SONY

LMD-2451W

24-inch high grade LCD monitor

Overview

The new LMD-2451W is a 24-inch widescreen LCD monitor designed for demanding broadcast and professional applications.

Redefining high performance in the mid-market sector, the new model incorporates a full HD resolution 1920x1200 WUXGA LCD panel, displaying high brightness and contrast images together with a superior viewing angle of 178 degrees. The LMD-2451W offers highly accurate and consistent colour reproduction through its unique Sony ChromaTRU technology. This allows assured picture quality decisions as well as facilitating close colour matching for tiling applications.

The LMD-2451W inherits the technology and features of the LMD-2450W. It also includes the latest generation of LCD panel which provides improved colour accuracy and viewing angle.

Full digital 10-bit processing adds to the already impressive array of specifications, delivering smooth greyscale and colour transitions.

The LMD-2451W accepts a 3G SDI input interface to display 1080p format for future proof capability.

A DVI-D input is available enabling a third-party manufacturer's

multi-image processor to be connected. The Quad Split board developed by Harris can be inserted in the modular slot structure of the monitor saving space in confined environments.

It has a new on-screen video waveform and audio level meter combined together plus a picture-in-picture mode for greater user flexibility.

An automatic lip sync control is implemented to keep the sound synchronised with the video.

An Ethernet connector is available to control monitors remotely in a wall configuration.

Entirely at home in broadcast, OB, production, post-production and corporate environments, the LMD-2451W accepts a wide variety of PC and analogue video formats and optional decoder boards are available for standard and high definition digital video display.

Suitable for a Wide Range of Applications

Ideal for BROADCAST (studio, office viewing, control room etc.), PRODUCTION (OB, monitor wall, VTR control, audio monitoring etc.), POST-PRODUCTION (mid-range multi-format editing consoles), CORPORATE (high-end multi-format use) and GRAPHIC DESIGN

Superb High Definition Display

Full HD 1920x1200 LCD panel delivers outstandingly sharp high brightness and contrast pictures

Perfect for Group Viewing

An ultra-wide viewing angle of 178 degrees makes this no problem

Lifelike picture quality

Outstanding greyscale and colour transitions provide lifelike picture quality thanks to full digital 10-bit processing.

Colour Quality Decisions can be made with Confidence

Enhanced colour gamut and innovative Sony ChromaTRU technology ensure consistent and repeatable colour to ITU-709, SMPTE and EBU standards and from monitor to monitor.

Consistently Optimal Picture Performance

Less 'drift' than CRT displays, with no convergence, geometry or linearity issues, and no susceptibility to magnetic fields.

Ideal for 'Tiling' Applications

Consistent and repeatable chroma and greyscale performance ensures close matching between monitors. Lighting function keys contribute to an elegant design ideally suited for display wall.

Productivity Boost

With new picture-in-picture and on-screen Video waveform and audio level meter.

Exceptionally Versatile

Equally suited to AV or IT-based applications due to a broad range of inputs and multi-format signal capabilities.

Future Proof

Multi-format and HD capability plus optional decoder boards will ensure that the LMD-2451W remains current.

Indoor or Outdoor Operation

Can be powered by AC or DC power supplies.

Easier to Install and Accommodate than CRT

Space saving / lightweight / low heat output - and ideal for OB or mobile applications

Air Conditioning Requirements lower than with CRT

LCD monitors generate less heat.

Low Maintenance

No routine convergence, geometry or linearity adjustments necessary. No susceptibility to magnetic fields.

Reduced Operator Fatigue

Flicker-free picture is more comfortable to view and reduces eye-strain.

Lower Total Cost of Ownership than CRT

- Simpler and cheaper to install, transport and store.
- Long operational life / high reliability.
- Low energy bills.
- Low maintenance cost.
- Reduced environmental disposal costs.

Features

New High Definition 1920x1200 WUXGA LCD Panel

Delivers outstandingly crisp, high brightness and high contrast images

Extremely wide Viewing Angle

Class-leading horizontal and vertical viewing angle - ideal for group viewing.

High Purity Colour Filters

The LMD-2451W uses precisely manufactured RGB colour filters, allowing the reproduction of colours with stunning depth and saturation to create highly natural images.

Colour Temperature

Colour temperatures of 9300k, 6500k, or a user preset value can be selected.

Accurate and Repeatable Colour Reproduction

ChromaTRU technology ensures close CRT colour accuracy and gamma matching throughout the product's life and delivers consistent colour temperature across the entire greyscale range. Both control characteristics also assure extremely tight colour matching between different model samples.

Three settings are available to simulate EBU, SMPTE and ITU-709 colour reproduction.

10-bit Picture Processing

Delivers smooth colour and greyscale transitions for high quality video production.

Sophisticated I/P Conversion

The LMD-2451W monitor uses a motion-adaptive I/P-conversion process to achieve conversion results that are optimized to the picture content - whether it is static or dynamic. Highly accurate I/P conversion is provided regardless of signal resolution, for example, whether the input is HD or SD.

Multi-Format Signal Support - up to 3G SDI Input*

LMD-2451W can accept almost any SD or HD video format, both analogue and digital.

Includes NTSC, PAL, component, RGB, Y/C, 480/60i, 575/50i, 480/60p, 576/50p, 1080/50i, 1080/60i, 1080/50p, 1080/60p, 720/50p, 720/60p, 1080/24psf, 1080/25psf, 1080/24p, 1080/25p, 1080/30p and PC signals from VGA to WUXGA.

*3G SDI requires the optional BKM-250TG interface board

3G SDI Input*

The LMD-2451W has a 3G SDI input capability. On Sony's monitors, the 3G SDI interface is compliant with the SMPTE 425 standard, transmitting up to 4:2:2/10-bit 1080/60P video data

using one SDI cable. This single-link system is known as a SD-SDI or HD-SDI system, but it can also handle both Dual-Link HD-SDI and 3G SDI video data with the use of Sony's 3G SDI interface. This 3G SDI interface enables LMD-2451W monitor to accept 50P and 60P video data. Where an upgrade to a Dual-Link HD-SDI system is necessary, this single-link 3G SDI system is also the ideal alternative.

*3G SDI requires the optional BKM-250TG interface board

Computer Input Frequencies
The LMD-2451W monitor is factory preset to accept 32 typical computer input signal frequencies.

Signal Interface Options
The monitor can accept up to two optional video boards for additional video analogue or digital inputs (HD/SD SDI). Note that the new LMD-2451W is compatible with current decoder boards.

Quad Split functionality
Harris QS-100HD board has been designed to fit inside the LMD-2451W for space saving. It provides ultimate quad images with many functions associated.

New Video Waveform and Audio Level Meter
A combined video waveform and Audio Level Meter is available on the On-screen display of the monitor.

Picture-In-Picture mode
Side by side or Picture-in-Picture (PiP) mode allows users to check two images on the same screen. Combination of video and computer images side by side is also available.

Selectable Scan Size and Aspect Ratio
Over-scan and Normal-scan as well as full scan is available, and aspect ratio can be switched between 16:9 and 4:3.

Multiple-Language On-Screen Display
English, French, Spanish, German, Italian, Japanese and Chinese.

Advanced Video Markers
The LMD-2451W monitor can display various area markers, including a center marker, aspect markers, and a safety zone marker. These flexible marker controls, together with the choice of many different aspect markers, make the LMD-4251W monitor extremely convenient display devices for a variety of shooting scenarios - from standard video acquisition to digital cinematography.

Three Colour Tally
The LMD-2451W comes equipped with a tally lamp that can be lit via a parallel remote connector. The status of the signal displayed on the monitor can be identified by the tally colour - red, green, or amber.

Selectable Scan Size for Video Input and Aspect Ratio
The scan size can be selected between 5% over scan and 0% scan modes. The aspect ratio can be switched between 16:9 and 4:3 according to the input signal.

Smart APA (Auto Pixel Alignment) for Computer Input
The image size can be automatically adjusted to its optimal setting with the one-touch APA key

Remote Control Options
Three connection methods are available -, parallel 8-pin, serial RJ45 Ethernet and serial RS232C links. The parallel connection allows up to 38 functions to be remotely controlled.

Centralised Monitor-Wall Control
Via the serial RJ45 Ethernet connector using the BKM-16R control unit.

Stereo Audio Monitoring
The LMD-2451W is equipped with stereo speakers. Up to 16 embedded digital audio channels can be decoded and routed to the speakers. Analogue audio inputs are also catered for.

Smart Function Key Lighting
The key lighting contributes to the elegant design and enhances user functionality. And to increase flexibility, the lighting can be switched off to eliminate any visual disturbance when multiple displays are employed for tiling purposes.

Protected Controls
A key-inhibit switch prevents inadvertent operation from the control panel.

VESA Mounting Standard
Table, wall or ceiling mounting

Specifications

Picture Performance	
Panel	a-Si TFT Active Matrix LCD
Picture Size (Diagonal)	613.2 mm 24 inches
Effective Picture Size (H x V)	518.4 x 324.0 mm 20 1/2 x 12 7/8 inches
Resolution (H x V)	1920 x 1200 pixels (WUXGA)
Aspect	16:10
Pixel Efficiency	0.9999

Backlight	CCFL
Colors	Approx.16.7 million colors
Viewing Angle (Panel Specification)	89°/89°/89°/89° (typical) (up/down/left/right contrast 10:1)
Normal Scan	0% scan
Over Scan	5% over scan

Input

Composite Input	BNC (x1), 1 Vp-p ±3dB sync negative
Y/C Input	Mini DIN 4-pin (x1) Y: 1 Vp-p ± 3dB sync negative C: 0.286 Vp-p ± 3dB (NTSC burst signal level), 0.3 Vp-p ± 3dB (PAL burst signal level)
RGB, Component Input	BNC (x3) RGB: 0.7 Vp-p ± 3dB (Sync On Green, 0.3 Vp-p sync negative) Component: 0.7 Vp-p ± 3dB (75% chrominance standard color bar signal)
DVI-D Input	DVI-D (x1) TMDS single link

HD15 Input	D-sub 15-pin (x1), R/G/B: 0.7 Vp-p sync positive (Sync On Green, 0.3 Vp-p sync negative) Sync : Total level (polarity free, H/V separate sync) Plug & Play function : corresponds to DDC2B
Audio Input	Phono jack (x2) -5 dBu 47 kΩ or higher
External Sync Input	BNC (x1) 0.3 to 4.0 Vp-p ±bipolarity ternary or negative polarity binary
Option Port	Two (2) ports Signal format: H: 15 kHz to 45 kHz, V: 48 Hz to 60 Hz
Parallel Remote	Modular connector 8-pin (x1) (Pin-assignable)
Serial Remote (LAN)	D-sub 9-pin (RS-232C) (x1), RJ-45 (x1) (Ethernet, 10BASE-T/100BASE-TX)
DC Input	XLR-type 4-pin (male) (x1), 24V DC (output impedance 0.05 Ω or less)

Output

Composite Output	BNC (x1), Loop-through, with 75 Ω automatic terminal function
Y/C Output	Mini DIN 4-pin (x1), Loop-through, with 75 Ω automatic terminal function
RGB, Component Output	BNC (x3), Loop-through, with 75 Ω automatic terminal function
External Sync Output	BNC (x1), Loop-through, with 75 Ω automatic terminal function
Audio Monitor Output	Phono jack (x2)
Speaker (Built-in) Output	1.0 W + 1.0 W (stereo)

General

Power Requirements	100 V to 240 V AC, 1.5 A to 0.7 A, 50/60 Hz 24 V DC, 5.7 A
Power Consumption	Approx. 130 W (max.) (with 2 x BKM-229X)
Inrush Current	(1) Power ON, current probe method: 23 A (100 V), 56 A (240 V) (2) Hot switching inrush

	current, measured in accordance with European standard EN55103-1: 55A (230 V)
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	30% to 85% (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) [*1]	602.4 x 386.2 x 110.0 mm (without a stand) 602.4 x 497.9 x 269.9 mm (with a supplied stand) 23 3/4 x 15 1/4 x 4 3/8 inches (without a stand) 23 3/4 x 19 5/8 x 10 3/4 inches (with a supplied

	stand)
Mass (with options)	Approx. 11.4 kg (when 2x BKM-229X installed) Approx. 25 lb 2 oz (when 2x BKM-229X installed)
Mass	Approx. 11.0 kg (when no input adaptor installed) Approx. 24 lb 4 oz (when no input adaptor installed)
Supplied Accessories	AC power cord (1) AC plug holder (1) Operating Instructions (1) CD-ROM (1) Using the CD-ROM Manual (1)
Optional Accessories	BKM-220D SDI 4:2:2 Input Adaptor BKM-243HS HD/D1-SDI Input Adaptor BKM-227W NTSC/PAL Input Adaptor BKM-229X Analog Component Input Adaptor BKM-244CC HD/SD-SDI Closed Caption Adaptor BKM-250TG 3G/HD/SD-SDI

	Input Adaptor
Notes	
Note	[*1] The values for dimensions are approximate.
Environmental notice for customers in the USA	Lamp in this product contains mercury. Disposal of these materials may be regulated due to environmental considerations. For disposal or recycling information, please contact your local authorities or see www.sony.com/mercury for additional information.

Gallery