

## ONBOARD INSTRUMENTATION FOR SCRAMJET ENGINE FLIGHT TEST

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### Abstract

This paper brings out the design details of an instrumentation system that was used in ISRO's recent Scramjet Flight Test. The successful demonstration of supersonic combustion and evaluation of scramjet engine performance thrust were monitored through a number of pressure, temperature and acceleration parameters. The instrumentation subsystems for performing this function were distributed in the scramjet engine and the upper payload bay. This paper describe the design, qualification and performance characterization of the instrumentation and base band telemetry system with specific focus on those measurements which are critical for assessing the success of the mission.

**Keywords:** Scramjet, Instrumentation, Bandwidth, Resolution, High Frequency Data Acquisition Unit, Signal Conditioner