

MOJAVE 04A-E

LOW SWaP, SWIR CAMERA FROM THE LEADER IN SWIR SENSORS

A BREAKTHROUGH IN VIS-SWIR IMAGING

The Mojave 04A-E camera –powered by SCD Swift sensor platform–is a breakthrough in VIS-SWIR imaging, with a low SWaP architecture and capabilities that enable imaging and targeting in harsh environments from -40°C to 85°C.

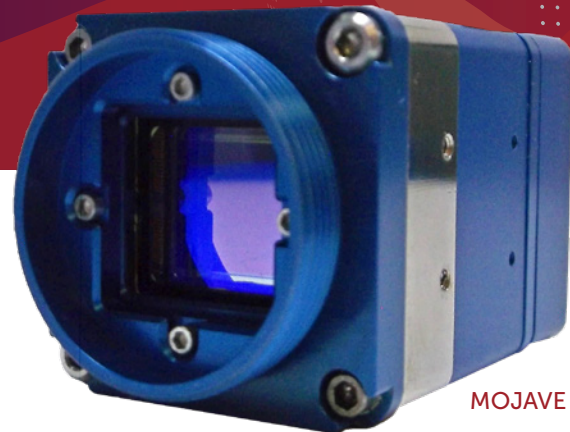
The VGA format camera uses a standard definition 640x512 format InGaAs detector with a 10µm pixel pitch, designed on SCD's high volume manufacturing platform.

Mojave features high-sensitivity and wide dynamic range. It provides real-time imaging with response across the Near Infrared (NIR) through SWIR waveband for passive and active (laser assisted) operation. Built-in Automatic Gain Control (AGC), image enhancement, and Non-Uniformity Correction (NUC) allow for seamless system integration and ease-of-use.

Data is provided through either a parallel data connector or a modular Camera Link attachment. Control is accomplished via a serial port interface.

The camera also provides the ability to detect and track multiple laser spots in the camera field of view and identify the associated pulse repetition frequency (PRF).

Noise and image stability are optimized through proprietary thermal stabilization techniques. The thermal design of the camera ensures operation up to 85°C temperatures and incorporates an option for TEC-less operation. Full characterization data sets including mean- variance and noise equivalent irradiance plots are provided with each camera.



MOJAVE 04A-E

BENEFITS

Low power consumption configurable cooling set-point for optimal power/performance

Optional TEC-less operation

Laser tracking capability

Extended spectral range increases sensitivity and allows shorter wavelength illuminators and laser designators

Compact size (2.4 cu.in.) and weight: 150gm for 85°C operation, 100gm for 71°C operation

APPLICATIONS

- Military Vehicles
- Man-Portable Systems
- UAVs and Drones
- Targeting
- SWIR Imaging

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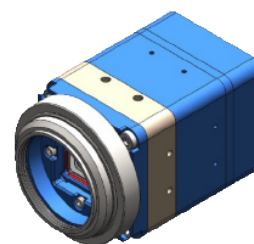
SYSTEM FEATURES

- 640 x 512 resolution, 10 μm pixel pitch
- 16-bit digitization
- Three Gain Modes (High, Medium, Low)
- Extended spectral response from 0.4 μm to 1.7 μm
- Snapshot image capture (to avoid rolling shutter artifacts)
- Frame rate of 60 Hz, up to 465 Hz with windowing
- Programmable operation (NUC, AGC, Trigger)
- Camera Link
- Mil-spec environment
- Internal "free running" mode or external trigger configurable
- Up to 85°C Operation
- Optional TEC-less operation for low SWaP, High Battery Life

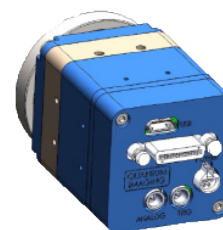
MOJAVE 04A-E SWIR VGA CAMERA

PARAMETER	VALUE	COMMENTS
Sensor Type	InGaAs	
Sensor Readout	Full frame, snapshot	
Image Format	640x512	100% fill factor
Pixel Size (μm)	10	
Spectral Response (μm)	0.6 – 1.7	See QE Plot
ELECTRICAL		
Frame rate (Hz)	60	Inquire for higher frame rate
Dynamic Range (dB)	70	
ALPD FAR (%)	<0.3	@1pA background
ALPD Detectivity (%)	>85	@2400 electrons
Power Dissipation (W)	2-10	TEC-less – 85°C
MECHANICAL		
Housing Material	Aluminum/Copper	
Lens Mount	C-Mount	
Weight	150	
Dimensions	1.3x1.3x1.4	
POWER AND ELECTRICAL INTERFACE		
Power Input (V)	5-13	DC
Data	LVC MOS, Base Camlink®	
Trigger/Sync		Samtec MCX and Camlink® CC1
Mode Control	Serial port	Via Camlink®
ENVIRONMENTAL		
Operating Temp.	-40°C to +85°C	
Storage Temp.	-50°C to 85°C	
Humidity	Up to 90%	Non-condensing

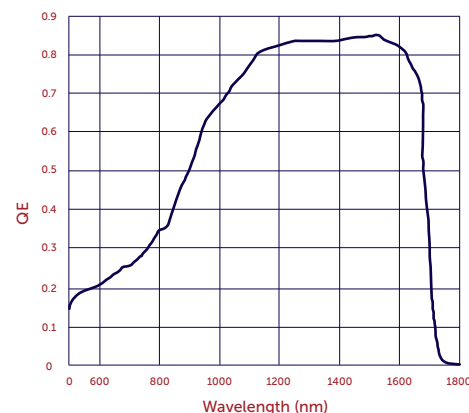
FRONT/TOP



BACK/TOP



Spectral Response



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