

## HVO-500MD (Surgical Version)

Full HD medical recorder with USB/NAS recording and still image capture



### Overview

**Support modern workflows with simultaneous Full HD video recording to internal drive, USB or NAS external media. Enjoy high image quality, reliable recording and long record time, easy operation and flexible integration. Optimised for surgical applications with still image capture.**

From patient records to education, training and referral to other physicians, modern medical workflows benefit from the increased convenience and detail offered by Full HD video recording.

The HVO-500MD Medical Recorder (Surgical Version) has been designed for use in a wide range of clinical environments, from operating rooms to surgical centres and doctors' offices.

Suitable for storing Full HD video from endoscopic, laparoscopic and other compatible surgical imaging systems, the recorder offers extensive connection options with a wide range of current and legacy devices.

Compact, lightweight and silent in operation, the HVO-500MD (Surgical Version) stores Full HD or Standard Definition video on its high-capacity internal hard disk drive. Via simple menu selection, video can be recorded at the same time to an external

USB drive or network server. This simultaneous recording capability supports modern hospital workflow, providing an extra safeguard against the risk of losing valuable data.

Optimised for surgical applications, the recorder can also capture and play back still images that can be printed using an optional Sony UP-DR80MD colour printer.

Product Order Code: HVO-500MD/SUR

## Features

### **Full HD video recording**

The HVO-500MD (Surgical Version) records crisply-detailed Full HD video at up to 1080i with a high bit rate (low compression), offering improved image quality compared with other recording devices.

### **Still image recording**

Optimised for surgical applications, the recorder can also capture and replay colour still images for review or printing. Still image recording can be triggered via front panel button, optional footswitch or external USB keyboard.

### **Simultaneous recording on internal HDD and external media**

To minimise the risks of accidental data loss, video files are recorded onto the internal hard disk drive simultaneously with a connected USB drive or a network server.

### **Wide range of interfaces and network data transmission**

The HVO-500MD (Surgical Version) is compatible with a wide range of modalities, including current HD as well legacy SD devices. Interfaces are provided for HDMI, DVI, composite video, S-Video and audio, as well as networked data transmission through CIFS to a centralised server.

## Long recording time, even in Full HD at best image quality settings

The recorder's high-capacity disk drive allows long video recordings without interruption, even in Full HD. A choice of three Image Quality settings (Standard/High/Best) permits between 39 and 100 hours of Full HD video recording (or between 99 and 172 hours of SD video). Each individual recording can be up to 24 hours long. Videos can be exported as high quality or PC-friendly MP4 files.

## Compliance with Medical Safety Standards

"The recorder is compliant with and certified for IEC 60601-1 and product safety standards in the U.S.A., Canada and Europe. Registration status as a medical device may vary, depending on country.

For more details, please contact your nearest Sony office or an authorised dealer."

## Specifications

### Recording Features

Recording Video Format	MPEG-4 AVC/H.264
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Recording Audio Format	AAC LC
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Recording File Format	MP4
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Recording Media	Internal HDD (500GB), External USB Storage, Network (CIFS)
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1920 x 1080/59.94i, 1280 x

Recording Resolution	720/59.94p, 1280 × 720/50p, 720 × 480/59.94i, 720 × 576/50i
Recording Bit Rate (HD)	20Mbps (Best), 12.5Mbps (High), 6Mbps (Standard)
Recording Bit Rate (SD)	6Mbps (Best), 3.75Mbps (High), 2.25Mbps (Standard)
3D Recording	-

## Connectors

Input Connectors	HDMI (Type A) (1), DVI-D (DVI 19-pin) (1), S VIDEO (Mini DIN 4-pin type) (1), VIDEO (BNC type) (1) 9-pin) (1), S VIDEO (Mini DIN 4-pin type) (1), VIDEO (BNC type) (1) AUDIO (Stereo mini jack) (1) DC IN (DIN 3-pin)
Output Connectors	HDMI (Type A) (1), DVI-D (DVI 19-pin) (1), S VIDEO (Mini DIN 4-pin type) (1), VIDEO (BNC type) (1) AUDIO (Stereo mini jack) (1)
Other Interfaces	USB (Type A) (3), USB (Type B) (1), Network (RJ-45, 1000 Base-T/100 Base-TX) (1)), RS-232C (D-sub 9-pin) (1) *1, REMOTE contact switch (stereo mini jack) (2) REMOTE

## General

Power Requirements	+12 V to +24 V DC (supply from AC adaptor)
Input current	3.2 A to 1.6 A
Operating Temperature	5°C to 40°C (41°F to 104°F)
Operating Humidity	20% to 80% (Maximum wet-bulb temperature: 30°C (86°F)) (no condensation)
Operating Pressure	700 hPa to 1060 hPa
Storage and transport temperature	-20°C to +60°C (-4°F to +140°F)
Storage and transport humidity	20% to 90% (Maximum wet-bulb temperature: 30°C (86°F)) (no condensation)
Storage and transport pressure	700 hPa to 1060 hPa
Mass *2	2.9 kg (6 lb. 6.3 oz.)
Dimensions (including longest protrusions) *2	212.0 × 287.7 × 105.5 mm (8 3/8 × 11 3/8 × 4 1/4 in.)

## Supplied Items

Before Using This Unit (1), CD-ROM (Instructions for Use, PROTOCOL MANUAL) (1), Warranty booklet (1), AC adapter (1), AC adapter Instructions for Use (1), Service Contact List (1)

## Notes

\*1

This interface is disabled on surgical version.

\*2

The values for mass and dimensions are approximate.

## Related products



### **CMDS-MS10MD**

HD Content Management System



### **CMDS-MS20MD**

4K/HD Content Management System



### **UP-DR80MD**

A4 Digital Colour Printer



### **MCC-1000MD**

Two-piece Full HD surgical video camera

## Gallery

