

SONY



HVO-4000MT

4K and 4K 3D Video Recorder

4K

The HVO-4000MT is a 4K 2D and 4K 3D video recorder that enables the recording of 4K video and still images from endoscopic or laparoscopic camera systems, surgical microscopes, and other compatible medical imaging systems. The recorded images can be included in patient records, and used for training and education purposes. This recorder is suitable for use in hospital operating rooms, medical imaging centers, and surgical centers.

Key Features



4K Video Recording

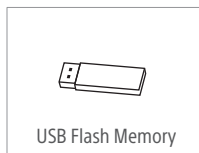
Recording sharp detailed 4K video at up to 3840 x 2160, this recorder offers an improvement in image quality over Full HD recording devices such as the HVO-3000MT.

Simultaneous Recording in 4K and HD

This recorder can record 4K and HD simultaneously. The HD footage is created from the 4K footage using an internal conversion process. This HD material is useful for daily playback on standard PCs.



Blu-ray/DVD



USB Flash Memory



Removable HDD

Simultaneous Recording on Internal HDD and External Media

Video files can be recorded simultaneously onto the built-in internal hard disk drive, a Blu-ray disk, connected USB drive, or network server. This helps to shorten the workflow, as there is no need to export or copy videos to an external device after they have been recorded on the internal HDD.

Long Recording Time

The recorder's high-capacity 4TB internal storage allows long-duration video recording without interruption, even in 4K. A choice of three image quality settings (Standard/High/Best) permits up to 119 hours of 4K video recording. Each individual recording can be up to 24 hours long.

Network Compatibility

Recorded data can be automatically uploaded from the operating room to a computer using CIFS (Common Internet File System) over the hospital network. This process is similar to recording onto removable media, and enables effective, network-based sharing of recorded material.

Touch Panel Support

The HVO-4000MT supports optional medical-grade external touch panel monitor^{*1}. This allows users to easily operate and control many of the recorder functions, such as entering patient data, capturing video and still images, and printing.

Compliance with Medical Safety Standards^{*2}

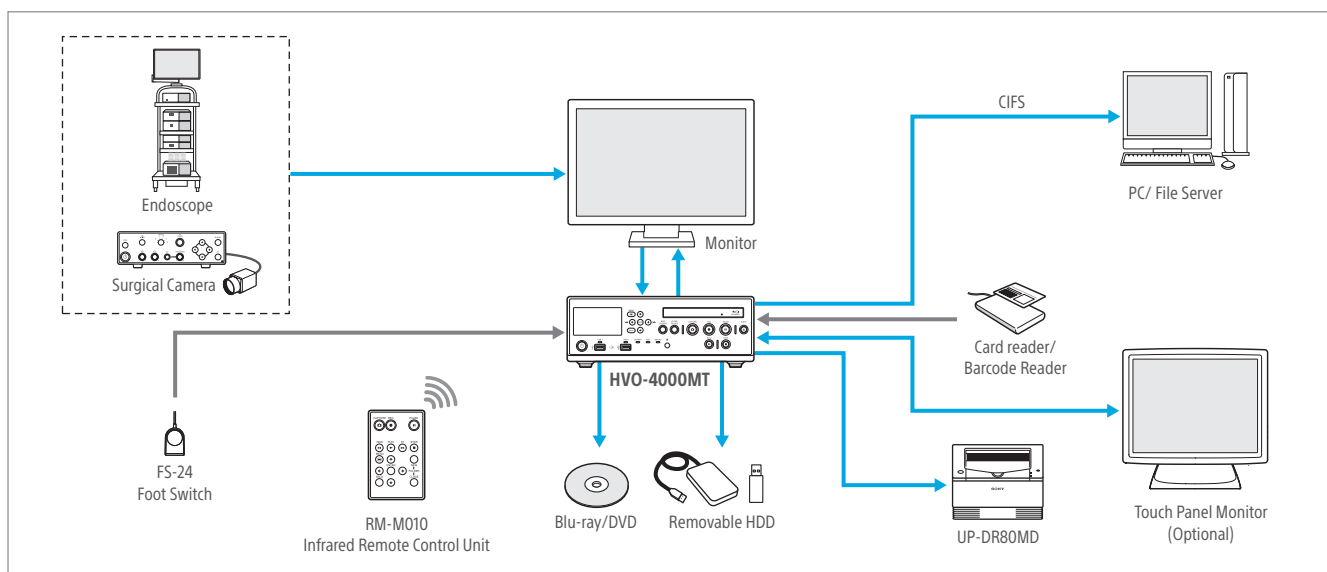
- UL: UL60601-1+ANSI/AAMI ES60601-1, FCC: Part15 Class A Digital Device
- cUL: CAN/CSA-C22.2 No.60601-1+No.601.1, IC: ICES-003 Class A
- CE: EN60601-1+EN60601-1-2
- CB: IEC60601-1, IEC60065, IEC60950-1
- Class 1 Laser Product

^{*1} Requires an optional USB touch panel monitor, commercially available.

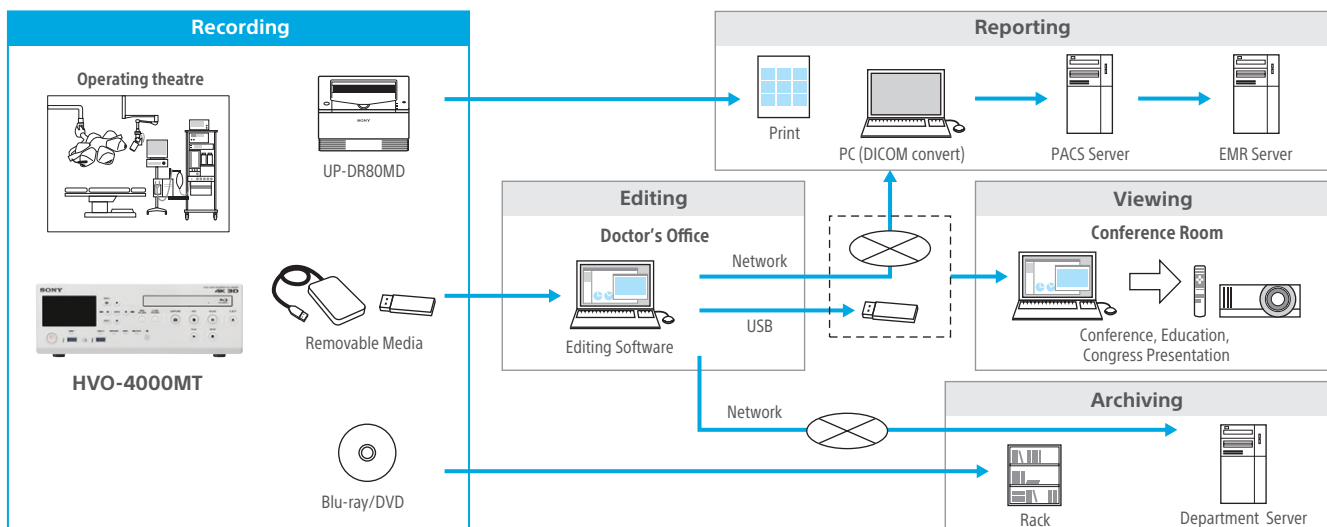
^{*2} Registration status as a medical device may vary, depending on country. For more details on compliance issues, please contact your nearest Sony office or an authorized dealer.



System Configuration



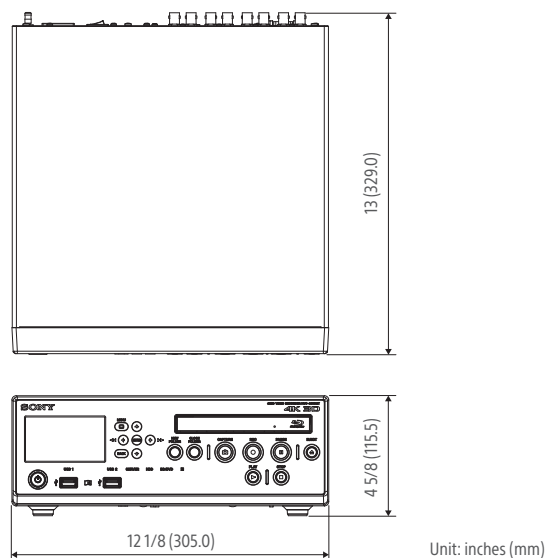
Workflow



Specifications

	HVO-4000MT
Recording Features	
Recording Video Format	MPEG-4 AVC/H.264
Recording Audio Format	LPCM, AAC LC
Recording File Format	XAVC S, MP4
Recording Media	Internal HDD (4TB), External USB Storage, Network (CIFS), DVD-R, BD-R/BD-RL, BD-RE/BD-RE DL
Input Resolution	4096 x 2160 3840 x 2160
Recording Resolution	3840 x 2160 1920 x 1080
3D Recording	Line by Line Top and Bottom
Connectors	
Input Connectors	3G-SDI (BNC type) (4), AUDIO (Stereo mini jack) (1), MIC (Stereo mini jack) (1), AC Inlet (3-pin) (1)
Output Connectors	3G-SDI (BNC type) (4), HDMI (Type A) (1), AUDIO (Stereo mini jack) (1)
Other Interfaces	USB 3.0 (Type A) (2), USB 2.0 (Type A) (4), USB 2.0 (Type B) (1), Network (RJ-45, 1000 Base-T/100 Base) (1), REMOTE RS-232C (D-sub 9-pin) (1), REMOTE contact switch (stereo mini jack) (4), Equipotential
General	
Power Requirements	100 V to 240 V AC, 50/60 Hz
Input current	1.25 to 0.52 A
Operating Temperature	41° F to 104° F (5° C to 40° C)
Operating Humidity	20% to 80% (Maximum wet-bulb temperature: 86° F (30° C) (no condensation))
Operating Pressure	700 hPa to 1060 hPa
Storage and transport temperature	-4° F to +140° F (-20° C to +60° C)
Storage and transport humidity	20% to 90% (Maximum wet-bulb temperature: 86° F (30° C) (no condensation))
Storage and transport pressure	700 hPa to 1060 hPa
Mass	Approx. 14 lb. 5.3 oz. (Approx. 6.5 kg)
Dimensions (W x H x D)	12 1/8 x 4 5/8 x 13 in. (305.0 x 115.5 x 329.0 mm) (including longest protrusions)
Supplied Items	Before Using This Unit (1), CD-ROM (Instructions for Use, PROTOCOL MANUAL) (1), Warranty booklet (1), Service Contact List (1), Infrared remote control unit (RM-M010) (1)

Dimensions



Sony Electronics Inc.
1 Sony Drive
Park Ridge, NJ 07656
sony.com/4Kmedical

ME-4060

Optional Accessories



FS-24*
Foot Switch

* 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.

Related Products



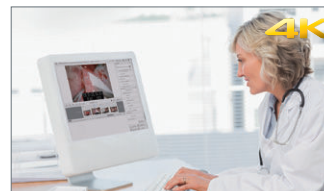
LMD-X550MD
LCD Monitor



LMD-X310MD
LCD Monitor



UP-DR80MD
Digital Color Printer

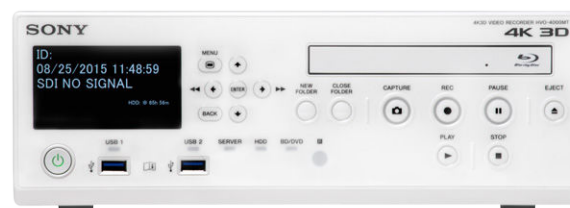


Sony Content Management System



PMW-PZ1
4K SxS memory player

Front and Rear Panels



Front Panel



Rear Panel

CAUTION: Federal (USA) law restricts this device to sale by or on the order of a physician or other appropriately licensed medical professional.

CAUTION: See product labeling for indications, contraindications, warnings, cautions, and directions for use.

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