

## S P E C I F I C A T I O N S



Product Number : **ET-YFB100G**

Product Name : Digital Interface Box

**Description**

This digital interface box is designed for use with an applicable Panasonic projector. It operates as a switcher for DIGITAL LINK. Video, audio and control (LAN/serial) signals can be transmitted over distances of up to 100 meters using only a LAN cable (CAT5e or greater STP cable). 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 interface box.

**Specifications**

Power supply		16 V DC (DC input connector)
Power consumption		16 W (0.2 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	HDMI	$f_H$ : 27–99 kHz, $f_V$ : 24–119.8 Hz, dot clock: 25.2–162 MHz
	RGB	$f_H$ : 15.6–99 kHz, $f_V$ : 24–119.8 Hz, dot clock: 13.5–162 MHz
	YPbPr (YCbCr)	480i (525i): $f_H$ 15.75 kHz; $f_V$ 60 Hz, 576i (625i): $f_H$ 15.63 kHz; $f_V$ 50 Hz, 480p (525p): $f_H$ 31.50 kHz; $f_V$ 60 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)/25p: $f_H$ 28.13 kHz; $f_V$ 25 Hz 1080 (1125)/24p: $f_H$ 27.00 kHz; $f_V$ 24 Hz, 1080 (1125)/30p: $f_H$ 33.75 kHz; $f_V$ 30 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,
	Video/S-Video	$f_H$ : 15.75 kHz, $f_V$ 60 Hz [NTSC/NTSC4.43/PAL-M/PAL60] $f_H$ : 15.63 kHz, $f_V$ 50 Hz [PAL/PAL-N/SECAM]
Terminals	HDMI IN	HDMI 19-pin × 2, Deep Color, HDCP compatible 480p (525p), 576p (625p), 720 (750)/60p, 720 (750)/50p, 1080 (1125)/60i, 1080 (1125)/50i, 1080 (1125)/24p, 1080 (1125)/25p, 1080 (1125)/30p, 1080 (1125)/60p, 1080 (1125)/50p VGA (640 × 480)–WUXGA*1 (1,920 × 1,200), 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) × 1 G: 0.7 Vp-p (1.0 Vp-p for sync on G), 75 ohms; B, R: 0.7 Vp-p, 75 ohms; HD/VD, SYNC: high impedance, TTL (positive/negative) <b>NOTE: SYNC/HD and VD terminals do not accept tri-level sync signals.</b>
	Y, Pb (Cb), Pr (Cr)	Y: 1.0 Vp-p (including sync signal); Pb (Cb), Pr (Cr): 0.7 Vp-p, 75 ohms
	COMPUTER (RGB) 2 IN / 1 OUT 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; B, R: 0.7 Vp-p, 75 ohms; HD/VD, SYNC: high impedance, TTL (positive/negative)
	VIDEO IN	RCA pin × 1, 1.0 Vp-p, 75 ohms
	S-VIDEO IN	Mini DIN 4-pin × 1, Y: 1.0 Vp-p; C: 0.286 Vp-p, 75 ohms
	AUDIO IN	M3 (L, R) × 1, 0.5 Vrms
	AUDIO OUT	M3 (L, R) × 1 (monitor out: 0–2.0 Vrms, variable)
	SERIAL IN	D-sub 9-pin (female) × 1, 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 × 1, for Digital Link connection

Dimensions (W × H × D)		210 × 44 × 250* <sup>2</sup> mm (8-9/32 × 1-23/32 × 9-27/32* <sup>2</sup> inches)
Weight	Main unit	Approx. 1.15 kg (2.5 lbs)
	AC adaptor	Approx. 0.20 kg (0.4 lbs)
Operating temperature		0–40 °C (32–104 °F)
Operating humidity		20%–80% (no condensation)
Applicable projector		PT-VW431D

**Supplied accessories**

AC adaptor (× 1)  
Power cord (2 m) (× 3)  
AC power cord holder (× 1)  
Mounting brackets for rack or countertop installation (× 2)  
Mounting bracket for rack installation (× 1)  
Countersunk screws (× 6)  
Legs (× 4)  
Screws for installing legs (× 4)

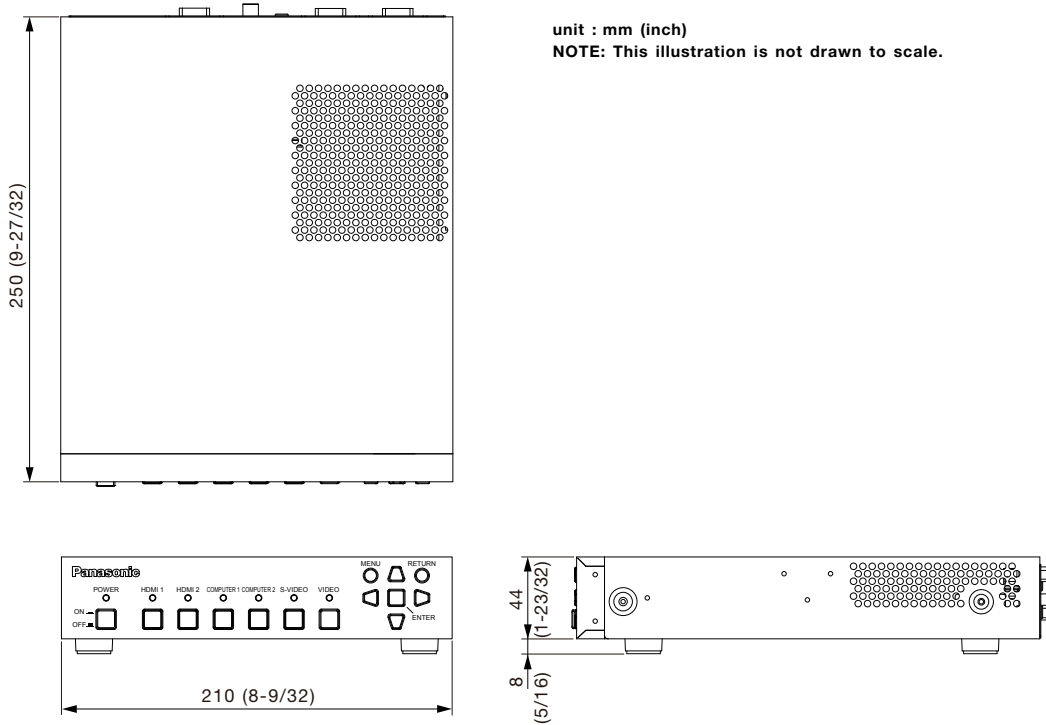
Weights and dimensions shown are approximate. Specifications subject to change without notice.

\*1 Supported only when the signals are compliant with VESA CVT-RB (Coordinated Video Timing-Reduced Blanking).

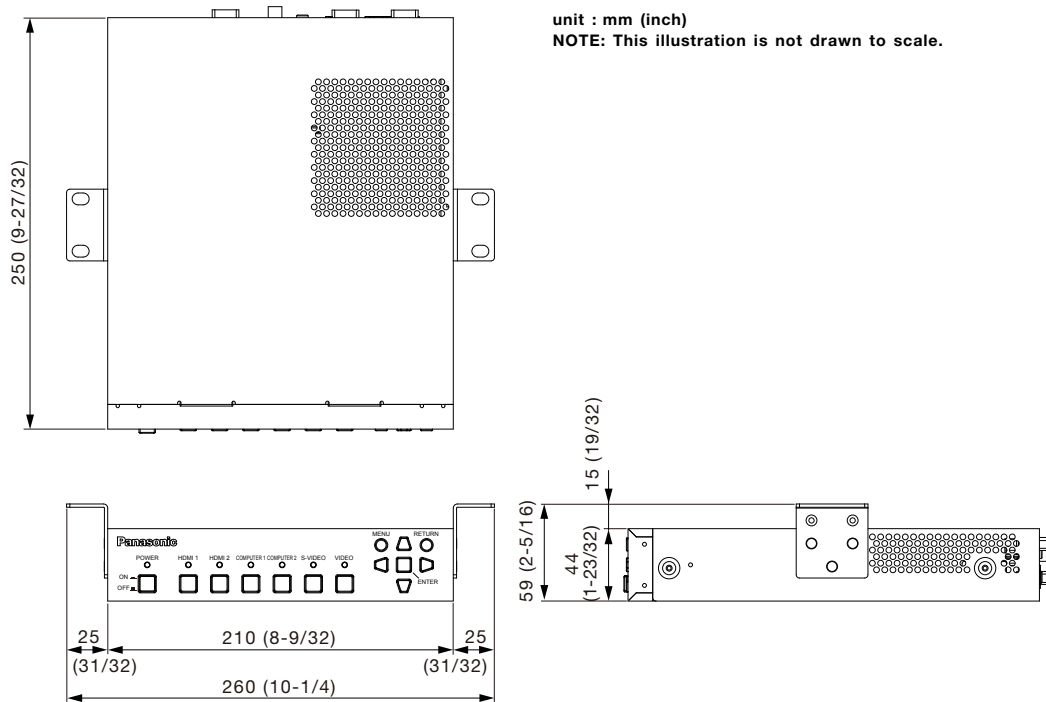
\*2 Protruding parts not included.

**Dimensions**

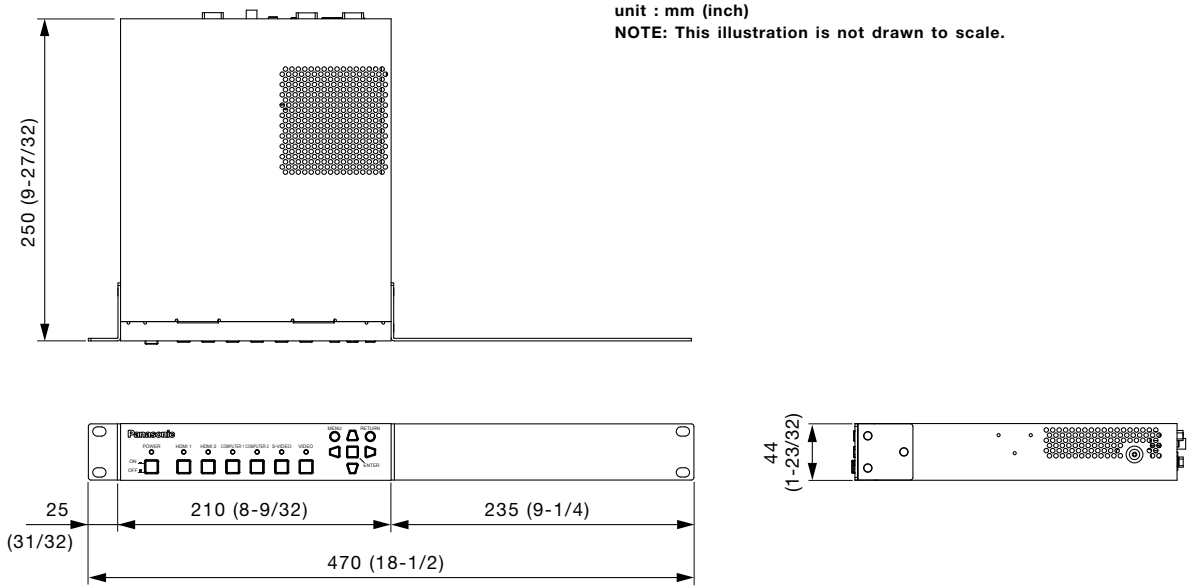
The illustration shows the ET-YFB100G with legs attached.



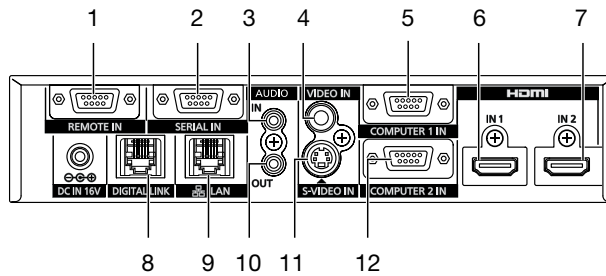
The illustration shows the ET-YFB100G with the mounting bracket for countertop installation attached.



The illustration shows the ET-YFB100G with the mounting bracket for rack installation attached.



**Terminals**



- |                    |                       |
|--------------------|-----------------------|
| 1 Remote input     | 7 HDMI 2 input        |
| 2 Serial input     | 8 DIGITAL LINK output |
| 3 Audio input      | 9 LAN connector       |
| 4 Video input      | 10 Audio output       |
| 5 Computer 1 input | 11 S-Video input      |
| 6 HDMI 1 input     | 12 Computer 2 input   |

## List of compatible signals

The signals that can be input to this projector are shown in the table below. Horizontal scanning frequencies of 15.6 kHz to 99 kHz, vertical scanning frequencies of 24 Hz to 119.8 Hz, and a dot clock of 162 MHz maximum can be input.

**NOTE:** If the display resolution of the input signal is different from the native resolution, image compression or expansion will be used to convert the input signal to a level within the native resolution.

Display mode	Display resolution (dots)*	Scanning frequency		Dot clock frequency (MHz)	Format
		H (kHz)	V (kHz)		
NTSC/NTSC4.43/PAL-M/PAL60	720 × 480i	15.7	59.9	–	VIDEO/S-VIDEO
PAL/PAL-N/SECAM	720 × 576i	15.6	50.0	–	
480i (525i)	720 × 480i	15.7	59.9	13.5	YPbPr/RGB
576i (625i)	720 × 576i	15.6	50.0	13.5	
480p (525p)	720 × 483	31.5	59.9	27.0	HDMI/YPbPr/RGB
576p (625p)	720 × 576	31.3	50.0	27.0	
720p (750p)/60p	1280 × 720	45.0	60.0	74.3	
720p (750p)/50p		37.5	50.0	74.3	
1080 (1125)/60i	1920 × 1080i	33.8	60.0	74.3	
1080 (1125)/50i		28.1	50.0	74.3	
1080 (1125)/24p	1920 × 1080	27.0	24.0	74.3	
1080 (1125)/25p		28.1	25.0	74.3	
1080 (1125)/30p		33.8	30.0	74.3	
1080 (1125)/60p		67.5	60.0	148.5	
1080 (1125)/50p		56.3	50.0	148.5	
VESA400	640 × 400	37.9	85.1	31.5	HDMI/RGB
VGA		31.5	70.1	25.2	
	640 × 480	31.5	59.9	25.2	
		35.0	66.7	30.2	
		37.5	75.0	31.5	
		37.9	72.8	31.5	
		43.3	85.0	36.0	
SVGA	800 × 600	35.2	56.3	36.0	
		37.9	60.3	40.0	
		46.9	75.0	49.5	
		48.1	72.2	50.0	
		53.7	85.1	56.3	
MAC16	832 × 624	49.7	74.6	57.3	
XGA	1024 × 768	39.6	50.0	51.9	
		48.4	60.0	65.0	
		60.0	75.0	78.8	
		56.5	70.1	75.0	
		65.5	81.6	86.0	
		68.7	85.0	94.5	
		80.0	100.0	105.0	
		99.0	119.8	137.8	
MXGA	1152 × 864	64.0	70.0	94.2	
		67.5	74.9	108.0	
		77.1	85.0	119.7	
MAC21	1152 × 870	68.7	75.1	100.0	
1280 × 720	1280 × 720	37.1	49.8	60.5	
		44.8	59.9	74.5	
1280 × 768	1280 × 768	39.6	49.9	65.3	
		47.8	59.9	79.5	
1280 × 800	1280 × 800	41.3	50.0	68.0	
		49.7	59.8	83.5	
MSXGA	1280 × 960	60.0	60.0	108.0	

\* The "i" appearing after the resolution indicates an interlaced signal.

Display mode	Display resolution (dots)	Scanning frequency		Dot clock frequency (MHz)	Format
		H (kHz)	V (kHz)		
SXGA	1280 × 1024	64.0	60.0	108.0	HDMI/RGB
		80.0	75.0	135.0	
		91.1	85.0	157.5	
SXGA+	1400 × 1050	65.2	60.0	122.6	
		65.3	60.0	121.8	
		82.2	75.0	155.9	
WXGA+	1440 × 900	55.9	59.9	106.5	
UXGA	1600 × 1200	75.0	60.0	162.0	
WSXGA+	1680 × 1050	65.3	60.0	146.3	
1920 × 1080*	1920 × 1080	66.6	59.9	138.5	
WUXGA*	1920 × 1200	74.0	60.0	154.0	

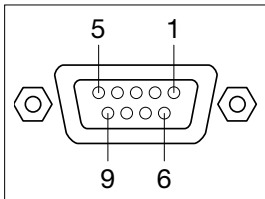
\* Supported only when the signals are compliant with VESA CVT-RB (Coordinated Video Timing-Reduced Blanking).

**Serial connector**

A computer can be connected to the serial terminal of the digital interface box to control the PT-VW431D projector. The serial connector complies with RS-232C. To control the projector from a computer, commands must be input through communication software, based on the format and satisfying the communication conditions shown below.

See the specifications of the PT-VW431D for control details.

**Pin assignments and signal names**



D-sub 9-pin (female)  
Serial input

No.	Signal name	Description	No.	Signal name	Description
1	-	NC	6	-	NC
2	TXD	Send data	7	CTS	Connected internally
3	RXD	Receive data	8	RTS	Connected internally
4	-	NC	9	-	NC
5	GND	Ground			

**Communication conditions (factory setting)**

Signal level	RS-232C-compliant
Synchronization method	Start-stop synchronization
Baud rate	9,600 bps
Parity	None

Character length	8 bits
Stop bit	1 bit
X parameter	None
S parameter	None

**Cable specifications**

Projector		PC (DTE)	
1	NC	NC	1
2			2
3			3
4	NC	NC	4
5			5
6	NC	NC	6
7			7
8			8
9	NC	NC	9