Panasonic

SPEC FILE

Product Number : ET-**YFB200G**

Product Name : Digital LINK Switcher

Digital LINK Switcher

ET-YFB200G

Description

This DIGITAL LINK switcher is designed for use with Panasonic video display devices. Two output lines of video, audio and control signals (LAN/serial) can be transmitted over distances of up to 150 meters (in long reach mode)* using only a LAN cable (CAT5e or greater STP cable). It can also handle an additional DVI-D output line. In addition to video and RGB signals, HDMI signals can be input. Switching is done using the projector's wireless remote control or the control buttons of the DIGITAL LINK switcher.

* Video signals that can be transmitted are those with a resolution of 1080/60p (dot clock 148.5 MHz) or lower.

Specifications

Power supply		16 V DC (DC input connector)
Power consumption		32 W (0.15 W with the power off, including the power consumption of AC adaptor)
AC adaptor	Input	100 – 240 V AC, 1,5 – 0.8 A, 50/60 Hz
	Output	16 V DC, 3.75 A
Scanning frequency	Input	
	HDMI	480i (525i): f_H 15.73 kHz; f_V 59.94 Hz*, 576i (625i): f_H 15.63 kHz; f_V 50 Hz*, 480p (525p): f_H 31.47 kHz; f_V 59.94 Hz, 576p (625p): f_H 31.25 kHz; f_V 50 Hz, 720 (750)/60p: f_H 45.00 kHz; f_V 60 Hz, 720 (750)/50p: f_H 37.50 kHz; f_V 50 Hz, 1080 (1125)/60i: f_H 33.75 kHz; f_V 60 Hz, 1080 (1125)/50i: f_H 28.13 kHz; f_V 50 Hz 1080 (1125)/60p: f_H 67.50 kHz; f_V 60 Hz 1080 (1125)/50p: f_H 56.25 kHz; f_V 50 Hz, 1080 (1125)/24p: f_H 27.00 kHz; f_V 24 Hz, 1080 (1125)/24sF: f_H 27.00 kHz; f_V 48 Hz**, 1080 (1125)/25p: f_H 28.13 kHz; f_V 25 Hz 1080 (1125)/30p: f_H 33.75 kHz; f_V 30 Hz, f_H: 15.6 – 98.8 kHz, f_V: 24.0–120.0 Hz Dot clock frequency: 25.2 MHz to 162.0 MHz Displayable resolution: VESA400 (640 x 400) to WUXGA*** (1 920 x 1 200), * Pixel-Repetition signal (dot clock frequency 27.0 MHz) only ** Does not support the frame lock. *** VESA CVT-RB (Reduced Blanking) compliant
	RGB	f_H: 15.6 – 98.8 kHz, f_V: 24.0–120.0 Hz Dot clock frequency: 25.2 MHz to 162.0 MHz Displayable resolution: VESA400 (640 x 400) to WUXGA* (1 920 x 1 200), * VESA CVT-RB (Reduced Blanking) compliant
	$Y P_B P_R$ ($Y C_B C_R$)	480i (525i): f_H 15.73 kHz; f_V 59.94 Hz, 576i (625i): f_H 15.63 kHz; f_V 50 Hz, 480p (525p): f_H 31.47 kHz; f_V 59.94 Hz, 576p (625p): f_H 31.25 kHz; f_V 50 Hz, 720 (750)/60p: f_H 45.00 kHz; f_V 60 Hz, 720 (750)/50p: f_H 37.50 kHz; f_V 50 Hz, 1080 (1125)/60i: f_H 33.75 kHz; f_V 60 Hz, 1080 (1125)/50i: f_H 28.13 kHz; f_V 50 Hz 1080 (1125)/60p: f_H 67.50 kHz; f_V 60 Hz 1080 (1125)/50p: f_H 56.25 kHz; f_V 50 Hz, 1080 (1125)/24p: f_H 27.00 kHz; f_V 24 Hz, 1080 (1125)/24sF: f_H 27.00 kHz; f_V 48 Hz*, 1080 (1125)/25p: f_H 28.13 kHz; f_V 25 Hz 1080 (1125)/30p: f_H 33.75 kHz; f_V 30 Hz, * Does not support the frame lock.
	Video/S-Video	f_H: 15.73 kHz, f_V: 59.94 Hz [NTSC/NTSC4.43/PAL-M/PAL60] f_H: 15.63 kHz, f_V: 50 Hz [PAL/PAL-N/SECAM]

Scanning frequency	Output	WUXGA60-CVT-RB(1920 x 1200): f_H 74.04 kHz; f_V 59.95 Hz*, 1080/60p(1920 x 1080): f_H 67.50 kHz; f_V 60 Hz, SXGA+60(1400 x 1050): f_H 65.22 kHz; f_V 60 Hz, 1366 x 768/60(1366 x 768): f_H 47.71 kHz; f_V 59.79 Hz, 1280 x 800/60(1280 x 800): f_H 49.70 kHz; f_V 59.81 Hz, XGA60(1024 x 768): f_H 48.36 kHz; f_V 60 Hz, 720/60p(1280 x 720): f_H 45.0 kHz; f_V 60 Hz, 1080/24p(1920 x 1080): f_H 27.0 kHz; f_V 24 Hz 1080/30p(1920 x 1080): f_H 33.8 kHz; f_V 30 Hz 1080/50p(1920 x 1080): f_H 56.3 kHz; f_V 50 Hz, 720/50p(1280 x 720): f_H 37.5 kHz; f_V 50 Hz, 1080/25p(1920 x 1080): f_H 28.1 kHz; f_V 25 Hz, Dot clock frequency: 65.0 MHz to 154.0 MHz * When the display (projector or flat panel display) connected with the DIGITAL LINK is supporting the long reach communication method, it is not supporting the output. The supported output signal for the <DIGITAL LINK OUT 1> terminal/ <DIGITAL LINK OUT 2> terminal is same as the <DVI-D OUT> terminal. However, output of 3D signal is supported only by the <DIGITAL LINK OUT 1> terminal/<DIGITAL LINK OUT 2> terminal, and it is not supported by the <DVI-D OUT> terminal.
Terminals	HDMI IN	HDMI 19-pin × 2, Deep Color, HDCP compatible audio signal: linear PCM (sampling frequencies: 48 kHz, 44.1 kHz, 32 kHz)
	COMPUTER (RGB) IN R, G, B	D-sub HD 15-pin (female) × 2 G: 0.7 Vp-p (1.0 Vp-p for sync on G), 75 ohms; HD/VD, SYNC: high impedance, TTL (positive/negative) **NOTE: SYNC/HD and VD terminals do not accept tri-level sync signals.**
	Y, P_B (C_B), P_R (C_R)	Y: 1.0 Vp-p (including sync signal); P_B (C_B), P_R (C_R): 0.7 Vp-p, 75 ohms C: 0.286 V [p-p] 75 Ω **Only the <COMPUTER 1 IN> terminal can input Y/C signal using the optional D-SUB - S Video conversion cable (Model No.: ET-ADSV).**
	VIDEO IN	PIN jack ×1, 1.0 Vp-p, 75 ohms
	DVI-D OUT	DVI-D 24-pin ×1
	AUDIO IN	M3 (L, R) stereo mini jack × 3, 0.5 Vrms, 22 kΩ
	AUDIO OUT	M3 (L, R) stereo mini jack × 1 (monitor out: 0–2.0 Vrms, variable), 2.2 kΩ
	SERIAL IN	3-pin 3.5 mm detachable terminal for external control (RS-232C compliant)
	REMOTE IN	D-sub 9-pin (female) × 1 for external control (parallel)
	LAN	RJ-45 × 1, for network connection, 100Base-TX/10Base-T
	DIGITAL LINK	RJ-45 × 2, for DIGITAL LINK connection
Dimensions (W × H × D)		210 × 44 × 250*1 mm (8-9/32 × 1-23/32 × 9-27/32*1 inches)
Weight	Main unit	Approx. 1.3 kg (2.9 lbs)
	AC adaptor	Approx. 0.2 kg (0.4 lbs)
Operating temperature		0–40 °C (32–104 °F)*2
Operating humidity		20%–80% (no condensation)
Applicable display		DIGITAL LINK compatible projector, flat panel display

Supplied accessories

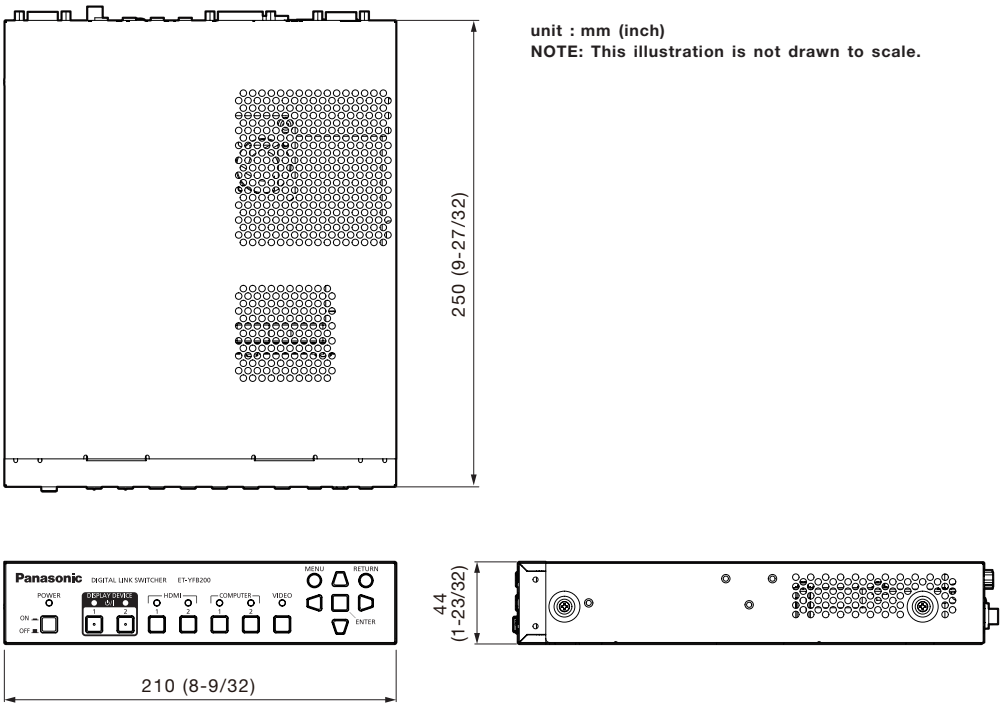
AC adaptor (× 1)
AC adaptor securing bracket (× 1)
Power cord (2 m) (× 3)
Foot (× 4)
Screws for attaching feet (× 4)
Rack mounting bracket (× 2)
Screws for attaching the rack mounting brackets (× 6)
Plug for 3-pin 3.5 mm detachable terminal block (× 1)

Weights and dimensions shown are approximate. Specifications subject to change without notice.

***1 Protruding parts not included.**

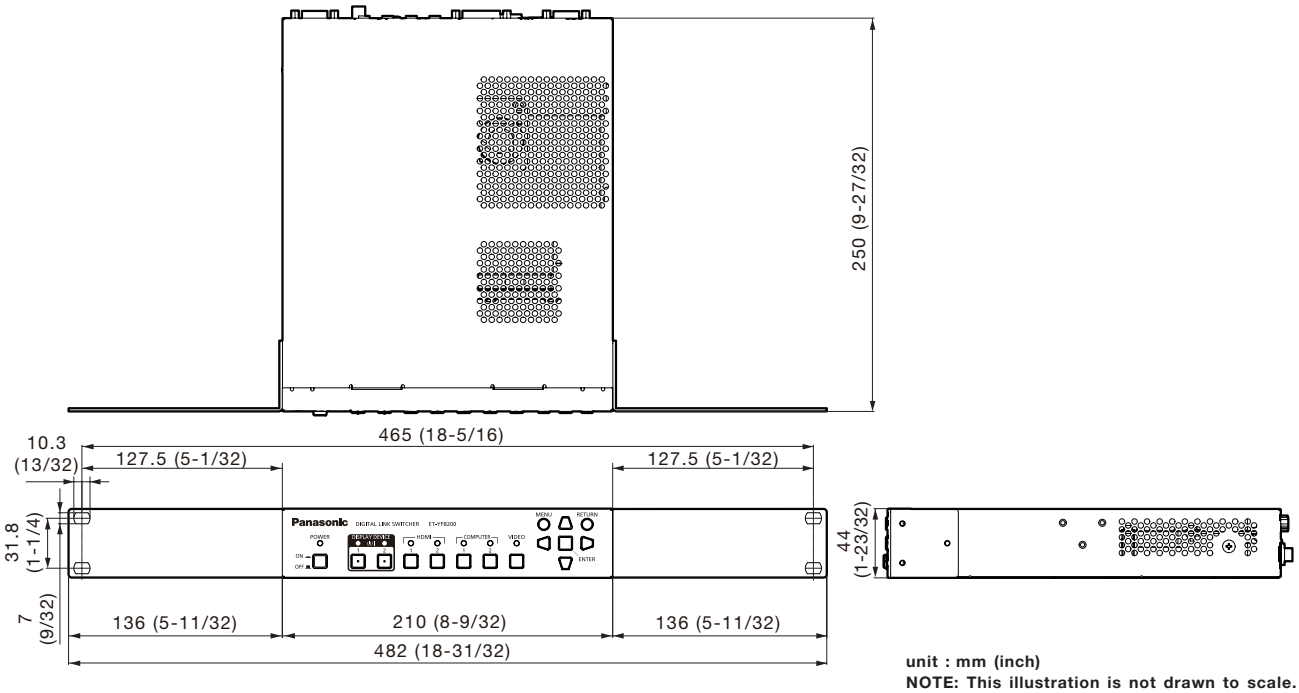
***2 When using the device at elevations between 1 400 m (4 593') and 2 700 m (8 858') above sea level, the operating environment temperature should be between 0 °C (32 °F) and 35 °C (95 °F). The device cannot be used at elevations of 2 700 m (8 858') or higher above sea level.**

Dimensions



unit : mm (inch)
NOTE: This illustration is not drawn to scale.

The illustration shows the ET-YFB200 with the mounting bracket for rack installation attached.

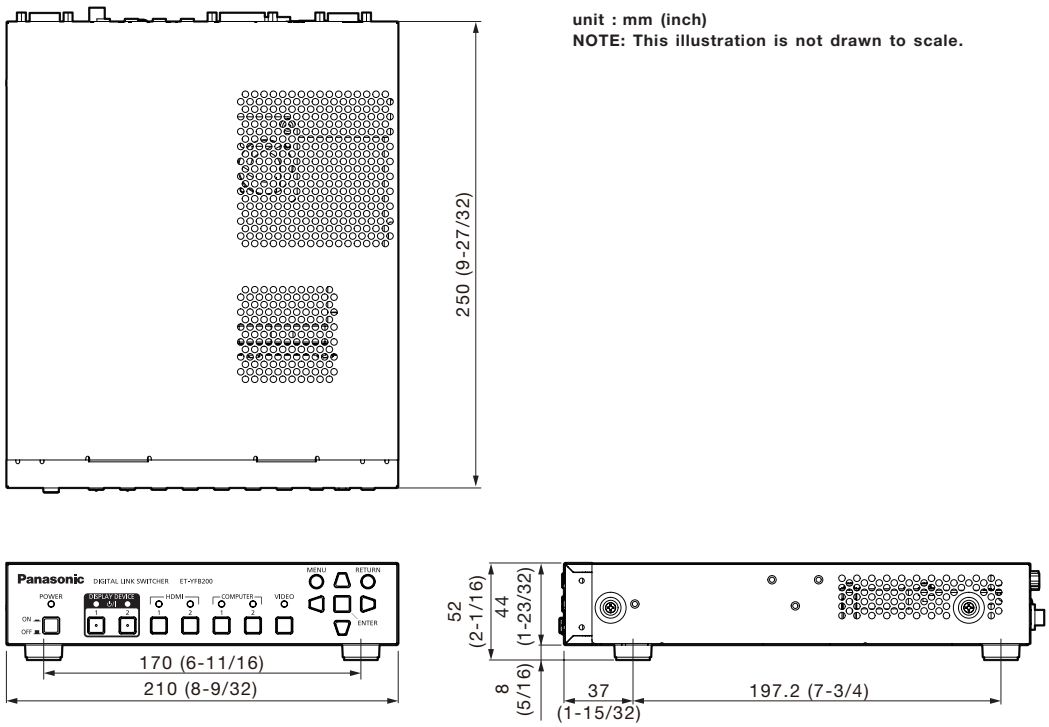


unit : mm (inch)
NOTE: This illustration is not drawn to scale.

Digital LINK Switcher

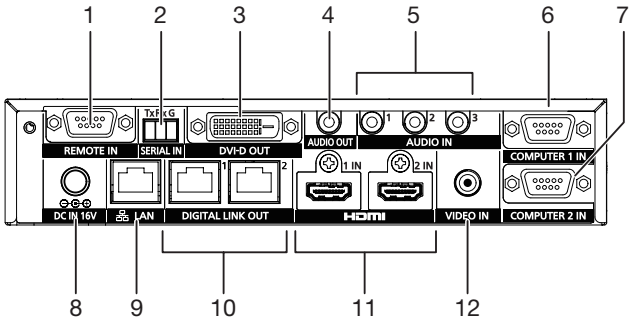
ET-YFB200G

The illustration shows the ET-YFB200 with foot attached.



unit : mm (inch)
NOTE: This illustration is not drawn to scale.

Terminals



1 REMOTE IN terminal
2 SERIAL IN terminal
3 DVI-D OUT terminal
4 AUDIO OUT terminal
5 AUDIO IN 1/2/3 TERMINAL
6 COMPUTER 1 IN terminal
7 COMPUTER 2 IN terminal
8 DC IN (16V) terminal
9 LAN terminal
10 DIGITAL LINK OUT
11 HDMI terminal
12 VIDEO IN terminal

List of compatible signals (input)

The signals that can be input to this projector are shown in the table below.

Compatible signals	Resolution (dots)	Scanning frequency H (kHz)	Scanning frequency V (kHz)	Dot clock frequency (MHz)	Format	Plug and play*1 COMPUTER 1/ COMPUTER 2*2	Plug and play*1 HDMI 1/HDMI 2*3
NTSC/NTSC4.43/ PAL-M/PAL60	720 x 480i	15.7	59.9	—	VIDEO/Y·C	—	—
PAL/PAL-N/SECAM	720 x 576i	15.6	50.0	—	VIDEO/Y·C	—	—
525i (480i)	720 x 480i	15.7	59.9	13.5	RGB/Y·CB·CR	—	—
625i (576i)	720 x 576i	15.6	50.0	13.5	RGB/Y·CB·CR	—	—
525i (480i)	720(1440) x 480i*4	15.7	59.9	27.0	HDMI	—	—
625i (576i)	720(1440) x 576i*4	15.6	50.0	27.0	HDMI	—	—
525p (480p)	720 x 483	31.5	59.9	27.0	RGB/Y·CB·CR/ HDMI	—	√
625p (576p)	720 x 576	31.3	50.0	27.0	RGB/Y·CB·CR/ HDMI	—	√
750 (720)/60p	1280 x 720	45.0	60.0	74.3	RGB/ Y·PB·PR/HDMI	—	√
750 (720)/50p	1280 x 720	37.5	50.0	74.3	RGB/ Y·PB·PR/HDMI	—	√
1125 (1080)/60i*5	1920 x 1 080i	33.8	60.0	74.3	RGB/ Y·PB·PR/HDMI	—	√
1125 (1080)/50i	1920 x 1 080i	28.1	50.0	74.3	RGB/ Y·PB·PR/HDMI	—	√
1125 (1080)/24p	1920 x 1 080	27.0	24.0	74.3	RGB/ Y·PB·PR/HDMI	—	√
1125 (1080)/24sF*6	1920 x 1 080i	27.0	48.0	74.3	RGB/ Y·PB·PR/HDMI	—	—
1125 (1080)/25p	1920 x 1 080	28.1	25.0	74.3	RGB/ Y·PB·PR/HDMI	—	—
1125 (1080)/30p	1920 x 1 080	33.8	30.0	74.3	RGB/ Y·PB·PR/HDMI	—	—
1125 (1080)/60p	1920 x 1 080	67.5	60.0	148.5	RGB/ Y·PB·PR/HDMI	—	√
1125 (1080)/50p	1920 x 1 080	56.3	50.0	148.5	RGB/ Y·PB·PR/HDMI	—	√
VESA400	640 x 400	31.5	70.1	25.2	RGB/HDMI	—	—
	640 x 400	37.9	85.1	31.5	RGB/HDMI	—	—
VGA480	640 x 480	31.5	59.9	25.2	RGB/HDMI	√	√
	640 x 480	35.0	66.7	30.2	RGB/HDMI	—	—
	640 x 480	37.9	72.8	31.5	RGB/HDMI	√	√
	640 x 480	37.5	75.0	31.5	RGB/HDMI	√	√
	640 x 480	43.3	85.0	36.0	RGB/HDMI	—	—
SVGA	800 x 600	35.2	56.3	36.0	RGB/HDMI	√	√
	800 x 600	37.9	60.3	40.0	RGB/HDMI	√	√
	800 x 600	48.1	72.2	50.0	RGB/HDMI	√	√
	800 x 600	46.9	75.0	49.5	RGB/HDMI	√	√
	800 x 600	53.7	85.1	56.3	RGB/HDMI	—	—
MAC16	832 x 624	49.7	74.6	57.3	RGB/HDMI	√	√
XGA	1024 x 768	39.6	50.0	51.9	RGB/HDMI	—	—
	1024 x 768	48.4	60.0	65.0	RGB/HDMI	√	√
	1024 x 768	56.5	70.1	75.0	RGB/HDMI	√	√
	1024 x 768	60.0	75.0	78.8	RGB/HDMI	√	√
	1024 x 768	65.5	81.6	86.0	RGB/HDMI	—	—
	1024 x 768	68.7	85.0	94.5	RGB/HDMI	—	—
	1024 x 768	81.4	100.0	113.3	RGB/HDMI	—	—
	1024 x 768	98.8	120.0	139.1	RGB/HDMI	√	√
MXGA	1152 x 864	53.7	60.0	81.6	RGB/HDMI	—	—
	1152 x 864	64.0	70.0	94.2	RGB/HDMI	—	—
	1152 x 864	67.5	74.9	108.0	RGB/HDMI	—	—
	1152 x 864	77.1	85.0	119.7	RGB/HDMI	—	—
MAC21	1152 x 870	68.7	75.1	100.0	RGB/HDMI	√	√
1280 x 720	1280 x 720	37.1	49.8	60.5	RGB/HDMI	—	—
	1280 x 720	44.8	59.9	74.5	RGB/HDMI	—	—
	1280 x 720	76.3	100.0	131.8	RGB/HDMI	—	—
	1280 x 720	92.6	120.0	161.6	RGB/HDMI	—	—
1280 x 768	1280 x 768	39.6	49.9	65.3	RGB/HDMI	—	—
	1280 x 768	47.8	59.9	79.5	RGB/HDMI	—	—
	1280 x 768*7	47.4	60.0	68.3	RGB/HDMI	—	—
	1280 x 768	60.3	74.9	102.3	RGB/HDMI	—	—
	1280 x 768	68.6	84.8	117.5	RGB/HDMI	—	—
1280 x 800	1280 x 800	41.3	50.0	68.0	RGB/HDMI	—	—
	1280 x 800	49.7	59.8	83.5	RGB/HDMI	—	—
MSXGA	1280 x 960	91.1	60.0	108.0	RGB/HDMI	—	—

Compatible signals	Resolution (dots)	Scanning frequency H (kHz)	Scanning frequency V (kHz)	Dot clock frequency (MHz)	Format	Plug and play*1 COMPUTER 1/ COMPUTER 2*2	Plug and play*1 HDMI 1/HDMI 2*3
SXGA	1280 x 1024	52.4	50.0	88.0	RGB/HDMI	—	—
	1280 x 1024	64.0	60.0	108.0	RGB/HDMI	√	√
	1280 x 1024	72.3	66.3	125.0	RGB/HDMI	—	—
	1280 x 1024	78.2	72.0	135.1	RGB/HDMI	—	—
	1280 x 1024	80.0	75.0	135.0	RGB/HDMI	√	√
	1280 x 1024	91.1	85.0	157.5	RGB/HDMI	—	—
1366 x 768	1366 x 768	39.6	49.9	69.0	RGB/HDMI	—	—
	1366 x 768	47.7	59.8	85.5	RGB/HDMI	—	—
SXGA+	1400 x 1050	54.1	50.0	99.9	RGB/HDMI	—	—
	1400 x 1050	64.0	60.0	108.0	RGB/HDMI	—	—
	1400 x 1050	65.2	60.0	122.6	RGB/HDMI	—	—
	1400 x 1050	65.3	60.0	121.8	RGB/HDMI	√	√
	1400 x 1050	78.8	72.0	149.3	RGB/HDMI	—	—
	1400 x 1050	82.2	75.0	155.9	RGB/HDMI	—	—
WXGA+	1440 x 900	46.3	49.9	86.8	RGB/HDMI	—	—
	1440 x 900	55.9	59.9	106.5	RGB/HDMI	—	—
1600 x 900	1600 x 900	46.4	49.9	96.5	RGB/HDMI	—	—
	1600 x 900	55.9	60.0	119.0	RGB/HDMI	√	√
UXGA	1600 x 1200	61.8	49.9	131.5	RGB/HDMI	—	—
	1600 x 1200	75.0	60.0	162.0	RGB/HDMI	√	√
WSXGA+	1680 x 1050	54.1	50.0	119.5	RGB/HDMI	—	—
	1680 x 1050	65.3	60.0	146.3	RGB/HDMI	—	—
1920 x 1080	1920 x 1080	55.6	49.9	141.5	RGB/HDMI	—	—
	1920 x 1080*4	66.6	59.9	138.5	RGB/HDMI	—	—
	1920 x 1080*5	67.2	60.0	173.0	RGB	—	—
WUXGA	1920 x 1200	61.8	49.9	158.3	RGB/HDMI	—	—
	1920 x 1200*4	74.0	60.0	154.0	RGB/HDMI	√	√
	1920 x 1200*5	74.6	59.9	193.3	RGB	—	—

*1 The signal with I in the Plug and play column is a signal that is described in the EDID (extended display identification data) of this device and the display. Even if the signal does not have I in the Plug and play column, it can be input if there is a description in the Format column. The signal without I in the Plug and play column may not be able to select the resolution on the computer even if this device or the display is supporting the signal.

*2 This indicates that the plug and play is supported when the [OPTION] menu → [COMPUTER IN] → [COMPUTER 2 EDID MODE] is set to [DEFAULT]. When [COPY] or [USER] is set, it will follow the EDID for the setting.

*3 This indicates that the plug and play is supported when the [OPTION] menu → [HDMI IN] → [HDMI 2 EDID MODE] is set to [DEFAULT]. When [COPY] or [USER] is set, it will follow the EDID for the setting.

*4 VESA CVT-RB (Reduced Blanking) compliant

*5 The image is displayed by sampling the pixels with the image-processing circuit.

Note

• The “i” at the end of the resolution indicates an interlaced signal.

• When interlaced signals are connected, flickering may occur on the image.

• The image may not be displayed even for the compatible signal that is described if the video signal is recorded with a special format.

List of compatible signals (output)

The following are video signals supported by this device. The output resolution will differ depending on the input signal, frame lock setting, and output resolution setting.

• Symbol that indicates format is as follows. The compatible signals for the <DIGITAL LINK OUT 1> terminal/<DIGITAL LINK OUT 2> terminal and the <DVI-D OUT> terminal are the same.

Compatible signals	Resolution (dots)	Scanning frequency H (kHz)	Scanning frequency V (kHz)	Dot clock frequency (MHz)	Format	Input signal
750(720)/60p*1	1280 x 720	45.0	60.0	74.3	DIGITAL LINK, DVI-D	750 (720) /60p
750(720)/50p*1	1280 x 720	37.5	50.0	74.3	DIGITAL LINK, DVI-D	750 (720) /50p
1125(1080)/24p*1	1920 x 1080	27.0	24.0	74.3	DIGITAL LINK, DVI-D	1125 (1080) /24p
1125(1080)/25p*1	1920 x 1080	28.1	25.0	74.3	DIGITAL LINK, DVI-D	1125 (1080) /25p
1125(1080)/30p*1	1920 x 1080	33.8	30.0	74.3	DIGITAL LINK, DVI-D	1125 (1080) /30p
1125(1080)/60p*3	1920 x 1080	67.5	60.0	148.5	DIGITAL LINK, DVI-D	[When FRAME LOCK is on] NTSC·NTSC4.43 PAL-M·PAL60 525i (480i) 525p (480p) 1125 (1080) /60i 1125 (1080) /60p [When FRAME LOCK is off] All compatible signals
1125(1080)/50p*1	1920 x 1080	56.3	50.0	148.5	DIGITAL LINK, DVI-D	PAL·PAL-N SECAM 625i (576i) 625p (576p) 1125 (1080) /50i 1125 (1080) /50p
XGA*2	1024 x 768	48.4	60.0	65.0	DIGITAL LINK, DVI-D	All compatible signals
1280 x 800*2	1280 x 800	49.7	59.8	83.5	DIGITAL LINK, DVI-D	All compatible signals
1366 x 768*2	1366 x 768	47.7	59.8	85.5	DIGITAL LINK, DVI-D	All compatible signals
SXGA+*2	1400 x 1050	65.2	60.0	122.6	DIGITAL LINK, DVI-D	All compatible signals
WUXGA*2 *4 *5	1920 × 1200	74.0	60.0	154.0	DIGITAL LINK, DVI-D	All compatible signals

*1 When FRAME LOCK is on, output matches the input signals.
*2 When FRAME LOCK is off, output matches the output resolution setting.
*3 When FRAME LOCK is on, output matches the input signals.
When FRAME LOCK is off, output matches the output resolution setting.
*4 VESA CVT-RB (Reduced Blanking) compliant
*5 When the display (projector or flat panel display) connected with the DIGITAL LINK is supporting the long reach communication method, it is not supporting the output.

List of 3D compatible signals (input/output)

The following are 3D signals supported by this device (HDMI signal only). Output of 3D signal is supported only by the <DIGITAL LINK OUT 1> terminal/<DIGITAL LINK OUT 2> terminal, and it is not supported by the <DVI-D OUT> terminal.

3D Compatible signals	Format of 3D video signal		
	Frame packing	Side by side	Top and bottom
750 (720) /60p	√*1	√	√*1
750 (720) /50p	√*1	√	√*1
1125 (1080) /60i	—	√*1	—
1125 (1080) /50i	—	√*1	—
1125 (1080) /24p	√*1	√	√*1
1125 (1080) /60p	—	√	√
1125 (1080) /50p	—	√	√

*1 HDMI standard 3D Mandatory format signal.

Note
• To output the 3D signal, go to the [OPTION] menu → [DIGITAL LINK OUT] (➔ page 53) and set [FRAME LOCK] to [ON]. The 3D signal is not output when [OFF] is set.