Panasonic

65-inch Full High Definition Plasma Display

TH-65PF20ER

⬤ Product specification (design and specification subject to change without notice)

■DISPLAY

Screen Size (Diagonal)	65-inch (1,645 mm)
Aspect ratio	16:9
Effective Display Area (W x H)	1,434 x 806 mm
Number of pixels (H x V)	1,920 x 1,080 pixels (1 pixel=3cells for R, G and B)
Pixel Pitch (H x V)	0.747 x 0.747 mm
Brightness (Panel)	1,400 cd/㎡
Contrast Ratio (Bright room)	5,000,000 :1 (400:1)
Gradation	6,144 steps (equivalent)

■CONNECTION TERMINAL

VIDEO IN	BNC x 1	1.0 V [p-p] (75 Ω)
AUDIO IN (L/R)	RCA pin jack x 1 set	0.5 V [rms]
COMPONENT/RGB IN	BNC x 3	Y/G : with sync 1.0 V [p-p] (75 Ω) B/P_B/C_B, R/P_R/C_R : 0.7 V [p-p] (75 Ω)
AUDIO IN (L/R)	RCA pin jack x 1 set	0.5 V [rms]
HDMI IN	HDMI TYPE A connector x 1	
DVI-D IN	DVI-D 24pin x 1	Compliance with DVI Revision 1.0 Compatible with HDCP 1.1
AUDIO IN	M3 jack x 1	0.5 V [rms]
PC IN	MINI D-SUB 15PIN x1 (Female)	Y/G : with sync 1.0 V [p-p] (75 Ω) without sync 0.7 V [p-p] (75 Ω)
	Plug & Play (VESA DDC 2B)	B/P_B/C_B, R/P_R/C_R : 0.7 V [p-p] (75 Ω) HD/VD : 1.0~5.0 V [p-p] (high impedance)
AUDIO IN	M3 JACK x 1	0.5 V [rms]
LAN	RJ45 10BASE-T / 100BASE-TX, compatible with PJLINK™	
SERIAL	D-SUB 9PIN x 1 (EXTERNAL CONTROL TERMINAL), RS-232C COMPATIBLE	
Function Slot : SLOT 2.0	1 (Vacant)	

■ELECTRICAL

Power Requirements	220-240 V AC, 50 Hz/60 Hz
Power Consumption	660 W
On Mode Average Power Consumption*	500 W
Power off condition	0.3 W
Stand-by condition	1.2 W (Save off), 0.7 W (Save on)

*Based on IEC 62087 Ed.2 measurement method.

■SOUND

Audio Output	20 W [10 W + 10 W] (10 % THD)

■MECHANICAL

Dimensions (W x H x D)	1,554 × 925 × 99 mm
Carton Dimensions (W x H x D)	1,698 × 1,130× 400 mm
Weight	approx. 55.0 kg
Gross weight	approx. 69.0 kg
Cabinet Color	Black

■ENVIRONMENTAL

Operating environment	Temperature: 0 ℃ to 40 ℃
	Humidity : 20 % to 80 % (Non condensation)
	Altitude : 0 to 2,800 m
Storage environment	Temperature: -20 ℃ to 60 ℃
	Humidity : 20 % to 90 % (Non condensation)
	Altitude : 0 to 3,300 m

■STANDARD (CERTIFICATIONS)

SAFETY REGULATIONS	EN60065 Ver.7, GOST 12.2.006-87, IEC60065
RADIATION REGULATIONS	EN55022 Class-B, EN55024 EN61000-3-2, EN61000-3-3

■REMOTE CONTROL TRANSMITTER

Power Requirements	DC 3 V (2 x R6 Size batteries)
Operation distance	approx. 7 m in front of plasma display
Weight	approx. 100 g including batteries

INCLUDED ACCESSORIES	- Operating Instruction book - Remote Control Transmitter - Batteries for the Remote Control Transmitter - Clamper - AC cord - Ferrite core

SMG09/30/2010

MAIN FEATURE

Network Function	Yes
Portrait Zoom	Yes
Blend Dual Picture*	Yes
Dual Picture*	P and P,P out P,P in P
Advanced Dual Picture*	Yes
Picture Profiles	Yes
1:1 Pixel Mode	Yes
Multi Display	2 x 2, 3 x 3, 4 x 4, 5 x 5 n x m (Max 5 x 5)
Digital Zoom	x2, x3, x4
Display Size Setting	Yes
Weekly Command Timer	Yes
Automatic Picture Positioning	Yes
Screen Savers	NANODRIFT saver, Side Panel Adjustment Peak Limit Mode, Negative Image, Scrolling Bar only, White Screen, Overlay Scrolling Bar
Power Save Mode	Yes
Auto Power Off	Yes
Standby Power Save Mode	Yes
Input lock	Yes
Button lock	Yes
Maximum volume level	Yes
Remote user level	Yes

OPTIONAL ACCESSORIES

|	
Pedestal	TY-ST65P20
Wall-hanging bracket (angled)	TY-WK65PR20
Speakers	TY-SP65P11WK
Touch Panel	TY-TP65P10S
HD-SDI (with audio) Terminal board	TY-FB10HD
Dual HD-SDI Terminal board	TY-FB11DHD
Dual HDMI Terminal board	TY-FB10HMD
Dual Video Terminal board	TY-FB9BD
DVI-D Terminal board	TY-FB11DD
Ir Through board	TY-FB9RT

* Following combinations of two input signals cannot be displayed simultaneously; COMPONENT - HDMI, COMPONENT - DVI, COMPONENT - PC, HDMI - DVI, HDMI - PC, DVI - PC
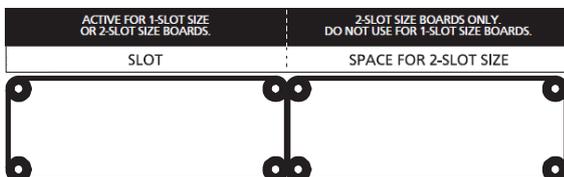
DIMENSIONS
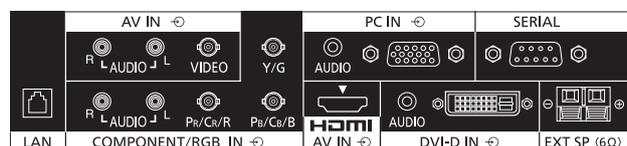
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Units : mm
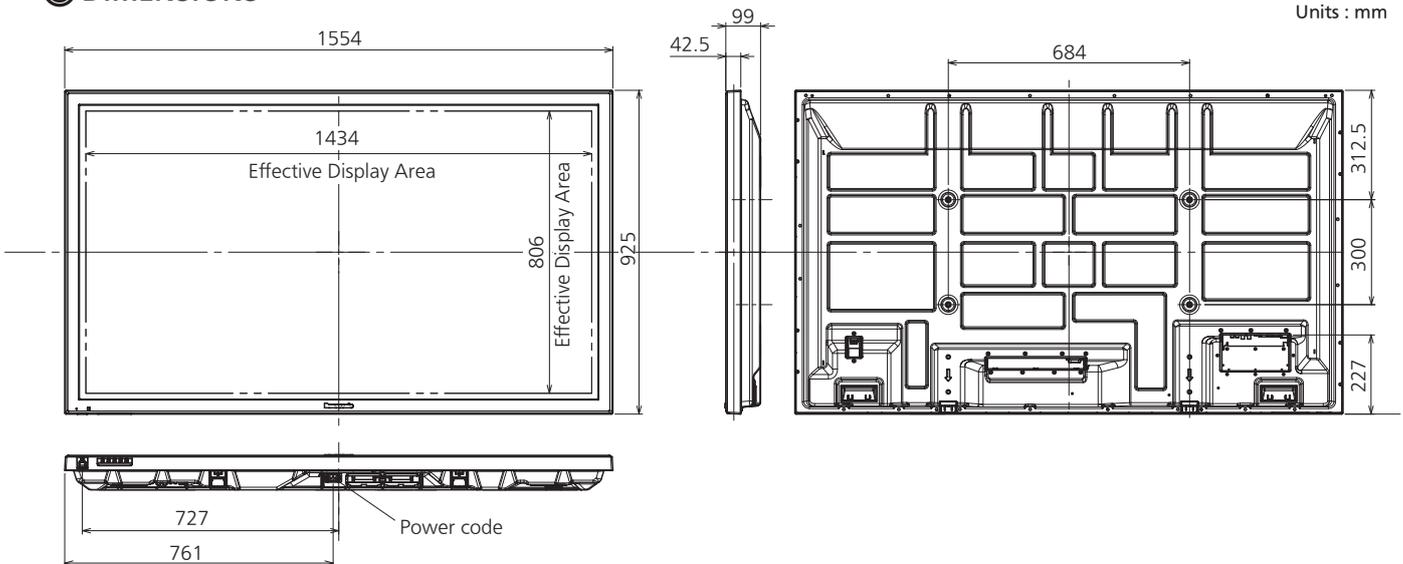
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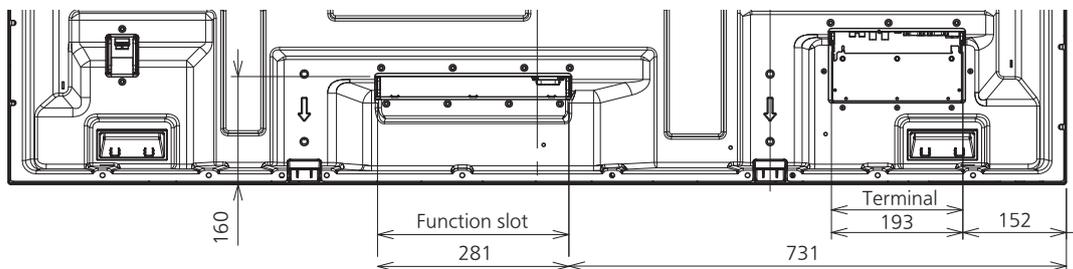
FUNCTION SLOT

CONNECTION TERMINAL

◉ Preset Input Signals

Category	Signal name	horizontal frequency (kHz)	vertical frequency (Hz)	Component Video	Composite Video	HDMI	DVI-D	PC IN (D-sub 15-pin)	BNC Dual Video (TY-FB9BD)	DVI-D (TY-FB11DD)	HD-SDI with Audio (TY-FB10HD)	Dual HD-SDI (TY-FB11DHD)	Dual HDMI (TY-FB10HMD)
				Fixed Terminal					*Optional Board*				
Composite	NTSC	15.73	59.94		Y				Y				
Composite	PAL	15.63	50.00		Y				Y				
Composite	PAL60	15.73	59.94		Y				Y				
Composite	SECAM	15.63	50.00		Y				Y				
Composite	Modified NTSC	15.73	59.94		Y				Y				
Component/RGB	525(480)/60i	15.73	59.94	Y	Y	Y	Y	Y			Y		
Component/RGB	525(480)/60p	31.47	59.94	Y	Y	Y	Y	Y*1		Y			Y
Component/RGB	625(575)/50i	15.63	50.00	Y				Y					
Component/RGB	625(576)/50i	15.63	50.00			Y	Y				Y		
Component/RGB	625(575)/50p	31.25	50.00	Y				Y					
Component/RGB	625(576)/50p	31.25	50.00			Y	Y			Y			Y
Component/RGB	750(720)/60p	45.00	60.00	Y		Y	Y	Y	Y	Y	Y	Y	Y
Component/RGB	750(720)/50p	37.50	50.00	Y		Y	Y	Y	Y	Y	Y	Y	Y
Component/RGB	1125(1080)/60i	33.75	60.00	Y*2		Y	Y	Y*2	Y	Y	Y	Y	Y
Component/RGB	1125(1080)/60p	67.50	60.00	Y*2		Y	Y	Y*2	Y	Y		Y	Y
Component/RGB	1125(1080)/50i	28.13	50.00	Y*2		Y	Y	Y*2	Y	Y	Y	Y	Y
Component/RGB	1125(1080)/50p	56.25	50.00	Y*2		Y	Y	Y*2	Y	Y		Y	Y
Component/RGB	1125(1080)/30p	33.75	30.00	Y*2			Y	Y*2	Y	Y		Y	
Component/RGB	1125(1080)/25p	28.13	25.00	Y*2			Y	Y*2	Y	Y		Y	
Component/RGB	1125(1080)/24p	27.00	24.00	Y*2		Y	Y	Y*2	Y	Y		Y	Y
Component/RGB	1125(1080)/24sF	27.00	48.00	Y*3				Y*3			Y	Y	
Component/RGB	1250(1080)/50i	31.25	50.00	Y*4				Y*4					
Component/RGB	2048x1080/24P	27.00	24.00									Y*5	
Component/RGB	2048x1080/24sF	27.00	48.00									Y*5	
RGB	640×400@70Hz	31.46	70.07	Y				Y					
RGB	640×480@60Hz	31.47	59.94	Y*6		Y	Y	Y		Y			Y
RGB	640×480@72Hz	37.86	72.81	Y				Y					
RGB	640×480@75Hz	37.50	75.00	Y				Y					
RGB	640×480@85Hz	43.27	85.01	Y				Y					
RGB	800×600@56Hz	35.16	56.25	Y				Y					
RGB	800×600@60Hz	37.88	60.32	Y		Y	Y	Y		Y			
RGB	800×600@72Hz	48.08	72.19	Y				Y					
RGB	800×600@75Hz	46.88	75.00	Y				Y					
RGB	800×600@85Hz	53.67	85.06	Y				Y					
RGB	852×480@60Hz	31.47	59.94	Y*6			Y	Y		Y			
RGB	1024×768@50Hz	39.55	50.00				Y			Y			
RGB	1024×768@60Hz	48.36	60.00	Y		Y	Y	Y		Y			
RGB	1024×768@70Hz	56.48	70.07	Y				Y					
RGB	1024×768@75Hz	60.02	75.03	Y				Y					
RGB	1024×768@85Hz	68.68	85.00	Y				Y					
RGB	1066×600@60Hz	37.64	59.94	Y			Y	Y		Y			
RGB	1152×864@60Hz	53.70	60.00				Y			Y			
RGB	1152×864@75Hz	67.50	75.00	Y				Y					
RGB	1280×768@60Hz	47.70	60.00	Y				Y					
RGB	1280×960@60Hz	60.00	60.00	Y				Y					
RGB	1280×960@85Hz	85.94	85.00	Y				Y					
RGB	1280×1024@60Hz	63.98	60.02	Y		Y	Y	Y		Y			
RGB	1280×1024@75Hz	79.98	75.03	Y				Y					
RGB	1280×1024@85Hz	91.15	85.02	Y				Y					
RGB	1366×768@50Hz	39.55	50.00				Y			Y			
RGB	1366×768@60Hz	48.36	60.00	Y		Y	Y	Y		Y			
RGB	1400×1050@60Hz	65.22	60.00				Y			Y			
RGB	1600×1200@60Hz	75.00	60.00	Y		Y	Y	Y		Y			
RGB	1600×1200@65Hz	81.25	65.00	Y				Y					
RGB	1920×1080@60Hz	67.50	60.00	Y*7			Y*7	Y*7		Y*7			
RGB	1920×1200@60Hz	74.04	59.95				Y			Y			
RGB	Mac13" (640×480)	35.00	66.67	Y				Y					
RGB	Mac16" (832×624)	49.72	74.54	Y				Y					
RGB	Mac21" (1152×870)	68.68	75.06	Y				Y					

*1:When selected the RGB format and 525p signal input, it is recognized as VGA 60Hz signal. *2:Based on SMPTE 274M standard. *3:Based on SMPTE RP211 standard.
*4:Based on SMPTE 295M standard. *5:Based on SMPTE 292M and 372M standards. *6:When inputted VGA 60 Hz format signal, it is recognized as 525p signal.
*7:Recognized as 1,125(1,080)/60p signal. Note: Signals without above specification may not be displayed properly.

◉ Pin assignments and signal names

Serial RS232C : D-sub 9-Pin (Male)
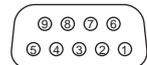
No.	Signal name	Descriptions
1	CD	NC
2	RXD	Receive Data
3	TXD	Transmit Data
4	DTR	Not used
5	GND	Ground
6	DSR	Not used
7	RTS	Shorted in this set
8	CTS	Shorted in this set
9	RI	NC

*These signal names are those of computer specifications.

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

No.	Signal name
1	R (P$_R$/C$_R$)
2	G (Y)
3	B (P$_B$/C$_B$)
4	NC (Not connected)
5	GND (Ground)
6	GND (Ground)
7	GND (Ground)
8	GND (Ground)
9	+5V DC
10	GND (Ground)
11	NC (Not connected)
12	SDA
13	HD/SYNC
14	VD
15	SCL

DVI-D Input Terminal
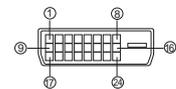
No.	Signal name	No.	Signal name
1	T.M.D.S. data 2-	13	——
2	T.M.D.S. data 2+	14	+5 V DC
3	T.M.D.S. data 2 shield	15	Ground
4	——	16	Hot plug sense
5	——	17	T.M.D.S. data 0-
6	DDC clock	18	T.M.D.S. data 0+
7	DDC data	19	T.M.D.S. data 0 shield
8	——	20	——
9	T.M.D.S. data 1-	21	——
10	T.M.D.S. data 1+	22	T.M.D.S. clock shield
11	T.M.D.S. data 1 shield	23	T.M.D.S. clock+
12	——	24	T.M.D.S. clock-

HDMI Terminal
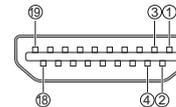
No.	Signal	No.	Signal
1	T.M.D.S. data 2+	11	T.M.D.S. clock shield
2	T.M.D.S. data 2 shield	12	T.M.D.S. clock-
3	T.M.D.S. data 2-	13	CEC
4	T.M.D.S. data 1+	14	Reserved (N.C. on device)
5	T.M.D.S. data 1 shield		
6	T.M.D.S. data 1-	15	SCL
7	T.M.D.S. data 0+	16	SDA
8	T.M.D.S. data 0 shield	17	DDC/CEC Ground
9	T.M.D.S. data 0-	18	+5 V DC
10	T.M.D.S. clock+	19	Hot Plug Detect