

**The Adcole Space SpectraCAM High Resolution Flight Cameras are 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 49mm (boresight) configuration, weighing under 225g without optics, and typical power consumption of 2.5 Watt at full resolution and 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 ≤ 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 μsec resolution are standard, and the system supports operating temperatures of -30°C to +55°C.



PARAMETERS	
<b>Size</b>	50mm x 50mm x 49mm (boresight) configuration
<b>Weight</b>	< 225g without optics
<b>Power Requirements</b>	2.5 W Typical (500 mA at 5 VDC; Full resolution, 10 FPS)
<b>Operating Temperatures</b>	-30°C to +55°C
<b>Aspect Ratio</b>	2592 x 1944 with 5MP monochrome resolution (color sensor is available)
<b>Exposure Timing</b>	1 usec resolution
<b>Exposure Time Settings</b>	0.1 msec to 5000 msec
<b>Image and Control Interface</b>	Gigabit ethernet
<b>Imaging Camera</b>	Metal-oxide semiconductor (CMOS)
<b>Image Depth</b>	12-bit
<b>Image SNR</b>	≤ 38.1 dB
<b>Pixel Dynamic Range</b>	70.1 dB
<b>Responsivity</b>	1.4V/lux-sec (550nm)

## COMPANY HERITAGE

Founded by Addison Cole in 1957, the sun sensors designed by Adcole have flown on numerous space exploration missions, including all Mars Rovers, New Horizons, Juno, and the Parker Solar Probe. An engineer by trade, Cole invented a sun angle sensor that enables rockets and satellites to maintain their orientation in space. Cole's invention, which is in use by space agencies today, provided the impetus behind the launch of Adcole Corporation.

