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.
+ 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 Interstage Adapters.
+ LV Core Stage.
+ LV Payload Fairings.
+ LV Upper Stage.
+ Test Vehicles.
+ Military Aviation.
+ Civil Aviation.
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 gyro.
+ 3 Axis magnetometers.

+ Weight
  <1.0 kg

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

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

+ High range 3 axis accelerometers.
+ Barometric pressure.
+ Temperature.
+ Polyurethane capsule.

+ LoRa transceiver for command and telemetry.

ACTIVATION AND RECOVERY LIFETIMES

+ 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
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