

SONY



HVO-500MD (Surgical Version)

Full HD Video Recorder

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

The HVO-500MD (Surgical Version) Full HD Video Recorder has been designed for use in a variety of clinical environments, including operating rooms, surgical centres and doctors' offices.

Suitable for storing High Definition videos from endoscopic, laparoscopic and other compatible surgical imaging systems, the recorder offers extensive connection options.

This recorder can store HD or Standard Definition video on its high-capacity internal hard disk drive. Via simple menu selection, videos can be recorded simultaneously to an external USB drive or network server. This simultaneous recording capability saves time, eliminating the need to export or copy video files to another storage medium after recording. It also provides an extra safeguard against the risk of losing valuable data.

Furthermore, this recorder offers still image capture and printing function which is convenient in surgical application.

Key Features

High Definition video recording

Recording crisply-detailed Full HD video at up to 1080i, this recorder offers an improvement in image quality over Standard Definition recording devices.

Simultaneous recording on internal HDD and external media

To minimise the risks of accidental data loss, video files can be recorded onto the internal hard disk drive, a connected USB drive or a network server. This also helps to shorten workflow, since videos do not need to be exported or copied onto another device after being recorded onto the internal HDD.

Still image recording

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

Wide range of interfaces and network data transmission

This recorder 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 HD at best image quality settings

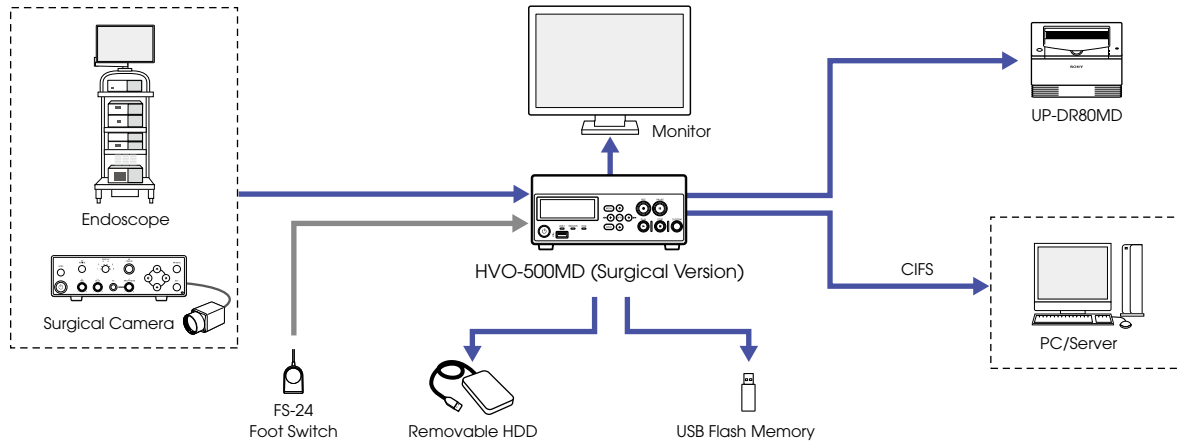
The recorder's high-capacity disk drive allows long video recordings without interruption, even in High Definition. A choice of three Image Quality settings (Standard/High/Best) permits between 40 and 140 hours of HD video recording (or between 150 and 300 hours of SD video). Each individual recording can be up to 24 hours long. Videos can be exported as PC-friendly MP4 files.

Compliance with Medical Safety Standards

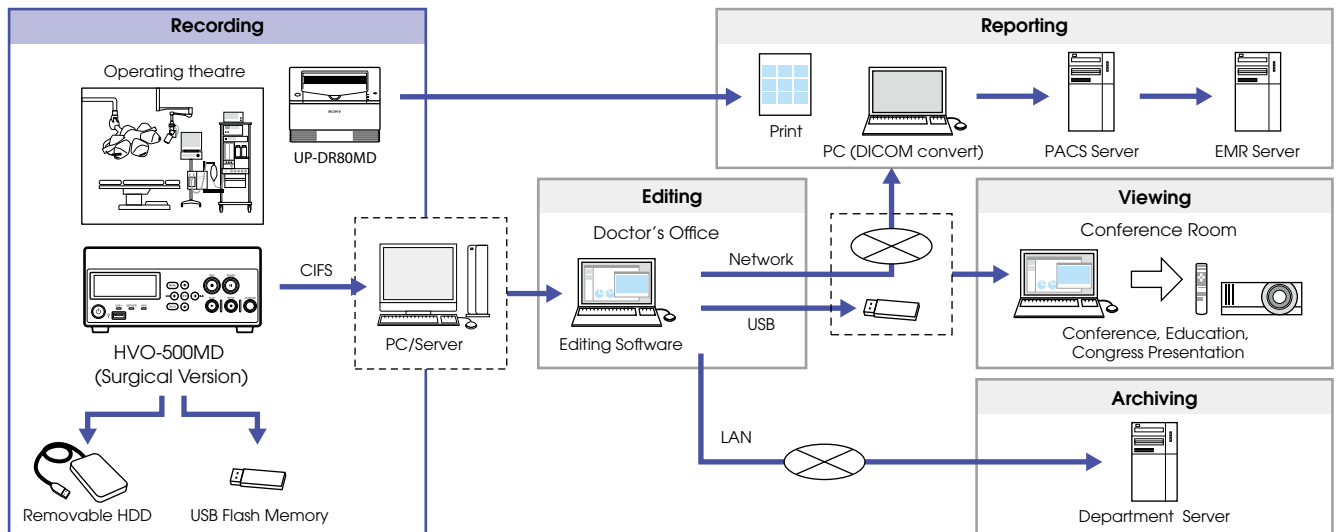
This recorder is compliant with and certified for IEC 60601-1 and product safety standards in the U.S.A., Canada, and Europe.*

* Registration status as a medical device may vary, depending on country. For more details, please contact your nearest Sony office or an authorized dealer.

System Configuration



Work Flow



Front and Rear Panels

Front Panel



HVO-500MD

Rear Panel



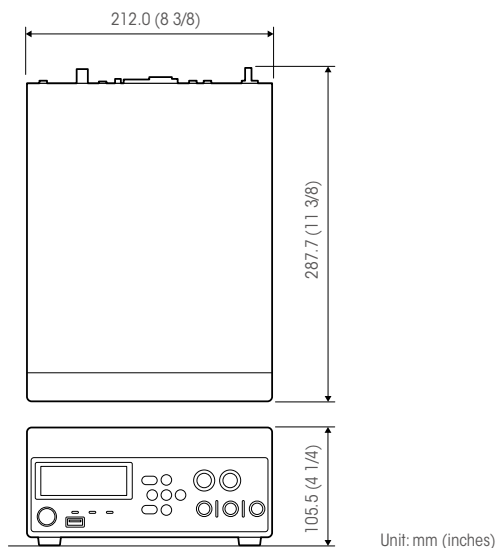
HVO-500MD

Specifications

HVO-500MD (Surgical Version) (Order Code: HVO-500MD/SUR)	
Recording Features	
Recording Video Format	MP4 (using MPEG-4 AVC/H.264 compression)
Recording Audio Format	AAC (using LPCM compression)
Recording Media	Internal HDD (500GB), External USB Storage, Network (CIFS)
Recording Resolution	1920 x 1080/59.94i, 1920 x 1080/50i, 1280 x 720/59.94p, 1280 x 720/50p, 720 x 480/59.94i, 720 x 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)
	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)*, REMOTE contact switch (stereo mini jack) (2) REMOTE MONITOR (RJ-45) (1), Equipotential
General	
Power Requirements	+12 V to +24 V DC (supply from AC-80MD AC adaptor)
Input current	3.5 A to 1.8 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	3.2 kg (7 lb. 0.88 oz.)
Dimensions (including longest protrusions)	212.0 x 287.7 x 105.5 mm (8 3/8 x 11 3/8 x 4 1/4 in.)
Supplied Items	Before Using This Unit (1), CD-ROM (Instructions for Use) (1), Warranty booklet (1), AC-80MD AC adapter (1), AC-80MD Instructions for Use (1), Service Contact List (1)

*This interface is not supported on surgical version.

Dimensions



Optional Accessories



Digital Color Printer
UP-DR80MD



Foot Switch
FS-24*

* The FS-24 has an ingress protection rating of IPX3 and therefore should not be operated in environments liable to liquid splashes (e.g., a surgical operating room). For safety, devices with a rating of IPX6 or higher should be selected for that type of environment.

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 Registration status as a medical device may vary, depending on country.
 For more details, please contact your nearest Sony office or an authorized dealer.