

## LMD-X310MD

31-inch 4K 2D LCD medical monitor



### Overview

#### **View surgical images with the detail, clarity and colour of 4K**

This 31-inch medical grade LCD monitor can display very high quality two-dimensional colour video images with 4K resolution from a wide range of medical imaging systems such as surgical endoscopes and laparoscopic camera systems. Its ergonomic design is optimised for environments such as Operating Rooms, surgical centres, clinics and doctors' offices.

Offering four times the pixel count of Full HD, the LMD-X310MD provides a clearer view of fine details than conventional medical monitors. Its increased resolution also maintains picture quality when viewing zoomed images, as well as supporting multiple picture display modes for enhanced operability in the OR.

The OptiContrast Panel™ ensures clear, high contrast images by controlling light reflections and dispersion within the LCD panel. The monitor's advanced new panel design is teamed with powerful Sony digital signal processing to provide a wider colour gamut than ordinary LCD medical monitors.

Advanced Image Multiple Enhancer (A.I.M.E.™) technology can be used to accentuate subtle colour differences or highlight the outline structure of displayed objects.

The LMD-X310MD features a slim, stylish design to allow easy handling, with a narrow bezel that maximises the compact monitor's screen area. Flat surfaces make disinfection simpler in modern clinical environments.

Simple installation and set-up is complemented by a user-friendly control panel for positive, intuitive operation in the OR.

**Note:** 4K medical monitors are available in 31-inch and 55-inch sizes. At 31-inches, this screen is the largest size that will fit an endoscopy system (trolley) to provide a full 4K medium-sized panel. At 55-inches, this screen provides the ideal viewing distance when mounted in an operating theatre when installed facing the bed.

## Features

### **4K Ultra HD resolution**

The LMD-X310MD can display 4K images with four times the detail of Full HD.

### **High brightness anti-reflective OptiContrast Panel™**

The 31-inch (789mm) OptiContrast Panel™ features an advanced design that controls incident light reflections and dispersion within the LCD panel layer for improved contrast and visibility. It also helps prevent dew condensation within the panel.

### **Wider colour gamut**

The advanced panel design and Sony signal processing ensure a wider colour gamut - as much as 43% greater than the BT.709 colour space.

### **A.I.M.E.™ (Advanced Image Multiple Enhancer)**

This unique technology has been developed to enhance the visibility of displayed shapes and colours. Structure

Enhancement mode accentuates the outline of on-screen objects, while Colour Enhancement mode helps clarify subtle tonal differences between objects.

### **Ergonomic easy-grip design**

The monitor's slim, compact, easy to hold design facilitates simple user adjustment of monitor position.

### **Smaller bezel, larger screen**

The narrow bezel maximises screen size of this compact, space-saving monitor.

### **User friendly Control Panel**

Operation is simplified by the monitor's intuitive, easy to use control panel. LED backlighting only highlights active control buttons, guiding the user and reducing the risk of inadvertent operation, especially in dark environments. Custom buttons can be assigned to commonly used functions.

### **Easy clean design**

Flat surfaces simplify wiping off liquids and gels from the LCD panel and control buttons, supporting more effective cleanliness and disinfection.

### **Choice of display formats**

A variety of display formats including Rotation Image, Side-by-Side, Picture-in-Picture (PIP) and Picture-out-Picture (POP) can be selected quickly and easily from the menu.

### **Installation friendly cabling**

All signal connectors face downwards, allowing easy and organised cable connection to other equipment in the OR.

### **Compliance with medical standards**

This product is distributed to the US and EU as a medical device and satisfies product safety standards (e.g. IEC 60601-1). For more details, please contact your nearest Sony sales office or an

authorized dealer.

## Specifications

### Picture Performance

Panel	a-Si TFT Active Matrix LCD
Picture Size (Diagonal)	789.06 mm (31 1/8 inches)
Effective Picture Size (H x V)	698.0 x 368.1 mm (27 1/2 x 14 1/2 inches)
Pixel pitch	0.1704 x 0.1704 mm
Resolution (H x V)	4096 x 2160 pixels
Aspect	17:9
Pixel Efficiency	0.9999
Backlight	LED
Panel Technology	LCD with IPS
Luminance (Panel Specification)	770 cd/m <sup>2</sup> (typical)
Contrast Ratio	1450:1
Colors	Approx.1.073 billion colors
Viewing Angle (Panel Specification)	89°/89°/89°/89° (typical)

Gamma	1.8, 2.0, 2.2, 2.4, 2.6, DICOM, Highlight
HDMI Input	HDMI (x1) (HDCP 1.4 correspondence)
DVI-D Input	DVI-D (x1) (HDCP 1.4 correspondence) TMDS single link
SDI Input	BNC (x5) 3G/HD/SD-SDI
Serial Remote (LAN)	D-sub 9-pin (RS-232C) (x1), RJ-45 (x1) (Ethernet, 10BASE-T/100BASE-TX)
DC Input	XLR-type 3-pin (male) (x1), 26 V DC (output impedance 0.005 ohms or less)
DVI-D Output	DVI-D (x1) when HDCP disabling
SDI Output	BNC (x5)
DC 5V/12V Output	5 V Output(x1), 8 W 12 V Output (x1) 20 W max

## General

LCD monitor  
- DC Input: 26 V, 6.9 A

Power Requirements	AC adaptor(AC-300MD): 245 (W) x 150 (L) x 58 (H) mm AC adaptor's AC IN: 100 V - 240 V, 50/60 Hz, 2.0A - 0.8 A
Power Consumption	LCD Monitor: Approx. 180 W (max.)
Operating Temperature	0°C to 40°C (Recommended: 20°C to 30°C) 32°F to 104°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	753.8 x 456.4 x 69.3 mm (Slimmest D 28mm) (29 3/4 x 18 x 2 3/4 inches)
Mass	Approx. 11.8 kg (Approx.

26lb 0.23oz)

Mounting

100 x 100 mm VESA  
100 x 200 mm VESA

Supplied Accessories

AC adaptor : AC-300MD (1)  
AC power cord (1)  
Instructions for Use (CD-ROM) (1)  
Abridged edition of  
Instructions for Use (1)  
AC power plug holder(2)  
Instructions for Use of the  
AC adaptor (1)  
Service Contact List (1)  
Warranty book (JP only) (1)  
M4x12mm Screw(4)

## Notes

\*1

The values for dimensions are approximate.

## Related products



**NU-IP40S**  
Medical IP Converter



**MCC-1000MD**  
Two-piece Full HD



**AC-300MD**  
Provides power for  
Sony LCD medical  
monitors



**HVO-4000MT**  
4K 2D/3D medical

surgical video camera

recorder



## **NUCLeUS**

The smart digital  
imaging platform for  
medical environments



## **NUA-BK30**

IP Converter Bracket  
for NU-IP3R



## Gallery

