

DATA ACQUISITION AND RECOVERY SYSTEM DARS-00-501

PRODUCT DESCRIPTION

The Redwire Space Data Acquisition and Recovery System (DARS) is a stand-alone, high speed, high-capacity data capture and return. DARS records 128 GB of 4K UHD video or any other high-speed data (160 Mbps) over USB in a miniature recoverable capsule.

Redwire DARS technology features a robust data recovery capsule that is vacuum compatible, and tolerant to shock and vibration environments. A DARS unit includes GPS, Iridium, and Lo-Ra communications, on-board data storage, IMU, and other sensors, such as temperature and pressure.

Self-powered and controlled, the DARS solution does not require external power or commanding for operation and offers a long battery life (1 month prior to start of the mission, and 1-month post-release).

Engineered for water recovery, DARS offers long range (100 km) direct data transmission via Lo-Ra, as well as global communication via the Iridium constellation. DSS video camera and lighting system options are available.



ENVIRONMENTAL QUALIFICATION

- + Operational altitude: >100 km to sea level.
- + Random vibration: 14.14 Grms Qual for 120 seconds.
- + Shock: 325 Qual Peak G's.
- + Compatible with water recovery zones.

APPLICATIONS

DARS is designed to support a variety of aerospace systems and operational or test environments, such as:

- + HIAD Release.
- + LV Core Stage.
- + LV Interstage Adapters.
- + LV Payload Fairings.
- + LV Upper Stage.
- + Test Vehicles.
- + Military Aviation.
- + Civil Aviation.



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MADE IN THE USA

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RELATED PRODUCTS

- + **4K/60 Video Camera** High performance, Super Rugged.
- + High Intensity LED Floodlight 2200 Lumens Output.
- + LoRa Mobile Ground Station Hand-held Recovery System.

MISSION HERITAGE

+ Low-Earth Orbit Flight Test of an Inflatable Decelerator (LOFTID).

PARAMETERS

- + Mass
 - 1 kg
- + Dimensions
- 110 x 110 x 125 mm (w antenna)

Each DARS unit includes:

- + GPS receiver.
- + 3 Axis accelerometers.
- + 3 Axis gyros.
- + 3 Axis magnetometers.

- + Weight <1.0 kg
- + Records 256 GB of 4K UHD video or any other high-speed data (30MBps)

+ High range 3 axis accelerometers.

+ Barometric pressure.

+ Polyurethane capsule.

+ Power

Self-powered via Internal LiPo batteries: 2×500 mAh capsule + 6×500 + 4×150 mAh base.

+ LoRa transceiver for command and telemetry.

ACTIVATION AND RECOVERY LIFETIMES

+ Temperature.

+ 1 Month programmable self-activation

Based on time, sensed acceleration, integrated velocity, pressure, LoRa command, etc.

+ 1 Month post separation recovery lifetime

GPS synchronized LoRa transmissions of GPS coordinates, health and status.

FOR MORE INFORMATION ABOUT OUR SPACE CAPABILITIES, CONTACT REDWIRE SPACE SALES AT DISCOVER@REDWIRESPACE.COM



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 commercial space platform, Redwire is uniquely positioned to assist its customers in solving the complex challenges of the future space missions. For more information, please visit **www.redwirespace.com**



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