Panasonic
ideas for life

Professional Presentation 2007

Plasma Displays

Superior picture quality, up to 103"

Picture sizes from 42'' up to 103"

Contrast ratio of up to 10,000:1

SD, HD and full HD models

Long-life panel, 60,000 hours

Ideal for digital signage applications

The new, environmentally friendly Plasma Displays: featuring outstanding

Panasonic Professional Plasma Displays are the first choice for commercial applications. Thanks to their adaptability and versatility, they can be configured with absolute precision. The new displays are manufactured without lead to make them environmentally friendly, and offer functions that set them well aside from other displays. Panasonic Plasma Displays have the best daylight contrast value currently* available, and an incredible contrast ratio of 10.000:1. They also have up to 4,096 shades of grey, the highest number available. Full HDTV resolutions up to a size of 103" ensure brilliant pictures that are immediately impressive.

TH-103PF9EK:

The largest Plasma Display in the world for an unbelievable experience

- Full high definition with 1,920 x 1,080 resolution
- 68.7 billion displayable colours and 4,096 shades of grey

TH-65PF9EK:

For an impressively large picture with accurate detailed precision

- Full high definition with 1,920 x 1,080 resolution
- 68.7 billion displayable colours and 4,096 shades of grey

* Status April 2007

picture quality and expandable for professional use

TH-50PH10EK/ES:

With 'HD-Ready' resolution in black or silver

- High definition with 1,366 x 768 resolution
- 29 billion displayable colours and 3,072 shades of grey

TH-42PS10EK/ES:

The fan-free classic

- Standard definition with 852 x 480 resolution
- 29 billion displayable colours and 3,072 shades of grey

TH-58PH10EK:

With 'HD-Ready' resolution

- High definition with 1,366 x 768 resolution
- 29 billion displayable colours and 3,072 shades of grey

TH-50PF9EK:

With full HD for fine definition

- Full high definition with 1,920 x 1,080 resolution
- 68.7 billion displayable colours and 4,096 shades of grey

TH-42PH10EK/ES:

Standard size in top quality

- High definition with 1,024 x 768 resolution
- 29 billion displayable colours and 3,072 shades of grey

Larger size for a more intense experience

With the 103" display in outstanding full HD precision, Panasonic offers the biggest mass-produced Plasma Display currently on the market – no one can ignore it! The possibilities for professional use are almost unlimited.

Fascinating 103" diagonal for remarkable picture quality.

The top model of the plasma series automatically attracts attention. With its exquisite Full HD resolution of 1,920 x 1,080, the viewer literally dives into a fascinating world of images.

Inside, a 1080p processor works together with the new system LSI with HD optimiser. This detects the MPEG artefacts upon the receipt of digital HD signals, reduces them ensuring clean and clear pictures. In order to further increase the panel performance, the 1080p driver supports 16-bit image processing, guaranteeing super-crisp motion sequences.

4,096 brightness steps create pictures that are so vivid and realistic that they directly address the viewers' emotions. In darker environments, the 'Super Cinema Mode' can achieve a particularly rich shade of black and an amazing contrast ratio of 5,000:1. Unique connection capabilities through the use of plug-in boards allow high-performance and flexible solutions for professional applications.

With Panasonic you are completely prepared for all requirements.

Standard Definition, High Definition or Full High Definition – all resolutions are offered by Panasonic with a meaningful correlation to the screen size.

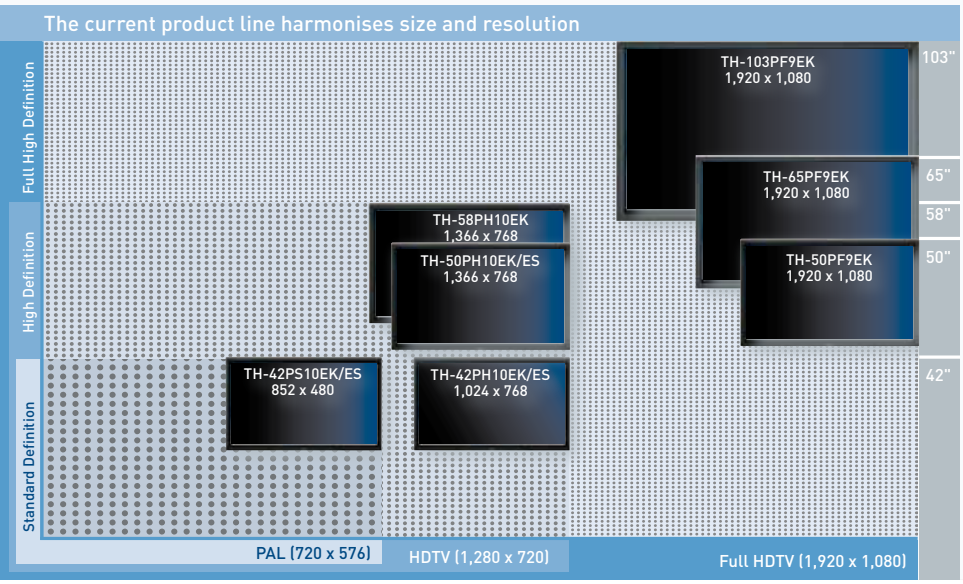
Standard Definition: Often TV or DVD reproduction with standard PAL quality is acceptable. The high compatibility of the playback capabilities offer a cost-effective solution in certain installation environments. With its Standard Definition model, Panasonic is able to offer superior high picture quality compared to conventional PAL models. This is due to its innovative picture improvement techniques.

High Definition: The increasing quality of data sources and the reproduction of demanding PC applications with text or high-resolution pictures, require the use of Plasma Displays with HD resolution. Panasonic's own technologies, such as the unique picture scaler, the internally developed control processes and the long-life panel, show their strength in high definition applications. This can be seen in particular when it comes to the display of finer details. Thanks to these factors and using the optional digital boards, Panasonic demonstrates the degree of quality that can really be implemented with 'HD-ready' in conjunction with the applicable slot-in terminal boards..

The most exclusive definition of picture quality has become reality: Panasonic full HDTV panels

Full High Definition: With the full HD resolutions a picture quality is achieved which previously was simply inconceivable. The area of application is clear: the new models are the first choice wherever it is important to capture the smallest details and provide outstanding clarity. The full HD resolution is completely in keeping with the trend: the Panasonic Blu-ray Disc Player was launched last year, television programmes are already being offered in 1080i and the games consoles of the new generation directly support this resolution.

The new Panasonic Plasma Displays show 1080i or also 1080p signals natively in the 16:9 format. They also have a new picture mode, the '1:1 pixel display' whereby the input signals are reproduced with pixel precision. They are the right choice for those areas where precise and professional display is important such as CAD, studio and television, monitoring and process tracking, large image advertisements and E-poster applications, rental businesses, info boards in sporting arenas and much more.



Close-up of an HD display

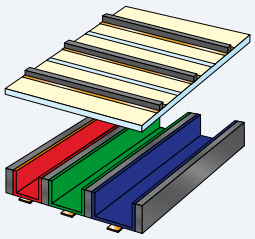
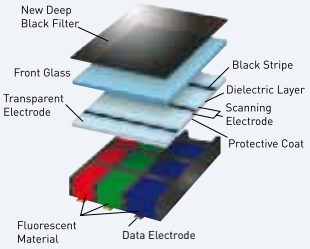
Close-up of a full HD display

Technologies

The picture quality of a display is detemined not only by its hardware but also to a considerable degree by its integrated image enhancement technologies. Panasonic offers you a wide range of future-orientated technologies which bring out the best in your images in every situation.

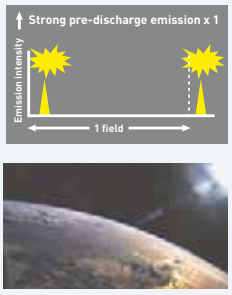
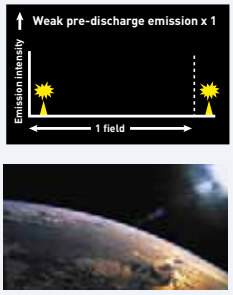
Increasing the picture brightness and efficiency

Panasonic displays set themselves apart due to a particularly finely delineated cell structure. The cell surface coated with phosphor is enlarged by the use of cross struts. The result is light efficiency and light yield visibly improved, while at the same time the energy consumption is improved compared to conventional systems.

Conventional cell structure	Advanced Plasma Display panel
	

Increasing the contrast up to 10,000:1

So that dark areas stay really dark, Panasonic has developed the New Real Black Creation technology, giving unparallelled contrast ratios of up to 10,000:1 in dark environments. Visible flashing before pre-loading has been suppressed by 30 %, which prevents black areas being shown in grey – for outstanding images with a rich, deep black.

Conventional	New Real Black Creation
Contrast 4.000 :1	Contrast max. 10.000 :1
	

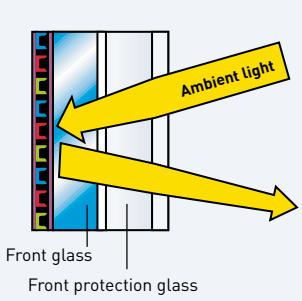
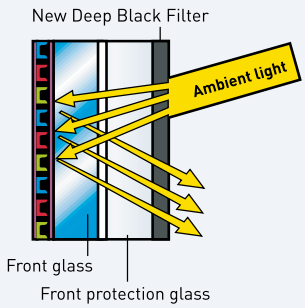
Highest daylight contrast throughout the industry.

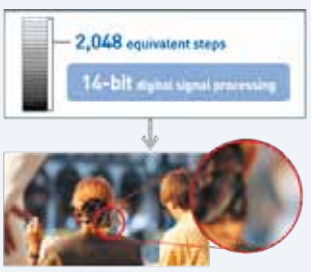
The protective front screen of the Panasonic Plasma Display includes a newly developed deep black filter which restricts the light transparency and drastically reduces reflection from ambient light. Panasonic Plasma Displays thereby achieve the*2 highest achievable contrast ratio in serial production of 400:1 in daylight.

*2 Status April 01, 2007

Finest gradation shading throughout the industry

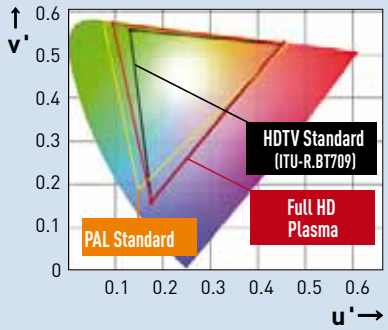
Panasonic is the only manufacturer so far to use 16-bit picture processors for reproduction of the finest gradations. The Real Gamma Control technology thereby achieves what is currently the highest value of up to 4,096 equal gradations in the full HD Displays. This results in incomparably detailed and filigree images – an advantage in application areas such as medicine, simulation and graphics.

Conventional	New Deep Black Filter
	

Conventional	Real Gamma Control
	
Bright image areas with insufficient gradation lack detail.	Clear, detailed rendering of both bright and dark areas.
	* 3,072 levels with SD and HD models

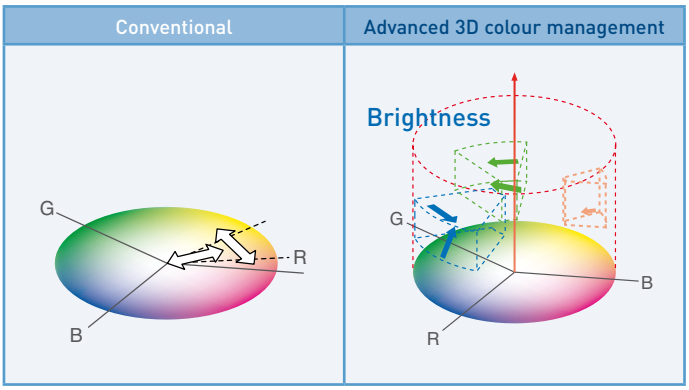
The entire HDTV colour spectrum

Panasonic HDTV Plasma Displays reproduce the expanded colour spectrum of the HDTV standard (ITU-R. BT709), thus depicting high-resolution HD sources absolutely realistically.



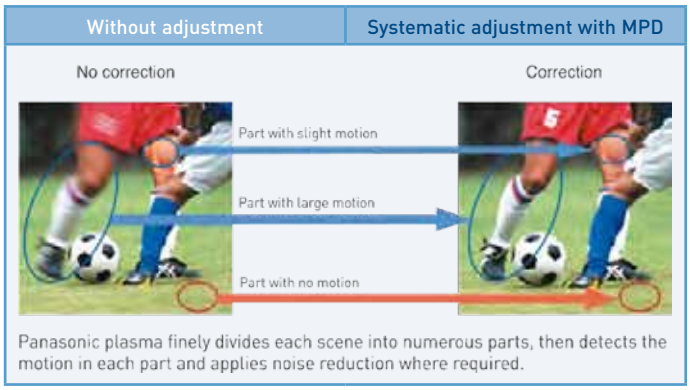
The advanced 3D colour management system ensures powerful and natural colours

The advanced 3D colour management system is a new adjustment process which, unlike conventional two-dimensional systems, works in a three-dimensional colour matrix (colour, saturation and brightness). The new technology ensures even more powerful colours and completely natural skin tones.



No fast movement escapes the MPD noise reduction

This method of motion detection reduces any distortions which are caused when displaying images in rapid motion such as sport events. The result is crisp and sharp. The unique feature works by use of an algorithm developed by Panasonic. Only those motion patterns which are responsible for distortions will, if desired, be corrected for optimum picture quality.



For consistently high quality: The screen saver for long service life at the POS

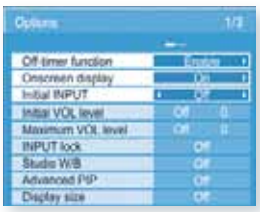
A large selection of screen savers ensure that you will be able to enjoy the Plasma Display for a long time. Furthermore you can specify the screen saver cycles, operating and switch-on and shut-off times.

- Scroll bar: White bars move from left to right in set intervals – perfect for static picture motifs
- Colour inversion: You can specify the time during which colours are inverted – a good idea for text displays, for example
- Lateral area adjustment: The black bars are regularly lightened during a 4:3 display
- Wobbling: The picture is moved by several pixels clockwise. Two operating modes can be set
- Peak value correction: Decreases the peak brightness (picture contrast) by 30 % – ideal with a white font on a black background

Ideal für digital signage – the practical range of settings

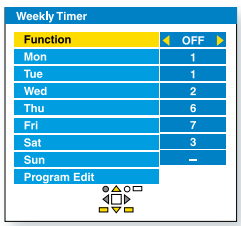
On the display you can conveniently set multiple options, a great advantage for a commercial installation:

- Locking the device buttons
- Colour temperature selection in television studios
- ID selection for remote control or serial control
- Specifying a volume and much more



A practical time switch is integrated into the display

With this function in the displays of the PH series, you can get different settings performed at specific times/on specific days without any extra hardware, e.g. on/off, choice of picture source, screen saver functions and much more.



Technologies

Rotatable by 90°

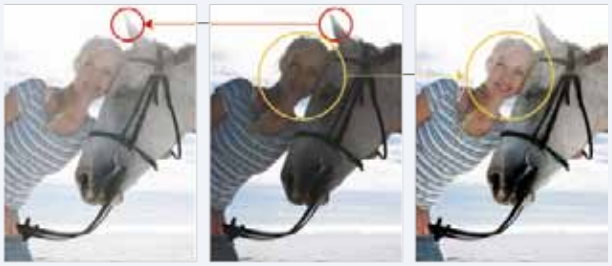
The content decides!

Panasonic Plasma Displays can be mounted both horizontally as well as vertically*, depending on the application!

* No vertical installation to the TH-50PF9EK

The contrast management system prevents a pale appearance

This Panasonic technology optimises the contrast through the exact analysis of the picture in light and dark areas. Here – contrary to the usual procedure – the picture is not completely brightened, for this would inevitably result in pale images. The contrast management system systematically analyses dark segments, lightens these areas and leaves parts of the picture which are already bright unadjusted. The result is a clearly more natural, more detailed and finer picture display.

Conventional	Contrast Management System
	
Enhancing dark areas washes out the highlights.	Brightens the subject without changing the background.

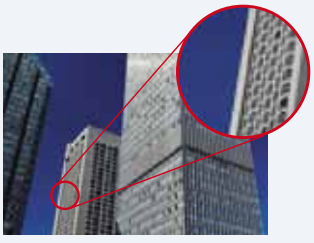
The correct choice becomes more clear with automatic brightness.

Decide for yourself whether you would like to activate automatic brightness adjustment in the menu. A feature known as "Automatic Gain Control"(AGC) improves the luminous intensity of the entire picture without increasing the image noise in the process. Dark picture contents are not lightened and are not affected by the adaptive AGC. On the whole, the result in an increase in the contrast scope.

Conventional	Adaptive AGC
	

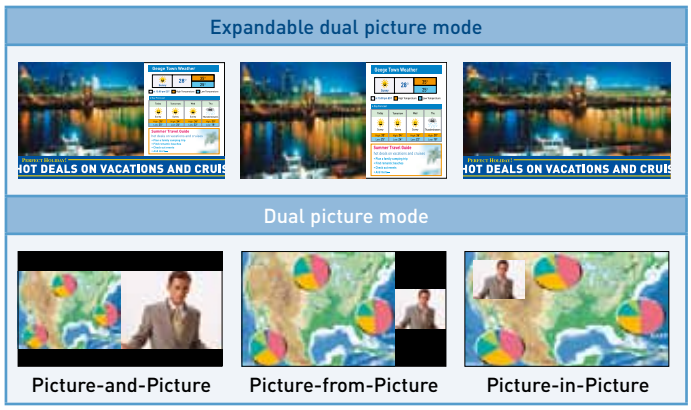
The sub-pixel controller ensures a sharp image right into the corners

The sub-pixel controller creates well-balanced contours when diagonal lines are displayed. Contrary to conventional systems in which the three RGB colours are processed together, resulting in jerky or blurry lines, this system processes each colour separately and thereby achieves more natural contours. This leads to a visual increase in the horizontal resolution of 30 % compared to conventional systems.

Without adjustment	With sub-pixel controller
	
Blurred lines or step formations result in the impression that the picture is not clear.	Fine display of the lines and edges. The stairway step effect is clearly reduced.

Additional characteristics of the Panasonic Plasma Display

- Virtual 100-Hz driver system (frame doubling to avoid flickering during PAL reproduction)
- MACH Enhancer to improve the drawing of object contours
- Extended status query by RS-232C (status check display, input and signal type), function to display invisible lines
- Colour temperature change (3,200°, 6,500°, 9,300° and 11.300°)
- Settable timers with to-the-minute precision – Settable on/off control
- Extensive power saving functions including Auto-ON and OFF circuits
- Sound selection PiP either in main or secondary picture
- 1:1 pixel mode for unscaled HD pictures (PF series)



Weight comparison			
	10 series	8 series	Weight saving
50" HD	36.0 kg	43.0 kg	16 %
42" HD	26.0 kg	31.5 kg	16 %
42" SD	26.0 kg	29.5 kg	12 %

Advanced Picture in Picture: incorporated tickers and other dual picture functions

Extended picture functions are possible with Panasonic Plasma Displays. In addition to the classic Picture-in-Picture mode (PiP), in which two pictures can be replayed from two signal sources, the extended dual picture mode allows additional displays.

For example, you can lay text information or tickers from the PC over a video picture and thus insert additional information or advertising in an attractive manner. If you display two different pictures, you can select the audio sound from one of these sources and replay it – a useful tool, e.g. at video conferences.

Note: The following combinations from two analogue signals cannot be displayed simultaneously: Component – Component, Component – PC (RGB), PC (RGB) – Component, PC (RGB) – PC (RGB)

Ultra-light cabinet: the slimming programme for easy installation

The advanced production technology of Panasonic makes it possible to reduce the glass thickness from 2.8 mm to 1.8 mm without a loss in quality – with amazing weight savings of up to 15 %* compared to previous models. A real advantage for installation – both in terms of the mounting area and the effort required.

* In the 42" HD model

Flexible solutions – slot-in principle

The interfaces of the Panasonic Plasma Display can be easily exchanged due to the proven slot system. The slot accepts connection boards for the widest range of signal sources

With the multifunction slots, you can create numerous options: Exchangeable connection boards for analogue and digital signals

The Panasonic Plasma Displays in the PF and PH series are supplied with pre-installed connection boards: the HD models already have the S-video/composite board TY-FB9BD in the standard version. The full HD models are equipped with the digital board TY-FB9FDD and the component video board TY-42TM6A ex-works.

If necessary, these boards can easily be exchanged or plugged into other slots. The free slots can be occupied with optional boards to extend the connection possibilities.

Optional connection boards

TY-42TM6Y
- RGB(HV)/component video (BNC)
- S-video (Hosiden) or Composite in/out (BNC)
- 2 x Audio L/R (RCA-cinch)
- Slot 1 & 2 or slot 2 & 3

TY-42TM6G
- RGB(HV)/component video (D-Sub HD 15-pin)
- RS-232C (D-Sub 9-pin)
- Slot 1 & 2 or 2 & 3[1]

TY-FB10WPE[2] (PH10/PF10 series only) wireless presentation board
- IEEE 802.11 b/g standard
- RGB/component video (RCA chinch)
- Slot 1 & 2 or 2 & 3

[1] Place RS-232C communication in the menu on slot 2
[2] Planned availability: from September

TY-FB9BD
- S-Video (Hosiden) and Composite (BNC)
- 2 x Audio L/R (RCA-cinch)
- Slot 1 or 2

TY-42TM6B
- S-Video (Hosiden) or Composite In/Out (BNC)
- Audio L/R (RCA-cinch)
- Slot 1 or 2

TY-42TM6A
- RGB/component video (BNC)
- Audio L/R (RCA-cinch)
- Slot 1, 2 or 3

TY-42TM6Z
- RGB/component video (RCA-cinch)
- Audio L/R (RCA-cinch)
- Slot 1, 2 or 3

TY-42TM6V
- S-Video (Hosiden) or Composite (RCA-Chinch)
- Audio L/R (RCA-cinch)
- Slot 1 or 2

TY-42TM6P
- RGB(HV)/component video (D-Sub 15-pin)
- Audio L/R (3.5 mm mini-jack)
- Slot 1, 2 or 3

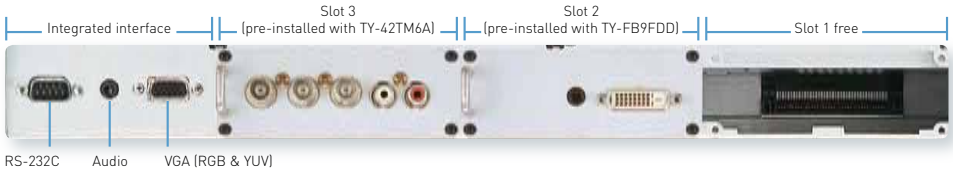
TY-FB8SC
- RGB/S-Video/Composite (SCART 21-pin)
- Audio L/R (SCART 21-pin)
- Slot 1 or 2

TV Tuner Board TY-FB9TE
- Including remote control
- Receiver systems PAL, SECAM, NTSC (via AV socket)
- Coax antenna socket (VHF / UHF)
- Videotext integrated
- Slot 2 & 3[1]

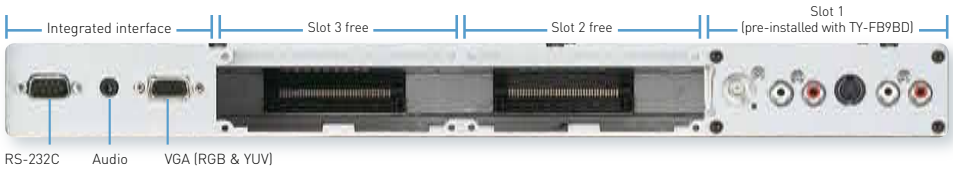
Especially for hotels

With the AV terminal box TY-TB10AT, hotel guests can connect their computer, DVD player etc. to the display via two video/RGB sockets. The board can also be set up on the desk or by the bed.

The serial interfaces of the Full-HD models TH-103PF9/ TH-65PF9/ TH-50PF9



The serial interfaces of the HD models TH-58PH10/ TH-50PH10/ TH-42PH10



The best picture quality via digital connections (DVI, HDMI, SDI and HD-SDI)

The highest quality results are achieved with digital connections. Signal transmissions at the digital level prevent any distortions to the original signal. Noisy playback, caused by the AD converter (analogue to digital) and signal losses through analogue cables, are now a thing of the past.

All conventional formats can be operated with the current boards. Whether DVI and HDMI for the consumer area or SDI and HD-SDI for professional transmissions – you can configure these yourself according to your own needs for each application. Furthermore, the new full high resolution displays with a native 1,920 x 1,080 resolution can be powered via the new TY-FB9FDD board, even up to 1080p.

TY-42TM6D[2]
- DVI-D with HDCP (24 + 1-pin)
- Audio L/R (3.5 mm mini-jack)
- Slot 1 or 2 (only SD & HD model)

TY-FB9FDD
- DVI-D with HDCP (24 + 1-pin)
- Audio L/R (3.5 mm mini-jack)
- Slot 1 or 2 (only full HD model)

TY-FB8HM[3]
- HDMI with HDCP (19-pin)
- Slot 1 or 2

TY-FB7SD[4]
- SD-SDI input and output (BNC)
- Slot 1 or 2

TY-FB9HD[4]
- HD-SDI input and output (BNC)
- Slot 1 or 2

TY-FB9RT
- 3 x IR-signal OUT (3.5 mm mini-jack)
- Slot 1, 2 or 3

Compatibility overview

	Compatibility / signal type	Horizontal frequency (kHz)	Vertical frequency (Hz)	RGBHV / component video (VGA-input)	Optional boards: Analogue: TY-FB9BD / -TE	TY-42TM6B / -V	TY-FB8SC	TY-42TM6Y	TY-42TM6A / Z	TY-42TM6P	TY-42TM6*	TY-FB10WPE	Digital: TY-42TM6D	TY-FB9FDD	TY-FB8HM	TY-FB7SD	TY-FB9HD
Model	SD				•	•	•	•	•	•	•		•		•	•	•
	HD				•	•	•	•	•	•	•	•	•		•	•	•
	Full HD				•	•	•	•	•	•	•	•		•	•	•	•
Insert	Slot 1				•	•	•	•	•	•	•	•	•	•	•	•	•
	Slot 2				•	•	•	•	•	•	•	•	•	•	•	•	•
	Slot 3								•	•							
Standard TV	PAL (B, G, H, I, M, N)	15.63	50.00		•	•	•	•									
	NTSC	15.73	59.94		•	•	•	•									
	PAL 60	15.73	59.94		•	•	•	•									
	SECAM	15.63	50.00		•	•	•	•									
	NTSC (modifiziert)	15.73	59.94		•	•	•	•									
Video	525 (480)/60i	15.73	59.94	•				•	•	•	•	•				•	•
	525 (480)/60p	31.47	59.94	•				•	•	•	•	•	•	•	•		
	625 (575)/50i	15.63	50.00	•				•	•	•	•	•				•	•
	625 (575)/50p	31.25	50.00	•				•	•	•	•	•					
	625 (576)/50p	31.25	50.00										•	•	•		
High Definition (Digital/Analogue)	750 (720)/60p	45.00	59.94	•				•	•	•	•	•	•	•	•		•
	750 (720)/50p	37.50	50.00	•				•	•	•	•	•	•	•	•		•
	1,125 (1,080)/60i	33.75	59.94	•				•	•	•	•	•	•	•	•		•
	1,125 (1,080)/60p**	67.50	59.94	•				•	•	•	•	•		•			
	1,125 (1,080)/50i	28.13	50.00	•				•	•	•	•	•	•	•	•		•
	1,125 (1,080)/50p**	56.26	50.00	•				•	•	•	•	•		•			
	1,125 (1,080)/24p	27.00	24.00	•				•	•	•	•	•					•
	1,125 (1,080)/24sF	27.00	23.98	•				•	•	•	•	•					•
	1,125 (1,080)/25p	28.13	25.00	•				•	•	•	•	•					•
	1,125 (1,080)/30p	33.75	30.00	•				•	•	•	•	•					•
	1,250 (1,080)/50i	31.25	50.00	•				•	•	•	•	•					
PC / MAC graphic solutions	640 x 400 @ 70	31.46	70.07	•				•		•	•	•					
	640 x 480 @ 60	31.47	59.94	•				•		•	•	•	•	•	•		
	640 x 480 @ 72	37.86	72.81	•				•		•	•	•					
	640 x 480 @ 75	37.50	75.00	•				•		•	•	•					
	640 x 480 @ 85	43.27	85.01	•				•		•	•	•					
	852 x 480 @ 60	31.47	59.94	•				•		•	•	•	•	•			
	800 x 600 @ 56	35.16	56.25	•				•		•	•	•					
	800 x 600 @ 60	37.88	60.32	•				•		•	•	•	•	•			
	800 x 600 @ 72	48.08	72.19	•				•		•	•	•					
	800 x 600 @ 75	46.88	75.00	•				•		•	•	•					
	800 x 600 @ 85	53.67	85.06	•				•		•	•	•					
	1,066 x 600 @ 60	37.88	60.32	•				•		•	•	•	•	•			
	1,024 x 768 @ 50	39.55	50.00											•			
	1,024 x 768 @ 60	48.36	60.00	•				•		•	•	•	•	•			
	1,024 x 768 @ 70	56.48	70.07	•				•		•	•	•					
	1,024 x 768 @ 75	60.02	75.03	•				•		•	•	•					
	1,024 x 768 @ 85	68.68	85.00	•				•		•	•	•					
	1,366 x 768 @ 50	39.55	50.00											•			
	1,366 x 768 @ 60	48.36	60.00	•				•		•	•	•	•	•			
	1,152 x 864 @ 60	53.70	60.00											•			
	1,152 x 864 @ 75	67.50	75.00	•				•		•	•	•					
	1,280 x 960 @ 60	60.00	60.00	•				•		•	•	•					
	1,280 x 960 @ 85	85.94	85.00	•				•		•	•	•					
	1,280 x 1,024 @ 60	63.98	60.02	•				•		•	•	•		•			
	1,280 x 1,024 @ 75	79.98	75.03	•				•		•	•	•					
	1,280 x 1,024 @ 85	91.15	85.02	•				•		•	•	•					
	1,400 x 1,050 @ 60	65.22	60.00											•			
	1,600 x 1,200 @ 60	75.00	60.00	•				•		•	•	•		•			
	1,600 x 1,200 @ 65	81.25	65.00	•				•		•	•	•					
	1,920 x 1,080 @ 60**	67.50	60.00	•				•		•	•	•		•			
	1,920 x 1,200 @ 60	74.04	59.95											•			
	MAC 13 (640 x 480)	35.00	67.67	•				•		•	•	•					
	MAC 16 (832 x 624)	49.72	74.54	•				•		•	•	•					
	MAC 21 (1,152 x 870)	68.68	75.06	•				•		•	•	•					

[2] Compatible with displays of the 6, 7, 8 and 9 series (signal compatibility for 6 and 7 restricted)
[3] Compatible with displays of the 8 and 9 series
[4] Compatible with displays of the 7, 8 and 9 series, (SD and HD-SDI without embedded audio)

* RS-232 communication can be set to slot 2 in the menu
** Only compatible with full HD models

Integral PC Solutions

The high-performance internal PCs can be easily installed in the displays and offer the advantage of an all-in-one solution. Without the need of connecting external PCs, the providers of content management systems thereby enjoy high-performance and space-saving alternatives.

Quick installation: The invisible PC in the display

The PC insert reduces the cabling and is integrated in the display to save space. Everywhere that displays are used commercially such as travel agencies, banks, official buildings or other advertising areas – you can demonstrate competence and offer cost-effective solutions. Every data transfer becomes possible here without a courier.

ETX-1312

Features

ETX-1312 and VC-251 PC inserts

- High-performance processors also for demanding applications
- Designed for 24 hr / 7 day operation (vertical and horizontal)
- Invisible installation, power supply through the display
- Optimal signal quality through direct digital connection
- Wide variety of interfaces (LAN, USB, Audio & RS-232)
- Operating systems can be installed individually
- Space-saving with whisper-quiet fan

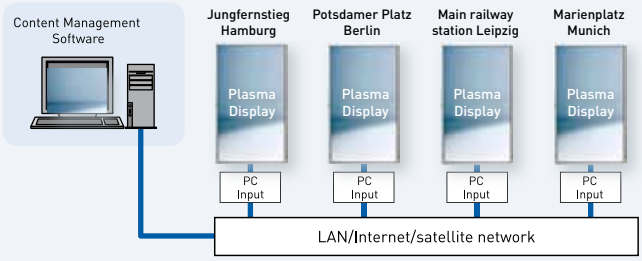
VC-251

Digital signage systems: Display applications for the next generation

With the new 10 series of Plasma Displays and the integral PC boards, Panasonic is taking the next step toward network-compatible compact displays. Intelligent network applications for replaying multimedia data according to set schedules, local or remotely controlled.

Example of an independent media distribution system

The interplay between hardware and software allows integral multi-media system solutions. Communication and control are through the software; transport and distribution using technologies like the Internet, LAN and UMTS.
As a result, you can receive any type of message on the professional Plasma Displays according to a defined schedule – individually and automated.



* The content is supplied by a central computer, saved on the hard drive of each display and is available for individual applications.

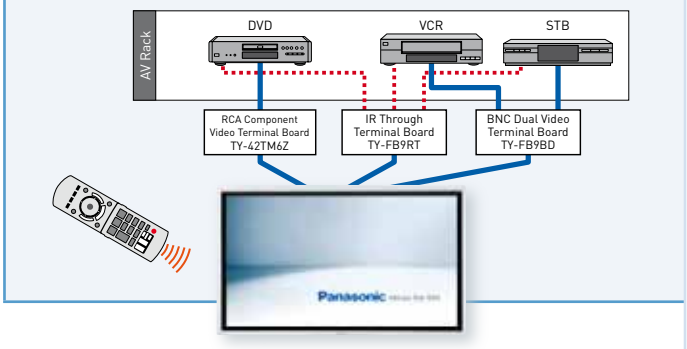
Specifications	ETX-1312				VC-251		
Art. no.	ETX-1312C1000	ETX-1312C600	ETX-1312C1000-XPE	ETX-1312C1000-XPE	NS8395-112WES01	N8395-112NE	N8395-113NE
Suitable displays	Panasonic Full HD, HD & SD models, Plasma Displays (generations 7 through 10)				Panasonic 58" to 42" HD & SD model Plasma Displays (generations 7 through 10)		
Slot compatibility	requires slots 1 to 2				requires slots 1 to 3		
Processor	ULV Pentium® Celeron 1 GHz	ULV Pentium® Celeron 600 MHz	ULV Pentium® Celeron 1 GHz	ULV Pentium® Celeron 600 MHz	ULV Pentium Celeron 1 GHz		
Memory	512 MB RAM (DDR SO-DIMM)				256 MB RAM (DDR SO-DIMM)		512 MB RAM (DDR SO-DIMM)
Internal hard drive	40 GB hard disk (2,5" HD)				40 GB hard disk (2,5" HD)		
Interfaces	1 x LAN, 2 x USB 2.0, 1 x Seriell, 1 x Line In / Out, 1 x Mic In				1 x LAN, 2 x USB 2.0/1.1, 2 x Serial*1, 1 x Line In / Out, 1 x Mic In		
VGA output	Yes				–		
Pre-installed operating system	–		Windows® XP Embedded		Windows® XP Embedded	–	
Included software	–				Scala IC3 media player	–	
PXE and wake-on-LAN-capable	Yes						
Standards	FCC Class A, VCC, CE, RoHS						

*1 A serial interface is connected internally. You can get any drivers you need directly from us, or under www.panasonic.de

IR board & CAT5 transmission system

When developing new boards, Panasonic listens very carefully to what customers say. Thus, through the slot-in principle you have the highest degree of flexibility and can implement even extraordinary customer requests quickly and cost-effectively.

Sample system configuration (IR board TY-FB9RT)



The slot-in principle: Uniquely adaptable

Your customer would like a video presentation system for the conference room. Of course, the appearance of the room should not be destroyed with visible equipment. This is what a possible solution with Panasonic Plasma Displays would look like:

IR-board TY-FB9RT: The most subtle installation

Too much of a technical presence is undesirable, particularly in the conference or seminar area. This is when the use of an IR through-terminal board becomes useful.

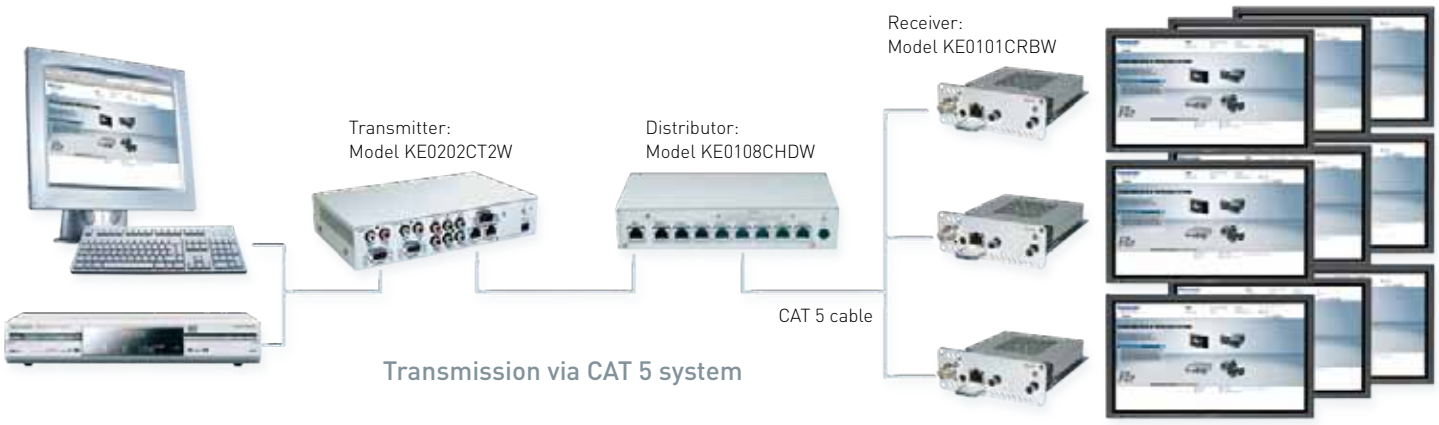
With this board, you can install video equipment so that it is hidden in cabinets and still conveniently controlled via a remote control. Here the IR transmitters included in the shipment are simply mounted onto the device receivers and the ends are inserted into the board. The hidden equipment can now be controlled via the IR receiver of the display.

With the CAT 5 system you can distribute information inexpensively via existing cables

Thanks to this technology you can move your information, from a PC or DVD player, inexpensively through your existing CAT 5 structured cabling. The advantage is obvious: by using the inexpensive CAT 5 cable, you reduce the installation time compared to a conventional video and VGA connection while also saving on materials. This kind of transfer very quickly pays off in comparison to conventional cable connections, particularly when installing Plasma Displays in airports, railway stations, stores and public buildings with long signal routes.

Receiver board

- Compatible in slot 1, 2 and 3
- You can adjust the picture quality optimally depending on the cable length with two adjusters (level/peak)
- Approximate transmission distance: UXGA: 100 m, SXGA: 120 m, XGA: 150 m, SVGA: 180 m, VGA: 200 m
- Simultaneous signal use for up to 128 Plasma Displays



Transmission via CAT 5 system

Note: The CAT 5 system is designed for long cable routing. The transmission of composite signals is only possible in conjunction with a video board (TY-42TM6, TM6B, TM6V or FB9BD).

Interactive touch panel

Using a touch panel on our Plasma Displays, you can set up direct communication with your customers and visitors

The complete information system with the contact-sensitive touch panel

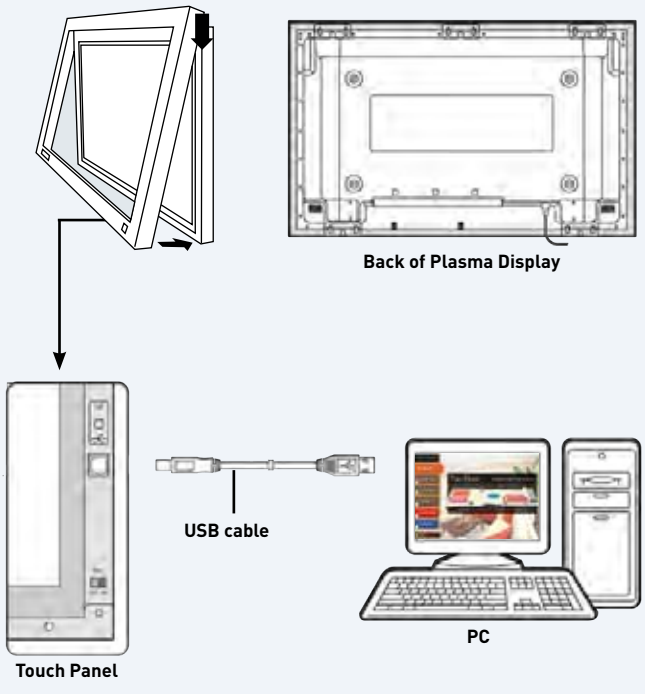
The extremely thin aluminium design of the touch panel unit allows a precise-fitting installation onto the screen area of the display. The touch-sensitive panel is simply placed on the pre-mounted Plasma Display. Via the USB interface, the panel is connected to a Panasonic PC module or to an external computer on which you have saved your messages or information. Using the included driver software you can then easily configure individual settings.

The result is perfect solutions for the in shopping centres, hotels, trade shows exhibits, car dealers and many other locations that wish to have direct, interactive contact to their customers.

Specifications	TY-TP65P8-S	TY-TP50P8-S	TY-TP42P8-S
Suitable Plasma Display	65" Plasma Display	50" Plasma Display	42" Plasma Display
Type/detection system	Optical touch panel / infrared obstruction		
External dimensions TP (W x H x D)	1,598 x 951 x 72 mm	1,257 x 773 x 69 mm	1,073 x 659 x 61 mm
Depth after attachment	170 mm	118 mm	110 mm
Weight without holder	5.0 kg	5.8 kg	5.0 kg
Material frame covering	Aluminium		
Optional accessories	Touch Pen TY-PEN6		

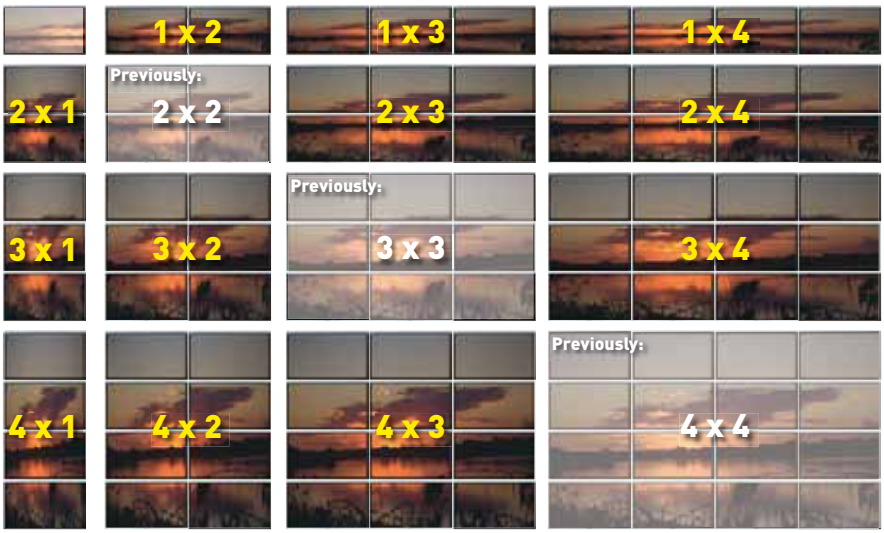
Comment: Simultaneous installation of a touch panel, optional loudspeaker and the anti-glare filter is not possible, only compatible with displays of the 8, 9 and 10 series.

Easy installation of the touch panel



Driver and calibration software included in shipment.

An integral scaler, which processes video and PC signals, enables video walls to be easily assembled from up to 16 (4 x 4) Plasma Displays in any combination you wish – without any additional equipment.



With the new picture-split function, the installation of picture video walls becomes more flexible

Without additional equipment you can combine four (2 x 2), nine (3 x 3) or sixteen (4 x 4) Panasonic plasma screens together. At the same time, the integrated technology makes it possible to use analogue or high-resolution signals. You can control each display individually with the remote control with the ID control function.

The new extended split picture function for the HD and Full HD models allows the independent vertical or horizontal scaling of the image to the 4th factor. Thus, you can position up to four Plasma Displays next to or above each other, and adjust the picture content to this aspect ratio.

Using the Full Screen Mode (extended settings), pictures can be displayed without data loss in the frame areas. This is particularly important for overflowing texts.

TY-42TM6G: The board to loop through your signals

Multi-screen systems usually require matrix switches, image enlargers for complex signal distribution and much more. By using the TY-42TM6G modules, which have an IN and OUT in each case, you will achieve virtually loss-free signal distribution to the Plasma Displays. This way, you can easily install an impressive multi-screen wall using the extended picture split function.

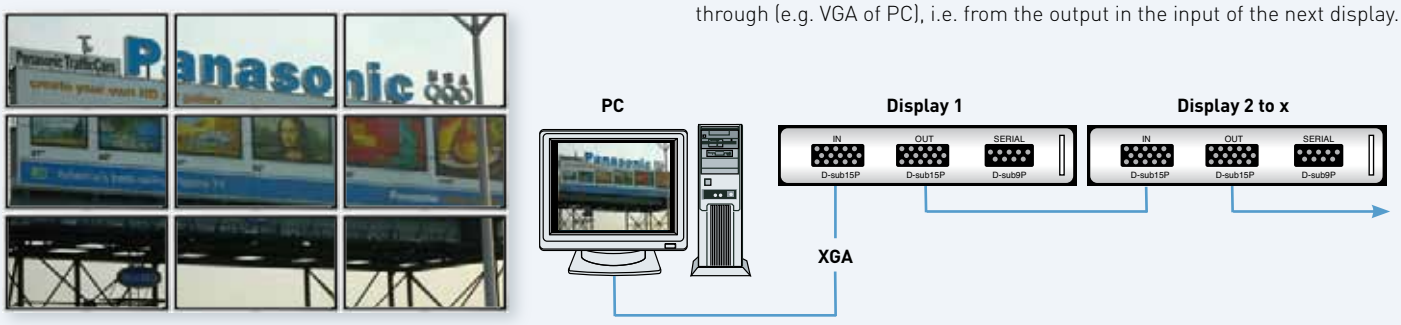
Thus, this system is primarily suited for heavily frequented areas such as office complexes and event locations.

Full control with just one remote control

The remote control included has a 'display ID control' function. You can use it to directly activate and control up to 99 displays.

Example of a system configuration with the 'loop through' board TY-42TM6G

You can use the optional TY-42TM6G board to conveniently loop the signal through (e.g. VGA of PC), i.e. from the output in the input of the next display.



Note: The picture scaling function cannot be used in dual picture mode. Pictures with SXGA resolution or higher from a PC or an RGB source can be incorrectly enlarged under some circumstances. The picture quality can deteriorate due to this enlargement. The Advanced Image Enlarging function is not integrated into the TH-42PS9. Please note the installation instructions (which we will be happy to provide) regarding sufficient ventilation.

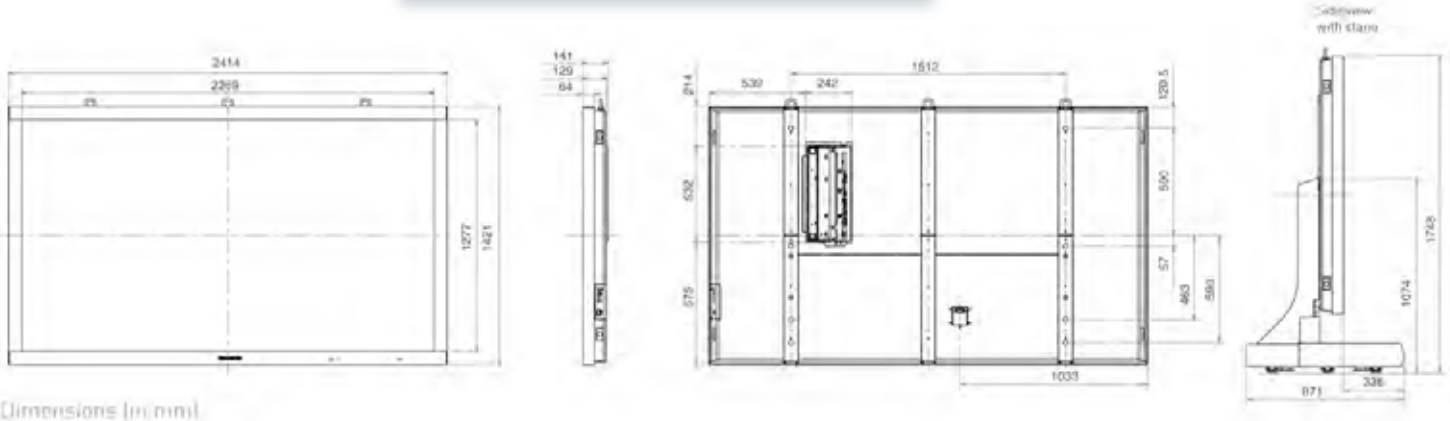
Dimensions

Multi-screen installation is this easy

- Install displays depending on needs (e.g. 1 x 3, 2 x 2 or 4 x 1)
- Distribute signal to the plasma screens (e.g. via TY-42TM6G board)
- Activate split mode in the menu under 'Multi-Display' and assign displays to the corresponding image field
- We will be happy to provide installation instructions

TH-103PF9EK

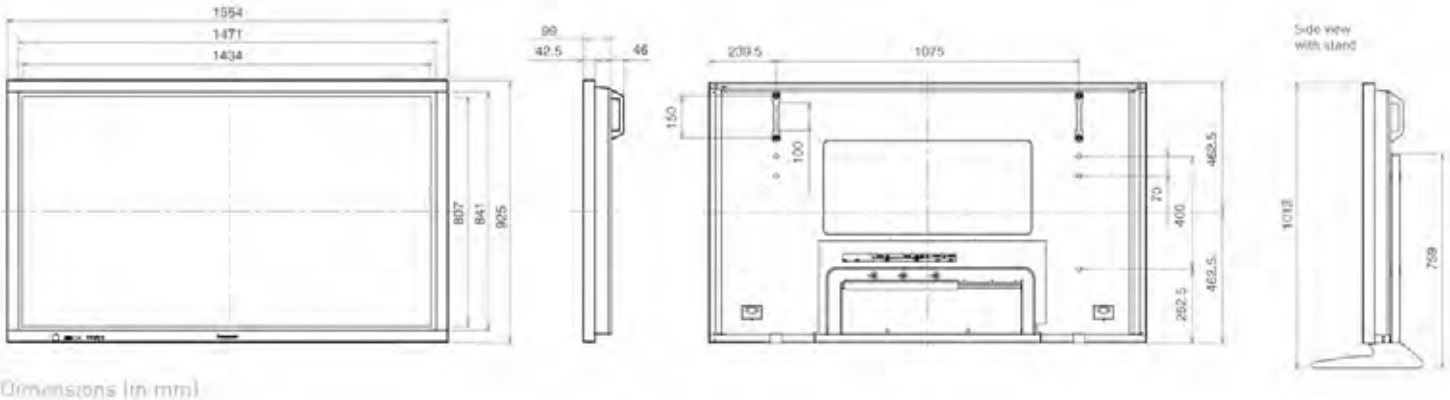
103" (260 cm) Plasma Display



Dimensions (in mm)

TH-65PF9EK

65" (165 cm) Plasma Display



Dimensions (in mm)

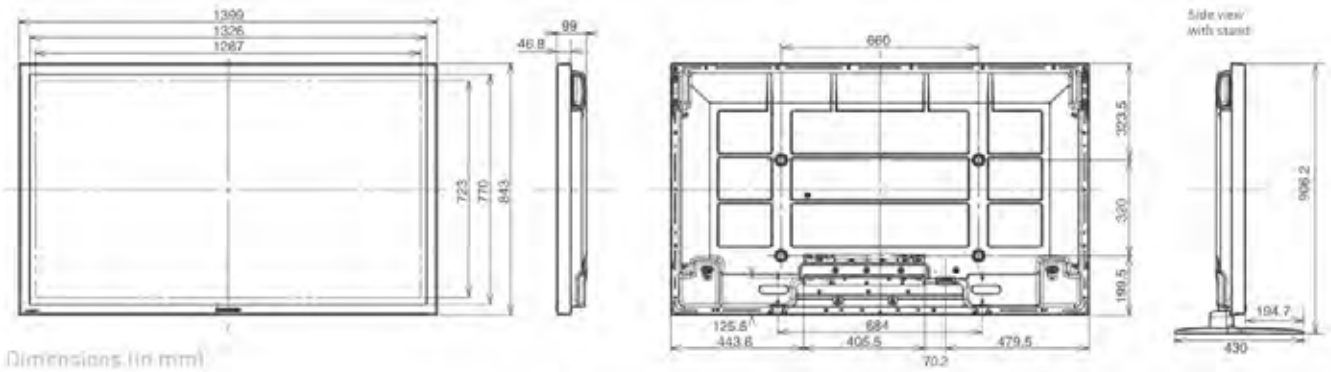
Vertical installation* is this easy

- Install the display 90° clockwise direction
- Activate vertical mode in the menu under 'Optional Adjustments'
- If the image is upside down, it is also possible to adjust by 180° in the menu
- Our robust wall holders are designed for both operating modes

* No vertical installation to the TH-50PF9EK

TH-58PH10EK

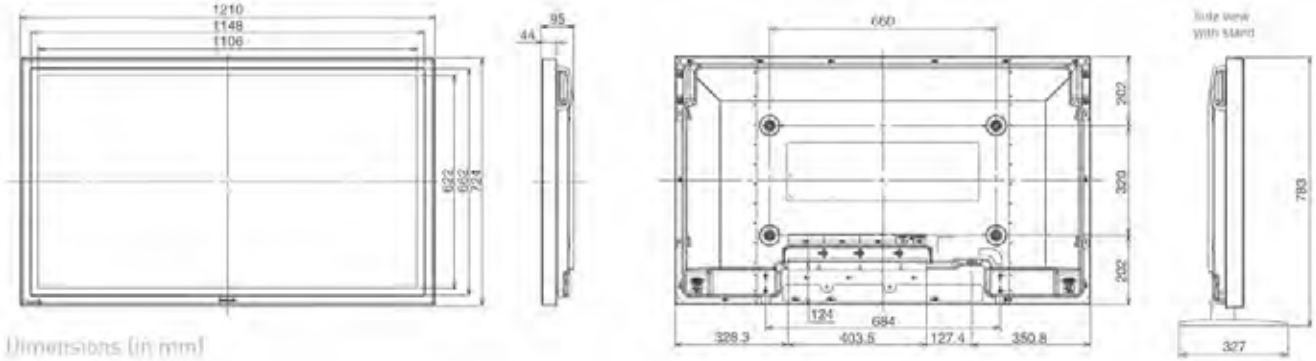
58" (148 cm) Plasma Display



Dimensions (in mm)

TH-50PH10EK/ES and TH-50PF9EK

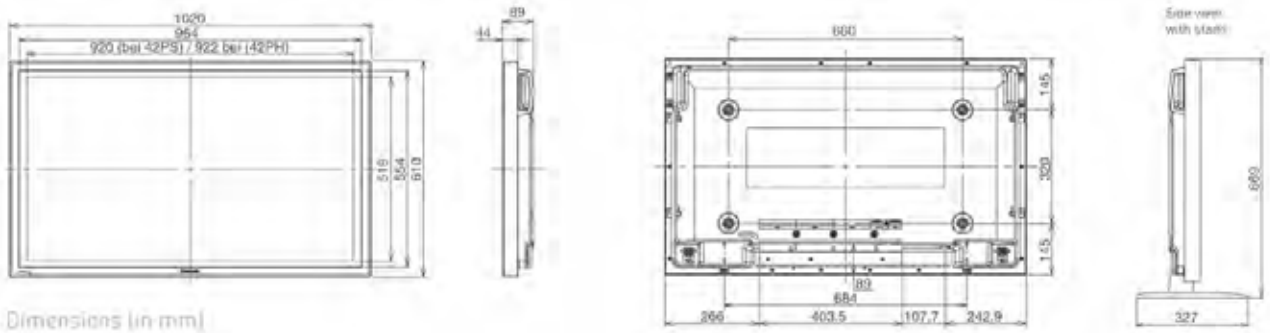
50" (127 cm) Plasma Display



Dimensions (in mm)

TH-42PS10EK/ES and TH-42PH10EK/ES

42" (106 cm) Plasma Display



Dimensions (in mm)

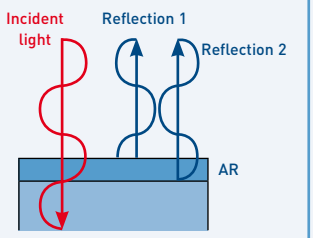
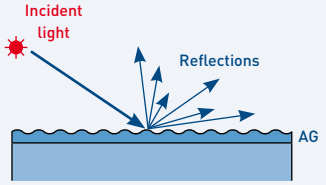
Optional accessories

Reduces reflections: the new anti-glare filter

At trade shows, in display windows or in stores, people often encounter extreme lighting situations due to spotlights or natural sunlight. This often results in reflections on the surface of a display, and can restrict the brilliance of your images.

In order to minimise this effect, Panasonic has now developed an optional, special filter which virtually eliminates reflections.

Mounting the filter is extremely easy and is also possible after installing the displays.

Basic principle of anti-reflection (AR)	Basic principle of anti-glare (AG)
	

Typ	TY-AR65P9W	TY-AR58P10W	TY-AR50P9W	TY-AR42P9W
Suitable display for series 8, 9 and 10.	Panasonic 65'' Plasma Display	Panasonic 58'' Plasma Display	Panasonic 50'' Plasma Display	Panasonic 42'' Plasma Display

* Simultaneous use of the anti-glare filter (TY-AR65P9W) and a touch panel (TY-TP65P8-S) is not possible for mechanical reasons.

Setting the tone: elegant loudspeaker systems

The optional loudspeaker systems can be perfectly adapted to the slim appearance of the Panasonic Plasma Displays, and can be attached to the frame in the twinkling of an eye.

Loudspeakers available as an optional extra

TY-SP65P7W-K (for TH-65PF9EK)
Configuration: three loudspeakers, 2-way
Dimensions (W x H x D): 100 x 925 x 90 mm. Weight: 2.2 kg each

TY-SP58P10WK (for TH-58PH10EK)
Configuration: three loudspeakers, 2-way
Dimensions (W x H x D): 107 x 843 x 88 mm. Weight: 2.5 kg each


Fig. TY-SP42P8W-K

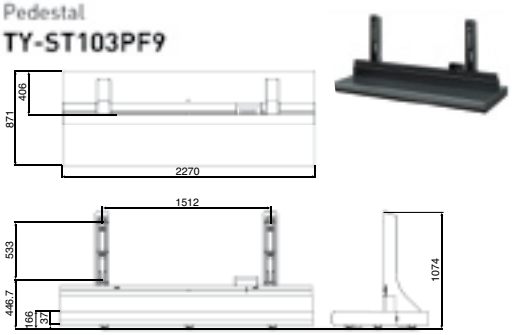
TY-SP50P8W-K (for TH-50PF9EK, TH-50PH10EK)
TY-SP50P8W-S (for TH-50PH10ES)
Configuration: three loudspeakers, 2-way
Dimensions (W x H x D): 107 x 724 x 88 mm. Weight: 2.0 kg each

TY-SP42P8W-K (for TH-42PH10EK, TH-42PS10EK)
TY-SP42P8W-S (for TH-42PH10ES, TH-42PS10ES)
Configuration: three loudspeakers, 2-way
Dimensions (W x H x D): 107 x 610 x 88 mm. Weight: 2.0 kg each

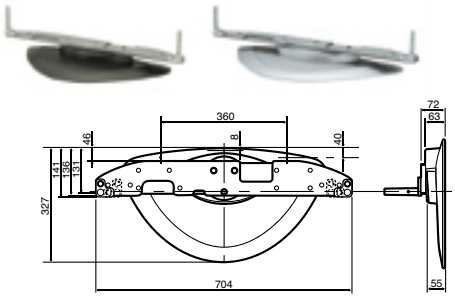

Fig. TY-SP42P8W-S

Optional fastening elements

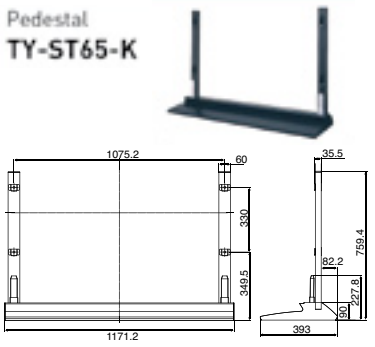
Pedestal TY-ST103PF9



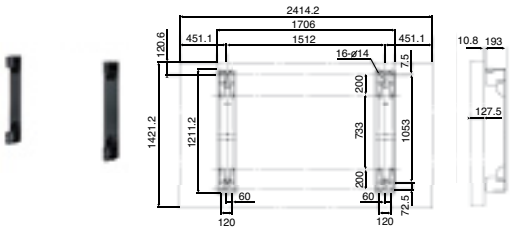
Pedestal TY-ST08-K/TY-ST08-S



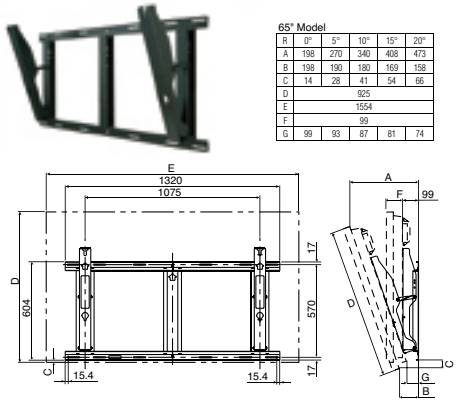
Pedestal TY-ST65-K



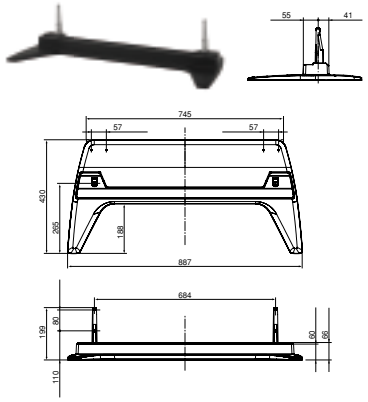
Wall-hanging bracket TY-WK103PV9



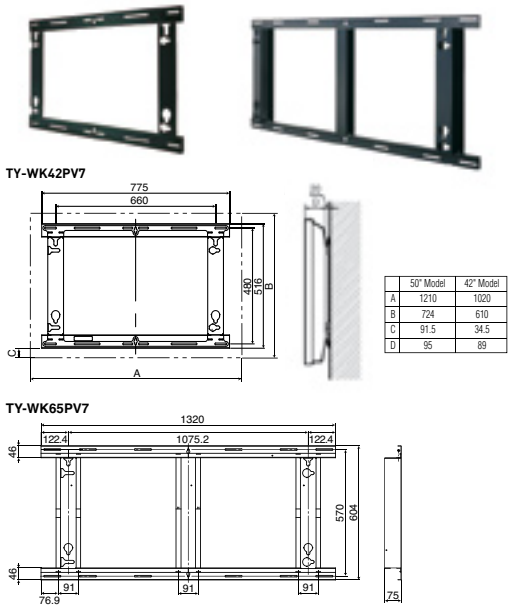
Wall-hanging bracket (angled) TY-WK65PR8



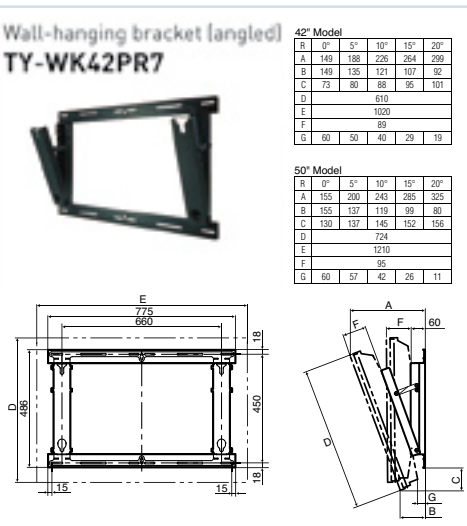
Pedestal TY-ST58-K



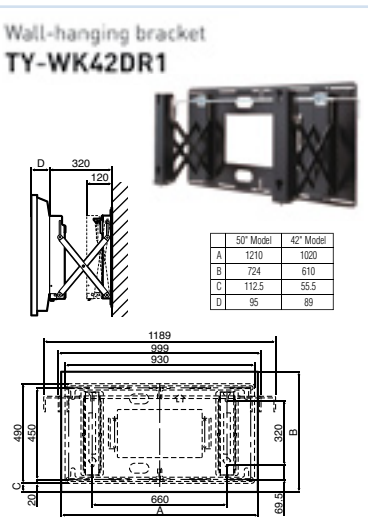
Wall-hanging bracket TY-WK42PV7/TY-WK65PV7



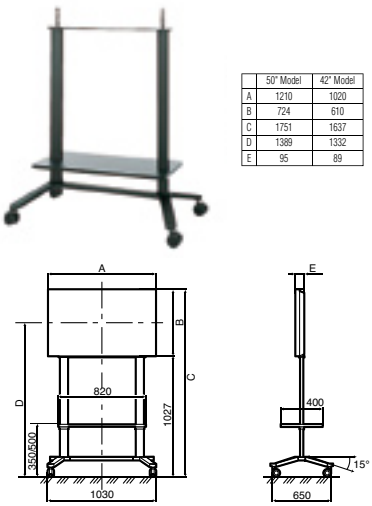
Wall-hanging bracket (angled) TY-WK42PR7



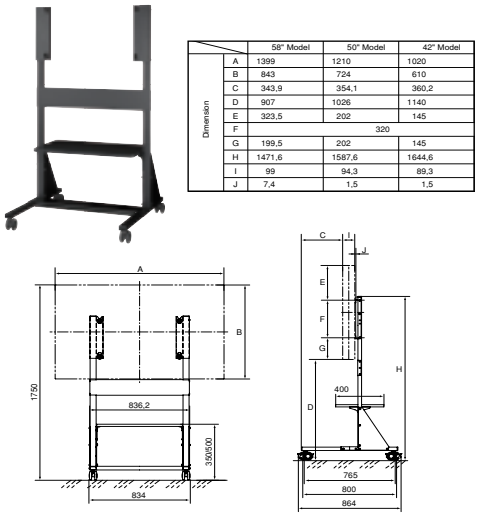
Wall-hanging bracket TY-WK42DR1



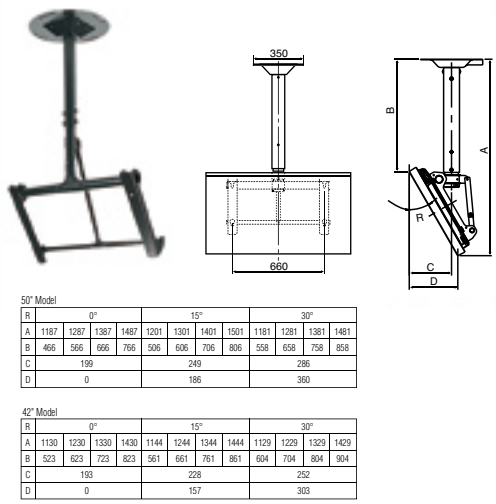
Mobile stand TY-ST42PF3



Mobile stand TY-ST58PF10



Ceiling-hanging bracket TY-CE42PS7



Technical data

	Full High Definition 1080p			High Definition			Standard Definition
Display	**TH-103PF9EK**	**TH-65PF9EK**	**TH-50PF9EK**	**TH-58PH10EK**	**TH-50PH10EK/ES**	**TH-42PH10EK/ES**	**TH-42PS10EK/ES**
Screen diagonal (Effective) W x H	103" (2,604 mm) 2,269 x 1,277 mm	65" (1,645 mm) 1,434 x 807 mm	50" (1,269 mm) 1,106 x 622 mm	58" (1,476 mm) 1,287 x 723 mm	50" (1,269 mm) 1,106 x 622 mm	42" (1,057 mm) 922 x 518 mm	42" (1,055 mm) 920 x 518 mm
Aspect ratio	16:9						
Number of pixels	2,073,600 (1,920 x 1,080)			1,049,088 (1,366 x 768)	1,049,088 (1,366 x 768)	786,432 (1,024 x 768)	408,960 (852 x 480)
Pixel spacing (H x V)	1.182 x 1.182 mm	0.747 x 0.747 mm	0.576 x 0.576 mm	0.942 x 0.942 mm	0.810 x 0.810 mm	0.900 x 0.675 mm	1.080 x 1.080 mm
Reproducible colours	68.7 billion			29 billion			
Number of greyscales	4,096			3,072			
Contrast ratio	5,000:1			10,000:1			
Contrast ratio (daylight)	400:1						
Viewing angle	Horizontal: > 160°; vertical: > 160°						
Video compatibility	NTSC/PAL/SECAM/PAL 60Hz/M-NTSC						
Audio Output	1x RCA-cinch (L/R)	20 W (10 W x 2)	16 W (8 W x 2)				
On-screen menu	8 languages (German, US English, UK English, Spanish, French, Italian, Chinese, Japanese)						
Screen anti-reflection coating	AR (Anti-Reflection)						
Connectors							
Not exchangeable							
Fixed: RGB/component video IN (PC)	1 x D-sub HD 15-pin (fH: 15kHz–110 kHz; fV: 48–120 Hz); Plug & Play (VESA DDC 2B)						
Fixed: Audio L/R IN (PC)	1 x 3.5 mm mini-jack (L/R)						
Fixed: Serial RS232C	1 x D-Sub 9-pin						
Exchangeable							
Slot 1: TY-FB9BD	–			Pre-installed			–
Slot 1: Composite/S-Video	–			1 x BNC (Composite) / 1 x Mini-DIN 4-pin (S-Video)			–
Slot 1: Audio IN	–			2 x RCA-cinch (L/R)			–
Exchangeable							
Slot 2: TY-FB9FDD	Pre-installed			–			
Slot 2: DVI-D with HDCP	24+1-pin Digital RGB			–			
Slot 2: Audio IN	1 x 3.5 mm mini-jack (L/R)			–			
Exchangeable							
Slot 3: TY-42TM6A	Pre-installed			–			
Slot 3: RGB/component video IN	3 x BNC (RGB/YUV)			–			
Slot 3: Audio IN	2 x RCA-cinch (L/R)			–			
General							
Power supply	220–240 V AC, 50/60 Hz						
Power consumption Standby (Power Save: on) Power off	1,500 W 1.3 W 0.5 W	725 W 1.0 W 0.3 W	595 W 1.0 W 0.3 W	630 W 0.6 W 0.8 W	485 W 0.3 W 0.6 W	365 W 0.5 W 0.8 W	280 W 0.6 W 0.2 W
Weight	220 kg	74 kg	42 kg	54 kg	36 kg	26 kg	26 kg
Dimensions (W x H x D) in mm	2,414 x 1,421 x 129	1,554 x 925 x 99	1,210 x 724 x 95	1,399 x 843 x 99	1,210 x 724 x 95	1,020 x 610 x 89	
Operating conditions							
Ambient temperature	0 ° to 40 °C						
Humidity	20 %–80 % (non-condensing)						
Altitude	0 to 2,400 m	0 to 2,800 m					0 to 3,000 m
Fan	Yes						No
EMC (electromagnetic compatibility)	EN55022 Class-B, EN55024, EN61000-3-2, EN61000-3-3						
Safety standards	EN60065 Ver. 7						
Accessories included in shipment	Infrared remote control including batteries, 2x cable connectors, mains cable, operating manual						
Optional accessories							
Loudspeakers (black / silver)	–	TY-SP65P7W-K	TY-SP50P8W-K/-S	TY-SP58P10WK	TY-SP50P8W-K/-S	TY-SP42P8W-K/-S	
Anti-glare filter	–	TY-AR65P9W	TY-AR50P9W	TY-AR58P10W	TY-AR50P9W	TY-AR42P9W	
Touch panel mounting	–	TY-TP65P8-S	TY-TP50P8-S	-	TY-TP50P8-S	TY-TP42P8-S	
Miscellaneous	Wall and ceiling holders, stands and optional connection boards – see overview inside						

Panasonic
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