

## MCC-3000MT

### 3D Full HD Medical Video Camera



#### Overview

Stereoscopic 3D colour images captured in Full HD with this medical grade camera can assist with providing improved depth perception and spatial orientation compared with conventional 2D.

'Live' 3D images can be shared with other consultants, teaching staff and students using a monitor such as the Sony LMD-2451MT (MDD approved) LMD-4251TD (non MDD compliant). 3D Full HD images can also be captured for later analysis, sharing and review using the HVO-3000MT medical grade video recorder.

The MCC-3000MT consists of two light, compact camera heads plus a CCU (Camera Control Unit). Compliant with latest medical safety standards, the complete system can be easily integrated into medical environments.

Image quality is assured by precision Exmor™ Full HD CMOS sensors in each camera head. Combined with advanced Sony digital image processing techniques, this allows the MCC-3000MT to capture detail-packed 3D images with high sensitivity and signal-to-noise plus wide dynamic range. 2D operation is also possible, allowing surgeons to capture two independent 2D images under control of one CCU.

Workflow is enriched with a range of useful imaging features and

shooting modes, including Image Reverse and Freeze. Image brightness and other functions for both camera heads can be adjusted intuitively from the CCU front panel. Customised picture profiles can be stored and recalled instantly, avoiding time-consuming set-up between procedures.

The system can optionally be controlled via an external PC or other host device. In addition, both camera heads can be sited as up to 20m from the CCU for even greater operational and integration flexibility.

**This equipment is intended for use by qualified medical professionals only.**

## Features

### **3D stereoscopic image capture in Full HD**

Controlled by a single CCU, two camera heads capture 3D video signals with Full HD (1080i) resolution. Alternatively, two separate 2D video images can be captured under control of a single CCU.

### **Exmor Full HD CMOS sensors assure detail-packed Full HD images**

Each camera head is equipped with a 3-chip 1/2-inch type Exmor™ Full HD CMOS sensors that deliver Full HD (1080i) resolution images. Combined with powerful digital processing technologies by Sony, this assures a high sensitivity of F10, together with a signal-to-noise ratio of 54 dB and a wide dynamic range of 450%.

### **Light, compact camera head unit allows easy installation**

With dimensions of just 35 x 45 x 50 mm (W x H x D) and weighing just 90g, each camera head unit can readily be installed in space-limited environments. The head units are C-mount compatible – the lens mount commonly used in microscopy applications.

## **Versatile operating modes**

Enhanced workflow is supported by a range of shooting functions including Image Reverse and Freeze that synchronises image capture with a camera's flashlight. Different Auto Exposure measurement areas can be selected to suit different light sources, such as a slit lamp. Picture/tonal settings can be stored and instantly recalled, avoiding the need for re-adjustment of camera settings between different procedures in theatre. Up to six different settings – including shutter, gain, detail, knee, and gamma – can be saved to memory and recalled instantly via the front panel.

## **Intuitive operation**

Camera settings – including brightness and red/blue adjustment – can be easily adjusted from the CCU front panel. Settings for both camera heads can be adjusted at the same time, eliminating the need to adjust settings independently for each camera head.

## **Flexible choice of camera cabling options**

Allowing greater operational flexibility, the CCU can be located up to 20m distant from the camera head. Optional camera cables are available in 5m, 10m, 15m and 20m lengths, depending on system installation requirements.

## **RS-232C Interface for external computer control**

The MCC-3000MT includes a D-sub 9-pin connector for RS-232C connection, allowing camera control from a PC or other external host device.

## **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 authorised dealer.

## Specifications

### Camera Head Unit

Image Device	3-chip 1/2-inch type Exmor CMOS
Effective Picture Elements	1920 (H) × 1080 (V)
Lens Mount	C-mount
Optical system	F2.2 prism system
Sensitivity	F10 typical (in 1920 × 1080/59.94i mode)
Minimum Illumination	9 lx (in 1920 × 1080/59.94i mode, F2.2, +21 dB gain)
Connector Camera output	20pin (× 1)

### Camera Control Unit

S/N Ratio	54 dB (Y) (typical)
Horizontal Resolution	1000TV lines (in 1920 × 1080/59.94i ; through HD-SDI)
White Balance	PRESET/MEMORY/ATW
AE	On/Off
AE Area	Multi/Large/Middle/Spot/Slit Selectable

Picture Profile	PictureProfile 1-6
Output Signals	HD-SDI, Composite
Color Bar Type	Multi/75%/100%/Off
Down Converter	Squeeze/Letterbox/Edge Crop
Serial Data	RS-232C
Connectors - Composite output HD SDI output EXT SYNC input Remote	BNC (×1) BNC (×2) BNC (×1) D-sub 9-pin (×1)
<b>General</b>	
Mass	CHU : 90 g (3.2 oz) (×2) CCU : 4.5 kg (9 lb 15 oz)
Dimensions	CHU : 35 × 45 × 50 mm (1 7/16 × 13/16 × 2 inches) without projection CCU : 200 × 88 × 341mm (7 7/8 × 3 1/2 × 13 1/2 inches) without projection
Power Requirements	DC 24 V
Input Current	1.5 A (inrush: 3.0 A)

Operational Temperature 0°C to 40°C (32°F to 104°F)

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Storage Temperature -20°C to 60°C (-4°F to 140°F)

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Supplied Accessories

- Tripod adapter (2)
- Tripod adapter fitting screws (8)
- Lens mount cap(2)
- Operating instructions
  - Japanese version (1)
  - English version (1)
  - German version(1)
- Before Using This Unit(1)
- CD-ROM
  - Manuals for HD Video Camera (Operating Instructions in PDF) (1)
  - Warranty Booklet (1)

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## Related products



**LMD-2451MT**  
24-inch Full HD 3D LCD medical monitor



**HVO-3300MT**  
Full HD 2D/3D medical recorder

## Gallery

