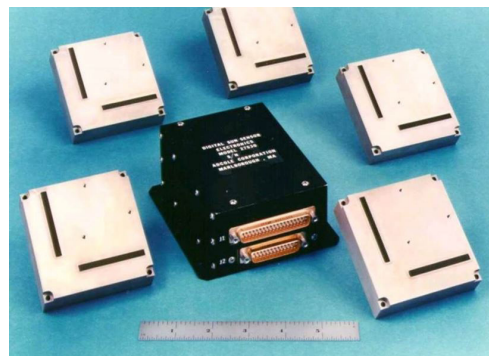


The Adcole Space Digital Sun Sensor $\pm 64^\circ$ is a two-axis digital sun sensor system.

The solution features two measurement axes and five sensors (1 to 8 sensors can also be used).

The Digital Sun Sensor $\pm 64^\circ$ is spaceflight proven, with a rich flight heritage. Applications for the Digital Sun Sensor $\pm 64^\circ$ include attitude determination, sun acquisition, solar array pointing, and fail-safe recovery.



PARAMETERS	
Field of View	128° x 128° (each sensor) Note: 4π steradians achieved with 5 sensors
Accuracy	$\pm 0.25^\circ$ (transition accuracy)
LSB Size	0.5°
Input Power	28 \pm 7 Vdc (other ranges available) (Typical power dissipation 0.4 W)
Output ¹	Serial data stream consisting of 16-bits of sun angle data (8 bits per axis), sun presence, head selected, optional albedo indication.
Weight	Sensor 0.56 lb (0.25 kg) nominal Electronics ² 0.65 lb. to 2.5 lb. (0.29 kg to 1.1 kg)
Size	Sensor ³ 3.2" x 3.2" x 0.8" (81x81x20) mm Electronics ³ Variable

¹ Electronics selects sensor that has sun in field of view. Parallel data format is available.

² Depending on processing and power.

³ Exclusive of connector.

APPLICATIONS	
• Attitude Determination	
• Sun Acquisition	
• Solar Array Pointing	
• Fail-Safe Recovery	

CONFIGURATION	
Number of Measurement Axes	2 (each sensor)
Number of Sensors	5 (typical) 1 to 8 can also be used

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.

