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surgiCam[®] HD and **surgiCam**[®] 4K

Optimal Views




Living experience

Live transmissions of surgical procedures are becoming more important. Transmissions for education and training in particular are now essential and it is difficult to imagine doing it without them. Teleconsultations are now also standard practice. surgiCam® gives you optimal resolution and definition into the smallest corners.

Great flexibility

surgiCam® can be customized for the specific requirements in the operating theater. It stands out with its great flexibility and versatility. The camera can be installed in a central position integrated into the sterile handle of the operating light and on a separate suspension arm. The sterile handle can be adjusted to give you the best possible view of the surgical site and you can operate the camera at the same time.



Better view for greater success

Hospitals today face increased pressure to improve success rates. Apart from highly qualified personnel, modern equipment is essential for efficient results. For this reason, digital surgical or image documentation along with live operations are becoming more and more important. The high-resolution surgiCam® camera system by KLS Martin is ideal for placing your hospital a jump ahead of your competitors. This is because surgiCam® in combination with the marLED® operating light generation offers optimal conditions for visualizing the complete operation.

surgiCam® HD – optical perfection guaranteed

The high-resolution surgiCam® HD camera system is ideal for use with marLED® operating lights. You can select an installation with a separate suspension arm or have it integrated into the sterile handle of the operating light. With surgiCam® HD, you get professional image quality in the Full HD 1080 format with 2 million pixels.

The surgiCam® HD wireless can be installed in the operating theater in no time - absolutely no need for time-consuming installation of additional data cables. The transmitter sends the image to the receiver with zero latency.



Breathtaking detail

4K quality shows impressive and realistic color differentiation, which clearly shows even the smallest changes in tissues. The 120x zoom (10x optical, 12x digital) shows all details of the image and the procedure can be documented in precise detail.

NEW! **surgiCam®** 4K – More details – more options!

With the unique KLS Martin surgiCam® 4K, you can experience the video with four times the resolution than with Full HD. The finest details from the operating field are displayed on one of our excellent 4K monitors. The picture looks more realistic, tissue and surgical situations are captured even better.

Your benefits with surgiCam®

- Documentation of the complete surgical procedure
- Live transmissions for teleconsultation and for education and training
- Professional image quality with maximum detail
- Interference-free transmission to external storage media
- Can be integrated in a separate suspension arm or in the sterile handle of the operating light

Better operation for perfect visualization

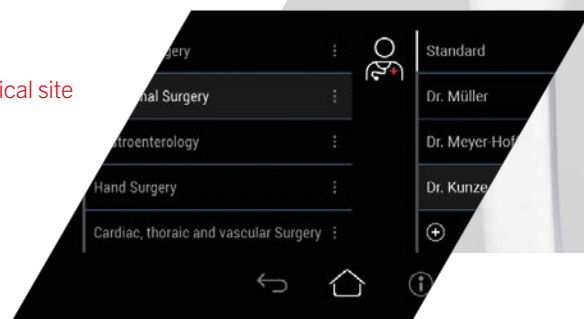
The surgiCam® system can be controlled from the control panel or with the sterile handle of the operating light. However, we recommend an external controller in order to be prepared for the widest possible range of personal and situational requirements. The investment is quickly recovered, because customized control options can save valuable time.

marTouch® Pro – absolutely individual

marTouch® Pro has been specially designed for the marLED® X operating light. It offers the widest range of functions, it can be individually programmed and it can control every single light separately. Multiple lights can also be controlled simultaneously. The touch-sensitive controller is installed on the operating light suspension or on the wall. It can also be used as a stand-alone device.

The benefits of marTouch®

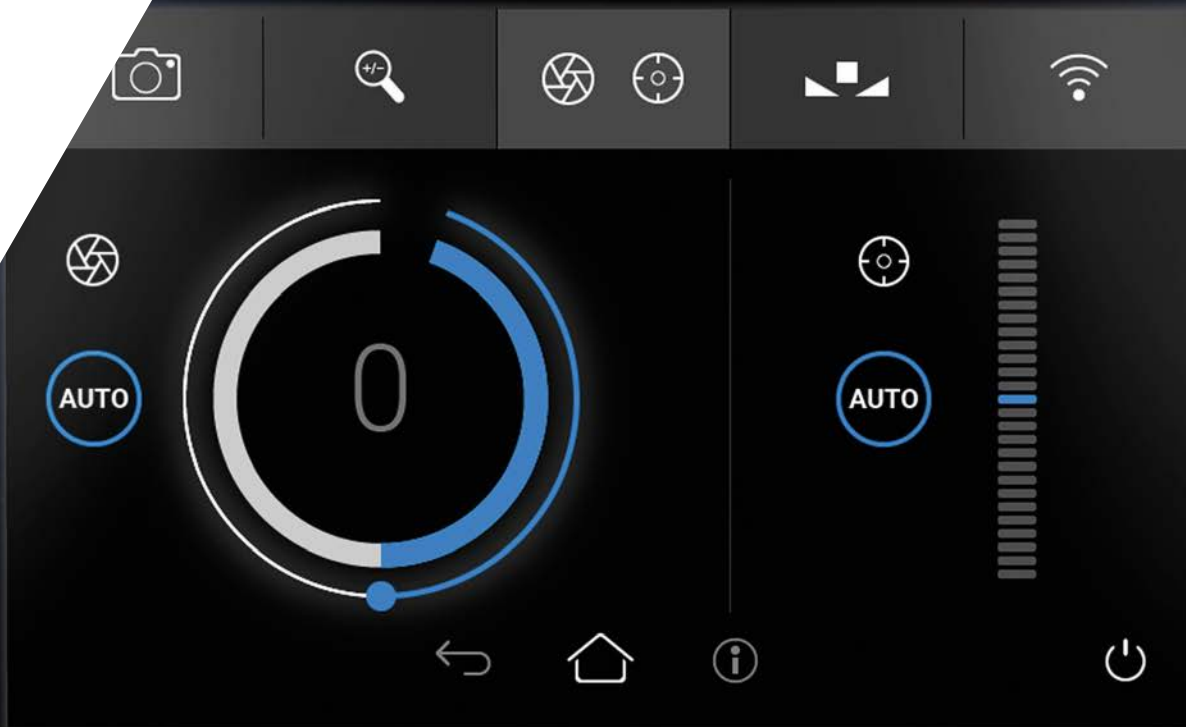
- Convenient operation of all functions with touch-sensitive icons
- Motorized image alignment 360° available – optimal view of the surgical site
- Can be programmed for specific users (marTouch® Pro)
- Different installation options: e.g. desk or wall-mounted version and on the DVE



User-specific setting

With the marTouch® Pro settings for the individual surgeon can be input and also saved. Simply enter the name – and there are the customized light parameters. This also saves valuable time.

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Convenient control

Operate all camera functions of the marTouch® Pro and marTouch® with touch-sensitive icons: zoom, image rotation, manual and automatic shutters, white balance and still image function.

Motorized image alignment

Motorized image alignment with the marTouch® Pro and marTouch® ensures that the viewing perspective of the surgeon is identical to the image on the monitor. This saves valuable time and increases safety during the operation.

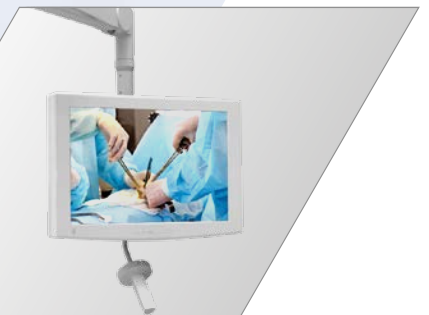
marTouch® – universal control

All camera functions and the functions of the marLED® E series operating lights can be set simply by tapping the digital touch screen. You can select the desk version for equipment trolleys or mounted via a VESA interface.



marView – complete freedom of movement

The TFT monitor bracket system for sizes up to 32 inches is noted for its high flexibility and low weight, making it ideal for a large action radius. Very low adjustment force due to innovative bearing technology and suspension with neutral center of gravity makes it easy to move the monitor to any position.



TFT FS – firm grip

The TFT FS monitor bracket system is the first choice for displays up to 42 inches. It offers five different tilt angles and is noted for its universal applicability for a wide range of different room conditions. The surgeon can also adjust the TFT FS using a disposable or sterilizable handle. It is compatible with various standard VESA sizes and also offers the option of internal or covered cable ducts.

The right accessories make work easier

Perfect interaction of all components can save lives, particularly during an operation. KLS Martin offers additional video components for processing the image signal to ensure that all components are compatible. If you are interested, please request the applicable documentation from the KLS Martin head office or a KLS Martin representative.

The benefits of the TFT monitor bracket systems

- Wide range of movement for large action radius
- Extremely flexible positioning anywhere in the room
- Easily moved to all positions
- Multiple monitors are available in HD and 4K

Technical data at a glance

Camera systems	surgiCam® HD	surgiCam® HD wireless	surgiCam® 4K wireless
Image sensor	1/2.8 type „Exmor“ CMOS sensor	1/2.8 type „Exmor“ CMOS sensor	1/2.5 type „Exmor“ CMOS sensor
Resolution	1920 x 1080	1920 x 1080	3840 x 2160
Aspect ratio	16:9	16:9	16:9
Effective pixel number	> 2,000,000	> 2,000,000	> 8,000,000
Zoom	10x optical / 12x digital	10x optical / 12x digital	20x optical / 12x digital
Focal length zoom lens	3.8 mm (wide angle) – 38 mm (tele)	3.8 mm (wide angle) – 38 mm (tele)	4.4 mm (wide) – 88.4 mm (tele)
Aperture	1.8 F – 3.4 F	1.8 F – 3.4 F	2.0 F – 3.8 F
Shutter speed	1 to 1/10,000 s	1 to 1/10,000 s	1 to 1/10,000 s
White balance marLED® X	automatic/sync/custom	automatic/sync/custom	automatic/sync/custom
White balance marLED® E	automatic	automatic	automatic
Video signal	Analog competent (Y/Pb/Pr)	2x HDMI at the receiver unit	1x HDMI at the receiver unit
Motorized image alignment	yes, 360°	yes, 360°	yes, 360°

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