



65-inch Multi Touch Screen LCD Display

## TH-65LFB70E

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

#### ■ DISPLAY

Screen Size (Diagonal)	65 inch (1638 mm)
Panel Type / Backlight	LCD VA panel / E-LED
Aspect Ratio	16:9
Effective Display Area (W x H)	1428 x 803 mm
Number of Pixels (H x V)	1920 x 1080 pixel
Brightness	350 cd/m <sup>2</sup>
Contrast Ratio	4000:1
Response Time	6.5 ms (G to G)
Viewing Angle (Horizontal / Vertical)	178 degrees / 178 degrees
Panel Life*	approx. 50000 hours

\* An approximate time until the panel brightness decreases to half of its original value.

#### ■ TOUCH PANEL

Detection Method	Infrared blocking detection method
PC Connection Port	USB (Compliance with 3.0)

#### ■ CONNECTION TERMINAL

VIDEO IN	BNC x 1	1.0 Vp-p (75Ω)
AUDIO IN (L/R)	Stereo mini jack (M3) x 1 (Shared with COMPONENT / RGB IN)	0.5 V rms
COMPONENT / RGB IN	BNC x 1 set	Y/G : 1.0 Vp-p (75Ω) P <sub>B</sub> /C <sub>B</sub> /B : 0.7 Vp-p (75Ω) P <sub>R</sub> /C <sub>R</sub> /R : 0.7 Vp-p (75Ω)
AUDIO IN (L/R)	Stereo mini jack (M3) x 1 (Shared with VIDEO IN)	0.5 V rms
HDMI IN	HDMI TYPE A connector x 2	
DVI-D IN	DVI-D 24 pin (Digital) x 1	Compliance with DVI Revision 1.0, Compatible with HDCP 1.1
AUDIO IN (L/R)	Stereo mini jack (M3) x 1 (Shared with PC IN)	0.5 V rms
PC IN	Mini D-sub 15 pin (female) x 1 Plug & Play (VESA DDC 2B)	Y/G : with sync 1.0 Vp-p (75Ω) : without sync 0.7 Vp-p (75Ω) P <sub>B</sub> /C <sub>B</sub> /B : 0.7 Vp-p (75Ω) P <sub>R</sub> /C <sub>R</sub> /R : 0.7 Vp-p (75Ω) HD/VD : 1.0 - 5.0 Vp-p (high impedance)
AUDIO IN (L/R)	Stereo mini jack (M3) x 1 (Shared with DVI-D IN)	0.5 V rms
PC OUT	Mini D-sub 15 pin x 1	R : 0.7 Vp-p (75Ω) G : 0.7 Vp-p (75Ω) B : 0.7 Vp-p (75Ω) HD/VD : 3.5 - 5.0 Vp-p
Function Slot : SLOT2.0	1 (Vacant)	
USB A	TYPE A USB connector x 1 (For Memory Viewer)	
USB B	TYPE B USB connector x 1 (For Touch panel)	
External Speaker	8Ω, 20 W [10 W + 10 W] (10 %THD)	

#### ■ CONTROL

SERIAL	D-sub 9 pin (male) x 1 (EXTERNAL CONTROL TERMINAL), RS-232C Compatible
DIGITAL LINK	RJ45 x 1 (Shared with LAN)
LAN	RJ45 x 1, 100BASE-TX, Compatible with PLink (Shared with DIGITAL LINK)

#### ■ ELECTRICAL

Power Requirements	220-240 V AC, 50/60 Hz.
Power Consumption	215 W
Power Off Condition	approx. 0.3 W
Stand-by Condition	approx. 0.5 W

#### ■ AUDIO

Built in Speaker	20 W [10 W + 10 W]
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#### ■ MECHANICAL

Dimensions (W x H x D)	1517 x 892 x 106 mm
Bezel Width	approx. 39 mm
Carton Dimensions (W x H x D)	1714 x 1023 x 282 mm
Weight	approx. 58 kg
Gross Weight	approx. 68 kg
Cabinet Material / Color	Aluminum / Black
Pitch for Wall-Hanging	684 x 300 mm (Installed by: M8 screws / Screw hole depth 15 - 20 mm)
Protection Glass Thickness	approx. 3.2 mm / Anti Glare

#### ■ INSTALLATION REQUIREMENT

Orientation	Landscape / Portrait
Tilting Angle	Vertical only

\* Please contact your sales representative with regard to the tilt angle before installation.

\* When installing the display on portrait setting, be sure to install with the power indicator at the topside of the display.

#### ■ ENVIRONMENTAL

Operating Environment	Temperature	: 0 °C to 40 °C
	Humidity	: 20 % to 80 % (Non condensation)
Storage Environment	Temperature	: -20 °C to 60 °C
	Humidity	: 20 % to 80 % (Non condensation)

**MAIN FEATURE**

Easy Whiteboard Functions*1	Yes
Memory Viewer	<ul style="list-style-type: none"> <li>Picture Extension :JPG, JPEG, BMP Format :Maximum resolution 8000 x 8000 Bit numbers (Bit depth): up to 24 bit</li> <li>Video Extension :mov, avi, mp4, mpg, mpeg, wmv Video format :Maximum 1920 x 1080/30fps Video bitrate :up to 40M bps Audio format :Maximum 48 kHz 2ch Audio bitrate :up to 384k bps</li> </ul>
Wireless Connections	Yes
DIGITAL LINK	Yes
Secondary Display	Yes
Picture in Picture	Yes
Digital Zoom	Yes
1:1 Pixel Mode	Yes
Auto Set Up	Yes
Power Management	Yes
Power Management (PC / DVI-D)	Yes
Input Lock	Yes
Button / Input lock	Yes
Remote-control User Level	Yes
No Signal Power Off	Yes
Input Search	Yes
Operating Time*2	18h/day

\*1 For e-mail sending function, can be sent as JPEG format only. Does not support mail servers using SSL or STARTTLS.  
 \*2 In case of running for a long time, the moving image is recommended to be displayed. If you display a still picture for an extended period, the image retention might remain on the screen. However, image retention can gradually disappear by displaying movie images.

**STANDARD (CERTIFICATIONS)**

SAFETY REGULATIONS	EN60065, IEC60065, GOST
RADIATION REGULATIONS	EN55022 Class-B, EN55024, EN61000-3-2, EN61000-3-3

**BUILT-IN WIRELESS LAN FUNCTION**

Standard	2.4 GHz: IEEE802.11b/g/n, 5.0 GHz: IEEE802.11a/n
Infrastructure Mode	WPA2-PSK (TKIP / AES), WPA-PSK (TKIP / AES), WEP (64-bit / 128-bit), WPA-EAP / WPA2-EAP (PEAP [MS-CHAPv2 / GTC] / EAP-FAST [MS-CHAPv2 / GTC] / EAP-TLS [MD5 / MS-CHAPv2], 128-bit / 64-bit)

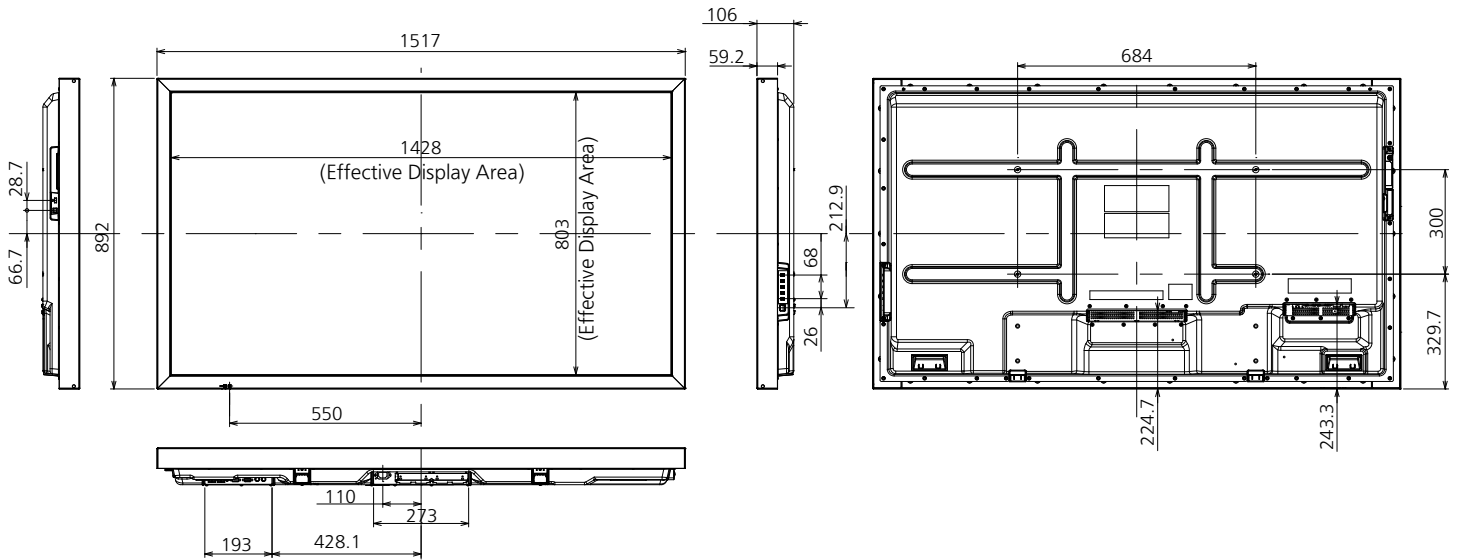
**INCLUDED ACCESSORIES**

- Power supply cord (2 m) - Remote Control Transmitter
- Batteries for the Remote Control Transmitter (R6 (UM) Size x 2)
- Software CD-ROM (Whiteboard software / Wireless Manager software / Operating Instruction) x 1 - USB Cable (2 m) x 1
- Pen x 2 - Eraser x 1 - Pen Stand x 1 - Operating Instruction book

**OPTIONAL ACCESSORIES**

Mobile Stand	TY-ST65PB2
Wall-Hanging bracket (Vertical)	TY-WK65PR20
Pedestal	TY-ST65P20
Dual Video Terminal Board	TY-FB9BD
DVI-D Terminal Board	TY-FB11DD
Dual HDMI Terminal Board	TY-FB10HMD
HD-SDI Terminal Board	TY-FB9HD
HD-SDI Terminal Board with Audio	TY-FB10HD
Dual Link HD-SDI Terminal Board	TY-FB11DHD
Digital Interface Box	ET-YFB100G
Easy Wireless Stick	ET-UW100E

**DIMENSIONS**



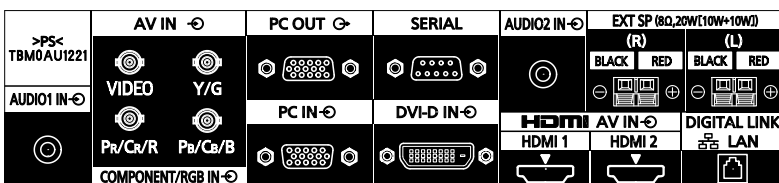
Cautions: This drawing is not a scale  
Units : mm

**CONNECTION TERMINAL**

SIDE



BACK



## Applicable Input Signals

\*Mark:Applicable input signal

	Signal name	Horizontal frequency (kHz)	Vertical frequency (Hz)	COMPONENT / RGB IN / PC IN (Dot clock (MHz))	DVI-D IN (Dot clock (MHz))	HDMI/DIGITAL LINK
1	525 (480) / 60i	15.73	59.94	* (13.5)	* (27.0)	*
2	525 (480) / 60p	31.47	59.94	* (27.0)*5	* (27.0)	*
3	625 (575) / 50i	15.63	50.00	* (13.5)		
4	625 (576) / 50i	15.63	50.00		* (27.0)	*
5	625 (575) / 50p	31.25	50.00	* (27.0)		
6	625 (576) / 50p	31.25	50.00		* (27.0)	*
7	750 (720) / 60p	45.00	60.00	* (74.25)	* (74.25)	*
8	750 (720) / 50p	37.50	50.00	* (74.25)	* (74.25)	*
9	1125 (1080) / 60p	67.50	60.00	* (148.5)*1	* (148.5)	*
10	1125 (1080) / 60i	33.75	60.00	* (74.25)*1	* (74.25)	*
11	1125 (1080) / 50p	56.26	50.00	* (148.5)*1	* (148.5)	*
12	1125 (1080) / 50i	28.13	50.00	* (74.25)*1	* (74.25)	*
13	1125 (1080) / 24sF	27.00	48.00	* (74.25)*2		
14	1125 (1080) / 30p	33.75	30.00	* (74.25)*1	* (74.25)	
15	1125 (1080) / 25p	28.13	25.00	* (74.25)*1	* (74.25)	
16	1125 (1080) / 24p	27.00	24.00	* (74.25)*1	* (74.25)	*
17	1250 (1080) / 50i	31.25	50.00	* (74.25)*3		
18	2048 x 1080 / 24sF *7	27.00	48.00			
19	2048 x 1080 / 24p *7	27.00	24.00			
20	640 x 400 @70 Hz	31.46	70.07	* (25.17)		
21	640 x 480 @60 Hz	31.47	59.94	* (25.18)*6	* (25.18)	*
22	640 x 480 @72 Hz	37.86	72.81	* (31.5)		
23	640 x 480 @75 Hz	37.50	75.00	* (31.5)		
24	640 x 480 @85 Hz	43.27	85.01	* (36.0)		
25	800 x 600 @56 Hz	35.16	56.25	* (36.0)		
26	800 x 600 @60 Hz	37.88	60.32	* (40.0)	* (40.0)	*
27	800 x 600 @72 Hz	48.08	72.19	* (50.0)		
28	800 x 600 @75 Hz	46.88	75.00	* (49.5)		
29	800 x 600 @85 Hz	53.67	85.06	* (56.25)		
30	852 x 480 @60 Hz	31.47	59.94	* (33.54)*6	* (34.24)	*
31	1024 x 768 @50 Hz	39.55	50.00		* (51.89)	*
32	1024 x 768 @60 Hz	48.36	60.00	* (65.0)	* (65.0)	*
33	1024 x 768 @70 Hz	56.48	70.07	* (75.0)		
34	1024 x 768 @75 Hz	60.02	75.03	* (78.75)		
35	1024 x 768 @85 Hz	68.68	85.00	* (94.5)		
36	1066 x 600 @60 Hz	37.64	59.94	* (53.0)	* (53.0)	*
37	1152 x 864 @60 Hz	53.70	60.00		* (81.62)	*
38	1152 x 864 @75 Hz	67.50	75.00	* (108.0)		
39	1280 x 768 @60 Hz	47.70	60.00	* (80.14)		
40	1280 x 800 @60 Hz (1)	49.31	59.91	* (71.0)	* (71.0)	*
41	1280 x 800 @60 Hz (2)	49.70	59.81	* (83.5)	* (83.5)	*
42	1280 x 960 @60 Hz	60.00	60.00	* (108.0)		
43	1280 x 960 @85 Hz	85.94	85.00	* (148.5)		
44	1280 x 1024 @60 Hz	63.98	60.02	* (108.0)	* (108.0)	*
45	1280 x 1024 @75 Hz	79.98	75.03	* (135.0)		
46	1280 x 1024 @85 Hz	91.15	85.02	* (157.5)		
47	1366 x 768 @50 Hz	39.55	50.00		* (69.92)	*
48	1366 x 768 @60 Hz	48.36	60.00	* (86.71)	* (87.44)	*
49	1400 x 1050 @60 Hz	65.22	60.00		* (122.61)	*
50	1440 x 900 @60 Hz (1)	55.47	59.90	* (88.75)	* (88.75)	*
51	1440 x 900 @60 Hz (2)	55.93	59.89	* (106.5)	* (106.5)	*
52	1600 x 1200 @60 Hz	75.00	60.00	* (162.0)	* (162.0)	*
53	1600 x 1200 @65 Hz	81.25	65.00	* (175.5)		
54	1920 x 1080 @60 Hz	67.50	60.00	* (148.5)*4	* (148.5)	*
55	1920 x 1200 @60 Hz	74.04	59.95		* (154.0)	*
56	Macintosh 13" (640 x 480)	35.00	66.67	* (30.24)		
57	Macintosh 16" (832 x 624)	49.72	74.54	* (57.28)		
58	Macintosh 21" (1152 x 870)	68.68	75.06	* (100.0)		

\*1: Based on SMPTE 274M standard.

\*2: Based on SMPTE RP211 standard.

\*3: Based on SMPTE 295M standard.

\*4: The input signal is recognized as 1125 (1080) / 60p.

\*5: When selected the RGB format and 525p signal input to the PC IN terminal, it is recognized as VGA 60Hz signal.

\*6: When inputted VGA 60Hz format signal from the other than PC IN terminal, it is recognized as 525p signal.

\*7: Based on SMPTE 292M and 372M standards. These signals can be received when the Dual Link HD-SDI Terminal Board (TY-FB11DHD) is installed.

Note: Signals without above specification may not be displayed properly.