

## Adcole Digital Sun Sensors provide a large field of view with moderate accuracy and resolution.

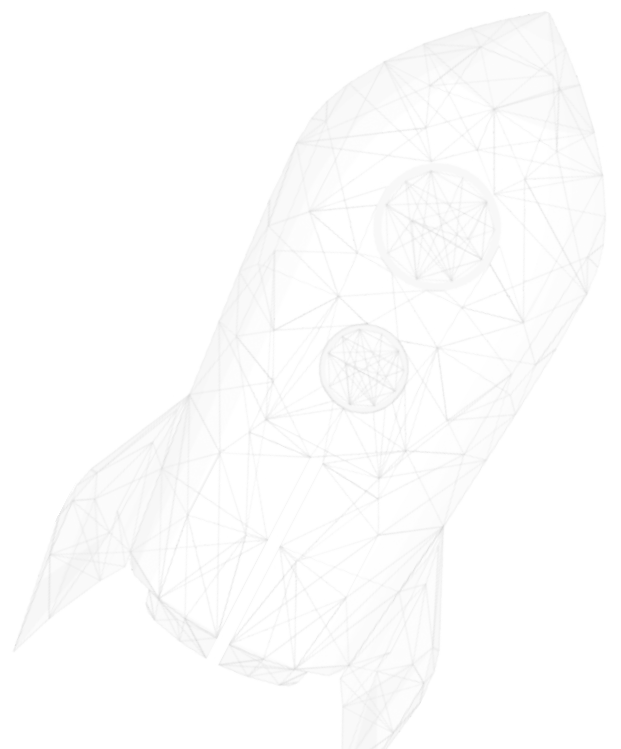
Each system consists of one or more optical heads, each of which provides two axes of sun angle data.

Adcole  $\pm 32^\circ$  Digital Sun Sensors are typically used for medium accuracy attitude determination. Systems can be configured with one or more optical heads per electronics.



PARAMETERS	
<b>Field of View</b>	$\pm 32^\circ \times \pm 32^\circ$ (each sensor)
<b>Accuracy</b>	$\pm 0.1^\circ$
<b>LSB Size</b>	$0.125^\circ$
<b>Input Power</b>	<b><math>28 \pm 7</math> Vdc</b> (other ranges available) (Typical power dissipation 1 W)
<b>Output</b>	Serial data stream consisting of two 10-bit data words (typically) plus one dedicated sun presence bit.  Note: One word per axis, each consisting of 9 bits of sun angle data, and 1 identity bit.
<b>Weight</b>	<b>Sensor</b> 0.66 lb (0.3 kg) nominal  <b>Electronics</b> 2.2 lb nominal
<b>Size</b>	<b>Sensor</b> 3.8" x 3.7" x 2.1" (96 x 94 x 53 mm)  <b>Electronics</b> 7.5" x 5" x 2.1" (190 x 127 x 53 mm)

CONFIGURATION	
<b>Number of Measurement Axes</b>	<b>2</b> (each sensor)
<b>Number of Sensors</b>	<b>2</b> (1 each redundant side)



## 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.

