

LMD-4251TD

42-inch 3D high grade LCD monitor

The optimum solution for 3D Monitoring applications

The LMD-4251TD is a 42-inch widescreen LCD monitor designed to satisfy the rapidly growing demand from 3D productions in the broadcast and professional field.

This professional monitor incorporates a micro-polarizer filter attached to the LCD panel, and is supplied with circular polarizer 3D glasses. Wearing these lightweight 3D glasses, users can enjoy smooth, uninterrupted viewing of multiple monitors.

The LMD-4251TD inherits the proven technology and features of the widely respected 2D LCD monitor, the high grade LMD-4250W. The LMD-4251TD can also display 2D pictures.

Key features of this monitor are Sony's highly acclaimed, unique ChromaTRU colour matching technology and a Full-HD (1920 x 1080) resolution professional LCD panel with an excellent wide viewing angle. Full digital 10-bit processing adds to the already impressive array of specifications, delivering smooth greyscale and colour transitions.

The LMD-4251TD can accept various source of 3D signal format such as 3D on 3G, Dual stream left and right, Field sequential and side-by-side HD-SDI as well as DVI-D line interleave (line by line) mode. A new set of 3D features have also been added to the monitor to help the user to manage the 3D effects with efficiency. The BKM-250TG board is required to display these features.

Entirely at home in broadcast, OB, production, post-production and corporate environments, the LMD-4251TD accepts a wide variety of PC and analogue video formats and optional decoder boards are available for Standard and High Definition digital video display.

All LMD Monitors come supplied with a 2-year PrimeSupport contract which offers unique extra services and benefits for added peace of mind.

This product comes with the full PrimeSupport package. That's fast, hassle-free repairs, a helpline

offering expert technical advice, and a free loan unit while yours is repaired. Plus the peace of mind that Sony is looking after your equipment – and your business.

Features

High Definition 1920x1080 Full HD LCD Panel

Delivers outstandingly crisp, high brightness and high contrast images.

High Purity Colour Filters

The LMD-4251TD uses precisely manufactured RGB colour filters, allowing the reproduction of colours with stunning depth and saturation to create highly natural images.

3D Circular-polarizer System

The LMD-4251TD adopts a 3D micro polarizer filter attached to the LCD panel, and is supplied with circular-polarizer glasses. In this system, the right and left signals are sorted into odd lines and even lines respectively. The right and left images delivered from the LCD panel are circular polarized in different directions through the micro-polarizer filter and the patterned retarder. Each right and left image can then be viewed by the corresponding right and left circular-polarizer filter glass.

Unique Lightweight Circular-polarizer 3D Glasses

Sony BKM-30G circular-polarizer glasses are designed for the 3D production operator's convenience, and optimized for both LMD 3D monitors.

3D display feature – Horizontal Flip

When a half-mirror type of rig is used, either the left or right signal may be reversed horizontally. The Flip H function turns the reversed image to the normal view. This is helpful because the user can refer directly to the rig camera, achieving a simple and cost-saving system.

3D display feature – Disparity Simulation

Either the left or right signal phase (or both phases) of a 3D image can be shifted horizontally. In this way, users can simulate the amount of 3D image parallax, and can judge whether the camera rig should be

adjusted on location or whether it would be better to adjust the parallax later during the post-production process.

3D display feature – Horopter Check

This function helps users to perceive the subtle difference of depth between different objects placed on the 3D screen surface.

3D display feature – Checker Board

Left and right input signals are displayed in a grid pattern on screen – divided into 9 blocks vertically and 16 blocks horizontally. By comparing adjacent images, users can recognise a difference in brightness and colour setting of the left and right images, and thus easily adjust the camera's white balance and iris settings.

3D display feature – L/R Switch

Left and right signals can be swapped in a moment without inserting black frames, simply by manually pushing a function key. This instant-swap capability enables users to compare whole images and check for any sense of incongruity or for unnatural images.

3D display feature – Payload ID Display

Channel-assign information about the payload ID data of input signals is displayed on the menu screen. This tells users how the left and right channels are assigned in the menu.

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.

White Balance Calibration Function

The LMD-4251TD employs software based white balance calibration function, which is called LMD_AutoWhiteBalance. Combined with a PC and commercially available calibration tool - X-Rite i1Pro - this function enables precise and quick adjustment of the monitor's white balance.

10-bit Picture Processing

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

3G SDI Input

The LMD-4251TD has a 3G SDI input capability. On Sony's monitors, the 3G SDI interface is compliant with the SMPTE 425 standard, transmitting up to 4:2:2/10bit 1080/60P video data using one SDI cable.

3D left and right signals can be handled through a single HD-SDI cable with a 3Gbps data rate.

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

LMD-4251TD 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 Full-HD.

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-4251TD is compatible with current decoder boards. For the variety of 3D display functions, the BKM-250TG is mandatory.

Computer Input Frequencies

The LMD-4251TD monitor is factory preset to accept 32 typical computer input signal frequencies.

Selectable Scan Size and Aspect Ratio (2D Mode)

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

Three Colour Tally

The LMD-4251TD 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.

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-4251TD 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

Benefits

High-performance Picture Quality

The LMD-4251TD incorporates a Full-HD (1920x1080) LCD panel to provide Full HD resolution images. It is equipped with a high purity colour filters to provide precise colours.

Stress-free 3D Monitoring

The LMD-4251TD incorporates a micro-polarizer filter attached to the LCD panel, and is supplied with circular-polarizer 3D Sony glasses. Wearing these lightweight 3D glasses, users can enjoy smooth, uninterrupted viewing of multiple monitors and flicker-free 3D images. This image quality helps users to engage in 3D production operations with minimal stress.

Convenient 2D/3D Display functions

There are a variety of convenient 3D production features— ideal for high-quality creative 3D production. These features are assignable to the function keys on the front panel of the LMD-4251TD, and can also be assigned to an external remote control unit. Channel 2D/3D mode can be selected from a function key for user convenience during 3D production work.

Dual 2D/3D functionality maximises ROI

This model not only excels in 3D, but is equipped with the consistent quality, functionality, and operability – essential for a 2D professional monitors. In fact, its features are fully compatible with those of current LMD-51W Series monitors.

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.

Perfect for Group Viewing

Sony 3D monitors have been optimised to provide a very wide viewing angle for group viewing.

Lifelike picture quality

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

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-4251TD remains current.

Indoor or Outdoor Operation

Can be powered by AC or DC power supplies.

Peace of Mind

All LMD monitors come supplied with a 2-year PrimeSupport contract which offers unique extra services and benefits.

2 years' cover

Free telephone helpdesk support in English, German, French, Italian and Spanish.

Collection and replacement product delivery anywhere in EU, Norway and Switzerland.

Technical Specifications

Picture Performance	
Type	a-Si TFT Active Matrix LCD
Resolution	1920 x 1080 pixels (Full HD)
Effective picture size (H x W) (Diagonal)	930 x 523 mm (36 3/4 x 20 3/4 inches) 1067 mm (Approx. 42 inches)
Aspect	16:9

Colors	Approx. 16.7 million colors
Viewing angle (2D mode)	89°/89°/89°/89° (typical) (up/down/left/right contrast > 10:1)
Vertical viewing angle (3D mode)	40° at a viewing distance more than 600 mm, crosstalk less than 7% (typical)

Input	
Composite	BNC (x1), 1.0 Vp-p \pm 3dB sync negative
Y/C	Mini DIN 4-pin (x1) Y: 1.0 Vp-p \pm 3dB sync negative, C: 0.286 Vp-p \pm 3dB (NTSC burst signal level), 0.3 Vp-p \pm 3dB (PAL burst signal level)
RGB, Component	BNC (x3) RGB: 0.7 Vp-p \pm 3dB (Sync On Green, 0.3 Vp-p sync negative) Component: 0.7 Vp-p \pm 3dB (75% chrominance standard color bar signal)
DVI-D	DVI-D (x1) TMDS single link
HD15	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	Phono jack (x2) (L, R), -5 dBu 47 kilohms or higher
External sync	BNC (x1) 0.3 Vp-p to 4.0 Vp-p \pm bipolarity ternary or negative polarity binary
Option slot	2 slots 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	D-sub 9-pin (RS-232C) (x1), RJ-45 modular connector (Ethernet) (x1) (10BASE-T/100BASE-TX)

Output	
Composite	BNC (x1), Loop-through, with 75 ohms automatic termination

Y/C	Mini DIN 4-pin (x1), Loop-through, with 75 ohms automatic termination
RGB, Component	BNC (x3), Loop-through, with 75 ohms automatic termination
External sync	BNC (x1), Loop-through, with 75 ohms automatic termination
Audio monitor out	Phono jack (x2) (L, R)
Speaker (Built-in)	1.0 W + 1.0 W (stereo)

General	
Power requirement	AC 100 V to 240 V, 50/60 Hz, 2.3 A to 1.1 A
Power consumption	Maximum: approx. 230 W (with 2 x BKM-229X)
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)	1027 x 616 x 130 mm (40 1/2 x 24 3/8 x 5 1/8 inches)
Mass (with options)	23.5 kg (51 lb 13 oz) (with 2 x BKM-229X)
Mass	23 kg (50 lb 11 oz)

Supplied Accessories	
	AC power cord
	AC plug holder
	3D glasses (including case) ²
	L/R labels
	Operating Instructions
	CD-ROM
	Using the CD-ROM Manual
	Warranty book

Accessories

Monitors



BKM-220D

4:2:2 Sdi Input Adaptor



BKM-243HS

HDSdi/4:2:2 SDI Input Adaptor

Option Boards and Cables**BKM-227W**

NTSC / PAL input adaptor for LMD monitors

**BKM-229X**

Analogue component input adaptor for LMD monitors

**BKM-250TG**

3G/HD/SD-SDI Input Adaptor

BKM-244CC

HD/SDI Closed Caption Adaptor