

# OLYMPUS®

Your Vision, Our Future

VISERA ELITE VIDEO SYSTEM CENTER

## OTV-S190

HDTV video processor



## Main Features

- Equipped with high-resolution HDTV imaging capability to provide the best possible image quality for flexible and rigid endoscopes. Enables comprehensive observation of different organs and tissue.
- Compatible with a wide range of endoscopes and camera heads, both for office and OR.
- NBI is a proprietary optical image enhancement technology that is only available on OLYMPUS products. NBI enhances the visualization of vessels and other tissues on the mucosal surface and is 20% brighter compared to previous models.
- Two types of structure enhancement are available, Type A for observation of larger mucosal structures with high contrast and Type B for observation of smaller structures such as capillaries.
- HD/SD-SDI and DVI output for high-quality digital video image transfer.
- Convenient digital-to-digital recording of still images into portable memory.
- Pre-freeze function improves the quality of still image for flexible scopes.
- Picture-in-picture display for any combination of endoscopic images, ultrasound images.
- Convenient index display for documentation.
- Scope ID function for easier endoscopy management.
- User-preset custom buttons for easier operation.
- Noise-reduction capability for exceptional image quality.



## Specifications

Power Supply	Voltage	120 – 240 V AC; within $\pm 10\%$
	Frequency	50/60 Hz; within $\pm 1$ Hz
	Consumption electric power	150 VA
Size	Dimensions (W x H x D)	370 x 85 x 455 mm; 382 x 91 x 489 mm (maximum)
	Weight	8.8 kg
	Type of protection against electric shock	Class I
Classification (medical electrical equipment)	Degree of protection against electric shock of applied part	Depend on applied part See also applied part (camera head or videoscope).
	Degree of protection against explosion	The video system center should be kept away from flammable gases.
	HDTV signal output	Analog signal output: Either RGB (1080/50i) or YPbPr (1080/50i) output can be selected. Digital signal output: HD-SDI (SMPTE 292M), SD-SDI (SMPTE 292M), DV (IEEE 1394), DVI (WUXGA, 1080p or SXGA) can be selected.
Observation	SDTV signal output	VBS composite, Y/C, YPbPr, and RGB; simultaneous outputs possible.
	White balance adjustment	White balance adjustment is possible using the white balance button on the front panel.
	Standard color chart output	A color bar chart can be displayed.
	Color tone adjustment	The following color tone adjustments are possible using the color tone level adjustment button and color tone selector button on the keyboard. • Red adjustment: $\pm 8$ steps • Blue adjustment: $\pm 8$ steps • Chroma adjustment: $\pm 8$ steps
	Automatic gain control (AGC)	The image can be electrically amplified when the light is inadequate due to the distal end of the endoscope being too far from the object.
	Contrast	The image contrast can be set to one of the following three modes (N, H, L) using the "CONTRAST" key on the keyboard. • N (Normal): Normal image • H (High): The dark areas are darker and the bright areas are brighter than in the normal image. • L (Low): The dark areas are brighter and bright areas are darker than in the normal image.
	Iris	The auto iris modes can be selected using the "iris mode" switch on the front panel. • Auto: The brightness is adjusted based on the brightest part of the central part and the average brightness of the periphery part. • Peak: The brightness is adjusted based on the brightest part of the endoscopic image. • Average: The brightness is adjusted based on the average brightness of the endoscopic image.
	Image enhancement setting	Fine patterns or edges in the endoscopic images can be enhanced electrically to increase the image sharpness. Either the structural enhancement or edge enhancement can be selected according to the user setup. • Structural enhancement: Enhancement of contrast of the fine patterns in the image. • Edge enhancement: Enhancement of edges of the endoscopic image.
	Switching the enhancement modes	The enhancement level can be selected from 3 levels (OFF, 1, 2, and 3) using the image enhancement mode button on the front panel.
	Image size selection	The size of the endoscopic image can be changed using the "IMAGE SIZE" key on the keyboard.
	Freeze	An endoscopic image is frozen using an endoscope or the "FREEZE" key on the keyboard.
	Switching the method of the freezing the endoscopic image	Pre-freezing: The image with the least rainbow color is selected from the images captured in the set time period before freeze operation and displayed.
	Optical-digital observation	The optical-digital observation can be performed when using the endoscope and light source compatible with each optical-digital observation mode. NBI observation: This is one of the optical-digital observations using the narrow band observation light. PDD observation: This is one of the optical-digital observations using the blue light. (To be used in combination with an optional filter for the light source)
	Endoscope's remote switches function	The functions of the remote switches on the endoscope can set in the user preset.
	Reset to defaults	The following settings can be reset to their defaults using the reset button on the front panel. • Color tone • Iris mode • Image enhancement method • Image enhancement level • Color enhancement mode • Optical-digital observation • Image size • Contrast • The function of the custom switches • User preset • Freeze • Release index • Zoom • Arrow pointer • Characters on screen • Exposure • PIP/POP
	Remote control	The following ancillary equipment can be controlled (specified models only). • Monitor • DVR • Video printer • Image filing system
Documentation	Patient data	The following data can be displayed on the monitor using the keyboard. • Patient ID No. • Patient name • Sex • Age • Date of birth • Date of recording (time) • Image frame No. • Video recorder mode • Display image setting • Comments
	Displaying the record state	The recording state of the following ancillary equipment can be displayed on the monitor. • DVR • Video printer • Image filing system
	Displaying the image information	The following data can be displayed on the monitor. • Structure enhancement level • Edge enhancement level • Contrast • Zoom ratio
	Advance registration of patient data	The following data of up to 40 patients can be entered prior to surgery using the keyboard. • Patient ID No. • Patient name • Sex and age • Date of birth
Portable Memory	Media	MAJ-1925 (Olympus).
	Recording format	• TIFF: no compression • JPEG (1/5): approx. 1/5 • JPEG (1/10): approx. 1/10
	Number of recording images	• TIFF: approx. 115 images • JPEG (1/5): approx. 500 images • JPEG (1/10): approx. 1500 images
Memory Backup	User preset	The data of up to 20 users can be entered prior using the keyboard.
	Memorization of selected setting	The following settings are held in memory even after the video system center is turned OFF. • Color tone • Iris mode • Enhancement • Image size • White balance
	Lithium battery	Life: 5 years

Specifications, design and accessories are subject to change without any notice or obligation on the part of the manufacturer.