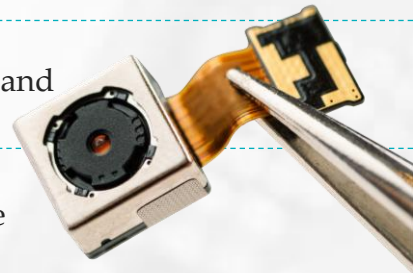
INV-AR0521FF-5MP-USB

5.1MP RGB Rolling Shutter Camera Module

The AR0521 is a 1/2.5−inch CMOS digital image sensor with an active−pixel array of 2592 (H) x 1944 (V). It captures images in either linear or high dynamic range modes with a rolling−shutter readout, and includes sophisticated camera functions such as binning, windowing and both video and single frame modes.

It is designed for both low light and high dynamic range performance, with line interleaved T1/T2 read out to support off chip HDR in an ISP chip. The AR0521 produces extraordinarily clear, sharp digital pictures, and its ability to capture both continuous video and single frames makes it the perfect choice for a security applications.

- 5MP capture at 60 fps for detailed, smooth video in industrial environments.
- Advanced pixel technology for superior light collection and low-light sensitivity.
- Full characterization of shading, distortion, and intrinsic/extrinsic parameters.
- Optimized BLC, LSC, and CCM for professional-grade color accuracy and machine vision.
- High-precision Auto Exposure, Auto White Balance, and rapid focus response.
- Integrated support for wide dynamic range to handle high-contrast lighting.
- IQ profiles specifically tuned for security analytics and intelligent monitoring.



Resolution	Sensor Vendor	Image Sensor	Interface	Focus	Optical Size	EFL	FOV (degrees)	Focus Range	Optical Distortion	Module Size (mm)	Application
5MP	OnSemi	AR0521	USB	FF	1/2.5”	Multiple Options		Dependent on the lens		38x38mm	Security, IoT