

PSLV-C34 / CARTOSAT-2 Series Mission

22 June, 2016

THE MISSION

PSLV-C34 carrying on-board the CARTOSAT-2 Series Satellite lifted-off from the Satish Dhawan Space Centre (SDSC) SHAR, Sriharikota at 09:26 AM (IST) on June 22, 2016. After a flight of 16 minutes 30 seconds, the satellites achieved a polar Sun-synchronous Orbit of 505 km inclined at an angle of 97.5° to the Equator (very close to the intended orbit) and in the succeeding 10 minutes, all the 20 satellites successfully separated from the PSLV fourth stage in a predetermined sequence.

After its injection into the designated orbit, the CARTOSAT-2 Series satellite was brought to operational configuration following which it will begin to provide regular remote sensing services using Panchromatic and Multi-spectral Cameras.

The co-passenger satellites are from USA, Canada, Germany and Indonesia, as well as 2 satellites – SATHYABAMASAT and SWAYAM from Indian University / Academic Institute. The total weight of all the 20 satellites carried on-board is about 1288 kg.

PSLV - C 3 4

THE LAUNCH VEHICLE

This flight of PSLV was in 'XL' configuration with the use of solid strap-on motors. This is the 36th flight of PSLV and the 14th in its 'XL' configuration.

SPECIFICATIONS

Height	44.4 m	
Lift-Off Mass	320 t	
No of Stages	4	
Payloads	<ul style="list-style-type: none"> • CARTOSAT-2 Series • SATHYABAMASAT • SWAYAM 	17 International Customer Satellites USA (13), Canada (2), Germany (1), Indonesia (1)
Orbit Height	505 km	
Inclination (deg)	97.48°	
Launch Pad	Second Launch Pad (SDSC, SHAR)	



CARTOSAT-2 Series

THE SATELLITE

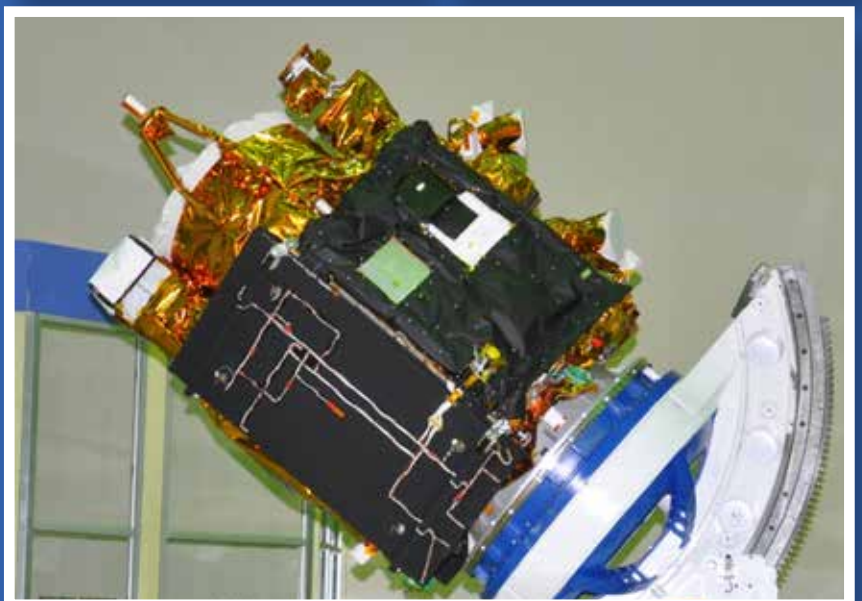


The Cartosat-2 series satellite is the primary satellite of this mission. This satellite is similar to the earlier Cartosat-2, 2A and 2B. It provides regular remote sensing services using Panchromatic and Multi-spectral Cameras. The imagery of Cartosat-2 series satellite will be useful for cartographic applications, urban and rural applications, coastal land use and regulation, utility management like road network monitoring, water distribution, creation of land use maps, precision study, change detection to bring out geographical and manmade features and various other Land Information System (LIS) and Geographical Information System (GIS) applications.



SPECIFICATIONS

Weight	727.5 kg
Power	986 W, Two Li-Ion batteries
Type of Satellite	Earth Observation
Payloads	<ul style="list-style-type: none">• Panchromatic Camera• Multi-spectral Camera
Mission Life	5 Years



SATHYABAMASAT

THE SATELLITE

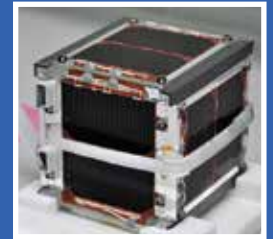
SATHYABAMASAT is a Student Satellite weighing 1.5 kg from Sathyabama University, Chennai. Its mission objective was to collect data on greenhouse gases such as Water Vapour, Carbon Monoxide, Carbon Dioxide, Methane and Hydrogen Fluoride.



SWAYAM

THE SATELLITE

SWAYAM, a Student Satellite weighing 1 kg was developed by the students of College of Engineering, Pune with the mission objective to provide point to point messaging services to the HAM community.



THE INTERNATIONAL CUSTOMER SATELLITES

Satellite	No. of Satellite	Country	Mission Objectives
LAPAN – A3	1	Indonesia	It is a Microsatellite for Earth Observation (multi-spectral remote sensing) for land use, natural resource and environment monitoring
M3MSAT	1	Canada	Maritime Monitoring and Messaging Microsatellite is a technology demonstration mission jointly funded and managed by Defense Research and Development Canada (DRDC) and the Canadian Space Agency (CSA). The satellite's primary mission is the collection and study of Automatic Identification System (AIS) signals from Low Earth Orbit
GHGSat-D	1	Canada	An Earth Observation Satellite built by Space Flight Laboratory at the University of Toronto Institute for Aerospace Studies. It is meant for measuring atmospheric concentration of greenhouse gases (Carbon Dioxide and Methane)
BIROS	1	Germany	Berlin Infrared Optical System is a small scientific satellite from the German Aerospace Centre (DLR). The main mission objective is the remote sensing high temperature events
SkySat GEN2-1	1	USA	It is a small Earth Imaging Satellite designed and built by Terra Bella, a Google company based in Mountain View, California, USA. The satellite will be capable of capturing sub-meter resolution imagery and HD video
DOVE Satellites	12	USA	The Planet Labs Dove Satellites (FLOCK-2P) are Earth Imaging Satellites. A total of 12 Dove satellites are carried in this mission inside 3 QuadPack dispensers.



LAPAN-A3



M3MSAT



GHGSat-D



SkySat GEN2-1