

SONY



HVO-3300MT

HVO-3300MT

3D HD Video Recorder

3D

Capture, Store and Share

In recent years, demand has been growing for greater flexibility in medical image recording. The need has increased for simultaneous image recording capabilities, multiple modality support, surgical image capture, vital signs monitoring, and easier content archiving and management. Responding to these critical requirements, Sony proudly introduces the HVO-3300MT, a new 3D/HD video recorder.

This recorder enables simultaneous recording in a variety of surgical fields through an endoscope, ultrasound, digital X-ray, and other compatible imaging systems and also captures operational procedures while recording 2D or 3D video images in HD quality.

Images captured with the HVO-3300MT can be used for patient records and for training, education, and referral purposes. For example, images can be sent and shared between surgeons and other clinicians.

The built-in 3.5 inch LCD color display allows users to easily access and review images.

This compact, portable recorder is suitable for use in hospital operating rooms, medical imaging centers, surgical centers, clinics, doctor's offices, and similar healthcare environments.



Key Features

3D/2D Full HD Video Recording

In addition to 2D Full high definition images, the HVO-3300MT supports 3D images from rigid endoscopes and surgical microscopes, meeting today's various medical sources. This recorder accepts various 3D formats (side-by-side, line-by-line, and dual stream), and the user simply selects input signal formats via a menu.

Ch1/Ch2 Two Channel Recording

The HVO-3300MT can simultaneously record two separate channels of input video, such as images from a connected endoscope and from an OR room camera. In addition, it enables for users to record a footage not only in 3D footage but also another content in 2D concurrently. This makes it much easier to use and manage content.

Simultaneous Recording onto Two External Media

Video files can be recorded simultaneously onto the built-in internal hard disk drive, a Blu-ray/DVD disk, connected USB drive, or network server.

This helps shorten the workflow, as there is no need to export or copy videos to external device after they have been recorded on the internal HDD.

Network Data Transmission via CIFS & DICOM Storage

Recorded video footage on the HVO-3300MT can be transferred from the operating room to a connected server such as the Sony Content Management System (CMS) – the CMDS-MS10MD and CMDS-MS20MD – via CIFS over hospital networks*1. This allows users to access each recording quickly after its completion, eliminating the additional step of having to use an external media source to transfer the recording onto a PC. The HVO-3300MT can also transmit captured still image data in 3D or 2D to a PACS system using the DICOM protocol.

*1 Files are transferred using the file-sharing protocol CIFS (Common Internet File System) in Windows.

Proxy Recording*2

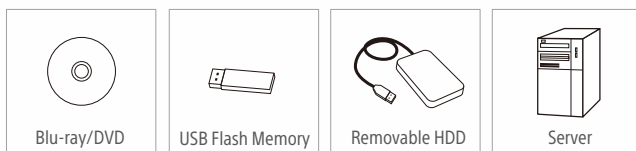
Original full-resolution video data and smaller proxy data can be recorded at the same time.

This streamlines integration with the Sony CMS – such as using full-resolution image files for clinical presentations – while also allowing lower-resolution proxy data to be easily shared on tablet devices or archived for other intended purposes.

Bookmark Index Linkage*2

Bookmark index markers are recorded onto the video stream when a user action occurs, such as taking a still picture or temporarily pausing recording. These bookmarks can be fed directly into the connected Sony CMS, allowing users to easily locate viewing/editing points on the CMS timeline.

*2 These functions are available with Sony CMS version 2.1 or later.



Key Features

Space-Saving, Lightweight Compact Design

This recorder is approximately 81 mm slimmer and 1.9 kg lighter than predecessor HVO-1000MD/HVO-3000MT models.

External Touch Panel Capability

The HVO-3300MT can be used with an external touch panel monitor^{*3}. This improves operability – for example, REC/STOP for each channel can be set independently, and data input (entering patient ID, name, gender, date of birth, etc.) is simplified.

^{*3} Requires an optional USB touch panel monitor, commercially available.

Perfect HVO-1000MD and HVO-3000MT Replacement

While offering enhanced functionality, the HVO-3300MT has command compatibility with previous-generation HVO-1000MD and HVO-3000MT recorders; the operator simply sets the required mode. Operators who have used these existing recorders will appreciate the operational familiarity of the HVO-3300MT.

Video Recording Time*

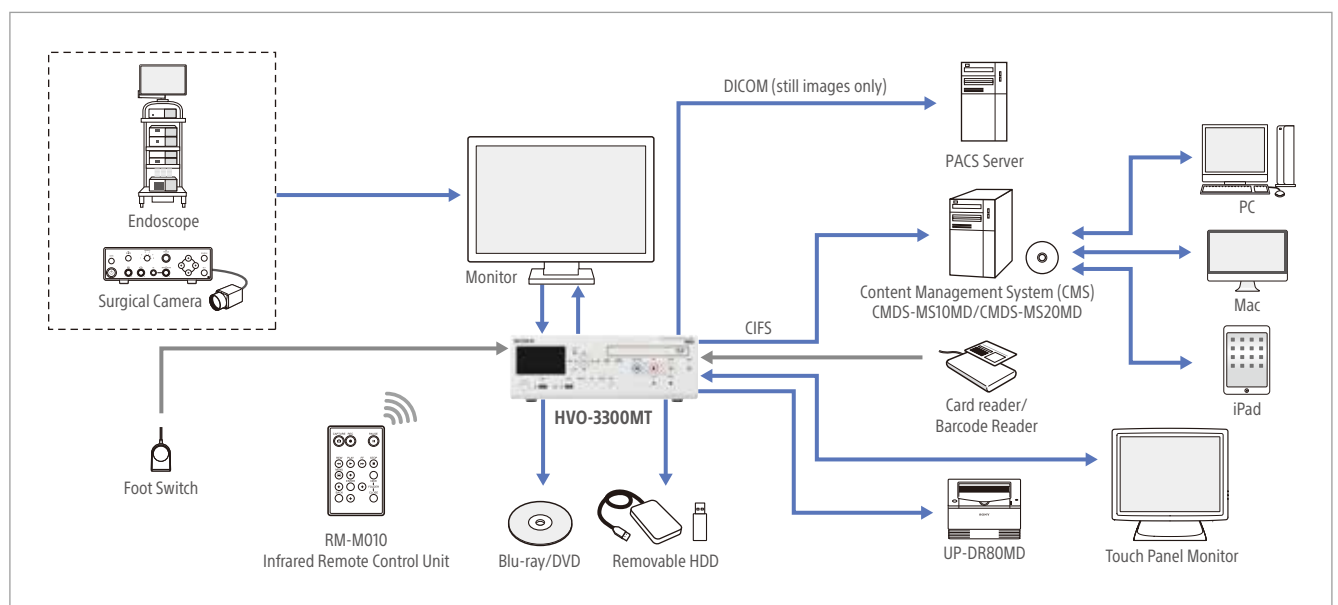
		HD (3D or 2D)						SD (2D)		
		1920 x 1080p			1920 x 1080i / 1280 x 720p			720 x 480i / 720 x 576i		
		Best	High	Standard	Best	High	Standard	Best	High	Standard
		24 Mbps	18 Mbps	12 Mbps	20 Mbps	12.5 Mbps	6 Mbps	6 Mbps	4 Mbps	2 Mbps
Internal HDD	2 TB	168 h 26 min	267 h 2 min	375 h 56 min	185 h 45 min	375 h 56 min	644 h 11 min	644 h 11 min	879 h 33 min	1162 h 46 min
BD-R (SL)	25 GB	2 h 22 min	3 h 55 min	5 h 50 min	2 h 37 min	5 h 50 min	11 h 26 min	11 h 26 min	17 h 49 min	28 h 22 min
DVD-R (SL)	4.7 GB	25 min	43 min	1 h 4 min	28 min	1 h 4 min	2 h 5 min	2 h 5 min	3 h 15 min	5 h 10 min
External Media	1 TB	99 h 56 min	165 h 31 min	246 h 24 min	110 h 55 min	246 h 24 min	481 h 46 min	481 h 46 min	750 h 39 min	1195 h 30 min

Number of Recordable Still Images*

		BMP/TIFF		JPEG					
		HD	SD	HD			SD		
		–	–	Best	High	Standard	Best	High	Standard
Internal HDD	2TB	282,000	1,510,000	1,050,000	1,940,000	3,390,000	3,880,000	5,410,000	6,740,000
BD-R (SL)	25GB	3,800	24,000	15,000	30,000	59,700	65,200	65,200	65,200
DVD-R (SL)	4.7GB	690	4,380	2,740	5,470	10,800	16,200	32,000	65,200
External Media	1TB	160,000	1,010,000	634,000	1,260,000	2,520,000	3,780,000	7,500,000	14,700,000

* These specifications may vary according to the recording image format or writing conditions. They are for reference only, and are not guaranteed.

System Configuration



Specifications

HVO-3300MT	
Recording Features	
Recording Video Format	MPEG-4 AVC/H.264
Recording Audio Format	AAC LC
Recording File Format	MP4
Recording Media	Internal HDD (2TB) External USB Storage Network (CIFS) DVD-R BD-R SL/BD-R DL BD-RE SL/BD-RE DL
Recording Bit Rate (HD)	1080p 24 Mbps (Best), 18 Mbps (High), 12 Mbps (Standard)
	1080i/720p 20 Mbps (Best), 12.5 Mbps (High), 6 Mbps (Standard)
Recording Bit Rate (SD)	480i/576i 6 Mbps (Best), 4 Mbps (High), 2 Mbps (Standard)
3D Recording	Side by Side, Top and Bottom (Input 3D Signals: Side by Side, Line by Line, Dual Stream)
Connectors	
Input Connectors	3G/HD/SD-SDI (BNC type) (2) DVI-D (Single link) (2) S-VIDEO (Mini DIN 4-pin type) (1) VIDEO (BNC type) (1) RGB IN (Mini D-sub 15pin) (1) AUDIO (Stereo mini jack) (1) MIC (Stereo mini jack) (1) AC Inlet (3-pin) (1)
Output Connectors	3G/HD/SD-SDI (BNC type) (1) DVI-D (Single link) (1) S-VIDEO (Mini DIN 4-pin type) (1) VIDEO (BNC type) (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-TX) (1) REMOTE RS-232C (D-Sub 9-pin) (1) REMOTE contact switch (stereo mini jack) (4) MENU MONITOR (Mini D-Sub 15-pin) (1) Equipotential
General	
Power Requirements	100 V to 240 V AC, 50/60 Hz
Input Current	1.25 to 0.52 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	Approx. 6.5 kg (Approx. 14 lb. 5.3oz.)
Dimensions (W x H x D) *	305.0 x 115.5 x 329.0 mm (12 1/8 x 4 5/8 x 13 in.) (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) European Representative (1)

* The values for dimensions are approximate.
These products are distributed to US (FDA) and EU (MDD) as medical devices. They satisfy product safety standards (e.g. IEC 60601-1).**
** For more details, please contact your nearest Sony sales office or an authorized dealer.

Front and Rear Panels



Front Panel



Rear Panel

Distributed by

Related Products



LMD-2765MD
27-inch LCD Monitor



LMD-3251MT
32-inch 3D LCD Monitor

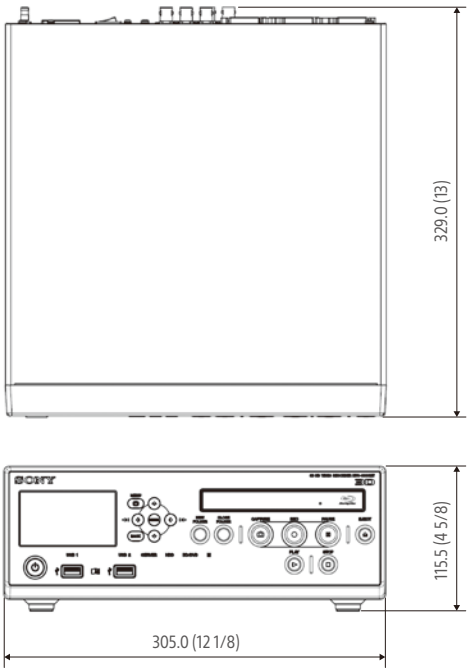


UP-DR80MD
Digital Color Printer



CMD5-MS20MD/CMD5-MS10MD
Content Management System

Dimensions



Unit: mm (inches)

©2016 Sony Corporation. All rights reserved.
Reproduction in whole or in part without written permission is prohibited.
Features and specifications are subject to change without notice.
The values for mass and dimension are approximate.
Some images in this brochure are simulated.
“SONY” and other marks are trademarks or registered trademarks of Sony Corporation.
All other trademarks are the property of their respective owners.