

Aries 6504 LT

The Aries 6504 LT is a compact scientific camera built on a next-generation sCMOS architecture. Combining broad spectral response, exceptional sensitivity, and high-speed imaging performance, it delivers an ideal balance of performance, flexibility, and value for scientific imaging and industrial inspection applications.



Key Features

Benefits

300–1100 nm Spectral Response	UV to NIR sensitivity for diverse imaging applications.
83% QE & 0.8 e ⁻ Readout Noise	High sensitivity for demanding low-light imaging applications.
100 fps @ 4.2 MP	2.5X higher full-resolution frame rates than the previous generation.
USB 3.2 & CoaXPress Interfaces	Flexible connectivity for diverse integration requirements. ^[1]
Compact Design	Optimized for space-limited OEM integration.

Typical Applications

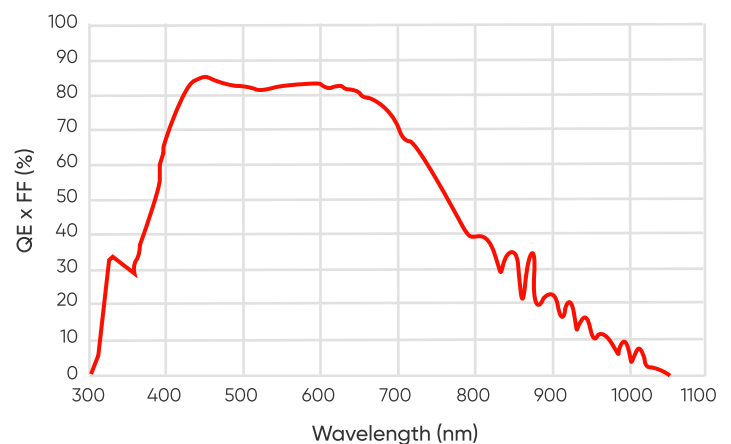
- Fluorescence Imaging
- Spectroscopy and Spectral Analysis
- Industrial Quality Inspection

Noted Examples

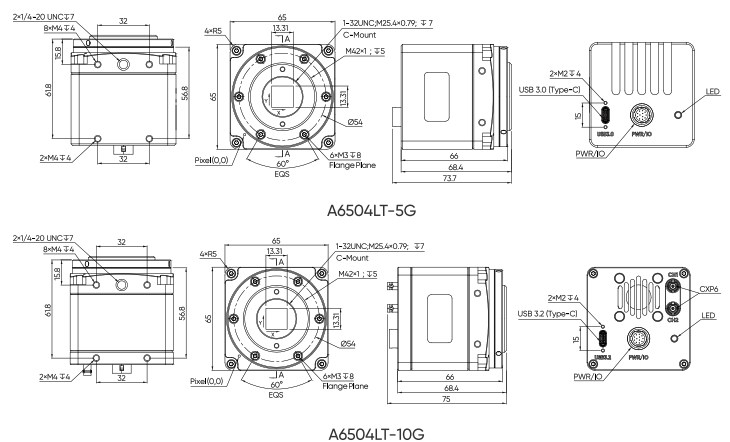
[1] Compared with the previous-generation compact sCMOS platform, the Aries 6504 LT delivers significant improvements in sensitivity, imaging speed, and overall imaging performance.

Aries	Previous Generation	Aries 6504 LT
Peak QE	72%	83%
Readout Noise	2.1 e ⁻	0.8 e ⁻
Max Frame Rate	40 fps	100 fps
Interface	USB 3.0	USB 3.2 / CXP

Quantum Efficiency



Dimensions (Unit: mm)



Specifications

Product Name	Aries 6504 LT	
Model	A6504LT-F-5G	A6504LT-F-10G
Sensor Type	BSI sCMOS	
Chrome	Mono	
Spectral Range	300 nm - 1000 nm	
Peak QE	83%@450 nm	
Resolution	2048 (H) x 2048 (V)	
Pixel Size	6.5 μm x 6.5 μm	
Effective Area	13.3 mm x 13.3 mm	
Frame Rate	42 fps@Dynamic mode	80 fps@Dynamic mode; 100 fps@Standard mode
Full-Well capacity	15 Ke-@Dynamic mode	
Dynamic Range	86 dB@Dynamic mode	
Readout Noise	0.8 e-@Dynamic mode	
Dark Current	TBD	
DSNU	TBD	
PRNU	TBD	
Cooling Method	Passive Cooling	Passive Cooling, Fan Cooling
Cooling Temp.	/	
Binning	2 x 2, 4 x 4	
ROI	Support	
Trigger Mode	Hardware, Software	
Trigger Output	Readout, Exposure Out, Trigger Ready, High, Low	
Trigger Interface	Hirose-12-Pin	
Timestamp	Support	
Data Interface	USB 3.2 Gen1	USB 3.2 Gen2, CXP 12 x 1
SDK	C / C++	
Bit Depth	16 bit	12 bit, 16 bit
Optical Interface	C Mount	
Power Supply	DC12V / USB3.2	
Power Cons.	< 6 W	< 12 W
Dimensions*	65 mm (H) x 65 mm (W) x 66 mm (L)	
Weight	456 g	425 g
Software	Sample Pro, Mosaic V3	
Operating System	Windows 10 / 11, Ubuntu 22.04	
Environment	Working: Temp. 0°C~40°C, Hum. 20%~80%, Altitude 0 m~3000 m; Storage: Temp. -20°C~60°C, Hum. 20%~80%;	

* The dimensions shown refer to the bare camera body only, Please see the mechanical drawing for details.

*Specifications in this manual are subject to changes without prior notice.



Follow us

+86 (591) 2805 5076 ext.818

www.tucsen.com

support@tucsen.com