



# HIGH RESOLUTION FLIGHT CAMERA

## SpectraCAM

The Redwire Space SpectraCAM High Resolution Flight Camera is engineered for low earth orbit (LEO) applications including docking, navigation, inspection, and situational awareness.

- + Featuring GigE Vision® image streaming over 1 Gb/s Ethernet, the camera's low light sensitivity and wide dynamic range make the system ideal for high contrast imaging found in orbital sun-illuminated applications.
- + With GigE Vision compatible control and image capture, SpectraCAM's ease of integration and low deployment cost make it an ideal solution for multiple LEO applications. The complementary metal-oxide semiconductor (CMOS) imaging camera offered in the SpectraCAM flight camera enables superior low-light performance. Low noise imaging electronics ensure clear and sharp images that render details with superior accuracy. Available in a 50mm x 50mm x 47mm (boresight) configuration, weighing under 180g (without optics), and typical power consumption of 5VDC@ 400mA (full resolution, 10 fps), the SpectraCAM camera is engineered with weight, power, and reliability as top priorities.
- + The advanced camera supports any user-specified image resolution and aspect ratio to 2592 x 1944 with 5MP monochrome resolution (color resolution is available). Offering 12-bit image depth, responsivity of 1.4V/lux-sec (550nm), dynamic range of 70.1 dB, and an image SNR of  $\leq 38.1$  dB, the SpectraCAM can support a range of mission profiles and applications. Exposure time settings of 0.1 msec to 5000 msec and precise exposure timing to 1  $\mu$ sec resolution are standard, and the system supports operating temperatures of -30°C to +55°C.



Leveraging its heritage in producing advanced space cameras and compliant with the Buy America Act, Redwire's low-cost, high-performance SpectraCAM is a COTS component supporting commercial, civil, and defense missions.



**MADE IN THE USA**

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## APPLICATIONS

+ Docking

+ Navigation

+ Situational Awareness

+ Inspection



## PARAMETERS

### 50MM X 50MM X 47MM (BORESIGHT) CONFIGURATION

Dimensions

**< 180G WITHOUT OPTICS**

Mass

**5VDC @ 400MA  
(FULL RESOLUTION, 10 FPS)**

Power Requirements

**-30°C TO +55°C**

Mounting Plate Operating Temperatures

**ROLLING GLOBAL RESET**

Shutter Type

### 2592 X 1944 WITH 5MP MONOCHROME RESOLUTION COLOR SENSOR PROVIDED SEPARATELY

Aspect Ratio

**1 MSEC RESOLUTION**

Exposure Timing

**0.1 MSEC TO 5000 MSEC**

Exposure Time Settings

**GIGABIT ETHERNET**

Image and Control Interface

### CMOS

Imaging Sensor

**12-BIT**

Image Depth

**≤ 38.1 DB**

Image SNR

**70.1 DB**

Pixel Dynamic Range

**1.4V/LUX-SEC (550NM)**

Responsivity

**STANDARD C MOUNT INTERFACE  
LENS CAN BE PROVIDED SEPARATELY**

Lens Mount

High Resolution Space Cameras are export controlled through an ECCN (Export Control Classification Number) issued by the United States Department of Commerce. Export shipment requires successful application for an export license (under ECCN7A004 for Redwire SpectraCAM Flight Cameras).

For more information about our space capabilities,

**CONTACT REDWIRE SPACE SALES**



## HERITAGE

Redwire is a new leader in mission critical space solutions and high reliability components for the next generation space economy. With decades of flight heritage combined with the agile and innovative culture of a commercial space platform, Redwire is uniquely positioned to assist its customers in solving the complex challenges of future space missions. For more information, please visit [www.redwirespace.com](http://www.redwirespace.com).

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