

# IMAGE1 S™ 4U

How you see your patient



# What really matters is the way you SEE your patient

The treatment outcome of your patient depends on the type of treatment administered. In order to achieve the best possible treatment results, we offer you an appropriate solution that will help you better visualize your patient.

With our modular, sustainable, and customized solutions, we offer you a wide range of visualization options. A notable feature is our camera heads – a key element of visualization. When we take a look at the rapid development of new technologies, it is not surprising

that many approaches and paradigms have changed over the years. New technologies bring about improvements and changes.

## What is really important in endoscopy?

- A good image that enables safe and precise work
- An image that provides a natural color experience
- An image that enables you to view small structures

Many different technologies are available that have a major impact on image quality. However, this is not a reason to rely on traditional technological approaches alone.

Through the technological advancement of imaging elements in recent years, it has been possible to implement new technologies and to improve visualization options.

Let yourself embrace new technological approaches and benefit from a better visualization of your patient.



# With the goal of delivering the best possible images

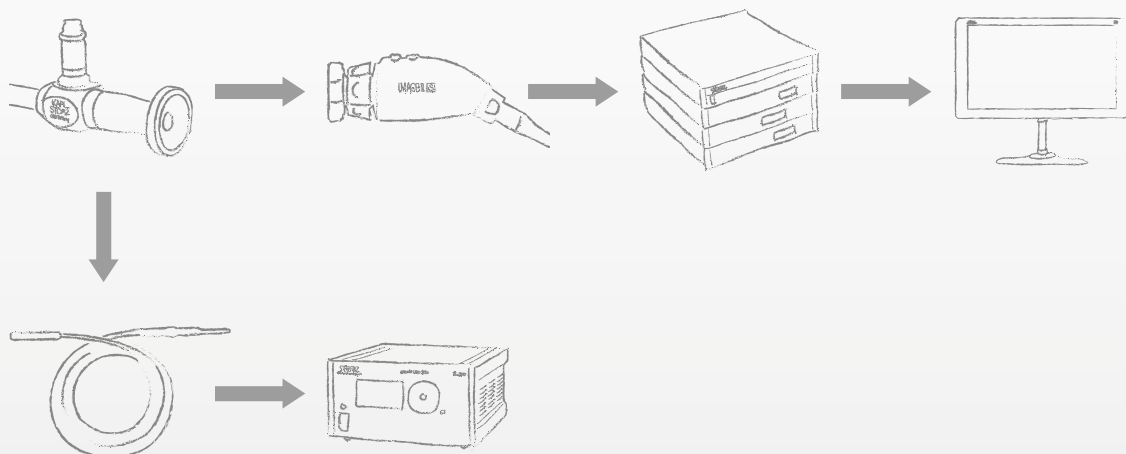
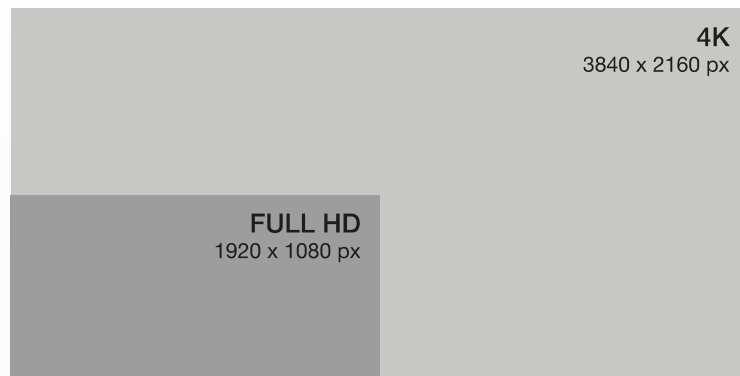
The introduction of 4K brought about the next step in the development of endoscopic visualization. KARL STORZ have pursued the goal of delivering the best possible imaging.

## 4K offers:

- 4x higher resolution compared to FULL HD
- Visibly greater detail
- Expanded depth of field – no autofocusing required
- Enhanced digital zoom
- Extended color space

During surgery, you need to be able to rely on your colleagues – the same goes for the image chain.

To profit from these benefits, you will need an optimally coordinated image chain.



Do you wish to learn more about the KARL STORZ image chain? If so, please visit our online catalog for further information:



<https://www.karlstorz.com/de/de/area-of-expertise.htm?cat=1000108631>



IMAGE1

# Another way of zooming - discover digital zoom

Thanks to a higher resolution, we can now offer you the option of using a digital zoom without a major loss in resolution.

The paradigm shift and the introduction of the digital zoom eliminates the need for mechanical elements, making it possible to

reduce repairs and thus lower repair costs. We are therefore able to provide you with even more reliable products.<sup>(1)</sup>

Would you like to enjoy better

visualization and an enhanced display of structures?

Thanks to the digital zoom, this is now possible at the press of a button. Activate the digital zoom via the camera head buttons and benefit from an enlarged image.



(1) Mechanical zoom elements are the most common repairs for IMAGE1 S™ H3 camera heads.



# Image quality combined with future-oriented technology – the CMOS sensors

Thanks to the energy efficiency of the CMOS sensors, less heat is generated so that the camera

heads do not overheat – even during longer surgeries.

## Additional properties of CMOS sensors:

- CMOS sensors have caught up with CCD sensors in terms of quality
- A more compact camera head design enables ergonomic work
- They have a reduced blooming effect: This reduces overexposure, especially when used with metallic instruments, and enables homogeneous visualization.

By choosing CMOS chips, not only have we opted for image quality but we have chosen a future-oriented technology in order to offer futureproof products. <sup>(2); (3)</sup>



# Providing highly realistic images thanks to...

## ... an extended color space

The BT.2020 color space is the new standard for 4K and covers 76% of the color gamut whereas BT.709 (REC.709), the standard for HD, covers 36%. The BT.2020 color space is able to reproduce more pure colors than the BT.709 standard. This results in a

wider color gamut within 4K, which in turn allows you to benefit from a more realistic color representation and thus more natural visualization of structures.

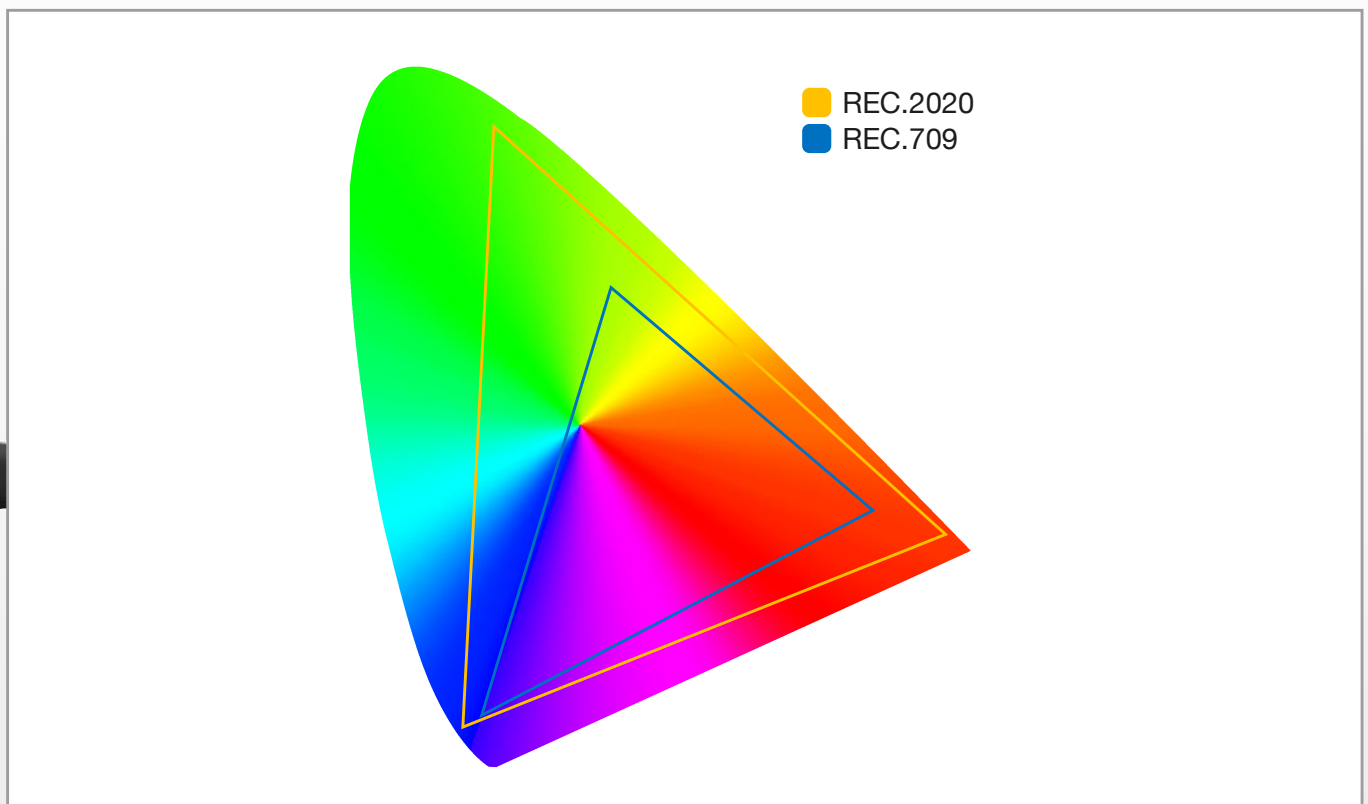
## ... color reproduction and number of chips

Through a special imaging processing algorithm as well as the enhanced color performance of the new CMOS chips, the color performance of a 1-chip CMOS camera is equivalent to that of a 3-chip CCD camera.

Let us impress you with the color rendition and natural visualization of structures. Request a demonstration now.



<https://www.karlstorz.com/de/de/contact-technical-consultant.htm>



(2) Sony (the Japanese world market leader for imaging sensors) will focus on CMOS sensor technology and announced they will cease production of CCD sensors after 2025.

<https://www.amos.com/en/news/sony-to-focus-on-cmos-technology-ccd-sensor-production-to-end>

(3) A sales analysis of CMOS image sensors worldwide in the period from 2007 to 2025 shows a significant increase in sales. This is presumably due to the special features of the CMOS sensor, which produce excellent image quality.

<https://www.statista.com/statistics/543969/worldwide-cmos-image-sensor-sales/>

More than  
**75**  
Years

*Shaping the Future  
of Endoscopy with you*