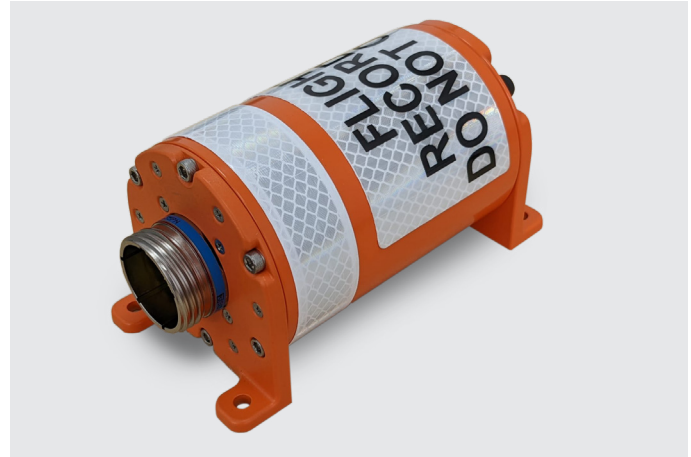# | REVOLUTION RECORDER SERIES
REVO 250LW CVFDR

The REVO 250LW CVFDR is designed for the light aircraft, unmanned aircraft and emerging Advanced Air Mobility (eVTOL) industry. Able to exceed EUROCAE ED-155 and meet all stringent ED-112A crash survivability requirements for Flight Data Recorders and Cockpit Voice Recorders when fitted without an underwater locator beacon for ultra-low SWaP (size, weight and power) at a price point of an ED-155 recorder.

Dimensions	80mm (3.1") width, 155mm (6.1") depth, 80mm (3.1") height
Weight	Less than 2.3lb (1.05 kg)
Mounting Type	Flanged with Qty 4 #10 QPL fastener (e.g. NAS1352-3-10)
Mounting Orientation	Unrestricted
Construction	Aluminium AMS QQ-A-200/8, ASTM-B221
Finish	MIL-DTL-5541 Type II Class 3 on exposed and faying metal surfaces MIL-PRF-85285 Top Coat (Aviation Orange)
Power supply input	28 VDC nominal, 10 to 80 VDC, DO-160 CAT Z
Power supply consumption	Maximum 4 watt
Sensor Pack	Internal MEMS AHRS Accelerometer and resettable impact switch
Input Connector	MIL-DTL-38999 Series III, D38999/20FG35PN
Mating Connector	MIL-DTL-38999 Series III, D38999/26FG35SN
Temperature	-55 to +70 degrees Celcius (+85 non-operating)
Altitude	Up to 55,000 ft
Environmental Qualification	RTCA DO-160G
Design Assurance	RTCA DO-178C Level D
Crash Survivability	EUROCAE ED-112A
Design Approvals	TSO-C123c, TSO-C124c, TSO-C177a
Production Approvals	FAA TSOA, FAA 8130-3 Release

Test	ED-112A	ED-155
Impact Shock	3,400 g	1,000 g
Penetration	500 lb, 10ft drop	Nil
Static Crush	5,000 lb	1,000 lb
High Temp Fire	1,100 deg C, 1 hour	1,100 deg C, 15 minutes
Low Temp Fire	260 deg C, 10 hours	Nil
Deep Sea Immersion	20,000ft, 30 days	Nil

With significant redundant storage capabilities, the recording durations vastly exceed the ED-112A standards of 25 hours for data and audio.

Interfaces include:

- ARINC717 (auto rate detection up to 2,048 wps)
- ARINC429 (4 channels, automatic rate)
- ARINC825 (dual or single channel)
- RS422/485 (dual or single channel)
- 10/100 Ethernet (2 ports) (e.g. for video recording or telemetry/maintenance interfaces)
- 4 channel ED-112A compliant high quality audio

No proprietary GSE tools are required for download with an internal web server able to connect to a standard portable computer. A standard Internal TPM 2.0 security chip is able to enhance cyber security when connected to other ethernet based aircraft systems. Optional recording encryption utilizes asymmetric (RSA-2048) or symmetric (AES-256) algorithms.

Compared with a modern and already lightweight Part 23 and Part 25 CVFDR (equipped with ULB), the 250 series recorder further reduces the weight and volume by over 50% while still meeting the challenging ED-112A crash survival requirements.

DIAGNOSTIC SOLUTIONS INTERNATIONAL LLC