

# SEE MORE. STAND TALL.

Aesculap Aeos®  
Digital Surgical Microscope Platform



DEDICATED TO THE TRUE  
PIONEERS OF SURGERY.



# SEE MORE

WITH THE Aesculap Aeos®.



Perfect vision is essential for neuro and spine surgery. For many decades, optical surgical microscopes have served surgeons worldwide well – but they do have certain limitations.

## It's time for Aesculap Aeos®

### Superior field of view & depth of field

- 16:9 aspect ratio for 50% more information at a glance compared to a round image
- Superior depth of field for more information at once

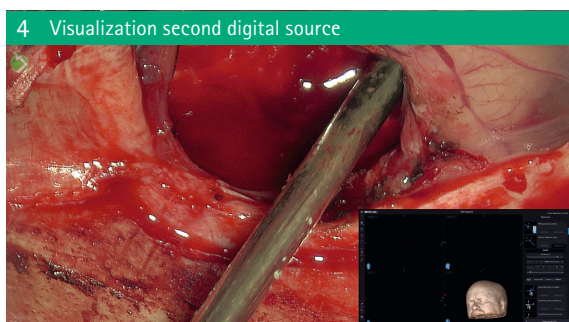
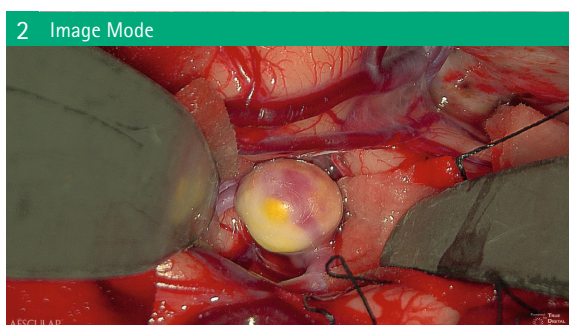
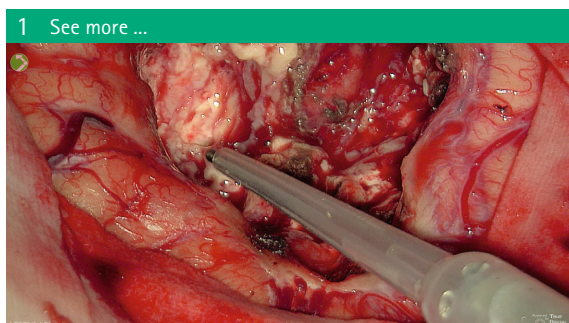
### Improved teamwork and teaching

- Multiple monitor capabilities during surgery provides the surgeon and the entire OR team with the same image quality
- Seeing the same allows for better teamwork and teaching



## Superior illumination of deep and narrow cavities

- Illumination is coaxially aligned with optical path
- Light sensitive High Dynamic Range (HDR) sensors reduce the need for high light outputs causing heat
- LED technology contributes to a cool operative field

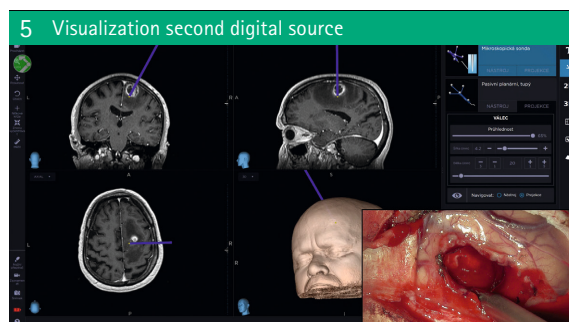
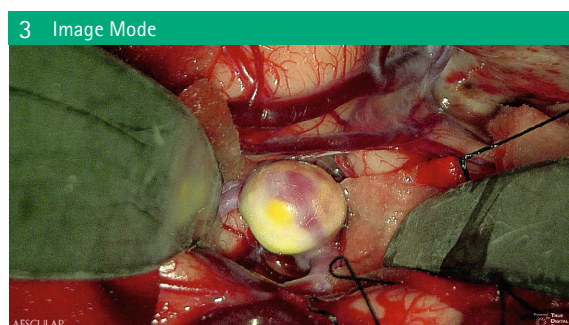


## 10x optical zoom & digital imaging

- 10x PURE optical zoom. Enjoy full resolution at any zoom level
- Up to 95x magnification on the 4K 3D 55" monitor
- High Dynamic Range (HDR) imaging
- Five digital image modes enable enhanced surgical views
- Visualize a second digital source on the same monitor at the press of a camera button

Fig. 1, 4, 5:  
Courtesy of ass. Prof. Radim Lipina, University Hospital Ostrava

Fig. 2, 3:  
Courtesy of Prof. Dr. Jürgen Konczalla, University Hospital Frankfurt





# SEE MORE

WITH THE Aesculap Aeos®.

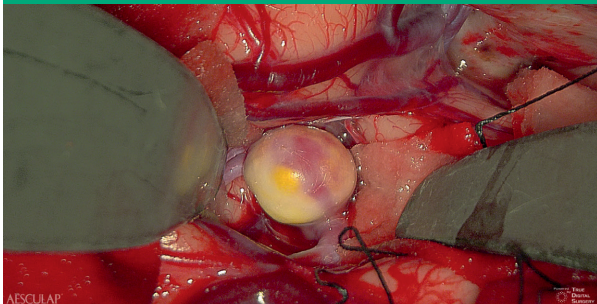
Aesculap Aeos® offers visualization beyond the human eye. LED powered 3D fluorescence modes for vascular and tumor surgery allow to see more.



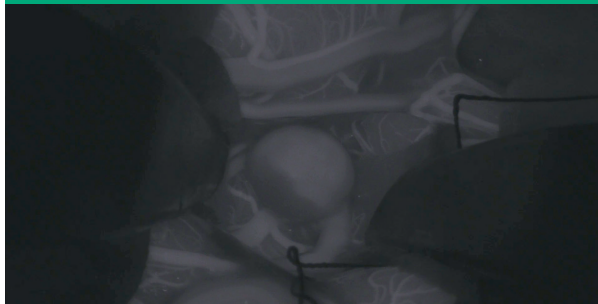
## Backlight Illuminated 3D ICG Fluorescence

- Digital InfraRed 800
- 3D ICG Fluorescence Visualization on Surgical monitor with optional backlight illumination to visualize surrounding structures
- Playback with slow-motion

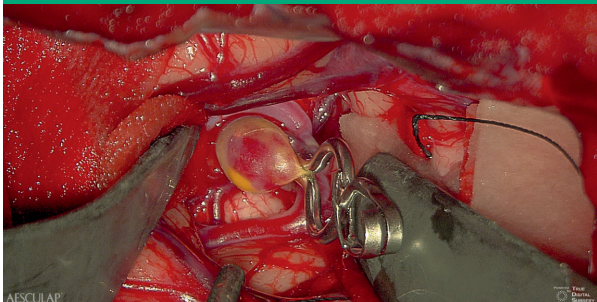
6 Aneurysm white light



7 Aneurysm ICG Fluorescence



8 Aneurysm clipped white light



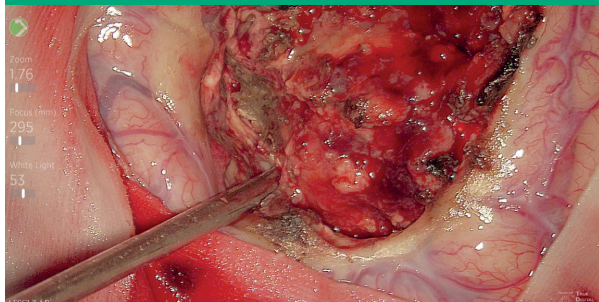
9 Aneurysm clipped ICG Fluorescence



Fig. 6-9: Courtesy of Prof. Dr. Jürgen Konczalla, University Hospital Frankfurt



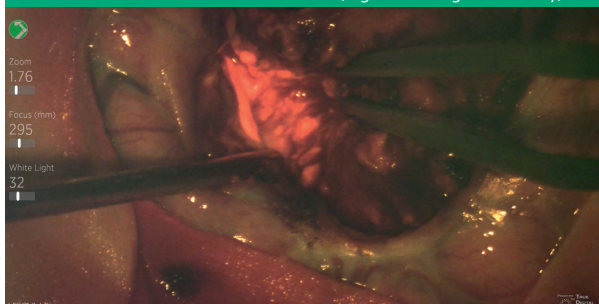
10 Glioblastoma white light



11 Glioblastoma 5-ALA Fluorescence (low backlight intensity)



12 Glioblastoma 5-ALA Fluorescence (higher backlight intensity)

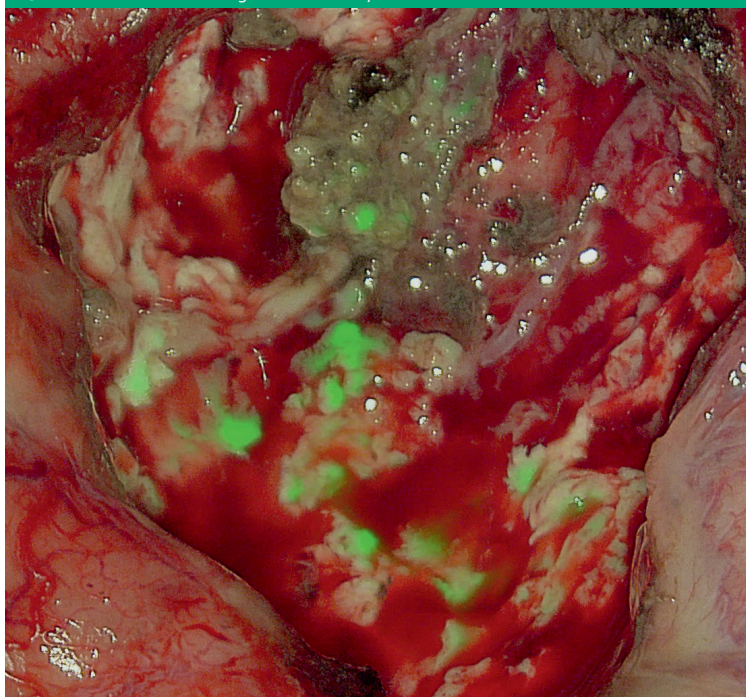


## Backlight Illuminated 3D 5-ALA Fluorescence

- Digital UltraViolet 400
- 3D 5-ALA Fluorescence Visualization with optional back-light illumination to visualize surrounding structures
- Optional overlay

Fig. 10-13: Courtesy of ass. Prof. Radim Lipina, University Hospital Ostrava

13 Glioblastoma white light with overlay



Your benefits at a glance:

### VISION



Superior field of view and depth of field

### LIGHT



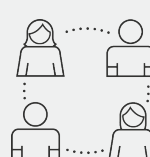
Superior illumination of deep and narrow cavities

### LESS HEAT



Cool operative field

### WORKFLOW



Improved teamwork and teaching

### FLUORESCENCE



Fluorescence modes with backlight illumination



# STAND TALL AND BE EFFICIENT

WITH THE Aesculap Aeos®.

The ergonomic challenges and the inefficiency resulting mainly from repositioning and readjusting the system reflect further challenges of optical microscopes.

It's time for Aesculap Aeos®



## Ergonomic Heads-Up surgery

- Unrestricted, unobstructed view allows the surgeon, not the microscope, to determine ergonomics
- Integrated boom arm (optional) provides additional flexibility to position the monitor in a convenient location

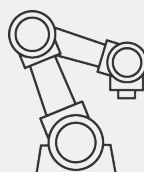
Your benefits at a glance:

### ERGONOMICS



Heads-up surgery

### ROBOTICS



Efficient robotic-assisted features

### LESS COSTS



LED illumination



Aesculap Aeos® allows for a more efficient workflow thanks to robotic-assisted features

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### Robotic-Assisted precision

- Efficient robotic-assisted positioning
- Hands-free positioning (whole arm range)
- Sub-millimeter precision
- Semi-automated positioning: Lock-on-target, Waypoints, Vector Movements
- Post-movement autofocus
- Hand, foot and touchscreen controls

### Keeping cool regarding costs

- No running costs for illumination due to LEDs with average lifetime of 50.000 h for White Light AND Fluorescence

### SAVE



### MOVE



### RECALL

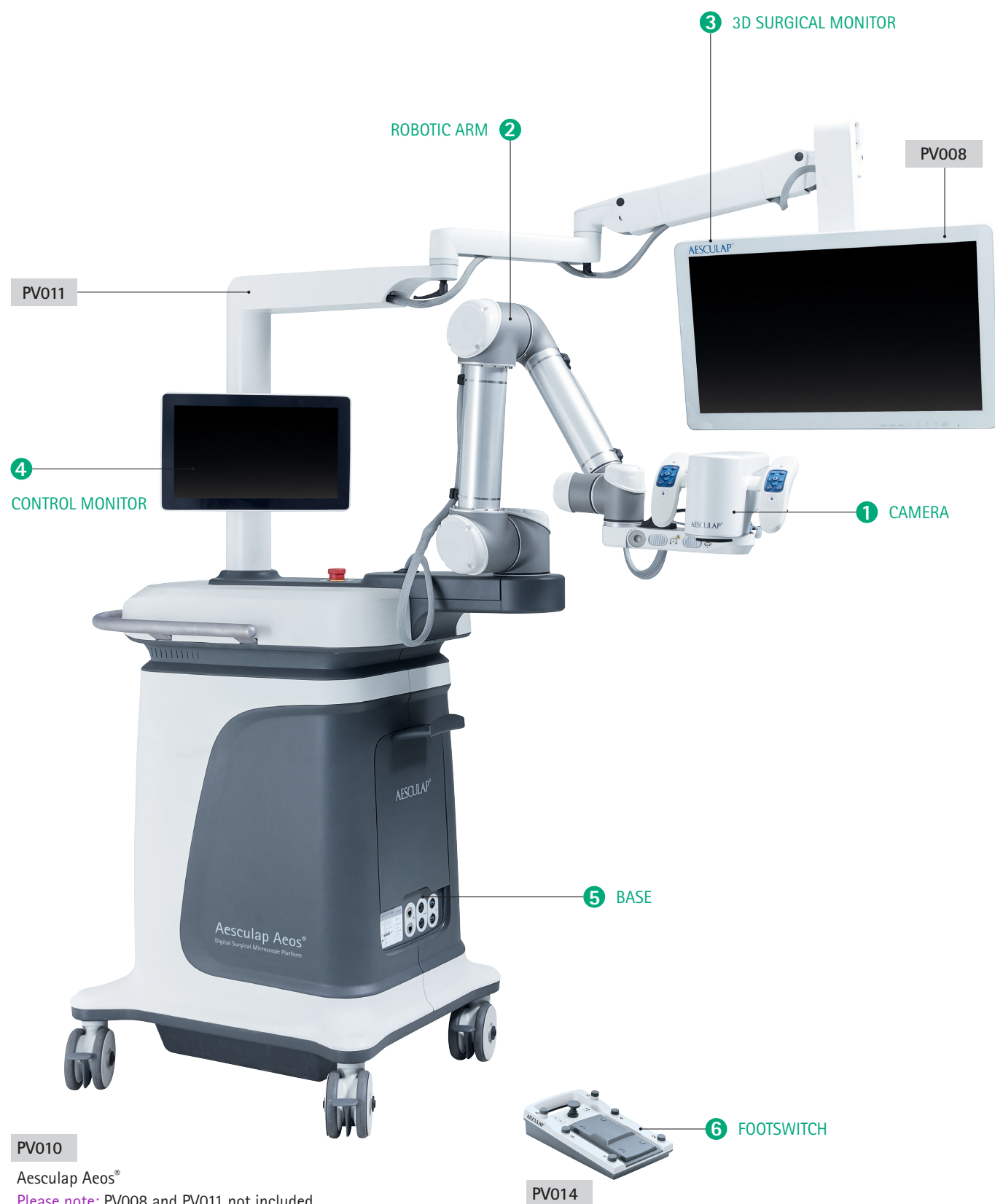


Fig. 15-17: Waypoints: Seamlessly return to a previously saved location, including zoom and focus



# VISUALIZATION

Aesculap Aeos® - DIGITAL SURGICAL  
MICROSCOPE PLATFORM.





## 1

### CAMERA

- 10 x Optical zoom
- Working distance 200 – 450 mm
- HDR imaging
- Coaxial direct LED illumination
- 3D backlight illuminated fluorescence (optional)

## 2

### ROBOTIC ARM

- 6-axis robotic arm
- Manual positioning
- Automatic / Robotic-assisted positioning
  - Lock-on-target
  - Waypoints

## 3

### 3D SURGICAL MONITOR

- 26", 32" and 55" models\*
- Full HD and 4K UHD models\*
- Passive 3D technology

\*not all models integratable in base

## 4

### CONTROL MONITOR

- 15.6" monitor size
- Touchscreen

## 5

### BASE

- 3D surgical monitor integratable (optional)
- 3D recording
- Video outputs: 12G-SDI, DP
- Video inputs: HDMI, 6G-SDI to integrate external sources such as endoscopic cameras
- Other interfaces: USB, Gigabit-LAN
- DICOM (optional)

## 6

### FOOTSWITCH

- Wireless / Cabled
- Programmable buttons
- Joystick

## PRODUCT OVERVIEW

### PV010

Aesculap Aeos®

### PV014

Footswitch, wireless

### PV012SU

Sterile Drape, single-use  
PAK = Package of 5 pieces

### PV031

Keyboard, USB

## SURGICAL MONITORS AND MONITOR STANDS

### PV011

Upgrade kit for integration  
of 3D monitor (PV008/PV648)

### PV008

26" Full HD 3D monitor

### PV648

32" Full HD 3D monitor

### PR050

32" 4K UHD 3D monitor

### PV015

55" 4K 3D monitor

### PV818

Mobile monitor stand  
(for PR050 & PV008)

### PV016

Mobile monitor stand  
(for PV015)

### PV061

Mobile monitor stand,  
height-adjustable (for PV015)

## SOFTWARE MODULES

### PV022

Software module DUV 400

### PV023

Software module DIR 800

### PV024

Software module DICOM

## CONNECTING CABLES

### PV034

Locking HDMI cable, 5 m

### PV035

HDMI cable, 10 m

### PV052

DP-HDMI cable, 5 m

### PV053

DP-HDMI cable, 10 m

### PV054

DP-DP cable, 10 m

### PV056

DP-DVI cable, 5 m

### PV057

BNC cable, 5 m

### PV058

12G-SDI cable, 10 m

### PV969

HDMI to DVI video signal  
cable, 3 m

## MAINS CORDS

### FS096

Mains cord Europe

### FS097

Mains cord UK

### FS098

Mains cord  
Japan/USA/Canada

### GK537

Equipotential bonding lead,  
5 m

## GLASSES

### PV621

3D polarization glasses  
PAK = Package of 15 pieces

### PV622

3D anti-fog glasses  
PAK = Package of 5 pieces

### PV623

3D polarization glasses clip

### PV624

3D eye shield glasses kit

## TEST CARDS

### PV030

White balance cards  
PAK = Package of 5 pieces

### PV032SU

Test card for DUV 400,  
single-use

### PV033SU

Test card for DIR 800,  
single-use

# AESCULAP® – a B. Braun brand

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