

INV-IMX490-5MP

5.4MP RGB/Mono Rolling Shutter Camera Module, MIPI-CSI Interface for SMARC QCS6490 Vision AI Dev Kit

The INV-IMX490-5.4MP camera module is based on the Sony IMX490 back-illuminated stacked CMOS image sensor, typically paired with high-performance M12 or M16 mount optics.

Engineered for Advanced Driver Assistance Systems (ADAS), the IMX490 achieves simultaneous High Dynamic Range (HDR) shooting and LED Flicker Mitigation (LFM). It delivers a dynamic range of 120 dB (up to 140 dB when prioritizing range), effectively eliminating motion artifacts and capturing clear images in high-contrast lighting. The sensor supports high-speed data transmission via a 4-lane MIPI CSI-2 interface, reaching frame rates up to 40 fps at full resolution in 10-bit mode. Additionally, it meets ASIL-D functional safety standards, making it a critical component for autonomous driving and intelligent robotic vision.



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Up to 120 dB range with simultaneous sub-exposure for flicker-free imaging.



Advanced pixel architecture to eliminate flickering from LED signs and traffic signals.



Comprehensive characterization of shading, distortion, and intrinsic parameters.



High-performance Auto Exposure, White Balance, and custom CCM/LSC optimization.



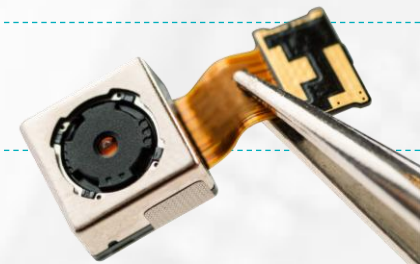
IQ optimization specifically for machine vision AI..



Large pixel structure.



Support for multi-exposure merging, EIS, and synchronized sensor arrays.



Resolution	Sensor Vendor	Image Sensor	Interface	Focus	Optical Size	EFL	FOV (degrees)	Focus Range	Optical Distortion	Module Size (mm)	Application
5MP	Sony	IMX490	MIPI	FF	1/1.55"	Multiple Options		Dependent on the lens		30x30mm	Automotive, ADAS