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## SARAL - FIRST MISSION ON MODULAR MULTI MISSION MINI SATELLITE BUS

**Abstract**

SARAL, Satellite with Argos and Altika, is a co-operative scientific mission on Indian Mini satellite Bus IMS-2, a new spacecraft bus developed by ISRO which belongs to the 450kg class of satellites. The bus is designed with a modular approach with standard mechanical and electrical interfaces. The Satellite comprises of two sections- The bus module and Payload module. Bus module consists of Main frame housing subsystems required to support the operation of the whole satellite including payloads and Payload module houses the payloads. The bus has a capability of carrying payloads of mass up to 200kgs and can support a payload power of 250 watts continuous operation. It has data transmission capabilities in both S-band and X-band. SARAL spacecraft carries a Ka band altimeter Ocean studies and ARGOS, a data collection platform. Both payloads integrated into module by CNES space agency.

The IMS-2 bus can support a variety of payloads –both optical and microwave used for a variety of applications . The bus has been designed for upward growth with minimal changes in the bus from mission to mission. The paper describes the salient features of the bus , system engineering, tests carried out on bus , versatility of the bus for changes and standardization of interfaces.