

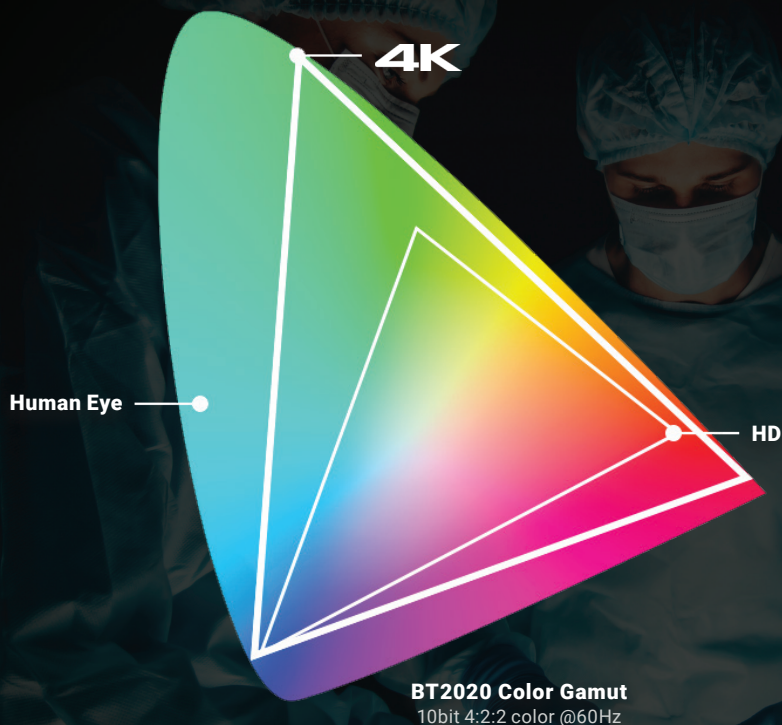
# The 4Klear™ "Lite" Camera

A TRUE Native Medical Camera

The 4Klear Lite is a Medical Grade Native 4K Camera designed for surgical microscopes. The remote camera head offers a large ½" Native 4K CMOS chip designed to better duplicate the surgeon's field of view (FOV) seen in the microscope. Produce live 4K video, control camera settings and manage entire patient workflow via an easy to use 12.7cm multi-touch screen.



4K  
HD



BT2020 - 10bit 4:2:2 live video produces the best possible color representation to the human eye which allows for near perfect duplication of the optical pathway of a surgical microscope.



C-Mount Microscope Camera Head (Actual Size)

First to market as a c-mount Medical Grade Microscope native 4K camera with a wide BT2020 Color Gamut and 12G-SDI output.

The state-of-the-art ½" back-illuminated 4K CMOS chip produces more light per pixel for light sensitive operations and reduces noise in the video all designed to give the surgeon and staff critical clarity for the surgical environment.

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# CAMERA FEATURES

## INTEGRATED 12.7CM TOUCH LCD SCREEN

- Control entire software from integrated touch screen
- Multi-touch/swipe interface
- Duplicate the internal 12.7cm touch screen to any HID touch monitor via VGA

## SPECIFICATIONS

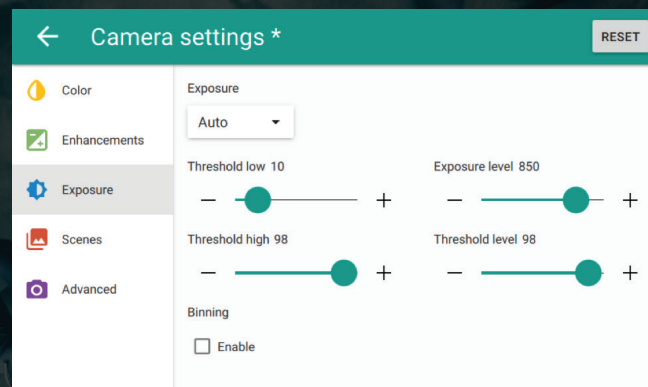
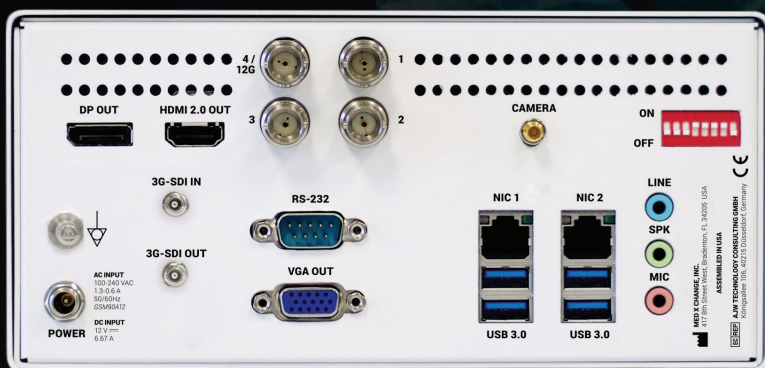
<b>Image Sensor</b>	• Native ½" 4K CMOS Chip
<b>Lens Mount</b>	• C-Mount
<b>Output Signals</b>	<ul style="list-style-type: none"> <li>• HDMI 2.0 4K UHD, Full HD 1080p 50/60hz</li> <li>• Quad-SDI 4K UHD</li> <li>• 12G-SDI 4K UHD</li> <li>• 3G-SDI, Full HD 1080p 50/60Hz</li> <li>• DP 1.2 (future)</li> </ul>
<b>Input Signals</b>	• 3G-SDI (future)
<b>Camera Cable</b>	• 3m, 6m, 9m or 15m
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>• Camera Head: 36mm (Round) x 27.5mm (H)</li> <li>• Camera Control Unit: 205mm (L) x 214mm (D) x 105mm (H)</li> </ul>
<b>Weight</b>	<ul style="list-style-type: none"> <li>• Camera Head: 49g (1.72oz)</li> <li>• Camera Control Unit: 2.72kg (6lbs)</li> </ul>
<b>Power Requirement</b>	• 12V 6.67A
<b>Power Consumption</b>	• 100-240VAC, 1.3-0.6A, 50-60Hz
<b>Safety Certifications</b>	<ul style="list-style-type: none"> <li>• IEC 60601-1-2:2014 (Ed.4.0)</li> <li>• IEC 60601-1:2012 (Ed. 3.1)</li> <li>• No. U8 18 05 74193 030</li> </ul>

## CAMERA FUNCTION

<b>Frame Rate</b>	• 4K 60fps: 50/60Hz
<b>Exposure Shutter</b>	• 1/60 – 1/30000 (Auto and Manual mode)
<b>Exposure Level (Fine Tuning Exposure Histogram)</b>	• 0-1000 (Auto, One-Shot, Manual Mode)
<b>Sensor Gain</b>	• 0.0 – 27.0 dB (Auto and Manual mode)
<b>Binning Cross Gain</b>	• Auto and Manual mode
<b>Binning Diagonal Gain</b>	• Auto and Manual mode
<b>Sharpness</b>	• 0-3180 (Default is 1500)
<b>Sharpness Floor</b>	• 0-512 (Default is 32)
<b>White Balance</b>	• Auto mode
<b>Hue</b>	• -15 to +15 (Default is 0)
<b>Brightness</b>	• -50 to +50 (Default is 0)
<b>Contrast</b>	• -50 to +50 (Default is 0)
<b>Saturation</b>	• -125 to +125 (Default is 0)
<b>Flare Composition</b>	• 0-12 (Default is 0)
<b>Noise Filter</b>	• Allowed values of: 0 (off), 1 (low), 3 (max)
<b>Output Colorspace</b>	• RGB 4:4:4, YUV 4:2:2 or YUV 4:4:4
<b>Mirror/Flip Feature</b>	• Options are Mirror, Flip or Mirror & Flip
<b>Scene Files</b>	• Preset files loaded (Ability to add unlimited user scene files)

## PERFORMANCE

<b>Resolution</b>	• 1900+ lines
<b>Sensitivity</b>	<ul style="list-style-type: none"> <li>• Sensitivity can change drastically; positively or negatively, based on the optics being used, therefore adding a value for this specification is irrelevant and misleading to the microscope user.</li> </ul>
<b>Signal to Noise Ratio</b>	<ul style="list-style-type: none"> <li>• (SNR1s) 0.95 lx</li> </ul> <p><b>Note:</b> SNR1s (lx) is a new index proposed by SONY® for picture quality at low illumination.</p>



Camera settings tab > Exposure sub tab

**Note:** All recording functionality, DICOM, IP streaming and other options can be activated on this system for separate additional fees.