Revolutionize Your Surgical Microscopy
ORBÉYE 4K 3D Orbital Camera System
**Key Benefits**

**4K 3D Visualization**
- Precise Images for Seeing More
- Anatomical Details and Tissue Structure
- 4K 3D visualization
- No image latency
- Super high 26 x magnification
- 4K 3D imaging chain

**Bright Observation Modes**
- Brighter Images Compared to Those by Standard Surgical Microscopes
- IR – infrared light
- BL – blue light
- NBI – Narrow Band Imaging

**Ergonomic Benefits**
- More Comfortable and Natural Working Posture
  - Comfortable heads-up posture
  - Freedom from ocular lenses
  - Positioning flexibility
  - Ample operative space

**Facilitating Team Surgery**
- Operative Efficiency and Educational Advantages
  - Side-by-side positioning
  - Multiple operator workflows for various procedures and approaches

**Smart Operating Room Solutions**
- Time-Saving and Versatile Utilization
  - Easy setup
  - Quick one-person sterile draping
  - Applicable for various specialties
4K 3D Visualization

**Big Screen 4K 3D Visualization**
- See anatomical details with four times the resolution of standard HD imaging.
- Experience true depth perception with natural 3D visualization.
- Reliably identify tissue boundaries, blood vessels and lesions via a larger color range and observation and filter modes such as blue light, infrared and Narrow Band Imaging.

**Agile Autofocus and Optical and Digital Zoom**
- The very agile autofocus keeps your surgical field in focus at all times, so there is no need to adjust the focus manually.
- The optical zoom function allows you to zoom in and out as needed.
- The digital zoom provides fast, additional magnification for extra-detailed surgical work.

**No Image Latency**
ORBHEY offers precise instrument placement and visualization. Fast image processing achieves zero delay between the movement of your instruments and the 4K 3D image.

**4K 3D Imaging Chain**
All ORBEYE imaging subcomponents work together seamlessly to produce unsurpassed 4K 3D images.
Bright Observation Modes

Seeing More
The ORBEYE 4K 3D orbital camera system offers three different observation modes aimed at improving the surgical workflow.

IR – Infrared Imaging Mode
The infrared imaging mode provides bright 4K 3D intraoperative ICG fluorescence. ORBEYE uses dedicated LEDs capable of directly producing the required wavelength without relying on filter technology. This ensures brighter illumination of the ICG distribution through the vascular structures.

BL – Blue Light Imaging Mode
The blue light imaging mode helps to distinguish tissues that have accumulated certain fluorophores from tissues that have not. A dedicated blue light LED provides high contrast and illumination for real-time dissection.
About Fluorescence Modes and Filter Technology
The ORBEYE 4K 3D orbital camera system fluorescence modes and filter technology benefit directly from the unique design of the system.

You will experience brighter fluorescence visualization than with traditional microscopes. Increased brightness is the result of three key design features:

1. Light passes through fewer optical lenses compared to an ocular-based microscope.

2. The use of blue and infrared LED light, rather than relying on filters removing light wavelengths from white light.

3. The Exmor R® CMOS image sensor made by SONY has the light-receiving surface located above the wiring layer. Therefore, most of the available light reaches the sensor.

NBI – Narrow Band Imaging Mode
Narrow Band Imaging (NBI) is an optical technology available for a variety of medical disciplines. It helps to visualize the minutest vascular patterns and variations in these patterns. NBI uses only wavelengths absorbed by hemoglobin for maximum contrast.

The way NBI works is easy to understand. White light imaging (WLI) contains all colors. When WLI hits the surface of a tissue, all colors are absorbed. NBI uses only blue and green light. When blue and green light hits the surface of the tissue, it is highly absorbed by hemoglobin in the blood vessels. The surrounding mucosal areas reflect the light back to the ORBEYE. As a result, the contrast of the blood vessels in relation to the mucosa is significantly enhanced. This makes the mucosal and vascular structure much clearer. Tumor tissue can be identified by specific vessel structures, which NBI light help us to identify and understand their pathology.

White Light Image
Vascular structures with white light imaging.

NBI Image
Visual enhancement of vascular structures with Narrow Band Imaging technology.

Changing the Way You See Things
Bright Observation Modes

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Free Yourself from the Constraints of Standard Surgical Microscopes

Ergonomic Benefits

Freedom from Ocular Lenses
Untether yourself from the constraints of traditional ocular-lens-based microscopes and experience a more ergonomic and more comfortable heads-up posture.

Greater Positioning Flexibility for Various Approaches
- Observe the surgical field from various angles that could not be achieved with a traditional microscope.
- ORBEYE’s small and flexible optical unit can facilitate multiple surgical positions without compromising posture of surgeon or creating positional discomfort.
- Ample space to operate due to the compact design of the optical unit. A large distance from the surgical field reduces obstruction of the surgical site.

Involve the Entire Surgical Team

Facilitating Team Surgery

Operative Efficiency
- Enables you to work side by side with your assistant in the same orientation.
- Optimizes multiple surgeon workflows.
- Ensures an immersive experience for the entire surgical team due to its big screen 4K 3D imaging, which facilitates teamwork, surgical training and additional consultative input if needed.
- May contribute to greater surgical-step anticipation and preparedness by including staff in magnified 3D visualization.

Educational Advantages
- The ORBEYE imaging system is a valuable tool for surgeon training and education. All participants, both residents and senior surgeons, can see the same high-quality 4K 3D immersive images of the surgical field at the same time.
- All surgical procedures can be saved using the 4K 3D recorder, allowing residents to study the surgical procedure if they want. Surgical procedures can be explained by senior or main surgeons on the large monitor.
Smart Operating Room Solutions

**Easy Draping**
ORBREVYE’s compact optical head and arm design facilitate simple and quick one-person sterile draping. Draping the ORBEYE takes less than a minute, which helps to maintain a smooth surgical workflow. The optical head and arm designs of traditional surgical microscopes often require multiple people and considerable time for the draping procedure.

**Applicable for Various Specialties**
- Due to its versatile design, ORBEYE can be used as a visualization tool for multiple surgical specialties and procedures.
- ORBEYE’s small footprint means it can be conveniently placed in multiple operating room configurations.
- Because it can be used for multiple specialties, ORBEYE may increase cost-effectiveness, utilization and return on investment.

**Plug and Play**
ORBREVYE eliminates the need for preprocedure balancing or center of gravity adjustment. Traditional surgical microscopes require this step due to changes of the machine’s center of gravity when moving their heavier ocular eyepieces. ORBEYE can be set up and ready to use in your case in a matter of minutes.

**Easy Transportation**
ORBREVYE can easily be transported between operating rooms due to it being lightweight and compact and greatly reduces obstruction of the surgical site.
ORBEGEYE 4K 3D Orbital Camera System

Components

- Straight, Simple Arm Design
  - Easy Draping without Slack
  - No balance adjustment required
  - X-Y motorized movement

- Intuitive Touch
  - Panel Control

- Long-Life and Cold
  - Light Source for Easy Maintenance

- All-in-one, Plug-and-play

- Lightweight, Easy to Move, Easy to Locate

- Large 4K 3D Monitor
  - Easy sharing with multiple surgeons

- Wireless Foot Switch
  - Control with various functions