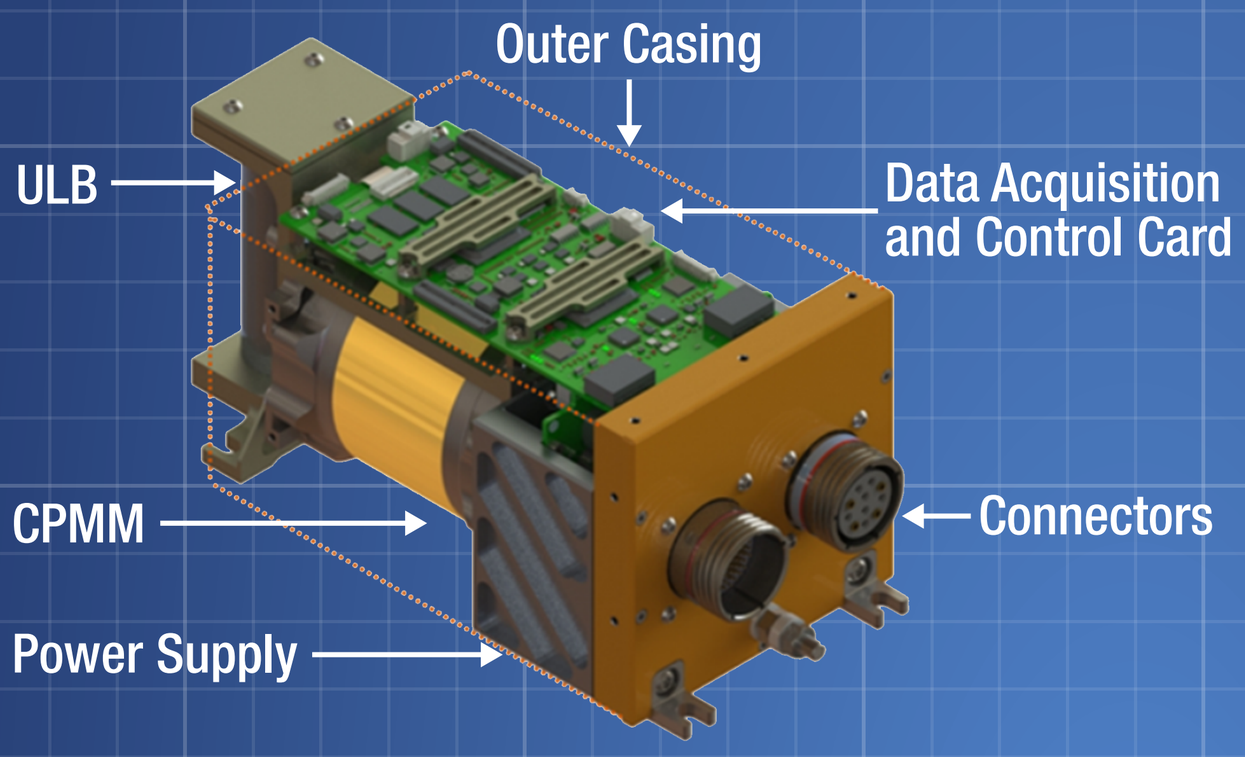
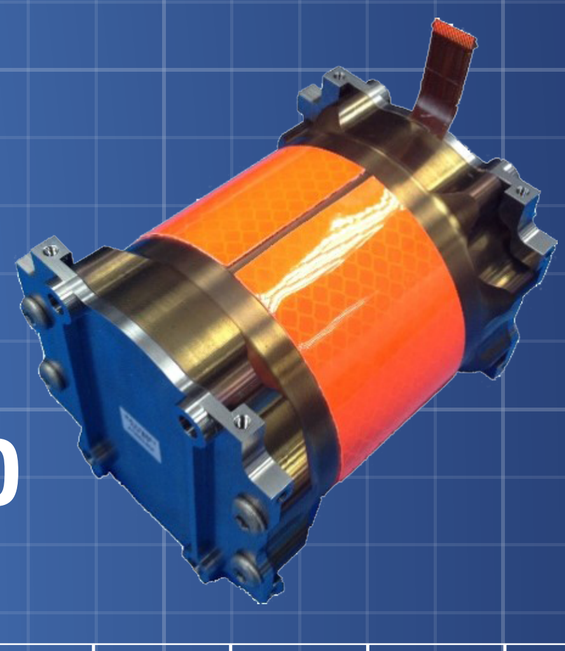
ANATOMY OF A FLIGHT RECORDER

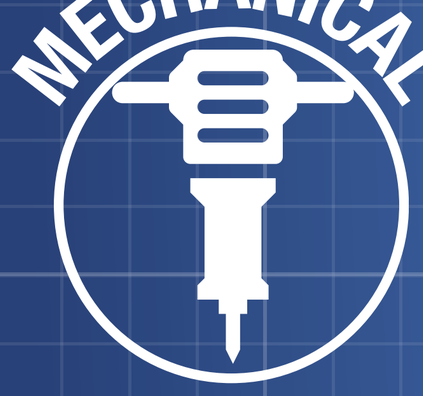


Outer casing: Colored orange with reflective strip to aid location.
Connectors: Connects to busses, sensors, and to download PC.
Data acquisition and control: Gathers data for storage. Sends stored data to users and facilitates unit control.
Power supply: Filters power for unit, 200 ms power interrupt protection.
Under water Locator Beacon (ULB): Sends signal for 90 days. Helps accident investigators locate recorder.

Crash Protected Memory Module (CPMM): A unit that protects the storage media. The flight recorder's most critical part, and the most difficult to make and qualify.



CRASH PROTECTED MEMORY MODULE REQUIRED

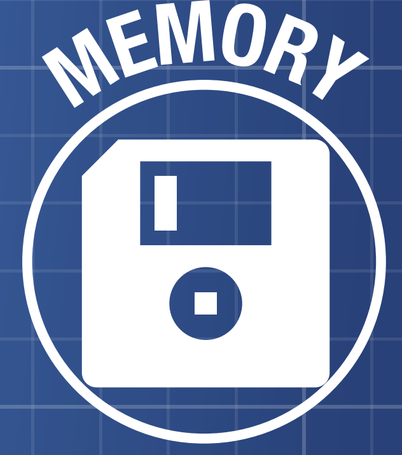


Impact: 3,400 G, 6.5 ms
Penetration: 500 lb, 10 ft, ¼" spike
Crush: 5,000 lb, 5 min
Shear: 6,000 lb, 1 min
Pressure: 20,000 ft

Testing is key
Accelerated lifetime tests for long term use
Multiple expensive test cycles likely

Fire intensity protection
High: 1100° C for 60 minutes
Low: 260° C for 10 hours

Storage considerations
Single level solid-state more reliable
Power dissipation must be minimal



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