

NEWSPACE MARKET · COMPANY PROFILE

Adcole Space (Redwire)

United States · founded 1957 · rdw.com

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WITH DATASHEETS

newspacemarket.com/companies/adcole-space-redwire/

as of 20 August 2026

Adcole Space (Redwire)

Redwire is an integrated aerospace and defense company that designs and manufactures advanced technologies for space and defense. The company focuses on aerospace infrastructure, autonomous systems, and multi-domain operations, leveraging digital engineering and AI automation. Its product lines include advanced optical imaging and sun sensor technology, ELSA high-performance, low-mass solar arrays, and spacecraft platforms like Mako. Redwire also provides critical technologies for autonomous aircraft, space exploration, and space-based defense. Customers include NASA (for the Artemis II mission), the U.S. Department of Defense (DoD), Portfolio Acquisition Executive Robotic Autonomous Systems (PAE RAS), Moog Inc. (for a National Security Program), the U.S. Space Force, and the Air Force Research Laboratory (for the Tetra-5 program). The company is also responsible for PROBA-3 spacecraft integration, testing, onboard computer, and development of the 3D Energetic Electron Spectrometer, and for assembling the team, building the SabreSat platform, and advancing critical technologies for DARPA's Otter program. Redwire successfully designed, analyzed, manufactured, tested, and delivered 8 IROSA wings for the International Space Station (ISS). The company has approximately 1,300 employees located throughout Europe and the United States.

This profile is generated from the live NewSpace Market catalogue. Specifications are as published by the manufacturer; every product links to a page where a request for quotation reaches the company directly.

SERVICES

Services

Design, Analysis, Manufacturing, and Testing of Space Structures & Mechanisms

Redwire designs, analyzes, manufactures, and tests space structures and mechanisms in-house, providing complete solutions to customers.

Digital Engineering Enterprise

Redwire offers a digital engineering enterprise including modeling, simulation, digital twin development, hardware-in-the-loop testing, and flight software development.

Digital Mission Planning and Architecture Assessment

Redwire provides digital mission planning and architecture assessment using its DEMSI agent-based digital engineering environment for high-fidelity simulation.

Orbital Research and Manufacturing Pipeline Development

SpaceMD, a Redwire venture, develops an orbital research and manufacturing pipeline for pharmaceutical innovation, identifying promising drug candidates.

Spacecraft Integration, Testing, Onboard Computer, and Payload Development

Redwire performs spacecraft integration, testing, and develops onboard computers and specific payloads for customer missions.

Product catalogue



ADCOLE SPACE (REDWIRE)
Coarse Sun Sensor (Cosine Type)

A single-detector analog sun sensor using the cosine principle for solar array pointing, sun acquisition, and fail-safe recovery. Over 1,000 units deployed since the 1960s across h

Sensor Type	Analog cosine-response photodiode
Axes	1 (single axis per detector)
Configuration	Cosine type (single detector)
Field of View	Hemispherical (custom baffle options available)
Output	Analog current/voltage proportional to cos(angle)
Heritage	Yes – 1,000+ units flown since 1960s
Status	In Production

[price on request](#) [datasheet](#)



ADCOLE SPACE (REDWIRE)
Coarse Sun Sensor (CSS) Pyramid

A two-axis analog sun sensor assembly containing four cosine-response detectors in a pyramid arrangement for full-hemisphere sun detection. Used for solar array pointing, sun acqui

Sensor Type	Analog cosine-response photodiode (×4)
Axes	2 (two-axis measurement)
Configuration	Pyramid (4-detector assembly)
Dry Mass	0.13 kg
Average Power	N/A (passive optical detection)
Heritage	Yes – 1,000+ sensors flown since 1960s
Status	In Production

[price on request](#) [datasheet](#)



ADCOLE SPACE (REDWIRE)

Digital Sun Sensor (±32°)

A two-axis digital sun sensor with $\pm 32^\circ$ field of view offering higher accuracy than the $\pm 64^\circ$ variant. Radiation-hardened to 100 krad (Si) with Hi-Rel components for GEO and deep-sp

Field of View	$\pm 32^\circ$
Axes	2 (per optical head)
Output	Serial digital – two 10-bit words + sun presence bit
Radiation Hardness	100 krad (Si)
Components	Hi-Rel qualified
Heritage	Yes
Status	In Production

[price on request](#)



ADCOLE SPACE (REDWIRE)

Digital Sun Sensor (±64°)

A two-axis digital sun sensor with $\pm 64^\circ$ field of view providing medium-accuracy attitude determination. Up to 8 optical heads per electronics unit with proven deep-space flight her

Field of View	$\pm 64^\circ$
Axes	2 (per optical head)
Optical Heads per Electronics Unit	1–8 (configurable)
Output	Serial digital data stream (sun angle + sun presence bit)
Dry Mass	1.3 kg (electronics unit + 1 head)
Average Power	1.0 W
Radiation Hardness	100 krad (Si)

[price on request](#)

[datasheet](#)



ADCOLE SPACE (REDWIRE)

Fine Spinning Sun Sensor (±64°)

A high-accuracy spinning spacecraft sun sensor with redundant optical heads and electronics delivering better performance than the Miniature variant, for sun acquisition and attitu

Field of View	$\pm 64^\circ$
Dry Mass	0.71 kg
Average Power	0.4 W
Architecture	Redundant – 1 optical head per electronics channel
Application	Spinning spacecraft attitude determination, sun acquisition, fail-safe recovery
Heritage	Yes
Status	In Production

[price on request](#)

[datasheet](#)



ADCOLE SPACE (REDWIRE)

Fine Sun Sensor

A high-precision sun sensor for attitude control applications requiring sub-arcminute accuracy and millidegree angular resolution. Available in single or dual-axis configurations a

Accuracy	Sub-arcminute
Resolution	Millidegree
Axes	1 or 2 (configurable)
Field of View	Custom (per mission requirement)
Heritage	Yes
Status	In Production
Form Factor	SmallSat compatible

[price on request](#)

[datasheet](#)

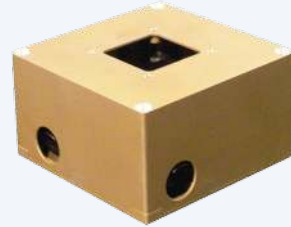


ADCOLE SPACE (REDWIRE) MADS 3D Dynamic Simulator

The dynamic simulator provides a HITL (Hardware In The Loop) test set for the MAI-400 which verifies and validates all software and hardware functions in a bench top setting. In...

Manufacturer **MAI**
Lead time **90 days**

€8 661



ADCOLE SPACE (REDWIRE) MAI-400 ADACS

The MAI-400 ADACS is a 1/2U Attitude Determination and Control System for small satellites, featuring reaction wheels, magnetometers, Earth Horizon Sensors, and torque rods for sta

Form Factor **1/2U**
Components **3 reaction wheels, 3-axis magnetometer, 2-camera Earth Horizon Sensor (EHS), 3 torque rods**
Compatibility **CubeSats**
Placement **Bottom or top of CubeSat stack**
Features **Cable channels for customer cable "Free-Arounds"**
Availability **90 days**

price on request

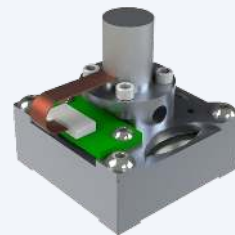


ADCOLE SPACE (REDWIRE) MAI-400 Control Board

An attitude determination and control board incorporating four microcontrollers, MEMS accelerometer and gyroscope, and reaction wheel/electromagnet drive circuitry, compatible with

Board size **8.6cm x 8.8cm**
Microcontrollers **Four (one ADACS processor, three reaction wheel control)**
Accelerometer **3-axis MEMS accelerometer**
Gyroscope **3-axis MEMS gyroscope**
Drive circuitry **3 sets of Reaction Wheel and Electromagnet drive circuitry**
Communication interfaces **UART, RS232, I2C, SPI**
Analog inputs **Up to 6 (for coarse sun sensor implementation)**

\$17 150 – \$27 150



ADCOLE SPACE (REDWIRE) MAI-400 Reaction Wheel

The MAI-400 reaction wheel is a standalone unit for CubeSats and NanoSat missions, featuring integrated motor driver electronics with an ARM Cortex CPU.

Availability **90 days**

price on request



ADCOLE SPACE (REDWIRE)

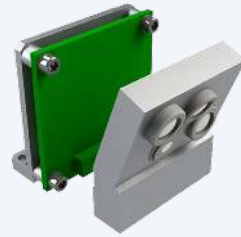
MAI-KE Sun Sensor

The MAI-KE Sun Sensor is an analog sun sensor designed for spacecraft missions, providing an output voltage from 0 to 250mV.

Manufacturer MAI

Lead time 90 days

price on request



ADCOLE SPACE (REDWIRE)

MAI-SES IR Earth Sensor

The MAI-SES is a miniature Static Earth Sensor designed for CubeSats, NanoSats, and larger spacecraft in Low Earth Orbit, measuring the dip angle with respect to the horizon using

Manufacturer MAI

Lead time 90 days

price on request



ADCOLE SPACE (REDWIRE)

MAI-SS Space Sextant

The MAI-SS Star Tracker is low in cost and intended for CubeSat and NanoSat missions. The unit is completely self-contained and features lost in space star identification. Just...

Manufacturer MAI

€28 434



ADCOLE SPACE (REDWIRE)

Miniature Spinning Sun Sensor

A compact sun sensor for spinning spacecraft providing sun aspect angle and sun crossing pulses for spin rate and spin axis orientation determination, with $\pm 87.5^\circ$ FOV and 0.25 kg m

Field of View $\pm 87.5^\circ$

Dry Mass 0.25 kg

Average Power 0.5 W

Measurements Sun aspect angle, sun crossing pulses

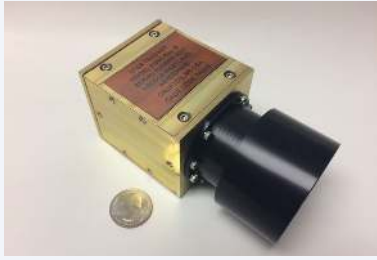
Application Spinning spacecraft attitude determination

Heritage Yes

Status In Production

price on request

[datasheet](#)



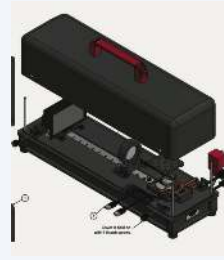
ADCOLE SPACE (REDWIRE)

SpectraTRAC Star Tracker

A miniature autonomous star tracker for CubeSat and NanoSat missions delivering 10 arcsecond quaternion accuracy at 4 Hz update rate, weighing only 475 grams with Lost-in-Space sta

Attitude Accuracy	10 arcsec (quaternion)
Output Rate	4 Hz
Maximum Tracking Rate	>2°/sec
Solution Availability	96.4%
Mass (with baffle)	475 g
Dimensions	120 × 61 × 61 mm
Power Consumption	<2.5 W

[price on request](#) [datasheet](#)



ADCOLE SPACE (REDWIRE)

Star Field Simulator

Ground support equipment that generates a simulated star field for functional testing and verification of the SpectraTRAC and other Adcole Space star trackers during spacecraft int

Function	Star field generation for star tracker functional verification
Compatible Products	SpectraTRAC and other Adcole Space star trackers
Test Capabilities	Lost in Space initialization, tracking, quaternion output, interface verification
Status	In Production

[price on request](#) [datasheet](#)



ADCOLE SPACE (REDWIRE)

Sun Sensor Stimulator System

Ground support equipment using infrared LEDs to optically stimulate Adcole sun sensor cells for functional verification, aliveness testing, and flight harness checkout during space

Stimulus Type	Infrared LED optical illumination
Function	Sun sensor functional verification, aliveness testing, harness checkout
Control Interface	Front panel controls and/or computer input
Input Power	100–240 VAC, 50/60 Hz
Compatible Sensors	Adcole coarse and fine sun sensor families
Status	In Production

[price on request](#) [datasheet](#)

Contact Adcole Space (Redwire)

Open the company profile on NewSpace Market to see full specifications and datasheets, and to send a request for quotation that reaches the manufacturer directly.

<https://newspacemarket.com/companies/adcole-space-redwire/>

<https://rdw.com/>

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