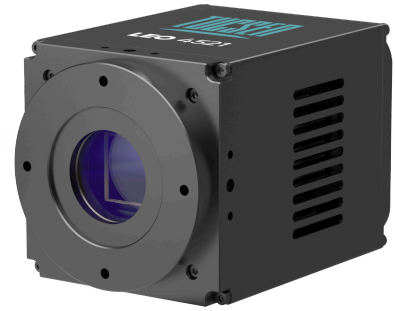


Dhyana 2100

The Dhyana 2100 is designed to deliver an unprecedented combination of maximum speed and resolution with an sCMOS sensor. It achieves an impressive 450 frames per second at a full resolution of 5120 x 4096, providing high-speed data even under low-light conditions.



Key Features

Benefits

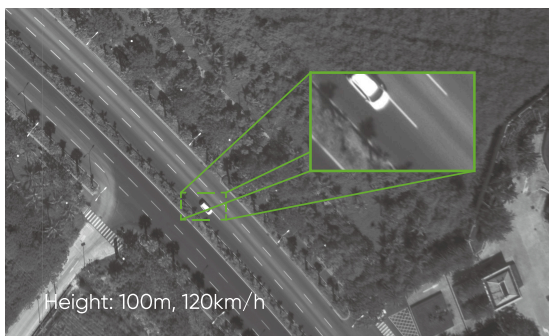
450 fps @ 21 MP	To allow the observation of fine details at high speed. ^[1]
Fast Binning Mode	Up to 975 fps @ 12 bit with high sensitivity and high dynamic range. ^[2]
Global Shutter	High image quality standard with no artifacts and no distortion.
Air & Liquid Cooling	Maintains low dark noise, minimizes vibration, and aids thermal stability.

Typical Applications

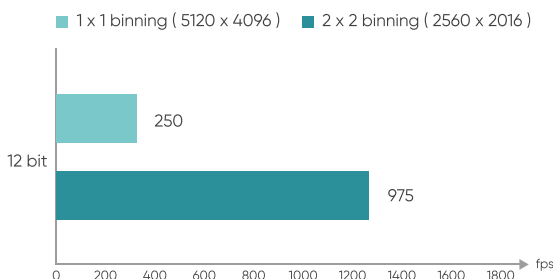
- Wafer Inspection
- FPD Inspection
- Aerial Photography
- Voltage Sensitive Imaging
- Cardiac Imaging

Noted Examples

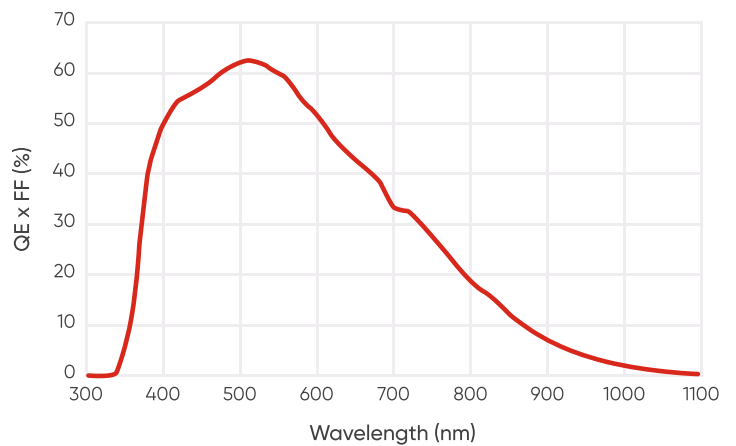
[1] High-Speed using global shutter provides clear images from objects moving at speed.



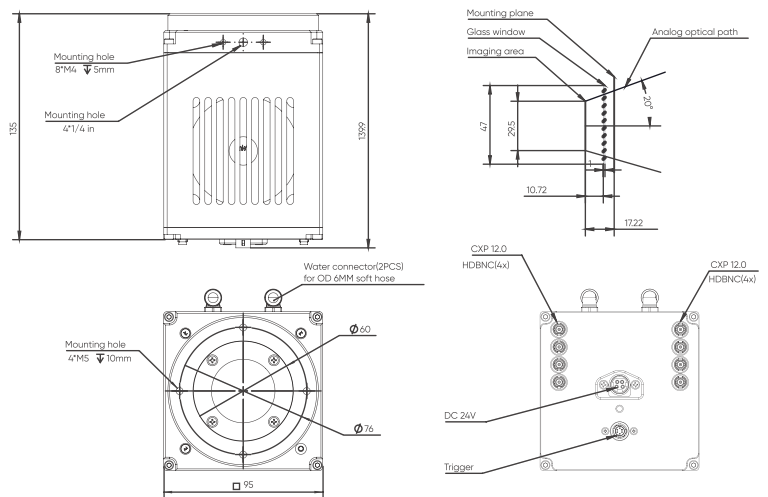
[2] Speed Comparison in Fast Binning Mode.



Quantum Efficiency



Dimensions (Unit: mm)



Model	Dhyana 2100
Sensor Type	FSI CMOS
Sensor Model	Gpixel GSPRINT4521
Peak QE	63% @ 520 nm
Color/Mono	Mono
Array Diagonal	29.5 mm
Effective Area	23.04 mm x 18.43 mm
Resolution	5120 (H) x 4096 (V)
Pixel Size	4.5 μm x 4.5 μm
Full-Well Capacity	Typ. : 32 ke- (12 bit Gain 0), 120 ke- (binned)
Dynamic Range	Typ. : 68.8 dB (12 bit Gain 2)
Frame Rate	Full mode: 450 fps @ 8 bit, 300 fps @ 10 bit, 250 fps @ 12 bit; Base mode: 225 fps @ 8 bit, 150 fps @ 10 bit, 150 fps @ 12 bit; Fastbinning: 975fps@12bit
Readout Noise	Typ. : 3.5 e- (Median)
Shutter Type	Global
Exposure Time	4 μs ~ 10 s
DSNU	Typ. : 0.15 % @ 12 bit gain 0
PRNU	Typ. : 0.45 % @ 12 bit gain 3
Cooling Method	Air, Liquid
Max. Cooling	25°C (Air) , 30°C (Liquid)
Binning	2 x 2, 4 x 4, 8 x 8
ROI	Support
Trigger Mode	Hardware, Software
Output Trigger Signals	Exposure start, Readout end
Trigger Interface	Hirose
Data Interface	Full mode: CXP12 x 8, Base mode: CXP12 x 4
Data Bit Depth	8 bit, 10 bit, 12 bit
Optical Interface	M58 / F-Mount / User Customization
Power Supply	24V/6.67A
Power Consumption	\leq 120 W
Dimensions	95mm x 95mm x 140mm (without water cooling connector)
Weight	<1850g
Software	samplePro
SDK	C, C++,
Operating System	Windows, Linux
Operating Environment	Working: Temp. 0~40 °C , HUM 10~85%