ This board cannot be used in some countries.

Specifications

Standards compliance	IEEE 802.11b/11g
Frequency range	2.4 GHz

System Configuration Required by Wireless Manager ME 4.0

OS	Microsoft Windows 2000 Professional/XP Home Edition/XP Professional
CPU	Intel Pentium III 600 MHz or faster (or compatible processor) (Processing speed of 800 MHz or faster recommended for Live mode)
Memory	256 MB or more
HDD	60 MB or more of available disk space
Required hardware	・ CD or DVD drive (for installing software and browsing the instruction manual) ・ A correctly operating built-in wireless LAN function or external wireless LAN adaptor supporting IEEE 802.11b/g
Web browser	Microsoft Internet Explorer 6.0 or newer, Netscape Communicator 7.0 or newer

* Microsoft, Windows and PowerPoint are either trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries. Intel and Pntlum are either trademarks of registered trademarks of Intel Corporation in the United States and/or other countries.

Main Functions

・ **Live Mode**
Images from one PC can be shown in real-time over the entire display.

・ **Multi-Display Live Mode**
Images from one PC can be sent by wireless transmission to as many as eight displays in real-time.

Up to four PCs can be used.

・ **Multi-Live Mode**
Images from up to 16 PCs can be shown together, in real-time, on the same display. (This can also be combined with Multi-Display Live mode.)

・ **Secondary Display Transmission**
This function transmits a secondary window from the PC. For example, it lets you display the Notes window from Microsoft PowerPoint onto your PC screen while showing the corresponding Slide Show on the display.

・ **Area-Specific Transmission**
Enlarges and displays only desired parts of the PC screen.

・ **Web Browser Control**
This function lets you control the display from your Web browser, for operations such as power on/off, input selection, and sound volume adjustment.

Peripherals

PDP Controller

ETX-1312C series (Mounts in slots 1 & 2, or slots 2 & 3)

Terminals

COM (RS232C)

LINE IN connector | LINE OUT connector | MIC connector | USB2.0 connector | VGA Interface | LAN (RJ45) connector

- Compact 2-slot width plug-in PC to facilitate turnkey solutions.
- Does not require any external power sources or any external brackets.
- Supports Compact Flash Cards.
- Supports VGA output for additional display.

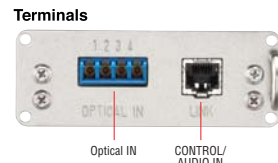*The PDP Controller cannot be combined for use with other terminal boards.

Specifications
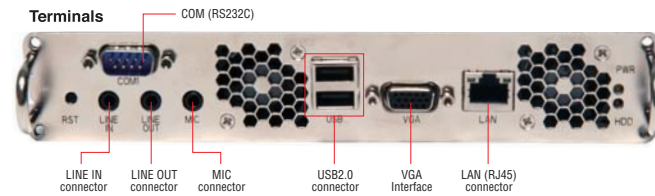
Model number	ETX-1312C1000	ETX-1312C600	ETX-1312C1000-XPE	ETX-1312C600-XPE
Slot compatibility	requires slots 1 & 2 or slots 2 & 3			
Processor	ULV Pentium Celeron 1 GHz	ULV Pentium Celeron 600 MHz	ULV Pentium Celeron 1 GHz	ULV Pentium Celeron 600 MHz
Memory	512 MB RAM (DDR SO-DIMM)			
Internal HDD	40 GB HDD (2.5" HD)			
Interfaces	1 x LAN, 2 x USB 2.0, 1 x Serial, 1 x Line In/Out, 1 x Mic In, 1 x VGA Out			
Pre-installed OS	—		Windows XP embedded	
Dimensions (W x H x D)	203 x 32 x 125 mm			
Power supply	Supplied from the plasma display			
Standards	FCC, CE, RoHS			

Optical DVI Transmission System

WK-0100
**Optical DVI Receiver Board (mounts in slots 1 & 2)**

Terminals

Optical IN | CONTROL/AUDIO IN

Optical DVI Transmitter

Terminals

Optical OUT | AUDIO IN
CONTROL/AUDIO OUT | DVI-D IN | SERIAL (RS-232C)
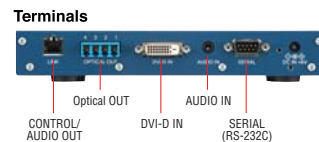
Maximum Transmission Length

Only DVI-D	1 km
DVI-D, Control, Audio	500 m

- Longer distance optical transmission of high definition DVI-D signal.
- Remote control and audio transmission, using additional Link cable (CAT-5e).
- UXGA signals (1,600 x 1,200 pixels) can be sent up to 1 km.
- Control signal and audio signal can be extended up to 500 m.
- Does not require any external power sources or any external units.

Connections

DVI-D

Professional Plasma Display

Optical DVI Receiver Board

Optical fiber cable

PC etc

Optical DVI Transmitter

DVI-D cable
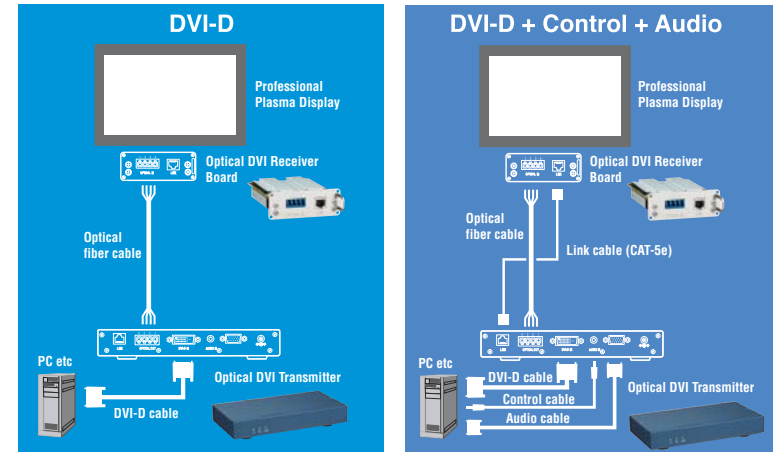
Connect the optical fiber cable.

Cable Length	Model Number
30 m	WK-0120A-FL030
50 m	WK-0120A-FL050
100 m	WK-0120A-FL100

DVI-D + Control + Audio

Professional Plasma Display

Optical DVI Receiver Board

Optical fiber cable

Link cable (CAT-5e)

PC etc

DVI-D cable
Control cable
Audio cable

Optical DVI Transmitter

Connect the optical fiber cable and link cable.

Cable Length	Model Number
30 m	WK-0120B-FL030
50 m	WK-0120B-FL050
100 m	WK-0120B-FL100

* A special order is required for a cable that exceeds the length of 100 m

Specifications

Signals	DVI-D	Complies with DVI Revision1.0 and supports HDCP1.1
	Number of pixels	SVGA to UXGA for display on PDP side: Full high definition supported (1080p)
	Control Signal	RS-232C, transmission rate 9600 bps standard (two way)
	Audio Signal	Stereo, input/output level: 0.5 Vrms (max. 2 Vrms)
Dimensions* (W x D x H)	Optical DVI Receiver Board	104.5 mm x 148.9 mm x 38.5 mm
	Optical DVI Transmitter	210.0 mm x 110.0 mm x 30.5 mm
Option Cables	DVI-D cable	DVI-D (single link); 2 m
	Control cable	RS-232C, D-sub 9-pin plug (female/female); 2 m
	Audio cable	Stereo with mini plugs (ø3.5); 2 m

* Excluding the protruding parts of the connectors and case legs.
Note: Be sure to use the supplied cables. Other cables may have an adverse effect on video and audio.

AV Terminal Box

TY-TB10AV

- Ideal for hotel guest rooms. Two input terminals (VIDEO/RGB) allow guests to easily connect and use their own notebook PC, portable DVD player, or other device.
- The TY-TB10AV can also be built into a desk or a bed sideboard.

Front Panel

CVBS IN | AUDIO IN (L/R) | S-VIDEO IN | AUDIO IN (L/R) | PC IN | AUDIO IN
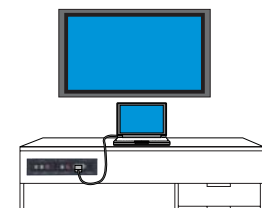
Twisted-Pair-Cable Transmission System Products

Twisted-Pair-Cable Receiver Board (Mounts in any slot*)
KE0101CR-BW (Video, Audio and Control Signals)

KE101CR-BX
(Video and Control Signals)

*Should be mounted in slot 1 to send the display control signal. Display control signal transmission is one-way.

- It is possible, using a single CAT5e cable, to simultaneously send multiple signals [KE0101CR-BW can send video signal (RGB, component, or composite), audio signal and the display control signal, while KE101CR-BX can send video signal (RGB, component, or composite) and the display control signal].
- * To send a composite video signal, the Composite Video Terminal Board (TY-FB9BD, 42TM6Y, 42TM6B or 42TM6V) must be mounted in the slot of the Plasma.
- This reduces both costs and setup time compared with a conventional BNC cable connection.
- XGA signals (1024 x 768 pixels) can be sent up to 500 ft.

For the latest information on the Twisted-Pair-Cable Receiver Board, please visit the following website:
http://www.kowa.co.jp/i-master/cat5-eng

Twisted-Pair-Cable Transmitter/Active Switcher
KE811CT2

- Makes it possible to simultaneously transmit video, audio and control signals over a single CAT5e cable to external equipment.
- Allows plasma display control (Power On/Off, Video Switching, Mute, Volume Up/Down, etc.) via RS-232C.
- Enables combined use with the KE109CD2 Distributor.

Twisted-Pair-Cable Transmitter
KE0202CT2W
Sends video, audio and control signals over a CAT5e cable.

Twisted-Pair-Cable Distributor
KE109CD2
Distributes one input to nine output channels.

Touch Panel
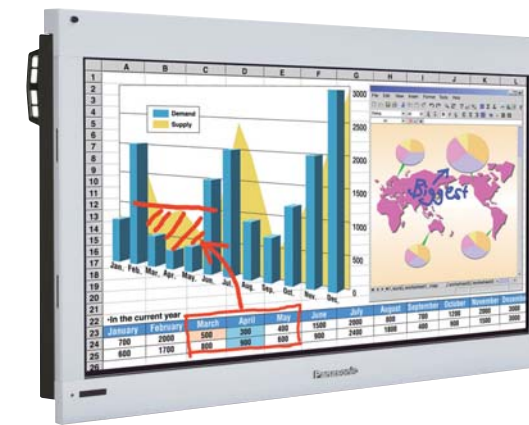
Touch Panel (CMOS Camera Detection System)
TY-TP65P10S (for TH-65PF11EK)
TY-TP58P10S (for TH-58PF11EK)
TY-TP50P10S (for TH-50PF11EK, 50PH11EK/ES)
TY-TP42P10S (for TH-42PF11EK, 42PH11EK/ES)

- High resolution
- High scan speed
- Dividable frame system for compact packaging

Note: The touch panel does not include a drawing application.
You cannot mount both a TY-TP65P10S, TP58P10S or TP50P8-S Touch Panel and an Anti-Glare Filter at the same time.
Do not use the touch panel near windows or other locations where external light is directly reflected. Otherwise, operating errors may result.

Anti-Glare Filter

TY-AR65P9W (for TH-65PF11EK)
TY-AR58P10W (for TH-58PF11EK)
TY-AR50P9W (for TH-50PF11EK)
TY-AR42P9W (for TH-42PF11EK)

- Mounting this filter to the front of the plasma display reduces glare from external light and reflections from fluorescent lighting, to maintain an easy-to-see screen at all times.
- It also suppresses the transmission of visible light rays and improves contrast, to provide sharp, crisp images.
- An anti-glare film is used that has excellent physical characteristics, such as preventing static electricity and resisting surface abrasion (with a surface hardness of 2H).

KEY PERFORMANCE RATIOS

Without Anti-Glare Filter

KEY PERFORMANCE RATIOS

With Anti-Glare Filter
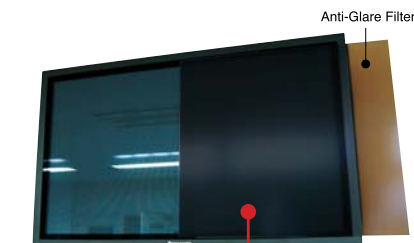
Anti-Glare Filter

An Endless Array of Applications

TV PRODUCTION

Beijing 2008 Olympic International Broadcasting Center
Beijing, China
6 x 103", 36 x 65"

Plasma displays were used in the Master Control Room, where footage from each of the venues was controlled and monitored, and then delivered to the broadcast booths of the respective countries. Large-screen, flat-panel models allowed multiple images to be shown on a multi-screen display as high-definition, distortion-free images. Also, compared to installing a large number of small CRT monitors, the plasma displays were able to save considerable space.

Asahi Broadcasting Corporation
Osaka, Japan
1 x 50", Touch Panel

This combination of a high-definition plasma display, touch panel, and HD-SDI terminal board is used as an HD weather system. An easy-to-follow weather forecast format has been established, with the newscaster writing directly on the clear screen.

PASSENGER INFORMATION

Shanghai Metro People's Square Station
Shanghai, China
10 x 103"

Ten plasma displays for use as digital signage were installed at a subway transfer building, which is used by over 500,000 people a day. Compared to conventional illuminated signboards, these displays give advertising a much greater visual effect due to their moving images. This allows them to attract more attention to the information that they transmit.

Japan Airline Corporation at Haneda Airport
Tokyo, Japan
146 x 50"

From Haneda Airport's departure lobby to the departure security check area, the standby counter, and the boarding gates, there are a total of 146 displays that deliver different content according to their location. The straightforward, step-by-step content of these displays smoothly guide passengers to their destination.

EDUCATION

Los Halcones
Medellin, Colombia
3 x 50"

Three plasma displays were installed at Los Halcones in Colombia to simulate the windshield of a plane. By creating a realistic flight environment, the monitors help to train pilots who will fly private planes. Panasonic displays were selected due to their easy installation, versatility, and updating ability, and because of the close fit of the monitor edges. The school plans to increase the number of flight simulators to three, as the plasma display resolution allows realistic simulations and enable effective testing.
The flight simulators have been so helpful that other branches of the school have requested additional information on Panasonic products.

Kokushikan University
Tokyo, Japan
1 x 103"

This 103-inch display, which was installed in the AV hall of the university's library, offers accurate, clear views of various academic information. Effective use of advanced multimedia visual aids is helping to support study and research, raise the quality of lectures, and motivate students to learn.

National University of Singapore
Singapore
2 x 103"

The previous projector system in the lecture room was replaced by these plasma displays. By solving problems such as the instructor's shadow covering the screen and making it difficult to see the images, and not being able to see images clearly unless the room was dark, the new displays offer excellent clarity even in brightly lit rooms.
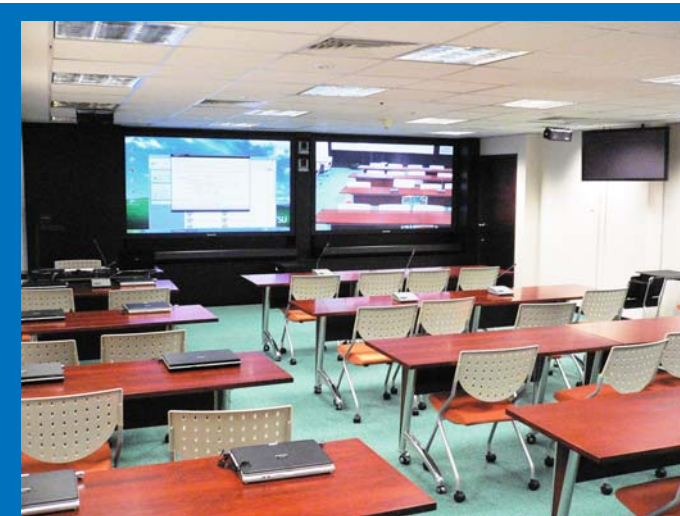
AMUSUMENT
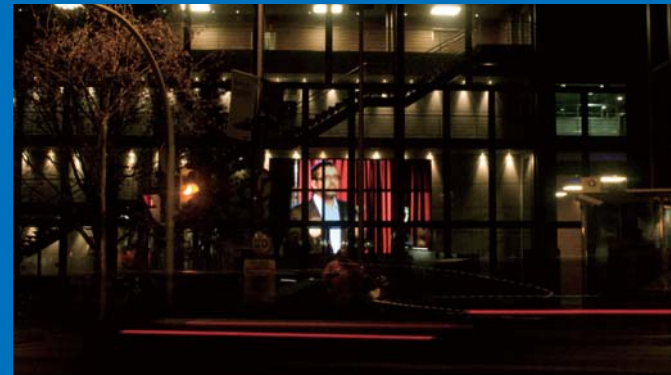
MEDIAPRO
Barcelona, Spain
9 x 103"

MEDIAPRO's newly built Production Center in Barcelona is the proud owner of the world's largest plasma display video wall. Nine Panasonic 103-inch full-HD displays have been installed in a 3 x 3 matrix in the reception area of their new offices. Visitors are captivated by dynamic moving images promoting the company's activities. The video wall can be seen from the street, and instantly draws attention to MEDIAPRO's new arrival in the area. It also emphasizes their dominance in Spain's media industry.
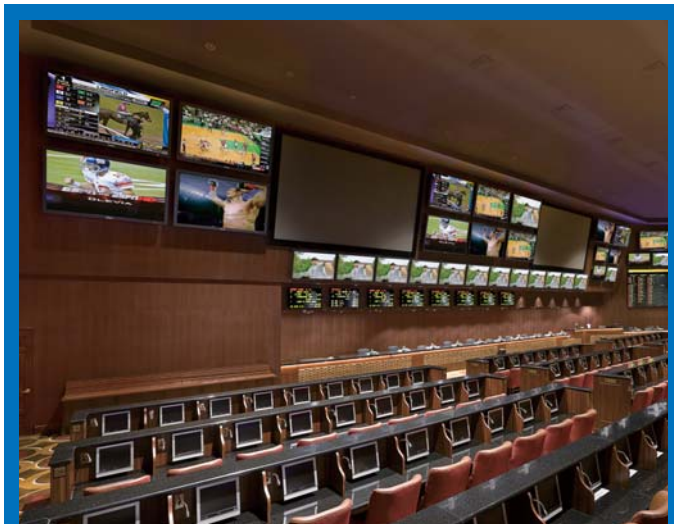
SAM'S TOWN
Las Vegas, USA
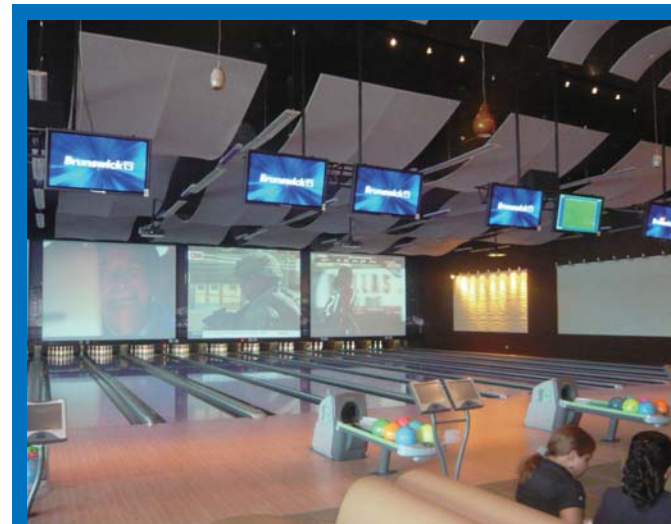
BENNIGAN'S
Panama City, Panama

MEDICAL CARE

Ehime University Hospital
Ehime, Japan
12 x 50", 3 x 37"

Plasma displays with superb color reproduction, uniform coloring, and high-speed image response are installed in the operating rooms. The 50-inch displays are being used as observation monitors for medical students.

DIGITAL SIGNAGE

CINE Planet
Lima, Peru
12 x 42", 116 x 50"

CINE Planet, which is the No. 1 cinema chain in Peru, chose to use plasma displays for the menu boards of its fast-food shops because of their ability to accurately render the natural colors of the food items.

Flora Shopping Centre
Prague, Czech
3 x 103"

Full HD Models — SPECIFICATIONS

FULL HD 1920×1080p

Screen Comparison

42-inch	922mm
50-inch	1,106mm
58-inch	1,287mm
65-inch	1,434mm
103-inch	2,269mm
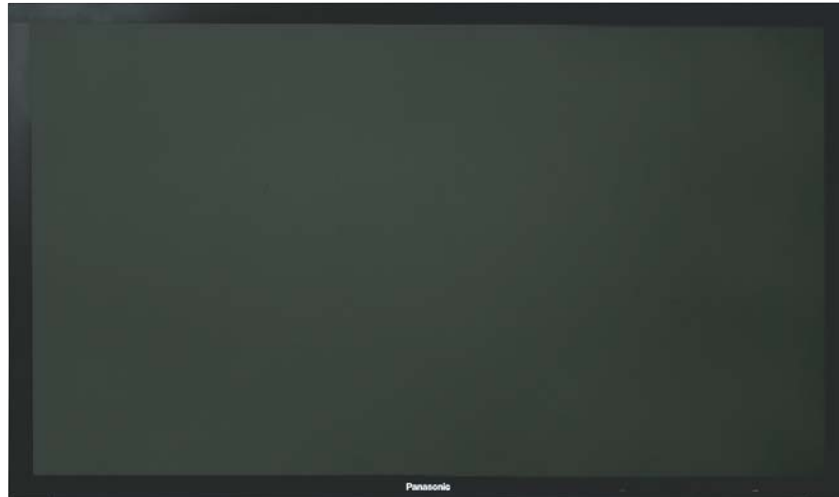
TH-103PF10EK
TH-103PF10EL (Low-reflection model)
103-inch (260 cm) diagonal
Full High Definition Plasma Display

TH-65PF11EK
65-inch (165 cm) diagonal
Full High Definition Plasma Display

TH-58PF11EK
58-inch (148 cm) diagonal
Full High Definition Plasma Display

TH-50PF11EK
50-inch (127 cm) diagonal
Full High Definition Plasma Display

TH-42PF11EK
42-inch (106 cm) diagonal
Full High Definition Plasma Display
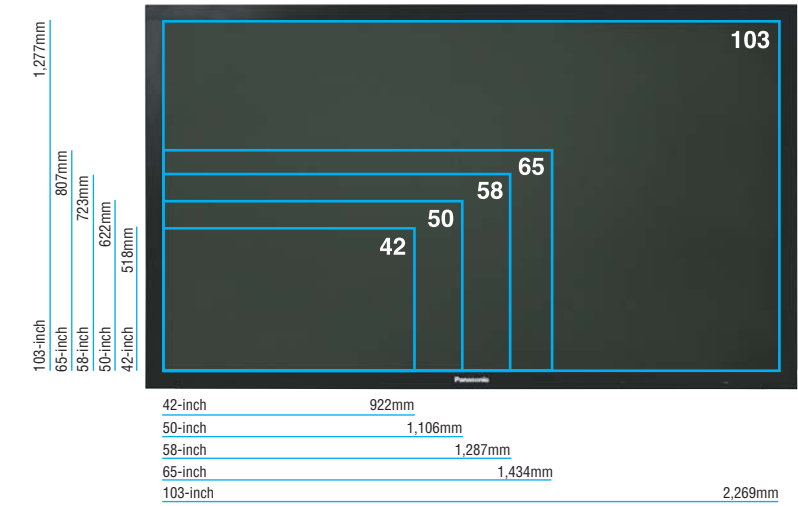
Specifications

DISPLAY	TH-103PF10EK/EL	TH-65PF11EK
Screen Size (Diagonal)	103-inch	65-inch
Aspect Ratio	16:9	16:9
Effective Display Area (W x H)	2,269 x 1,277 mm	1,434 x 807 mm
Resolution (H x V)	1,920 x 1,080 pixels	1,920 x 1,080 pixels
Pixel Pitch (H x V)	1.182 x 1.182 mm	0.747 x 0.747 mm
Contrast Ratio	5,000:1	30,000:1
Gradation	4,096 steps (equivalent)	5,120 steps (equivalent)
SIGNAL COMPATIBILITY		
Scan Rate	Horizontal frequency: 15 — 110 kHz; Vertical frequency: 48 —120 Hz	
PC Signal Compatibility	VGA, SVGA, XGA, WXGA, SXGA, SXGA+, UXGA (UXGA: compressed)	
Video Signal Compatibility	525 (480)/60i, 60p; 625 (575)/50i, 50p; 625 (576)/50p; 750 (720)/60p, 50p; 1125 (1080)/60i, 50i, 24p, 24sF, 25p, 30p, 60p, 50p; 1250 (1080)/50i	
INPUT/OUTPUT		
Fixed Terminals		
PC IN	Mini D-sub 15pin x 1; Analog RGB/Component; Plug & Play (VESA DDC 2B)	
AUDIO IN	M3 jack x 1	
SERIAL	D-sub 9-pin x 1, External control, RS-232C compatible	
Interchangeable Terminals		
Slot1	Vacant	Vacant
Slot2	DVI-D In (DVI 24-pin x 1), Audio In (M3 jack x 1; L/R: 0.5 Vrms)	
Slot3	Component In (BNC x 3, Analog RGB/Component), Audio In (L/R) (RCA pin jack x 2)	
ELECTRICAL		
Power Requirements	220 - 240 V AC, 50 Hz/60 Hz	220 - 240 V AC, 50 Hz/60 Hz
Power Consumption	1,550 W	710 W
Power off condition	0.5 W	0.4 W
Stand-by condition	Save Off: 1.0 W, Save On: 0.9 W	Save Off: 1.2 W, Save On: 0.7 W
SOUND		
Audio Output	Line Out (L/R)	20 W [10 W + 10 W] (10 % THD)
MECHANICAL		
Dimensions (W x H x D)	2,414 x 1,421 x 129*1 mm	1,554 x 925 x 99 mm
Weight (approx.)	220.0 kg	68.0 kg
OPERATING ENVIRONMENT		
Temperature	0°C — 40°C	
Humidity	20% — 80% (Non condensation)	
Altitude	0 — 2,400 m	0 — 2,800 m
RADIATION REGULATIONS		
	EN55022 Class-B, EN55024, EN61000-3-2, EN61000-3-3	
SAFETY STANDARDS		
	EN60065 Ver. 7	

*1: Exclusive of protruding portion (141 mm when including the protruding portion of the slot)

DISPLAY	TH-58PF11EK	TH-50PF11EK	TH-42PF11EK
Screen Size (Diagonal)	58-inch	50-inch	42-inch
Aspect Ratio	16:9	16:9	16:9
Effective Display Area (W x H)	1,287 x 723 mm	1,106 x 622 mm	922 x 518 mm
Resolution (H x V)	1,920 x 1,080 pixels	1,920 x 1,080 pixels	1,920 x 1,080 pixels
Pixel Pitch (H x V)	0.669 x 0.669 mm	0.576 x 0.576 mm	0.480 x 0.480 mm
Contrast Ratio	30,000:1		
Gradation	5,120 steps (equivalent)		
SIGNAL COMPATIBILITY			
Scan Rate	Horizontal frequency: 15 — 110 kHz; Vertical frequency: 48 —120 Hz		
PC Signal Compatibility	VGA, SVGA, XGA, WXGA, SXGA, SXGA+, UXGA (UXGA: compressed)		
Video Signal Compatibility	525 (480)/60i, 60p; 625 (575)/50i, 50p; 625 (576)/50p; 750 (720)/60p, 50p; 1125 (1080)/60i, 50i, 24p, 24sF, 25p, 30p, 60p, 50p; 1250 (1080)/50i		
INPUT/OUTPUT			
Fixed Terminals			
PC IN	Mini D-sub 15pin x 1; Analog RGB/Component; Plug & Play (VESA DDC 2B)		
AUDIO IN	M3 jack x 1		
SERIAL	D-sub 9-pin x 1, External control, RS-232C compatible		
Interchangeable Terminals			
Slot1	Vacant	Vacant	Vacant
Slot2	DVI-D In (DVI 24-pin x 1), Audio In (M3 jack x 1; L/R: 0.5		
Slot3	Component In (BNC x 3, Analog RGB/Component), Audio In (L/R) (RCA pin jack x 2)		
ELECTRICAL			
Power Requirements	220 - 240 V AC, 50 Hz/60 Hz	220 - 240 V AC, 50 Hz/60 Hz	220 - 240 V AC, 50 Hz/60 Hz
Power Consumption	625 W	485 W	410 W
Power off condition	0.4 W	0.4 W	0.4 W
Stand-by condition	Save Off: 1.2 W, Save On: 0.7 W	Save Off: 1.2 W, Save On: 0.7 W	Save Off: 1.2 W, Save On: 0.7 W
SOUND			
Audio Output	16 W [8 W + 8 W] (10 % THD)		
MECHANICAL			
Dimensions (W x H x D)	1,399 x 843 x 99 mm	1,210 x 724 x 95 mm	1,020 x 610 x 89*2 mm
Weight (approx.)	54.5 kg	36.0 kg	29.0 kg
OPERATING ENVIRONMENT			
Temperature	0°C — 40°C		
Humidity	20% — 80% (Non condensation)		
Altitude	0 — 2,800 m		
RADIATION REGULATIONS			
	EN55022 Class-B, EN55024, EN61000-3-2, EN61000-3-3		
SAFETY STANDARDS			
	EN60065 Ver. 7		

*2: Exclusive of protruding portion (99 mm when including the protruding portion of the slot)

Full HD Models — DIMENSIONS

(Unit: mm)

TH-103PF10EK/EL

With the optional pedestal attached.

TH-65PF11EK

With the optional pedestal TY-ST65P11 attached.

TH-58PF11EK

With the optional pedestal TY-ST58-K attached.

TH-50PF11EK

With the optional pedestal TY-ST08 attached.

TH-42PF11EK

With the optional pedestal TY-ST08 attached.

HD Models — SPECIFICATIONS & DIMENSIONS

TH-50PH11ES
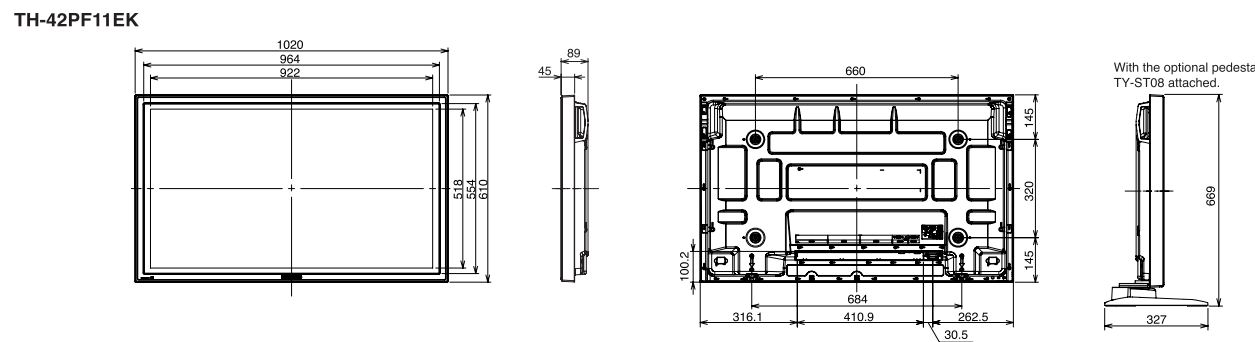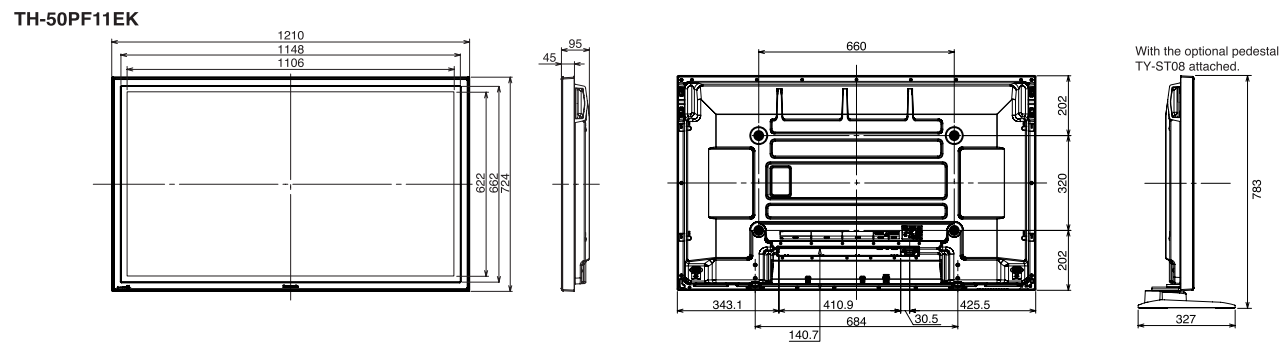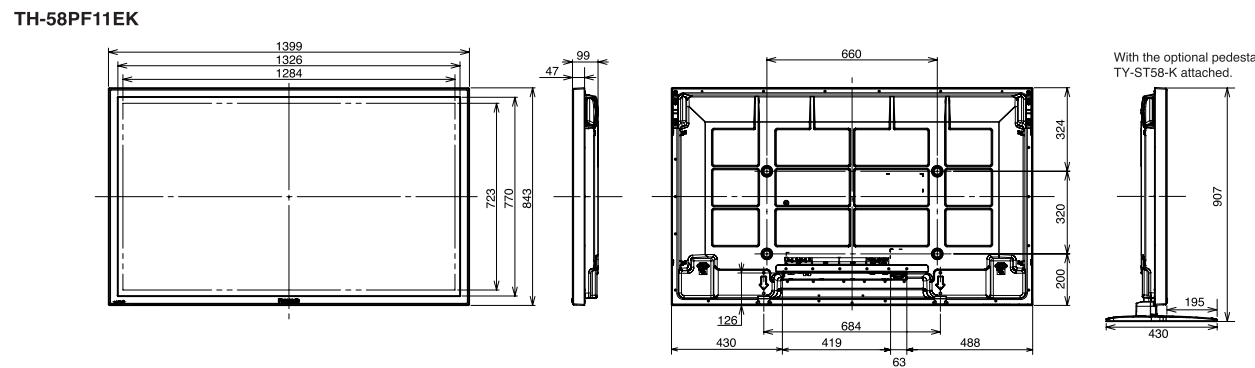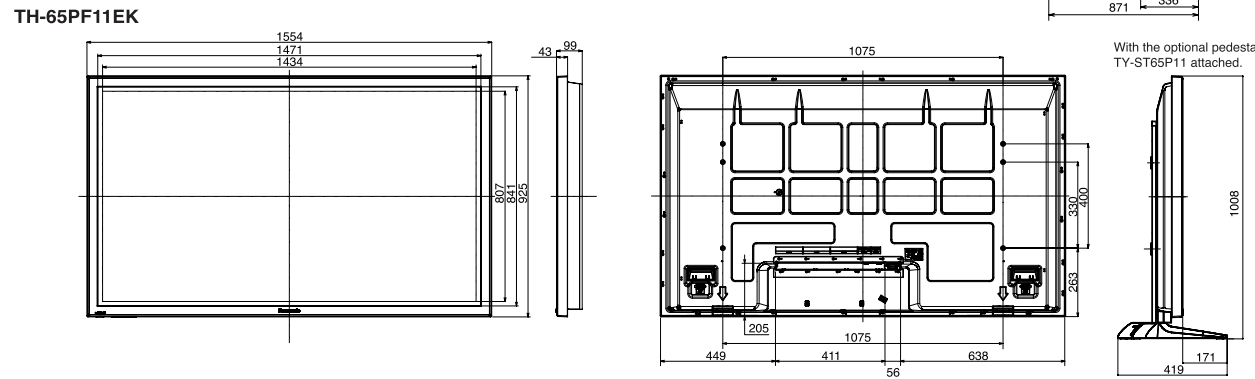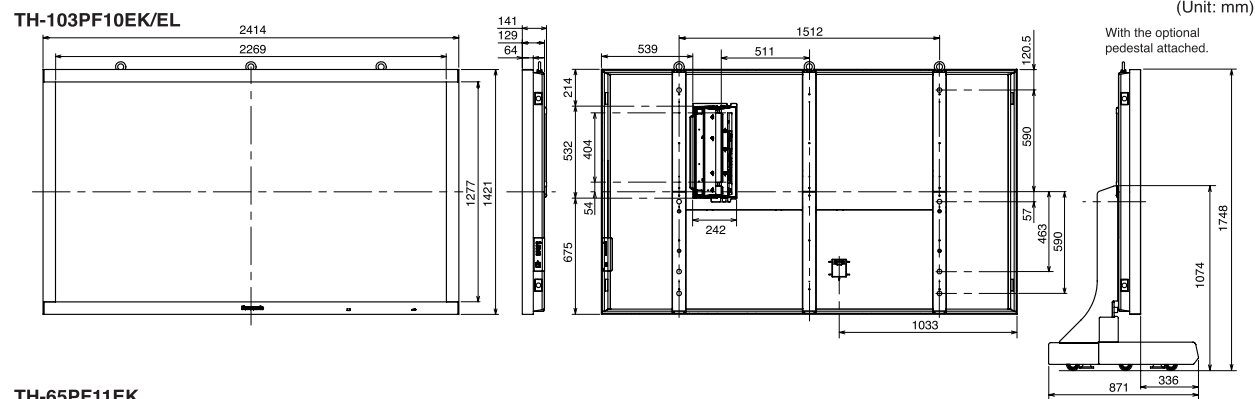
TH-42PH11ES

TH-50PH11EK

TH-50PH11EK/ES
50-inch (127 cm) diagonal
High Definition Plasma Display

TH-42PH11EK

TH-42PH11EK/ES
42-inch (106 cm) diagonal
High Definition Plasma Display

Hospitality Models Also Available

TH-42PR11EH
42-inch HD model

TH-37PR11EH
37-inch HD model

Specifications

	TH-50PH11EK	TH-50PH11ES	TH-42PH11EK	TH-42PH11ES
Cabinet Colour	Black	Silver	Black	Silver
DISPLAY				
Screen Size (Diagonal)	50-inch		42-inch	
Aspect Ratio	16:9		16:9	
Effective Display Area (W x H)	1,106 x 622 mm		922 x 518 mm	
Resolution (H x V)	1,366 x 768 pixels		1,024 x 768 pixels	
Pixel Pitch (H x V)	0.810 x 0.810 mm		0.900 x 0.675 mm	
Contrast Ratio	15,000:1			
Gradation	4,096 steps (equivalent)			
SIGNAL COMPATIBILITY				
Scan Rate	Horizontal frequency: 15 — 110 kHz; Vertical frequency: 48 —120 Hz			
PC Signal Compatibility	VGA, WVGA, SVGA, XGA, WXGA, SXGA, UXGA (WXGA and over resolution: compressed)			
Supported Video Standards	NTSC, PAL, PAL 60, SECAM, Modified NTSC			
Video Signal Compatibility	525 (480)/60i, 60p; 625 (575)/50i, 50p; 750 (720)/60p, 50p; 1125 (1080)/60i, 50i, 24p, 24sF, 25p, 30p, 60p, 50p; 1250 (1080)/50i			
INPUT/OUTPUT				
Fixed Terminals				
PC IN	Mini D-sub 15pin x 1; Analog RGB/Component; Plug & Play (VESA DDC 2B)			
AUDIO IN	M3 jack x 1			
SERIAL	D-sub 9-pin x 1, External control, RS-232C compatible			
Interchangeable Terminals				
Slot1	CVBS In (BNC x 1, Composite), Audio In (L/R) (RCA pin jack x 2); S-Video In (S-Video x 1), Audio In (L/R) (RCA pin jack x 2)			
Slot2	Vacant		Vacant	
Slot3	Vacant		Vacant	
ELECTRICAL				
Power Requirements	220 - 240 V AC, 50 Hz/60 Hz		220 - 240 V AC, 50 Hz/60 Hz	
Power Consumption	365 W		275 W	
Power off condition	0.3 W		0.5 W	
Stand-by condition	Save Off: 1.5 W, Save On: 0.7 W		Save Off: 1.8 W, Save On: 0.9 W	
SOUND				
Audio Output	16 W [8 W + 8 W] (10 % THD)			
MECHANICAL				
Dimensions (W x H x D)	1,210 x 724 x 95 mm		1,020 x 610 x 89 mm	
Weight (approx.)	34.0 kg		25.0 kg	
OPERATING ENVIRONMENT				
Temperature	0°C — 40°C			
Humidity	20% — 80% (Non condensation)			
Altitude	0 — 2,800 m			
RADIATION REGULATIONS				
	EN55022 Class-B, EN55024, EN61000-3-2, EN61000-3-3			
SAFETY STANDARDS				
	EN60065 Ver. 7			

Dimensions

TH-50PH11EK/ES

With the optional pedestal TY-ST08 attached.

TH-42PH11EK/ES

With the optional pedestal TY-ST08 attached.

Preset Input Signals

Preset Input Signals

	Signal name	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Dot Clock (MHz) Component RGB In/PC In	DVI-D In
Composite	NTSC	15.73	59.94		
	PAL	15.63	50.00		
	PAL60	15.73	59.94		
	SECAM	15.63	50.00		
	Modified NTSC	15.73	59.94		
Component/RGB	525 (480)/60i	15.73	59.94	13.5	
	525 (480)/60p	31.47	59.94	27.0 (*3)	27.0
	625 (575)/50i	15.63	50.00	13.5	
	625 (575)/50p	31.25	50.00	27.0	
	625 (576)/50p	31.25	50.00		27.0
	750 (720)/60p	45.00	60.00	74.25	74.25
	750 (720)/50p	37.50	50.00	74.25	74.25
	1125 (1080)/60i	33.75	60.00	74.25	74.25
	1125 (1080)/60p	67.50	60.00	148.5	148.5
	1125 (1080)/50i	28.13	50.00	74.25	74.25
	1125 (1080)/50p	56.25	50.00	148.5	148.5
	1125 (1080)/30p	33.75	30.00	74.25	74.25
	1125 (1080)/25p	28.13	25.00	74.25	74.25
	1125 (1080)/24p	27.00	24.00	74.25	74.25
	1125 (1080)/24sF	27.00	48.00	74.25	
	1250 (1080)/50i	31.25	50.00	74.25	
	2048 x 1080/24p	27.00	24.00		
	2048 x 1080/24sF	27.00	48.00		
RGB	640 x 400 @70Hz	31.46	70.07	25.17	
	640 x 480 @60Hz	31.47	59.94	25.18 (*4)	25.18
	640 x 480 @72Hz	37.86	72.81	31.5	
	640 x 480 @75Hz	37.50	75.00	31.5	
	640 x 480 @85Hz	43.27	85.01	36.0	
	800 x 600 @56Hz	35.16	56.25	36.0	
	800 x 600 @60Hz	37.88	60.32	40.0	40.0
	800 x 600 @72Hz	48.08	72.19	50.0	
	800 x 600 @75Hz	46.88	75.00	49.5	
	800 x 600 @85Hz	53.67	85.06	56.25	
	852 x 480 @60Hz	31.47	59.94	33.54 (*4)	34.24
	1024 x 768 @50Hz	39.55	50.00		51.89
	1024 x 768 @60Hz	48.36	60.00	65.0	65.0
	1024 x 768 @70Hz	56.48	70.07	75.0	
	1024 x 768 @75Hz	60.02	75.03	78.75	
	1024 x 768 @85Hz	68.68	85.00	94.5	
	1066 x 600 @60Hz	37.64	59.94	53.0	53.0
	1152 x 864 @60Hz	53.70	60.00		81.62
	1152 x 864 @75Hz	67.50	75.00	108.0	
	1280 x 768 @60Hz	47.70	60.00	80.14	
	1280 x 960 @60Hz	60.00	60.00	108.0	
	1280 x 960 @85Hz	85.94	85.00	148.5	
	1280 x 1024 @60Hz	63.98	60.02	108.0	108.0
	1280 x 1024 @75Hz	79.98	75.03	135.0	
	1280 x 1024 @85Hz	91.15	85.02	157.5	
	1366 x 768 @50Hz	39.55	50.00		69.92
	1366 x 768 @60Hz	48.36	60.00	86.71	87.44
	1400 x 1050 @60Hz	65.22	60.00		122.61
	1600 x 1200 @60Hz	75.00	60.00	162.0	162.0
	1600 x 1200 @65Hz	81.25	65.00	175.5	
	1920 x 1080 @60Hz	67.50	60.00	148.5	148.5
	1920 x 1200 @60Hz	74.04	59.95		154.0
	Mac 13 (640 x 480)	35.00	66.67	30.24	
	Mac 16 (832 x 624)	49.72	74.54	57.28	
	Mac 21 (1152 x 870)	68.68	75.06	100.0	

*1: The TH-103PF10 does not accept these signals.
*2: The PH series does not accept these signals.
*3: When selected the RGB format and 525p signal input to the Mini D-sub 15P terminal, it is recognized as VGA 60 Hz signal.
*4: When inputted VGA 60 Hz format signal from the other than Mini D-sub 15P terminal, it is recognized as 525p signal.
Note: When a signal having a resolution that exceeds the panel resolution is input, a simplified display will be produced.

Serial RS232C: D-Sub 9-Pin (Male)

```
① ② ③ ④ ⑤
  ⑥ ⑦ ⑧ ⑨
```

Pin Assignment and Signal Name

Pin No.	Signal name	Descriptions
1	CD	NC
2	RXD	Receive Data
3	TXD	Transmit Data
4	DTR	Not used
5	GND	Ground
6	DSR	Not used
7	RTS	Shorted in the set
8	CTS	Shorted in the set
9	RI	NC

Communication Parameters

Signal Level	RS232C Compliant
Synchronization Method	Asynchronous
Baud Rate	9600 bps
Parity	None
Character Length	8 bits
Stop Bit	1 bit
Flow Control	—

* The Serial terminal is used when the Plasma Display is controlled by computer.

PC Input: D-Sub 15-Pin (Female)

```
⑤ ④ ③ ② ①
 ⑩ ⑨ ⑧ ⑦ ⑥
  ⑮ ⑭ ⑬ ⑫ ⑪
```

Signal Name

Pin No.	Signal name	Pin No.	Signal name
1	R (PR/CR)	9	+5V DC
2	G (Y)	10	GND (Ground)
3	B (PB/CB)	11	NC (Not connected)
4	NC (Not connected)	12	SDA
5	GND (Ground)	13	HD/SYNC
6	GND (Ground)	14	VD
7	GND (Ground)	15	SCL
8	GND (Ground)		

Supplied Remote Control

For PF Series   For PH Series

Options

Wall-hanging bracket

TY-WK103PV9
Weight: 25.0 kg

TY-WK65PV7
Weight: 8.3 kg

TY-WK42PV7
Weight: 3.0 kg

Wall-hanging bracket (angled)

TY-WK65PR8
Weight: 12.0 kg

TY-WK42PR7
Weight: 5.2 kg

Wall-hanging bracket (drawer type)

TY-WK42DR1
Weight: 13.5 kg

Pedestal
TY-ST103PF9
Weight: 108.0 kg

TY-ST65P11-K
Weight: 17.0 kg

TY-ST58-K
Weight: 3.4 kg

TY-ST08-K/S
Weight: 10.0 kg

TY-ST08-K

TY-ST08-S

Ceiling-hanging bracket
TY-CE103PS10 Adjustable angle: 0° — 20°
Weight:
Vertical type: 15 kg;
Inclined type: 37 kg

TY-CE42PS7
Weight: 16.5 kg

Mobile stand
TY-ST58PF10
Weight: 32.0 kg

Compatible Models at a Glance

●: Compatible; —: Not

	TY-ST103PF9	TY-ST65P11-K	TY-ST58-K	TY-ST08-K/S	TY-WK103PV9	TY-WK65PV7	TY-WK42PV7	TY-WK65PR8	TY-WK42PR7	TY-WK42DR1	TY-ST58PF10	TY-CE103PS10	TY-CE42PS7
TH-103PF10	●	—	—	—	●	—	—	—	—	—	—	●	—
TH-65PF11	—	●	—	—	—	●	—	●	—	—	—	—	—
TH-58PF11	—	—	●	—	—	—	●	—	●	—	●	—	—
TH-50PF11, TH-50PH11	—	—	—	●	—	—	●	—	●	●	●	—	●
TH-42PF11, TH-42PH11	—	—	—	●	—	—	●	—	●	●	●	—	●

Detachable stereo speakers

TY-SP65P11WK (for TH-65PF11EK)
Weight: 2.2 kg/each

TY-SP58P10WK (for TH-58PF11EK)
Weight: 2.5 kg/each

TY-SP50P8W-K (for TH-50PF11EK/50PH11EK)
TY-SP50P8W-S (for TH-50PH11ES)
Weight: 2.0 kg/each

TY-SP42P8W-K (for TH-42PF11EK/42PH11EK)
TY-SP42P8W-S (for TH-42PH11ES)
Weight: 2.0 kg/each

Photo shows TY-SP42P8W-K.   Photo shows TY-SP42P8W-S.