

Press Release

Sony Olympus Medical Solutions Inc.

Sony Corporation

Olympus Corporation

Sony, Olympus, and Sony Olympus Medical Solutions Collaborated in the Development of a Surgical Endoscopy System that Supports 4K, 3D and Infrared (IR) Imagingⁱ Features

Tokyo, Japan – September 14, 2022 – Sony Corporation, Olympus Corporation, and Sony Olympus Medical Solutions Inc., a joint-venture company by Sony and Olympus announced today that the three companies have developed a surgical endoscopy system that offers surgical visualization features including 4K, 3D, infrared (IR) imagingⁱ above and NBI (Narrow Band Imaging)ⁱⁱ. This system will be sold by Olympus in Europe, Middle East and Africa (EMEA), parts of Asia, Oceania, and Japan as the “VISERA ELITE III” in September 2022 or later.

This is the third product developed through this collaboration, following the 2015 launch of the VISERA 4K UHD, a surgical endoscopy system equipped with 4K technology, and the 2017 release of the ORBEYE, a surgical microscope system that incorporates 4K and 3D imaging technology. VISERA ELITE III is to be used in endoscopic surgery for the resection and removal of tumors and lesions, including cancer. The process involves the insertion of a surgical endoscope together with other special-purpose devices such as energy devices or hand instruments.

VISERA ELITE III features Sony’s cutting-edge digital imaging technology enhanced by leading endoscope manufacturer Olympus’ expertise in manufacturing medical equipment and understanding the need of medical facilities. Sony Olympus Medical Solutions has leveraged these capabilities to develop the system’s essential technologies and to optimize medical device image processing. Not only does the system enable use of 4K, 3D, IR imagingⁱ, NBIⁱⁱ observation modes, and further options to meet surgeons’ needs, it is also compatible with Olympus’ existing rigid scopes, flexible scopes, and camera heads. Furthermore, the system software can be upgraded allowing for additional functions, and the system as a whole can be used in a wide range of clinical areas including general surgery, urology, gynecology, and Ear, Nose and Throat (ENT) surgery.

Collaborations between Sony and Olympus - including those involving Sony Olympus Medical Solutions - are branded with the logo "Innovation by Sony & Olympus."

The logo consists of a black rectangular box with the text "Innovation by" in a smaller font above "Sony & Olympus" in a larger, bold font, both in white.

● **Key contributions to the development of this system**

Sony Olympus Medical Solutions

Sony Olympus Medical Solutions has developed the product technologies that are fundamental to the system, as well as optimizing the core technologies of Sony and Olympus and image processing for medical devices. In particular, 4K camera head (CH-S700-XZ-EA), which functions as an eye of the endoscope, incorporates Sony’s original technologies

that were developed for its interchangeable-lens camera Alpha™, including C-AF (Continuous Autofocus), which adjusts focus according to the movements of the scope, and EDOF (Extended Depth of Field) function allowing for focus of a larger area. By equipping these technologies, the need of manually adjusting focus during surgery is reduced, which is expected to reduce surgeons' fatigue and the time needed for surgeryⁱⁱⁱ. Furthermore, Sony Olympus Medical Solutions has provided high-definition image processing technology to offset the degraded resolution usually found in IR imagingⁱ.

Sony

Sony has provided various technologies and knowledge of digital imaging in addition to 4K 3D imaging. 4K camera head (CH-S700-XZ-EA) incorporates Sony's 4K image sensor and miniaturization technologies and enables high-definition imaging and high functionality. Sony also provided LMD-XH320ST and LMD-XH550ST, the system's 3D-compatible 4K LCD monitors. These monitors incorporate Sony's original A.I.M.E.™ (Advanced Image Multiple Enhancer), for enhancing the color or structure of the displayed image and improving visibility in the dark. With these monitors, VISERA ELITE III realizes improved reproduction both for light and dark areas in HDR (high dynamic range).

Olympus

In developing this system, Olympus has applied its expertise as a leading manufacturer of various types of high-value-added endoscopes. This system benefits from Olympus's advanced optical technologies, primarily in its high-resolution rigid endoscopes and high-intensity light source. Furthermore, Olympus has developed the system to meet the needs of medical facilities. The system is an open platform which allows it to be utilized in a wide range of clinical areas and reduces installation costs for medical facilities. It also includes capabilities for adding optional functions by software upgrades. In addition to the optimized image quality for various procedures, it also features 4K camera head (CH-S700-XZ-EA), which is lightweight while still maintaining the level of performance of the previous system.

Please learn more about "VISERA ELITE III" at:

<https://www.olympus-global.com/news/2022/nr02399.html>

ⁱ Infrared imaging is a special light observation function for observing the fluorescence generated by administering a fluorescent agent called indocyanine green (ICG) and by applying near-infrared light (light with a wavelength of 700-780 nm).

ⁱⁱ NBI (Narrow band imaging) is an imaging technique for examining features such as the small blood vessels in mucosa and the surface patterns. NBI highlights tissue by illuminating it with two narrow bands (wavelengths) of light that are absorbed by the hemoglobin in blood.

ⁱⁱⁱ Compared with current Olympus products.