

SIMply  
VISIONary

BOA  
VISION

COBRA  
VISION

mamba  
VISION



**Flexible Sensor Endoscopes**  
for ENDOCAM Logic 4K Camera Platform



## Flexible Sensor Cystoscope

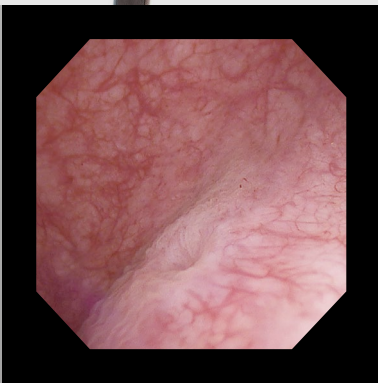
Ultimate flexibility meets sensor technology

The **MAMBA vision** is the 3<sup>rd</sup> member of Richard Wolf's flexible sensor endoscope family featuring bidirectional 210° deflection, a lightweight, ergonomic handle and axial cable to give the operator precise control and navigation.

The thin and flexible outer sheath coupled with an 11.5 Fr. beveled distal tip facilitates ease of insertion and improves patient comfort while providing a brilliant, high quality image with the latest in sensor technology.

The 7.5 Fr. large working channel allows for optimal irrigation for both diagnostic and therapeutic procedures.

# Cystoscopy



Sensor Cystoscope Picture

210° Deflection upward/downward

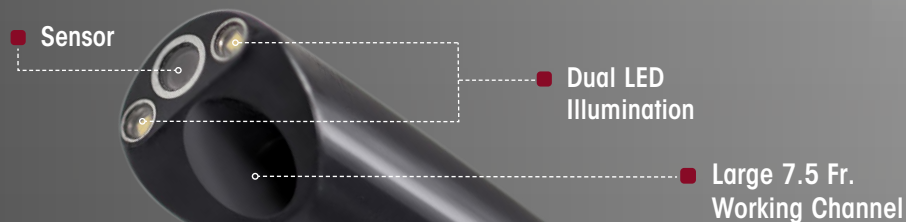




## **mamba** VISION

### **Flexible Sensor Cystoscope**

- 210° deflection upward/downward for precise control and navigation
- 7.5 Fr. large working channel for optimal irrigation
- Atraumatic, 11.5 Fr., beveled distal tip for easy insertion and patient comfort
- 16.2 Fr. sheath ø
- Dual LED distally for superior illumination
- Two programmable camera buttons capable of controlling up to four functions
- Special Imaging Mode (SIM) compatible
- Ergonomic handle
- Axial cable



**Atraumatic, 11.5 Fr., Oblique Distal Tip**

# Flexible Single Channel Sensor Ureterorenoscope

The multi-talented instrument for all-around application

## Ureterorenoscopy

The **BOA vision** boasts the latest sensor technology for a crisp, clear image. The slim design of 6.6 Fr. on the distal tip, paired with improved shaft stiffness make this single channel flexible URS ideal for difficult and small anatomy.

Engineered with a 3.6 Fr. working and irrigation channel and bidirectional 270° deflection, the **BOA vision** can be inserted through an access sheath as small as 9.5 Fr..



Sensor URS Picture



Boa vision ...

9.5 Fr.

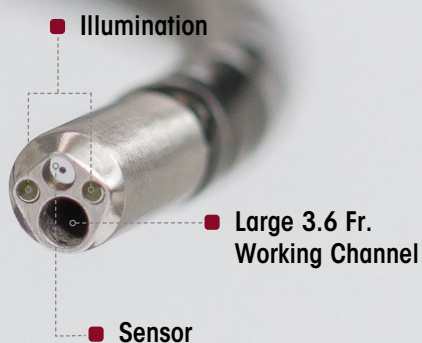
... fits through a 9.5 Fr. Access Sheath



## Boa VISION

### Flexible Single Channel Sensor Ureterorenoscope

- Fits through 9.5 Fr. access sheaths
- 270° deflection upward/downward
- 3.6 Fr. working channel
- Atraumatic, 6.6 Fr., beveled distal tip for easy insertion
- 8.7 Fr. sheath ø
- Integrated LED illumination and distal image sensor
- Two programmable camera buttons capable of controlling up to four functions
- Special Imaging Mode (SIM) compatible
- Ergonomic handle
- Axial cable



Atraumatic, 6.6 Fr., Oblique Distal Tip



270° Deflection upward/downward



# Flexible Dual Channel Sensor Ureterorenoscope

The specialist for stone therapy

As the first and only flexible dual channel sensor URS on the market, the **COBRA vision** provides exacting performance.

Two working channels allow for laser lithotripsy and extraction of concretions without having to interrupt the procedure to change auxiliary instruments.

The dual channel **COBRA vision** features a special laser shifter for fixation and precise positioning of the laser fiber making it perfect for stone therapy.

## Ureterorenoscopy



Sensor URS Picture

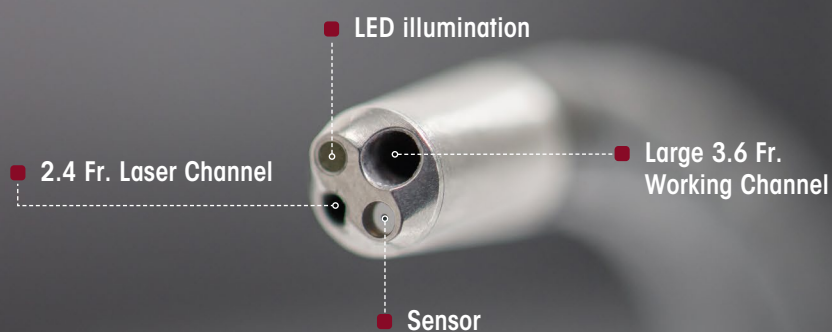


**Two independent channels**  
for the simultaneous use of tiplless baskets and laser fibers

## COBRA VISION

### Flexible Dual Channel Sensor Ureterorenoscope

- 270° deflection upward/downward
- Two independent irrigation and laser channels (3.6 Fr. and 2.4 Fr.) for the simultaneous use of tipless baskets and laser fibers
- Atraumatic, 5.2 Fr., beveled distal tip for easy insertion
- 9.9 Fr. sheath ø
- Integrated LED illumination and distal image sensor
- Two programmable camera buttons capable of controlling up to four functions
- Special Imaging Mode (SIM) compatible
- Ergonomic handle
- Axial cable



Atraumatic, 5.2 Fr., Oblique Distal Tip

# ENDOCAM Logic 4K

## SIMply LOGICaI

Your view into the future of endoscopic camera systems

### 4K Platform

The ENDOCAM Logic Camera Platform is a pioneer and trendsetter for groundbreaking new technologies. The **ENDOCAM Logic 4K** continues this tradition with a large number of impressive characteristics.



### SIM Modes

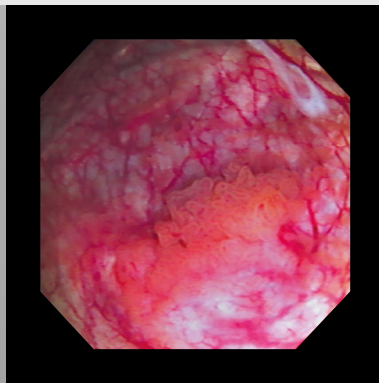
#### **SIM – Special Imaging Modes: The difference is in the detail**

Alongside visualization of natural colors 6 digital modes are available as options. Depending on the situation, the Special Imaging Modes can improve tissue differentiation. The stored SIM can be switched on and off at the touch of a button using the camera head button.



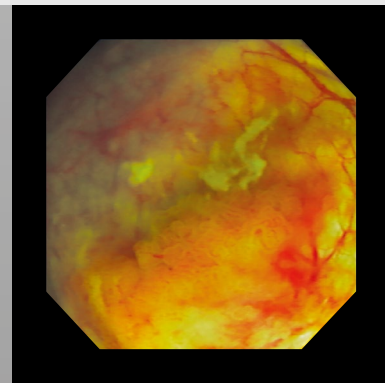
#### **COLOR CONTRAST I**

Differentiated color display and contrast enhancement in images with a high proportion of red.



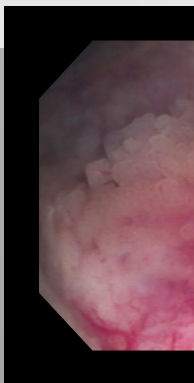
#### **COLOR CONTRAST II**

Differentiated color display, and contrast enhancement in pale images.



#### **COLOR CONTRAST III**

Strongly differentiated color display, and contrast enhancement in pale images.



#### **STANDARD**

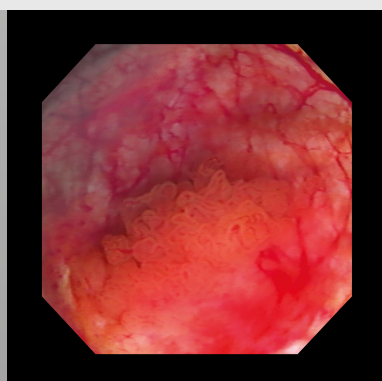
Natural color display.





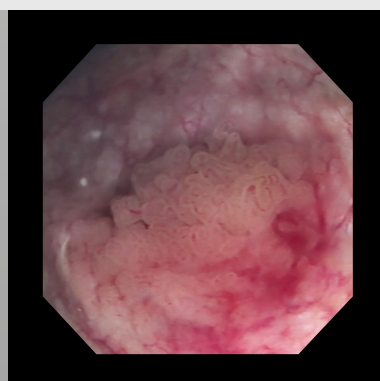
## ENDOCAM Logic 4K

- **Brilliant 4K UHD resolution**  
of 3840 x 2160 pixels  
for live display
- **Integrated Special Imaging Modes (SIM):** Digital algorithms for easier tissue differentiation
- **Compatible** with all application parts and camera heads of ENDOCAM Logic HD
- **Storage** of high-resolution images and videos on USB storage devices
- **User-friendly**  
Clinically developed presets for different disciplines
- **Integratable in core nova,** the Operating Room integration system from Richard Wolf



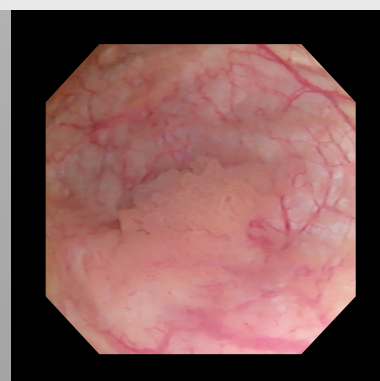
### CONTRAST I

Intensified color display, and contrast enhancement in pale images.



### CONTRAST II

Subdued color display for strongly saturated image scenes. The color intensity is reduced.



### HDR (High Dynamic Range)

Reduction of overexposures. Lightening of shadows.

# Flexible Sensor Endoscopes for Urology

## Technical Data

		<b>MAMBA vision</b> Flexible Sensor Cystoscope	<b>BOA vision</b> Flexible Single Channel Sensor Ureterorenoscope	<b>COBRA vision</b> Flexible Dual Channel Sensor Ureterorenoscope
Number of working channels		1	1	2
Sheath ø		16.2 Fr.	8.7 Fr.	9.9 Fr.
Distal tip ø		11.5 Fr. atraumatic plastic tip	6.6 Fr. atraumatic stainless steel tip	5.2 Fr. atraumatic stainless steel tip
Working/irrigation channel ø		7.5 Fr.	3.6 Fr.	3.6 Fr.
Laser channel ø		–	–	2.4 Fr.
Deflection		210° upward, 210° downward	270° upward, 270° downward	270° upward, 270° downward
Working length		400 mm	680 mm	680 mm
Viewing angle		110°	90°	90°
Lighting		two distally integrated LEDs	LED integrated to handle	LED integrated to handle
Handle		Ergonomically contoured handle with axial camera cable	Ergonomically contoured handle with axial camera cable	Ergonomically contoured handle with brake for locking the instrument tip and axial camera cable
Position of the working and irriga- tion channel in the image		at 3 o'clock	at 9 o'clock	at 6 o'clock
Position of the laser and irrigation channel in the image		–	–	at 9 o'clock
Endoimage		Octagon, 3 step detail enhance- ment and 6-fold digital zoom, automatic white balance, light control and focus	Square, 6-fold digital zoom, automatic white balance, light control and focus	Square, 6-fold digital zoom, automatic white balance, light control and focus
Compatible camera controller		ENDOCAM Logic 4K ENDOCAM Logic HD	ENDOCAM Logic 4K ENDOCAM Logic HD	ENDOCAM Logic 4K ENDOCAM Logic HD
Included accessories		Leak tester (163.903), pressure equalization valve (163.904), luer sealing cap (15023205), cleaning brush (PACK=10 pcs.) for flexible endoscopes with instrument chan- nel (7990005)	Leak tester (163.903), pressure equalization valve (163.904), cleaning brush (PACK=10 pcs.) for flexible endoscopes with instru- ment channel (7990001)	Leak tester (163.903), pressure equalization valve (163.904), cleaning brush (PACK=10 pcs.) for flexible endoscopes with instru- ment channel (7990001), cleaning brush (PACK=10 pcs.) for flexible endoscopes with instrument channel (7990003), clamping element (PACK=20 pcs.), orange (15394144), adapter (163914)
<b>Endoscope:</b> Control lever down – deflection ...	...down	<b>73150012</b> (incl. endoscope 7315001)	<b>73550712</b> (incl. endoscope 7355071)	<b>73560712</b> (incl. endoscope 7356071)
	...up	<b>73150062</b> (incl. endoscope 7315006)	<b>73550762</b> (incl. endoscope 7355076)	<b>73560762</b> (incl. endoscope 7356076)

# ENDOCAM Logic 4K Controller and Accessories



spirit of excellence

## Ordering Information

### 4K Camera Controller

#### ENDOCAM Logic 4K Camera Controller complete

consisting of:

ENDOCAM Logic 4K Camera Controller (5525301), hand-held remote control (5525401), USB Flash Storage 32 GB (72321829), HDMI / HDMI cable interlock 3.0 m (103847), power cable (2440.03) .....**55253011**

### 4K Camera Head

#### ENDOCAM Logic 4K Camera Head

autoclavable, 3 Chip,  
cable length 3.0 m .....**85525942**

### 4K Monitors

#### LCD Monitor 4K

32" .....**LMD-X3200N**  
55" .....**LMD-XH550N**

### Objective Lenses

#### RIWO Lens, C-mount

autoclavable, 14 mm .....**85261144**  
autoclavable, 24 mm .....**85261244**

#### RIWO Zoom Lens, C-mount

autoclavable, 13 - 29 mm .....**85261504**

### HD Camera Heads

#### Pendual blue HD Camera Head

1 Chip,  
cable length 3.0 m .....**5525833**

#### Pendual HD Camera Head

1 Chip,  
cable length 3.0 m .....**5525933**

#### 3 Chip HD Camera Head

autoclavable, 3 Chip,  
cable length 3.0 m .....**85525922**

#### 1 Chip HD Camera Head

autoclavable, 1 Chip,  
cable length 3.0 m .....**85525902**



ENDOCAM Logic 4K Camera Head

Interdisciplinary ENDOCAM Logic HD Camera Heads

Flexible Sensor Endoscopes in Urology

Photodynamic Diagnostic  
in Full HD



3 Chip HD  
Camera Head



1 Chip HD  
Camera Head



Pendual HD  
Camera Head  
with integrated Coupler



Pendual **blue** HD  
Camera Head  
with integrated Coupler



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Subject to modifications. Please note that some products may not be available in all countries. Please always take note of the information that is provided with the product. For more detailed information, please consult with your contact partner or directly with Richard Wolf GmbH.

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