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Camera Technology
Focused on Scientific Imaging
and Challenging Inspection

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Aries 6506 / 6510

The Aries 6506 and 6510 deliver a perfect combination of sensitivity, a large field of view (FOV), and high-speed performance. Their advantages stem not only from the Gpixel Gsense 6510BSI sCMOS sensor but also from the flexible readout modes and user-configurable structure, which are specifically designed for the most challenging scientific applications.
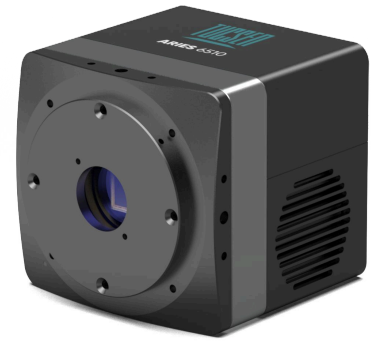
Key Features	Benefits
Ultimate Sensitivity	The Super Sensitivity mode maximizes signal collection power with up to 95% QE, while keeps the noise floor down to 0.7e-, makes them ideal for low light imaging.
Large Field of View [1]	22 / 29.4 mm diagonal sensor delivers the largest field of view among scientific cameras with 6.5 µm pixels.
Useable Full Well Capacity for High Speed Acquistion	We use 11-bit and 1,000 e- / 15,000 e- full well data for the high speed mode, resulting higher accuracy on intensity measurements over normal 8-bit data with only 200 e- full well.
Easy-to-use GigE Interface	High quality data without the need for a 3rd party frame grabber or complicated boot sequence.

Typical Applications

- Super Resolution Microscopy
- Low linght Living Cell Imaging
- Fluorescent Slide Scanning
- High Throughput Imaging

Noted Examples

[1] Aries 6510 delivers the largest field of view of 29.4 mm diagonal FOV, while Aries 6506 has an ideal FOV of 22 mm for the most of microscopes.
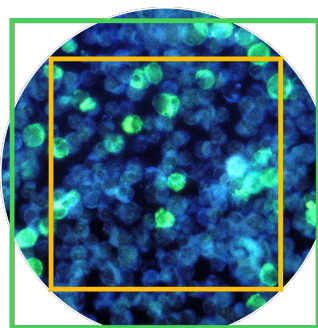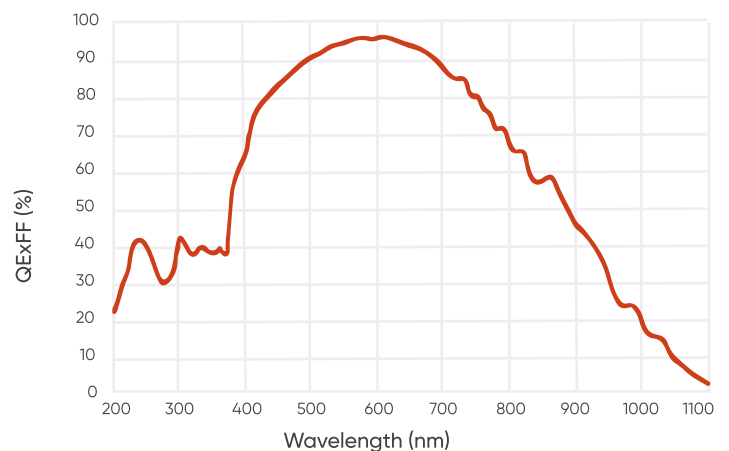

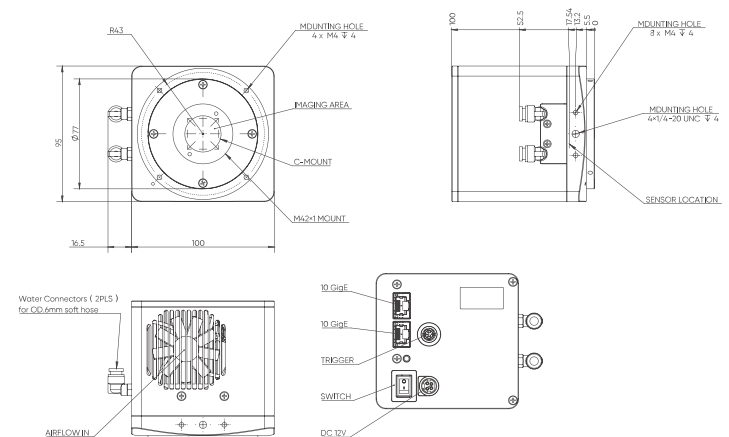**Aires 6506**
Diagonal: 22 mm
Area: 15.7 mm x 15.7 mm

Aires 6510
Diagonal :29.4 mm
Area: 20.8 mm x 20.8 mm

Microscope FOV at 22 mm

Quantum Efficiency

Dimensions (Unit: mm)

Model	Aries 6510				Aries 6506			
Sensor Type	BSI sCMOS							
Sensor Model	Gpixel GSENSE 6510BSI							
Peak QE	95%							
Color / Mono	Mono							
Array Diagonal	29.4 mm				22 mm			
Effective Area	20.8 mm x 20.8 mm				15.7 mm x 15.7 mm			
Resolution	3200 x 3200				2400 x 2400			
Pixel Size	6.5 µm x 6.5 µm							
Readout Mode	HDR	Speed	Sensitivity	Super –Sensitivity	HDR	Speed	Sensitivity	Super –Sensitivity
Bit Depth	16 bit	11 bit	12 bit	12 bit	16 bit	11 bit	12 bit	12 bit
Frame Rate	83 fps	150 fps	88 fps	5.2 fps	111 fps	200 fps	117 fps	6.9 fps
Readout Noise	1.6 e-	2.0 e-	1.2 e-	0.7 e-	1.6 e-	2.0 e-	1.2 e-	0.7 e-
Dark Current @ 0℃ (e- / P /s)	0.5	1.0	0.5	0.5	0.5	1.0	0.5	0.5
Full Well Capacity	15,000 e-	1,000 e- / 15,000 e-	1,500 e-	1,000 e-	15,000 e-	1,000 e- / 15,000 e-	1,500 e-	1,000 e-
Shutter Mode	Rolling							
Image Correction	DPC							
ROI	Support							
Binning (FPGA)	2 x 2, 4 x 4							
Cooling Method	Liquid Cooling , Air Cooling							
Cooling Temperature	Air: 0℃ @ 25℃ ambient; Liquid: –10℃ @ 20℃ liquid temprature							
Trigger Mode	Hardware, software							
Output Trigger Signals	Exposure start, Global, Readout end, Trigger ready, Global reset, First row, Any row							
Trigger Interface	Hirose							
SDK	C / C++ / C# / Python							
Data Interface	2x10G GigE							
Optical Interface	T / F / C Mount				C Mount			
Power	12 V / 8 A							
Power Consumption	≤ 55 W							
Dimensions	95 mm (H) x 100 mm (W) x 100 mm (L)							
Camera Weight	1350 g							
Operating System	Windows / Linux							
Operating Environment	Working: Temperature 0~40 ℃, Humidity 10~85 % Storage: Temperature –10~60 ℃, Humidity 0~85 %							