BVM-E251/BVM-E171

OLED Master Monitors

BVM-E251 BVM-E171

25"/17" FHD OLED Reference Monitors for Color Critical, Quality Control Operation of Versatile video productions

Main Features

- BVM 2nd Generation Grade OLED Panel
- Superb picture performance
- Super Top Emission™ technology
- Ultimate Sony display engine
- Multi-format signal support
- Versatile video inputs
- HDR*1 *2
- Flicker free mode
- ITU-R BT.2020 / DCI-P3/ ITU-R BT.709 support
- Accepts computer signals via HDMI with RGB/YCC full range support
- Auto White Balance
- Gamut error display
- S-Log3(SDR), S-Log2(SDR)
- 2K picture resolution
- High quality I/P conversion technology
- Low video delay
- Panel calibration
- Interlaced display mode
- Picture & Picture mode (Wipe, Butterfly, Blending the E series only)
- Pixel zoom mode
- Scan Switch
- Native Scan (pixel-to-pixel display)
- HD Frame Capture mode
- Separate control unit with USB
- Centralized monitor-wall control
- DC operation with DC low power indicator*1
- Character Off button
- Copy function for monitor setup and adjustment data
- +12dB Chroma UP function
- Marker settings
- Aspect switch
- Wide variety of functions
- Status display

*1 Requires v1.1 update.
*2 BVM-E171 only and requires optional HDR Monitoring License BVML-HE171..

Input / Output

Specifications

	BVM-E251	BVM-E171
Picture Performance		
Panel	OLED panel	
Picture size (diagonal)	623.4 mm (24 5/8 inches)	419.7 mm (16 5/8 inches)
Effective picture size (H x V)	543.4 x 305.6 mm (21 1/2 x 12 1/8 inches)	365.8 x 205.7 mm (14 1/2 x 8 1/8 inches)
Resolution (H x V)	1920 x 1080 pixels (Full HD)	
Aspect	16:9	
Pixel efficiency	99.99%	
Panel drive	10-bit	
Panel frame rate	48 Hz / 50 Hz / 60 Hz (48 Hz, 60 Hz are also compatible with 1/1.001 frame rates)	
Viewing angle (panel specification)	89°/89°/89°/89° (typical) (up/down/left/right contrast > 10:1)	
Standard luminance	100 cd/m2 (preset1 to preset5 at EOTF 2.4) 48 cd/m2 (preset (DCI)) (1.0 Vp-preference signal, 100% white signal input)	
Color temperature	D55, D61, D65, D93, DCI*3, DCI XYZ and User1-5 (5,000K to 10,000K adjustable)	
Color space (color gamut)	ITU-R BT.2020*4, ITU-R BT.709, EBU, SMPTE-C, DCI-P3*4, BVM-E251 Native*5, S-GAMUT/S-GAMUT3*4, S-GAMUT3.cine*4	ITU-R BT.2020*4, ITU-R BT.709, EBU, SMPTE-C, DCI-P3*4, BVM-E171 Native*6, S-GAMUT/S-GAMUT3*4, S-GAMUT3.cine*4
Transmission Matrix	ITU-R BT.2020(Non-constant luminance), ITU-R BT.709, ITU-R BT.601, SMPTE240M	ITU-R BT.2020 (Non-constant luminance is supported), ITU-R BT.709
EOTF	2.2, 2.4, 2.6, CRT, S-Log3(SDR), S-Log2(SDR)	2.2, 2.4, 2.6, CRT, S-Log3(SDR), S-Log2(SDR) 2.2, 2.4, 2.6, CRT, S-Log3(HDR), S-Log3(Live HDR), S-Log2(HDR), ITU-R BT.2100(HLG), SMPTE ST2084, 2.4(HDR) when BVML-HE171 activates the HDR monitoring features.
Input		
SDI	BNC (x2)	
HDMI	HDMI (x1) (HDCP 1.4 correspondence, Deep Color correspondence)	
Composite Video	BNC (x1)	
Parallel remote	RJ-45 modular connector 8-pin (x1), (Pin-assignable)	
Serial remote (LAN)	Ethernet (10BASE-T/100BASE-TX), RJ-45 (x1)	
DC In	XLR (x1)	
Output		
SDI	BNC (x2)	
Composite Video	BNC (x1)	
DC out	Circle 4-pin (female) (x1)	
General		
Power requirement	AC 100 V to 240 V, 1.2 A to 0.6 A, 50/60 Hz, DC 24 V to 28 V, 4.5 A to 3.9 A	AC 100 V to 240 V, 0.9 A to 0.5 A, 50/60 Hz, DC 24 V to 28 V, 3.3 A to 2.9 A
Power consumption	Approx. 117 W (AC power supply)(max.) Approx. 107 W (DC power supply)(max.) Approx. 55W (AC power supply) Approx. 51W (DC power supply) (average power consumption in the default status)	Approx. 88 W (AC power supply) (max.) Approx. 78 W (DC power supply) (max.) Approx. 53 W (AC power supply) Approx. 49 W (DC power supply) (average power consumption in the default status)
Operating temperature	0°C to 35°C (32°F to 95°F) Recommended: 20°C to 30°C (68°F to 86°F)	
Operating humidity	30% to 85% (no condensation)	
Storage and transport temperature	-20°C to +60°C (-4°F to +140°F)	
Storage and transport humidity	0% to 90%	
Operating, storage, and transport pressure	700 hPa to 1060 hPa	
Dimensions (W x H x D)	576.0 x 424.0(408.0)* x 148.0 mm (22 3/4 x 16 3/4(16 1/16)* x 5 7/8 inches) *Height without legs	436.0 x 282.4 (266.4)* x 156.5 mm (17 1/4 x 11 1/4 (10 1/2)* x 6 1/4 inches) *Height without legs
Mass	Approx. 10.3 kg (22 lb 11 oz)	Approx. 6.5 kg (14 lb 5 oz)
Supplied accessories	AC power cord (1), AC plug holder (1), CD-ROM (1), Before using this unit (Japanese, English, each 1), HDMI cable holder(1), European Representative (1)	AC power cord (1), AC plug holder (1), CD-ROM (1), Before using this unit (Japanese, English, each 1), HDMI cable holder(1), Handle(1), Rack mount bracket(2), Rack mount bracket attachment screws(4), European Representative (1)

*3 DCI: x=0.314 y=0.351
*4 The BVM-E251 and BVM-E171 does not support the ITU-R BT.2020, DCI-P3, S-Gamut/S-Gamut3 and S-Gamut3.cine color space in full.
*5 The BVM-E251 individual chromaticity points. The widest color space setting of the signal is reproduced by the BVM-E251.
*6 The BVM-E171 individual chromaticity points. The widest color space setting of the signal is reproduced by the BVM-E171.

BVM-E251/BVM-E171

OLED Master Monitors

Signal Formats / Input Adaptors

	Signal System	Signal Structure		Quantization
Composite	720*[2] X 487 / 59.94 / I	NTSC 0/7.5		Limited
	720*[2] X 487 / 59.94 / I	PAL-M		Limited
	720*[2] X 576 / 59.94 / I	PAL		Limited
SD-SDI	720 X 487 / 59.94 / I	4 : 2 : 2 (YCbCr)	10 bit	Limited
	720 X 576 / 59.94 / I	4 : 2 : 2 (YCbCr)	10 bit	Limited
HD-SDI Single Link	1920 × 1080 / 50 / I	4 : 2 : 2 (YCbCr)	10 bit	Limited
	1920 × 1080 / 60*[1] / I	4 : 2 : 2 (YCbCr)	10 bit	Limited
	1280 × 720 / 50 / P	4 : 2 : 2 (YCbCr)	10 bit	Limited
	1280 × 720 / 60*[1] / P	4 : 2 : 2 (YCbCr)	10 bit	Limited
	1920 × 1080 / 24*[1] / PsF	4 : 2 : 2 (YCbCr)	10 bit	Limited
	1920 × 1080 / 24*[1] / P	4 : 2 : 2 (YCbCr)	10 bit	Limited
	1920 × 1080 / 25 / PsF	4 : 2 : 2 (YCbCr)	10 bit	Limited
	1920 × 1080 / 25 / P	4 : 2 : 2 (YCbCr)	10 bit	Limited
	1920 × 1080 / 30*[1] / PsF	4 : 2 : 2 (YCbCr)	10 bit	Limited
	1920 × 1080 / 30*[1] / P	4 : 2 : 2 (YCbCr)	10 bit	Limited
	1280 × 720 / 24*[1] / P	4 : 2 : 2 (YCbCr)	10 bit	Limited
	1280 × 720 / 25 / P	4 : 2 : 2 (YCbCr)	10 bit	Limited
	1280 × 720 / 30*[1] / P	4 : 2 : 2 (YCbCr)	10 bit	Limited
HD-SDI Dual Link	1920 × 1080 / 50 / I	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (YCbCr)	12 bit	Limited
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 50 / I	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (YCbCr)	12 bit	Limited
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 50 / P	4 : 2 : 2 (YCbCr)	10 bit	Limited
	1920 × 1080 / 60*[1] / P	4 : 2 : 2 (YCbCr)	10 bit	Limited
	1920 × 1080 / 24*[1] / PsF	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (YCbCr)	12 bit	Limited
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 24*[1] / P	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (YCbCr)	12 bit	Limited
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 25 / PsF	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (YCbCr)	12 bit	Limited
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 25 / P	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (YCbCr)	12 bit	Limited
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 30*[1] / PsF	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (YCbCr)	12 bit	Limited
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 30*[1] / P	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (YCbCr)	12 bit	Limited
		4 : 4 : 4 (RGB)	12 bit	Limited / Full

	Signal System	Signal Structure		Quantization
3G-SDI	1920 × 1080 / 50 / I	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (YCbCr)	12 bit	Limited
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 50 / I	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (YCbCr)	12 bit	Limited
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1280 × 720 / 50 / P	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
	1280 × 720 / 60*[1] / P	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
	1920 × 1080 / 50 / P	4 : 2 : 2 (YCbCr)	10 bit	Limited
	1920 × 1080 / 60*[1] / P	4 : 2 : 2 (YCbCr)	10 bit	Limited
	1920 × 1080 / 24*[1] / PsF	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (YCbCr)	12 bit	Limited
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 24*[1] / P	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (YCbCr)	12 bit	Limited
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 25 / PsF	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (YCbCr)	12 bit	Limited
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 25 / P	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (YCbCr)	12 bit	Limited
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 30*[1] / PsF	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (YCbCr)	12 bit	Limited
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 30*[1] / P	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (YCbCr)	12 bit	Limited
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1280 × 720 / 24*[1] / P	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
	1280 × 720 / 25 / P	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
	1280 × 720 / 30*[1] / P	4 : 4 : 4 (YCbCr)	10 bit	Limited
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
HD-SDI Single Link (2K)	2048 × 1080/24*[1] / PsF	4 : 2 : 2 (YCbCr)	10 bit	Limited
	2048 × 1080/24*[1] / P	4 : 2 : 2 (YCbCr)	10 bit	Limited
	2048 × 1080 / 25 / PsF	4 : 2 : 2 (YCbCr)	10 bit	Limited
	2048 × 1080 / 25 / P	4 : 2 : 2 (YCbCr)	10 bit	Limited
	2048 × 1080 / 30*[1] / PsF	4 : 2 : 2 (YCbCr)	10 bit	Limited
	2048 × 1080 / 30*[1] / P	4 : 2 : 2 (YCbCr)	10 bit	Limited

*1 Also compatible with the frame rate 1/1.001

*2 Displayed as masked when blanking SMPTE ST170 (480/59.94i) and ITU-R BT.470 (576/50i) horizontally.

Signal Formats / Input Adaptors

	Signal System	Signal Structure		Quantization
HD-SDI Dual Link (2K)	1920 × 1080 / 24*[1] / PsF	4 : 4 : 4 (XYZ)	12 bit	Full
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 24*[1] / P	4 : 4 : 4 (XYZ)	12 bit	Full
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 25 / PsF	4 : 4 : 4 (XYZ)	12 bit	Full
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 25 / P	4 : 4 : 4 (XYZ)	12 bit	Full
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 30*[1] / PsF	4 : 4 : 4 (XYZ)	12 bit	Full
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 30*[1] / P	4 : 4 : 4 (XYZ)	12 bit	Full
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
3G-SDI Single Link (2K)	1920 × 1080 / 24*[1] / PsF	4 : 4 : 4 (XYZ)	12 bit	Full
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 24*[1] / P	4 : 4 : 4 (XYZ)	12 bit	Full
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 25 / PsF	4 : 4 : 4 (XYZ)	12 bit	Full
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 25 / P	4 : 4 : 4 (XYZ)	12 bit	Full
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 30*[1] / PsF	4 : 4 : 4 (XYZ)	12 bit	Full
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (RGB)	12 bit	Limited / Full
	1920 × 1080 / 30*[1] / P	4 : 4 : 4 (XYZ)	12 bit	Full
		4 : 4 : 4 (RGB)	10 bit	Limited / Full
		4 : 4 : 4 (RGB)	12 bit	Limited / Full

HDMI and DisplayPort Input Signal Formats

Signal System	Interface sampling frequency [MHz]	Aspect ratio	Standard	Quantization
Video Signals				
640 x 480 / 60*[1] / P	25.200*[1]	4:3	CEA-861	Full
720 x 480 / 60*[1] / P	27.027*[1]	4:3/16:9	CEA-861	Limited
1280 x 720 / 60*[1] / P	74.250*[1]	16:9	CEA-861	Limited
1920 x 1080 / 60*[1] / I	74.250*[1]	16:9	CEA-861	Limited
		2.39:1		
720 x 480 / 60*[1] / I	27.027*[1]	4:3/16:9	CEA-861	Limited
720 x 576 / 50 / P	27.000	4:3/16:9	CEA-861	Limited
1280 x 720 / 50 / P	74.250	16:9	CEA-861	Limited
1920 x 1080 / 50 / I	74.250	16:9	CEA-861	Limited
		2.39:1		
720 x 576 / 50 / I	27.000	4:3/16:9	CEA-861	Limited
1920 x 1080 / 60*[1] / P	148.500*[1]	16:9	CEA-861	Limited
		2.39:1		
1920 x 1080 / 50 / P	148.500	16:9	CEA-861	Limited
		2.39:1		
1920 x 1080 / 24*[1] / P	74.250*[1]	16:9	CEA-861	Limited
		2.39:1		
1920 x 1080 / 25 / P	74.250	16:9	CEA-861	Limited
		2.39:1		
1920 x 1080 / 30*[1] / P	74.250*[1]	16:9	CEA-861	Limited
		2.39:1		
2048 x 1080 / 24*[1] / P	74.250*[1]	1.896:1		Limited
		2.39:1		
2048 x 1080 / 25 / P	74.250	1.896:1		Limited
		2.39:1		
2048 x 1080 / 30*[1] / P	74.250*[1]	1.896:1		Limited
		2.39:1		
2048 x 1080 / 60*[1] / P	148.500*[1]	1.896:1		Limited
		2.39:1		
2048 x 1080 / 50 / P	148.500	1.896:1		Limited
		2.39:1		
2048 x 1080 / 48 / P	148.500*[1]	1.896:1		Limited
		2.39:1		
Computer Signals				
800 x 600 / 60 / P	40.000	4:3	Wall	Limited
1024 x 768 / 60 / P	65.000	4:3	Wall	Limited
1280 x 960 / 60 / P	108.000	4:3	Wall	Limited
1280 x 1024 / 60 / P	108.000	5:4	Wall	Full
1400 x 1050 / 60 / P	121.750	4:3	Wall	Full

*1 Also compatible with the frame rate 1/1.001

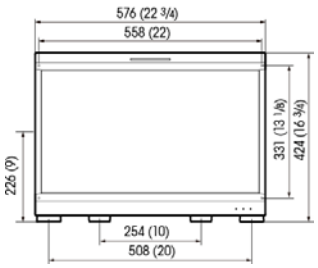
BVM-E251/BVM-E171

OLED Master Monitors

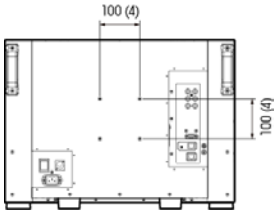
Dimensions

BVM-E251

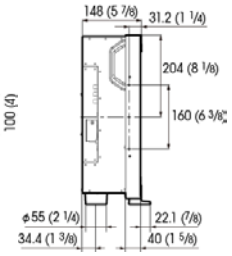
Front



Rear

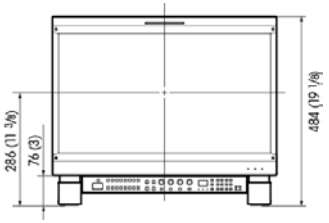


Side

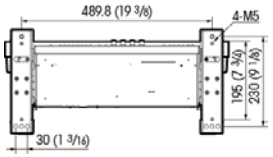


BVM-E251 with the optional BKM-17R and BKM-37H with a tilt

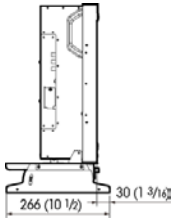
Front



Bottom



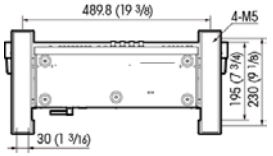
Side



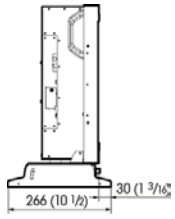
BVM-E251 with the optional BKM-17R and BKM-38H

Front

Bottom

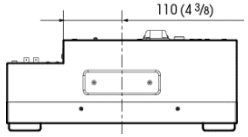


Side

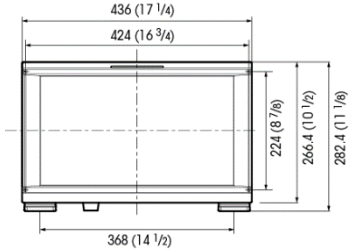


BVM-E171

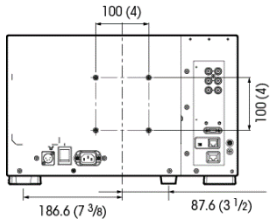
Top



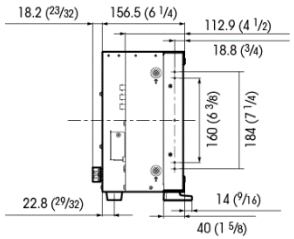
Front



Rear

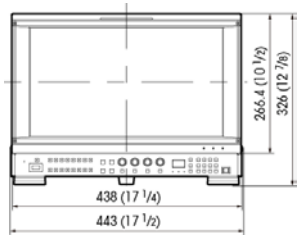


Side

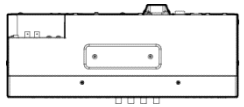


BVM-E171 with the optional BKM-17R and BKM-39H

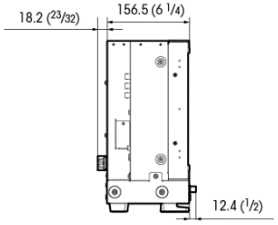
Front



Top

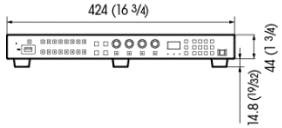


Side

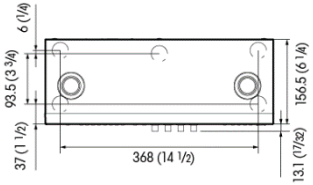


BKM-17R

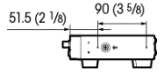
Front



Top



Side



Unit: mm (inches)

Options

BKM-17R
Monitor Control Unit

The BVM-E 251/E171 monitors and the BKM-17R Monitor Control Unit are equipped with an Ethernet port, allowing remote control of display parameters across a standard Ethernet connection. One BKM-17R Monitor Control Unit can control up to thirty-two (32) BVM*1 monitors.

*1 Includes BVM-X300, PVM-X550, BVM-L , PVM-L, and BVM- E/-F Series monitors.

Front panel

Rear panel

BKM-17R Specifications

INPUT/OUTPUT	
LAN	10BASE-T/100BASE-TX connector: RJ-45 (x1)
DC 12 V IN	Circle pin (x1)
USB (USB2.0) connector	USB Standard A (x1)
GENERAL	
Power requirements	DC IN: 12 V, 0.5 A (supplied with the connected monitor or the connected AC adapter) AC adapter (AC-UES1230 or ACUES1230M) AC adaptor: AC IN: 100 V to 240 V, 50/60 Hz, DC OUT: 12 V, 3 A
Current consumption	12 V DC, 0.5 A
Power consumption	Approx. 6 W
Operating temperature	0°C to 35°C (32°F to 95°F), Recommended: 20°C to 30°C (68°F to 86°F)
Operating humidity	0% to 90% (no condensation)
Operating pressure	700 hPa to 1060 hPa
Storage / transport temperature	-10°C to +40°C (14°F to 104°F)
Storage/transport humidity	0% to 90%
Operating / storage / transport pressure	700 hPa to 1060 hPa
Dimensions(W x H x D)	424 x 58.8 x 169.6 mm (16 3/4 x 2 3/8 x 6 3/4 inches)
Mass	2.1 kg (4 lb 10 oz)
Supplied accessories	AC adapter (AC-UES1230 or ACUES1230M)(1), AC power cord (1), Rack mount brackets (2), Rack mount bracket attachment screws(4), Function labels (2), DC-cord secure connection attachment (1), DC-cord secure connection screw (1), Before Using This Unit (1), CD-ROM (1), European Representative (1)

BVML-HE171
HDR Monitoring License

A permanent license allows the BVM-E171 TRIMASTER EL™ OLED Critical Reference Monitor*2 to support excellent HDR images. Called the BVML-HE171 HDR Monitoring License, it supports EOTF, S-Log3 (HDR), S-Log3 (Live HDR), S-Log2 (HDR), ITU-R BT.2100 (HLG), and SMPTE ST2084, 2.4 (HDR).

*2 The BVM-E171 must first be updated to V1.1. HDR features are activated via the BKM-17R Monitor Control Unit.

Fantastic HDR Performance

The fantastic HDR images enabled on the BVM-E171 Version 1.1 by the BVML-HE171 HDR Monitoring License include wide color gamut and OLED black pictures with pixel dimming and great off-axis performance.

Activate With The BKM-17R Monitor Control Unit

To activate these HDR features, you need a BKM-17R Monitor Control Unit and a install key. Your Sony sales representative can provide a purchase key. Your next step is to visit the Sony eCSite to input the unique device ID is shown on an OSD of your BVM-E171 V1.1 and your purchase key. You then receive your install key, which you should download and save to USB memory. Whenever required, you can now insert the USB memory stick in the BKM-17R to activate the HDR features of your BVM-E171 V1.1.

BKM-37H*3
Controller Attachment Stand with tilt (Between 5° forward and 10° backward.)
(For BVM-E251)

BKM-38H*3
Controller Attachment Stand
(For BVM-E251)

BKM-39H*3
Controller Attachment Stand
(For BVM-E171)

SMF-17R20
Monitor Interface Cable

*3 Requires the latest version of the BKM-37H, BKM-38H, and BKM-39H with a product code suffix /3 or later.

BVM-E251/E171

OLED Master Monitors

What's the difference between BVM and PVM?

	Master Monitor BVM-E251/E171	Picture Monitor PVM-A250/A170
		
Basic Quality	Selected Best Panel Only for BVM Sony Designed OLED 12bit Engine	Standard Panel Standard 10 bit Engine
Reference Monitoring Features	•ITU-R BT.2020/DCI-P3 support •HDR*1 •Interlace mode •High precision I/P conversion •XYZ signal support •Two Area Markers •Gamut error •Pixel Zoom •Aspect correction for SD signal	•ITU-R BT.2020/DCI-P3 support*2 •Flexible Marker*2
On-set Monitoring Features	•DC Operation(25"/17": 24V to 28V) •Picture & Picture •Chroma up •S-Log3/S-Log2	•DC Operation(17":11V to 16V) •DC Low power indicator •Light weight •Low power consumption •Optional Protection Panel •Camera Focus Assist •WFM/Vector •Grid display •Picture & Picture •Chroma up •Flip H/V •Camera metadata •Anamorphic display •S-Log2(SDR)*2 •S-Log3(SDR)*2 •False Color*2 •Sync-Free Side By Side*2

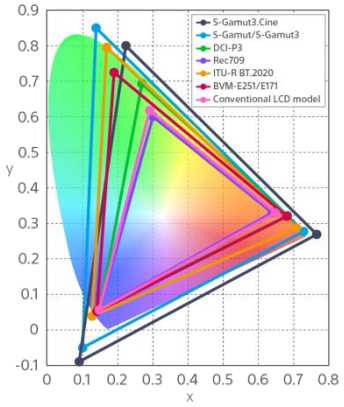
*1 BVM-E171 V1.1 only with HDR Monitoring License BVML-HE171.

*2 Supported with V2.0

ITU-R BT.2020 support enabled OLED's wide color gamut

The BVM-E251 and BVM-E171 are surely an HD monitor that conforms to ITU-R BT.709 color space. Responding to an increase of the demand of using an HD monitor in a 4K production, BVM-E251 newly supports ITU-R BT.2020 color space and transfer matrix. The OLED's wide color gamut enables DCI-P3 emulation for digital intermediate work.*1

*1 The BVM-E251 and BVM-E171 does not support the ITU-R BT.2020, S-Gamut,/S-Gamut3, S-Gamut3.cine and DCI-P3 color space in full.



Cutting-edge I/P conversion with low process delay

Sony's original I/P conversion technology used in the BVM Series minimizes processing artifacts found in typical up conversion processes. This has been improved in the BVM-L Series so that an interlaced image is displayed accurately and faithfully. The process delay times of 1080/60i and 50i are around 0.5 field or less and also the ones of SD/60i and 50i are less than 1 field.

Flicker free mode

The TRIMASTER EL OLED panel's superb quick response and scan-driving performance deliver stunning picture quality with virtually no motion blur. However, there is a possibility that flicker is just visible especially when a lower frequency signal is displayed (24p, 24PsF, and 50i). To remove visible flicker, the BVM-E251 and BVM-E171 are equipped with Flicker-free mode.

High Dynamic Range Mode

In addition to the intrinsic high-contrast performance of the TRIMASTER EL™ OLED panel, this monitor provides High Dynamic Range mode*2. This offers never-before-seen image reproduction – the black is black, and peak brightness can be reproduced more realistically with colors that are typically saturated in a conventional standard dynamic range. This mode can brilliantly express sparkling town lights and stars in the night sky.

*2 Only for BVM-E171 V1.1. BVML-HE171 is required for BVM-E171 V1.1.

Conventional standard dynamic range

Highlight is clipped; less shadow detail

High Dynamic Range mode

Render shadow detail to highlight

* Simulated images

Input Versatility

Multi-format signal support

The BVM-E251 and BVM-E171 can accept almost any SD or HD video format, such as analogue composite video, HDMI and SDI, and various computer signals through HDMI

Standard 3G-SDI inputs

These monitors are equipped with two standard 3G/HD/SD-SDI inputs, an HDMI (HDCP correspondence) and composite input. Two standard inputs also support dual link HD-SDI signals. And also closed caption on SDI is supported.

12-bit output accuracy signal processing

The BVM-E251 and E171 use a 12-bit display engine, which allows images to be reproduced with high precision for display accuracy.

Accepts computer signals via HDMI

The BVM-E251 and BVM-E171 accepts various computer signals input up to 1920 x 1080 through its HDMI connector. It is also equipped with Digital Cinema 2048x1080 signals.

Exclusive BVM-E Series Digital Cinema Features

The BVM- E251 and E171 offers digital cinema features which are indispensable and ideal for high-quality creative digital cinema onset and post-production workflow.

2K (2048 x 1080, RGB/XYZ) Input

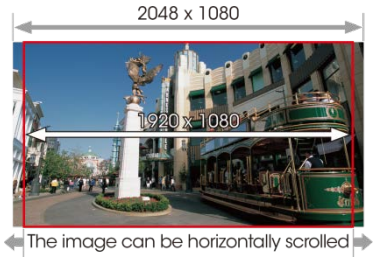
The BVM-E251 and E171 are capable of 2K (2048 x 1080 resolution, RGB/XYZ) input. The 2K signal is displayed in two ways – as a full 2K image scaled into a full-HD (1920 x 1080) screen, or as a 2K native display with an image-slide function.

S-Log3(SDR) and S-Log2(SDR) EOTF

S-LOG gamma is a technique used in Sony's digital cinematography cameras that allows the full latitude of the camera imager to be maintained throughout the production chain. Unlike conventional systems, in which highlight contrast is compressed, S-LOG Gamma logarithmically converts the video signal using characteristics similar to film negatives. This keeps the camera imager dynamic range intact, even in extreme highlight areas. Two display modes are offered:
The BVM-E171 V1.1 activated by BVML-HE171 supports HDR display only.

2K picture resolution

The 2048 Image-slide function allows 2K resolution (2048 x 1080 pixels) images to be mapped, pixel-to-pixel, on the full-HD (1920 x 1080 pixels) panel without picture degradation. When the user needs to view the left or right edge of the picture frame, they can scroll the image in a horizontal direction.



Gamut Error Display

This function detects irregular signal input. When an irregular signal is detected, these master monitors indicate this with a zebra pattern over the relevant area of the picture.
Gamut Error Display is a convenient feature that instantly alerts viewers to such signals without requiring the use of a waveform monitor

Signal Analyzing Functions

Picture & Picture

The unique Picture & Picture function of the BVM-E251 and E171 allows simultaneous display of two input signals on the monitor's screen. This function is extremely convenient for making instant adjustments to two input sources, because there is no need to individually adjust the different characteristics of two monitors. This function comes in handy for adjustments between two cameras, special-effects creation, time-lapse shooting, and computer graphics (CG) work.

Side-by-side

The two picture images are downscaled using a digital filter and displayed side-by-side. This feature is convenient when making white balance adjustments or determining shooting angles between two cameras.

WIPE

The area of the two pictures to be displayed is selected using a vertical WIPE pattern, which is controlled from the BKM-17R. This function is useful when picture detail of the two images must be examined on a pixel basis. This is normally used to review still images.

Butterfly

The two inputs are displayed as line-symmetric images on the left and right halves of the screen. By adjusting the H-position controller, the two images can be moved inward to the middle of the screen. An instant comparison of the moving images can then be made easily and accurately, without the user having to move their eyes.

Blending

The two picture images are overlapped for display, and the mix ratio is adjustable. This function is useful to verify whether a foreground signal is accurately keyed into the background signal, or when combining shoots with live action and computer-generated effects.

Pixel Zoom

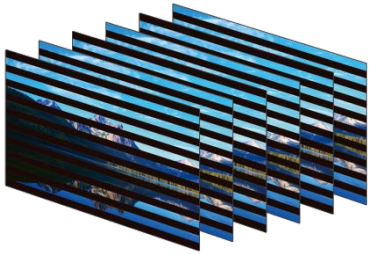
Pixel Zoom*1 is a function for magnifying images. A selected area of the displayed picture can be enlarged on a pixel basis, up to eight times in size both vertically and horizontally. Because this function does not use scaling, the desired picture content is magnified and displayed faithfully to the raw input signal. This function is useful when evaluating precise picture edges, such as for chroma keying.

*1 This function is effective when the input signal is displayed in "Native Scan" mode.

Convenient Features

Interlace Display

BVM-E251 and E171 monitors offer an Interlace Display feature for 1080i and SD inputs. This lets each BVM-E monitor display these inputs as a true interlace display. As with the Native Scan function, Interlace Display mode offers faithful reproduction of the input signal, and the displayed interlace fields are free from the picture degradation that can occur as a result of typical I/P conversion processes.



*Simulated image

Scan Switch

The Scan Switch function allows switching between under scan (-3%), normal scan (0%), and over scan (mask of the 5% over scan portion in the normal scan).

Native Scan (pixel-to-pixel display)

Conventional flat-panel monitors reproduce images using scaling and I/P conversion due to their fixed pixel counts and progressive scanning processes. The Native Scan function is a unique display mode that reproduces images without changing the input signal's pixel count. For example, when an SD signal is input, the BVM-E251 and E171 monitors will reproduce the image at a picture size of 720 x 487*1 pixels. For SD inputs the Native Scan function also allows the displayed image size to be doubled to 1440 x 974*1 by duplicating and doubling each pixel both horizontally and vertically.

*1 The 525/59.94i signal specified by Rec. ITU-R BT.601.

720 x 487 Native Scan

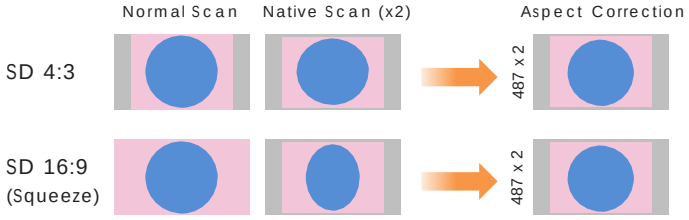
1440 x 974 Native Scan
(720 x 487) x 2

HD Frame Capture

The HD Frame Capture function of the BVM-E251 and E171 allows a picture frame from the 3G-SDI and HD-SDI input to be captured and saved as a picture file on a USB memory media(BKM-17R) . This picture file can be used as a reference for various purposes, for example, for picture-tone adjustments between past images and for camera-framing adjustments.

Aspect Correction Mode

PAL and NTSC video systems are all based on rectangular pixels. Display of these formats on a square pixel panel typically distorts the image. The BVM- E251 and E171 use a unique process called Aspect Correction which, while still offering native pixel performance, continues to display image geometry correctly. This scaling technique used in BVM-E251 and E171 corrects horizontal distortion while keeping the vertical pixel count correctly displayed.



Example of NTSC signal on the 16:9 aspect panel – BVM-E250A

Aspect switch

The aspect ratio can be switched between 4:3, 16:9, 2.39: 1, and 1.896:1 depending on the input signal.

16:9	⇔	4:3
16:9	⇔	2.39:1
1.896:1	⇔	2.39:1

Marker settings

BVM-E251 and E171 monitors can display various markers, including an aspect marker, safe area marker, and center marker. In addition to this flexible selection of marker types, detailed display settings of each marker are offered. For example, the color, brightness, horizontal/vertical position, and width of aspect markers can all be controlled, while the height and width of safe area markers can be adjusted.

Marker Variation

	Safe Area Maker		Aspect Marker*
	%	Dot (Pixel)	
Selectable Markers	80%, 88%, 90%, 93%, or variable	Flexible	16:9, 15:9, 14:9, 13:9, 4:3, 2.39:1, 2.35:1, 1.896:1,1.85:1, or 1.66:1
Line Colors	White, Red, Green, Blue, Yellow, Cyan, or Magenta		
Line Width	1 to 5 dots (factory preset at 2 dots)		
Line Luminance	High (bright) or Low (dark)		
Blanking	—		Off: Blanking is released Black: Blanking Half: Half blanking

Marker Examples

Aspect Mode: 2.35:1,
Safe Area: Shape A,
Area Size: 80%

Aspect Mode: 14:9,
Safe Area: Shape B,
Area Size: 80%

Aspect Mode: 4:3, Safe Area: Shape C, Area Size: 80%

Wide Variety of Functions

The user has a wide variety of over 40 functions to choose from. Each of these can be assigned to any of the 16 function buttons (F1 to F16) on the BKM-17R controller. Press ENTER to display the F1 to F8 (or F9 to F16) button assignment on screen.

ENTER button

F1 to F16 function buttons

F9 : FLICKER FREE
F10 : NATIVE SCAN
F11 : INTERLACE
F12 : MARKER
F13 : SIDE BY SIDE
F14 : ALM
F15 : TIME CODE
F16 : CAPTURE LOAD

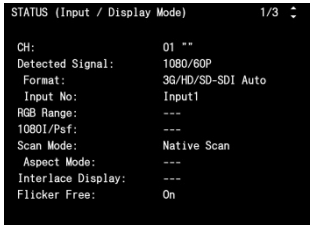
(The next Function display)

*Screen image is simulated

Status Display

Simply assign STATUS to one of the function buttons (F1 to F16) on the BKM-17R controllers. The user can instantly grasp the whole monitor status and configurations without having to search through menus.

F1 to F16 function buttons



*Screen image is simulated

Modular Monitor Control Unit (BKM-17R)

BVM-E251 and BVM-E171 monitors and their control panels are provided as separate units, allowing greater flexibility for system integration. BVM-E251 and E171 incorporate a monitor control unit (the BKM-17R) as an option. The BKM-17R can be attached beneath the monitor using the optional controller attachment stand*1*2, or connected remotely via an Ethernet cable.

*1 Requires the latest version of the BKM-37H, BKM-38H, and BKM-39H with a product code suffix /3 or later.
*2 The BVM-E251 use the BKM-37H or BKM-38H attachment stand.
The BVM-E171 use the BKM-39H attachment stand.

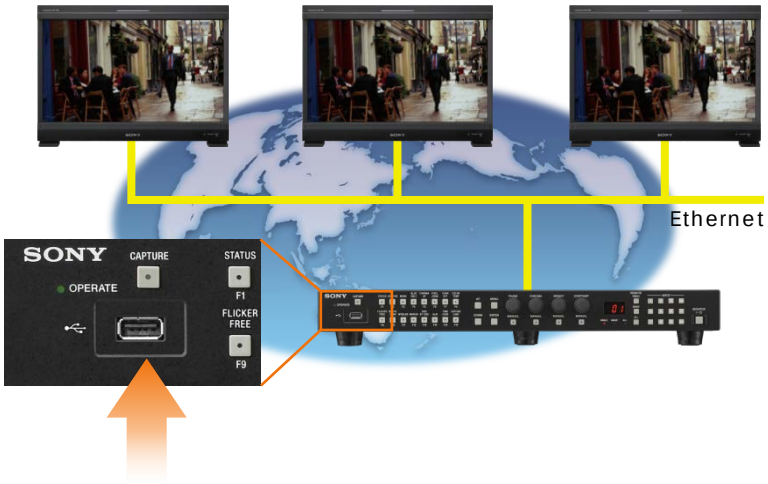
"+12dB Chroma UP" function

A "Chroma UP" button located on the front panel of the BKM-17R allows the Chroma level to be boosted by +12 dB.
This is a convenient feature for adjusting camera white balance with a higher degree of accuracy.

Copy function for monitor setup and adjustment data

Copy function for monitor setup and adjustment data
The optional BKM-17R control unit includes a USB memory slot to save and load monitor configuration and adjustment settings. This is useful for multiple monitor systems, allowing the transfer of one monitor's setup and adjustment data to another.*3
This data can also be transferred via the BVM's Ethernet connection.

*3 Data can be moved between BVM-E251 and BVM-E171 monitors.



Ethernet-based remote control

The BVM-E251 and BVM-E171 monitors and the BKM-17R Monitor Control Unit are equipped with an Ethernet port, allowing remote control of display parameters across a standard Ethernet connection. One BKM-17R Monitor Control Unit can control up to thirty-two (32) BVM*4 monitors.

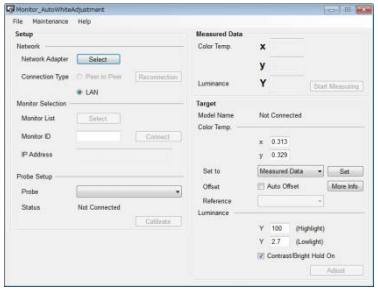
*4 Includes BVM-X300, PVM-X550, monitors, BVM-L , PVM-L, and BVM-E/-F Series monitors.

Easy Setup and Adjustment

Auto White Adjustment

The BVM-E251 and E171 employ a software-based color temperature (white balance) calibration function, which is called “Monitor_AutoWhiteAdjustment”. Combined with a PC and commercially available calibration tools*1, this function enables simple adjustment of the monitor’s white balance.

*1 Konica Minolta CA-210, CA-310, CS-200, DK-Technologies PM5639/06, X-Rite i1 Pro/i1 Pro2, Photo Research PR-655/670, Klein K-10, and JETI specbos 1211. A connector is required for each color analyzer.



“Monitor_AutoWhiteAdjuestment” GUI image

DC Operation With DC Low Power Indicator*3

The BVM-E251 and BVM-E171 can be DC operated and features a DC low power indicator. The BVM-E251 provides more flexibility and mobility to users who want a larger size screen for on-set applications. Due to its lightweight and slim design, the BVM-E171 is ideal for field applications.

*3 Requires V1.1 update.

BVM-E171 rear view

Tilting the monitor

The monitor can tilt between 5° forward and 10° backward when the attachment stand is attached.

“Character Off” button

To facilitate parameter adjustments, the On-Screen Menu indication can be taken off the screen, while in Menu mode. The On-Screen Menu indication can be toggled on or off with a simple press of a button on the BKM-17R’s front panel.

Auto Chroma / Phase adjustment*2

An Auto Chroma / Phase / Matrix setup function is provided on BVM-E251 and E171, which automatically adjusts the monitor’s chroma, phase, and matrix using external color bars.

*2 Supports analog signal inputs only.

Other features

- Wall Mounting (100 x 100 mm pitch)
- EIA 19-inch Standard Rack-mountable (6U High)*4
- Blue Only
- Mono
- H Delay / V Delay*5
- NTSC Setup Level (0%, 7.5%)
- Aperture
- Serial Remote (Ethernet)
- Parallel Remote (D-sub 9-pin)
- Tally Lamp (Amber)

*4 BVM-E171 only. Mounting brackets are supplied.
*5 This function does not work for a composite signal.