

BVM-E250

24.5-inch Full-HD Reference
OLED Monitor



Overview

Professional applications

For professional applications such as colour grading, high-end editing, broadcasting and scientific research, Sony's leading edge Organic Light-Emitting Diode (OLED) technology and signals processing technology ensures absolutely outstanding performance with the BVM-E250.

State-of-the-art product

Super Top Emission technology enhances OLED's intrinsic benefits to deliver outstanding black performance, a quick response with virtually no motion blur, and a wide colour gamut. An all-new 12-bit output digital signal processing engine provides a nonlinear cubic conversion colour-management system that delivers precise colour reproduction, stunning picture uniformity, smoother-than-ever gamma performance, and picture quality consistency.

Accepts computer signals via HDMI

The BVM-E250 accepts various computer signals input up to 1920 x 1080 through its HDMI connector. It is also equipped with Digital Cinema features.

Features

Superb Picture Performance

Sony TRIMASTER EL technology combines the ultimate performance of Sony OLED display with the highly sophisticated TRIMASTER technology to provide the highest level of picture performance:

- Accurate Black Reproduction
- High purity and accurate colour reproduction
- Quick response with virtually no motion blur
- High Contrast Performance

Super Top Emission™ technology

Sony's Super Top Emission™ technology has a micro-cavity structure which incorporates colour filters. The micro-cavity structure uses an optical resonance effect to enhance colour purity and improve light-emission efficiency. In addition, the colour filter of each RGB further enhances the colour purity of emitted light, and reduces ambient light reflection.

Ultimate Display Engine

High-precision signal processing engine has been developed to fulfil the reference monitor criteria and is optimized to maximize OLED panel performance. This engine incorporates 12-bit output accuracy at each process, and provides both a high quality I/P conversion algorithm and a highly accurate colour management system.

Multi-format signal support

The BVM-E250 monitor can accept almost any SD or HD video format, both analogue and digital, and variable computer signals up to 1920 × 1080. In addition to the standard inputs, four option board slots are offered to configure this monitor according to different user needs.

Versatile video inputs

This monitor is equipped as standard with two 3G/HD/SD-SDI inputs, an HDMI (with HDCP) input and a Displayport* for future

expansion. In addition, four option ports are available.

* DisplayPort input will be supported from monitor software version 1.1 or later.

Four Slots for Optional Video Input Decoders

The monitor can accept up to four optional video input boards simultaneously. Available formats include analogue, composite, Y/C, components, RGB and digital 3G/HD/SD SDI.

3D signal analyzing functions (3D signal input, 2D display)

By installing the optional BKM-250TG 3G/HD-SDI input adaptor*, the BVM-E250 can support a variety of 3D signal analyzes. The 3D signals* are displayed in 2D mode.

- Difference display
- Checkerboard display
- L/R switch display
- Horopter check display
- Flip H display

* Requires the BKM-250TG 3G-SDI input adaptor (serial number 7200001 or later). 3D signals are not displayed in stereoscopic view.

Auto White Balance

The colour temperature and white balance of BVM-E and F Series monitors can be automatically adjusted by the Auto White Balance function using specified colour temperature probes, such as the Konica Minolta CA-210, CS-200, DK-Technologies PM5639/06, and X-Rite i1 (Eye-One) Pro.

High Quality I/P Conversion Technology

The BVM-E250 monitor uses a sophisticated I/P conversion technique that keeps artefacts that are often seen in flat panel

displays to a minimum such as edge jaggedness, conversion errors, etc.

Low video delay

The BVM-E250 display engine ensures a picture delay that is less than one field.

Panel Calibration

Every BVM-E250 monitor is carefully calibrated at the factory on an individual basis, providing a high level of accuracy and stability for characteristics such as gamma and uniformity.

Colour Feedback System

Using a colour feedback system, the BVM-E250 monitor achieves the stability required for Broadcast critical monitoring applications.

Interlaced Display Mode

Faithfully reproduces interlaced signals, emulating CRT monitors.

Picture

The unique Picture

Gamut Error Display

BVM-E250 master monitor incorporates a Gamut Error Display function that detects irregular signal input.

S-LOG Gamma

BVM-E250 master monitor incorporates gamma tables to reproduce images captured using S-LOG Gamma technology. S-LOG gamma is a technique used in Sony's digital cinematography cameras that allows the full latitude of the camera CCD to be maintained throughout the production chain.

2K Picture Resolution

The 2048 Image Slide function of the BVM-E250 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.

HD Frame Capture Mode

The HD Frame Capture function of the BVM-F Series allows a picture frame from the 3G-SDI and HD-SDI input to be captured and saved as a picture file on a Memory Stick™ media.

Separate Control unit with memory stick slot

A separate control unit BKM-16R is available for the BVM-E250. It is equipped with a Memory Stick socket enables users to download and save all monitor set-ups such as input channel configuration, control preset adjustments, white balance settings and maintenance parameters.

Centralised Monitor-Wall Control

Multiple monitors can be easily managed by a single control unit BKM-16R via an Ethernet connection.

Specifications

Picture Performance

| | |
|--------------------------------|--|
| Panel | OLED panel |
| Picture Size (Diagonal) | 623.4 mm 24 5/8 inches |
| Effective Picture Size (H x V) | 543.4 x 305.6 mm 21 1/2 x 12 1/8 inches |
| Resolution (H x V) | 1920 x 1080 pixels (Full HD) |
| Aspect | 16:09 |

| | |
|-------------------------------------|--|
| Pixel Efficiency | 0,9999 |
| Panel Drive | RGB 10-bit |
| Panel Frame Rate | 48 Hz, 50 Hz, 60 Hz, 72 Hz, 75 Hz *1 |
| Viewing Angle (Panel Specification) | 89°/89°/89°/89° (typical) (up/down/left/right contrast > 10:1) |
| Normal Scan | 0% scan |
| Native Scan | Mapping the pixels of the signal to the panel to one-to-one mode, or displaying an SD signal of nonsquare pixels (the number of H pixels of the signal system is 720 or 1440) or a 640 × 480 SD signal of HDMI video by scaling processing of doubling for the V direction and correct aspect ratio for the H direction and also optimizing and displaying a picture by modifying the aperture coefficient value, filter coefficient value, etc. |
| Under Scan | 3% under scan |
| Over Scan | Mask of 5% over scan portion in the normal scan |
| Color Temperature | D55, D61, D65, D93, D-Cine *2 , User |

| | |
|--------------------|---|
| Standard Luminance | 100 cd/m ² (Preset1 to Preset5) 48 cd/m ² (Preset (D-Cine)) (100% white signal input) |
|--------------------|---|

| | |
|---------------------------|---|
| Color Space (Color Gamut) | ITU-R BT.709, EBU, SMPTE-C, D-Cine *3, E250 Native *4, S-GAMUT *5 |
|---------------------------|---|

| | |
|--------------|--------------------|
| Warm-up Time | Approx. 30 minutes |
|--------------|--------------------|

Input

| | |
|---------------------------|---------------------------------|
| BNC (x2) Input impedance: | 75 Ω unbalanced |
| Sampling frequency | |
| 3G-SDI: | |
| - Y/Cb/Cr (4:2:2): | 148.5 MHz/74.25 MHz/74.25 MHz |
| - Y/Cb/Cr (4:4:4): | 148.5 MHz /148.5 MHz/148.5 MHz |
| - G/B/R (4:4:4): | 148.5 MHz/148.5 MHz/148.5 MHz |
| HD-SDI: | |
| - Y/Cb/Cr (4:2:2): | 74.25 MHz/37.125 MHz/37.125 MHz |
| SD-SDI: | |
| - Y/Cb/Cr (4:2:2): | 13.5 MHz/6.75 MHz/6.75 MHz |
| Quantization | |

| | |
|---------------------|---|
| | 3G-SDI: 10bit/sample, 12 bit/sample HD-SDI: 10bit/sample SD-SDI: 10bit/sample |
| HDMI Input | HDMI (x1) (HDCP correspondence, Deep Color correspondence) |
| DisplayPort | DisplayPort connector (x1) *6 |
| Option Port | Four (4) ports |
| Parallel Remote | D-sub 9-pin (female) (x1) |
| Serial Remote (LAN) | RJ-45 (x1) (Ethernet, 10BASE-T/100BASE-TX) |

Output

| | |
|---------------|---|
| SDI Output | BNC (x1) (monitor output) *7 Output signal amplitude: 800 mVp-p ±10% Output impedance: 75 Ω unbalanced Transmission distance 3G-SDI: 70 m max. *8 HD-SDI: 100 m max. *8 SD-SDI: 200 m max. *9 |
| DC 5 V Output | Circle 4-pin (female) (x1) |

General

| | |
|-----------------------|---|
| Power Requirements | 100 V to 240 V AC, 1.6 A to 0.8 A, 50/60 Hz |
| Power Consumption | Approx. 145 W (max.) Approx. 72 W (average power consumption in the default status) |
| Inrush Current | (1) Maximum possible inrush current at initial switch-on (Voltage changes caused by manual switching): 53 A peak, 17 A r.m.s. (240V AC) (2) Inrush current after a mains interruption of five seconds (Voltage changes caused at zero-crossing): 39 A peak, 6 A r.m.s. (240V AC) |
| Operating Temperature | 0°C to 35°C (Recommended: 20°C to 30°C) 32°F to 95°F (Recommended: 68°F to 86°F) |
| Operating Humidity | 0% to 90% (no condensation) |

| | |
|--------------------------------------|---|
| Storage/Transport Temperature | -20°C to +60°C -4°F to +140°F |
| Storage/Transport Humidity | 0% to 90% |
| Operating/Storage/Transport Pressure | 700 hPa to 1060 hPa |
| Dimensions (W x H x D) *10 | 576.0 x 424.0 x 148.0 mm 22 3/4 x 16 3/4 x 5 7/8 inches |
| Mass | Approx. 13.0 kg Approx. 28 lb 11 oz |
| Supplied Accessories | AC power cord (1) AC plug holder (1) Bracket (1) Operation Manual (Japanese, English, each 1) CD-ROM (1) Using the CD-ROM Manual (1) |
| | BKM-16R Monitor Control Unit BKM-37H Controller Attachment Stand SMF-700 Monitor Interface Cable BKM-220D SDI 4:2:2 Input |

| | |
|----------------------|---|
| Optional Accessories | <p>Adaptor (with serial number 2100001 or higher) BKM-227W NTSC/PAL Input Adaptor BKM-229X Analog Component Input Adaptor (with serial number 2200001 or higher) BKM-243HS HD/D1-SDI Input Adaptor (with serial number 2108355 or higher) BKM-244CC HD/SD-SDI Closed Caption Adaptor BKM-250TG 3G/HD/SD-SDI Input Adaptor (with serial number 7300001 or higher)</p> |
|----------------------|---|

Notes

Note [*1] 48 Hz, 60 Hz and 72 Hz are also compatible with a frame rate of 1/1.001.

Note [*2] D-Cine: $x = 0.314$, $y = 0.351$

Note [*3] Chromaticity point of SMPTE RP 431-2 is not covered in full.

[*4] The BVM-E250 individual

| | |
|------|---|
| Note | chromaticity points. The widest color space setting of the signal is reproduced by the BVM-E250. R ($x=0.681, y=0.319$)/G ($x=0.189, y=0.724$)/B ($x=0.141, y=0.051$) (typical) |
| Note | [*5] For displaying the color gamut of the wide color space mode S-GAMUT, which is available for the F23 or F35 Digital Cinematography Camera. |
| Note | [*6] The DisplayPort input is available from V1.1. |
| Note | [*7] The signal from the monitor output connector does not satisfy the online signal specifications. |
| Note | [*8] When using 5C-FB coaxial cables (Fujikura or equivalent). |
| Note | [*9] When using 5C-2V coaxial cables (Fujikura or equivalent). |
| Note | [*10] The values for dimensions are approximate. |

Gallery



