

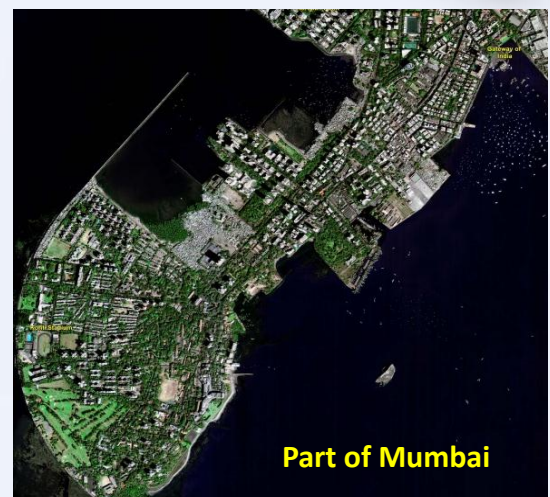
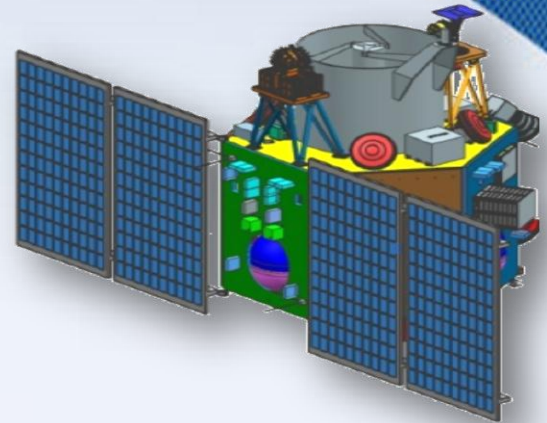
Cartosat-2S(E) was launched successfully by ISRO's Polar Satellite Launch Vehicle (PSLV-C38), along with 30 co-passenger satellites on June 23, 2017 from Satish Dhawan Space Centre SHAR, Sriharikota, Andhra Pradesh.

Cartosat-2S(E), referred to as Cartosat-2 Series satellite, is sixth in the series of India's Earth Observation satellite for cartographic applications, This satellite is capable of providing high resolution imagery with a high degree of agility.

Cartosat-2S(E) provides Panchromatic imagery with a resolution of 0.65 m and Multispectral imagery in four spectral bands with a spatial resolution better than 2 m, with a nominal swath around 9.6 Km. The satellite is capable of steering up to $\pm 45^\circ$ and $\pm 26^\circ$ along and across the track respectively.

Major advancements in Cartosat-2S (E):

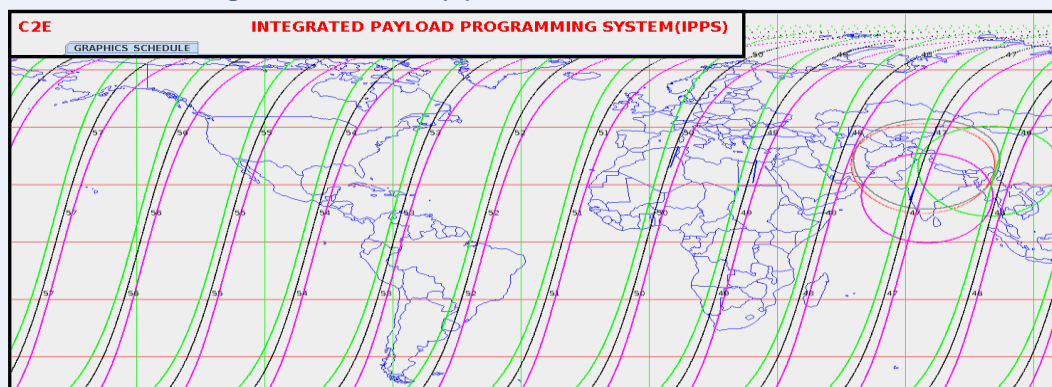
- Time Delay Integration (TDI) concept used for image acquisition.
- Better Signal-to-Noise Ratio (SNR).
- Continuous imaging capability to cover longer strips.
- Improved radiometric resolution (11-bit).
- On-board wavelet based compression and higher imaging efficiency.
- SSR Capacity 2X300 Gb.



Salient Features	
Satellite Mass (kg)	712 kg
Orbit Type	Polar, Sun Synchronous (SSO)
Orbit Height (Km)	505 Km
Orbit Inclination (deg.)	97.44 deg.
Local Time of Equator Crossing	9:30 am
Power	Solar Arrays Generating 970 Watts; Two Li-ion Batteries(36AH)

On the first day of imaging (26th June 2017), Panchromatic and Multispectral images will be captured in **orbit 47** in Real Time (two strips) and recording operations will be carried out in orbits 48 and 49 (one strip each). Fig-1 to 4 show the first day imaging plan on orbits 47(Real Time),48, and 49 (Recording).

Fig-1: Cartosat-2S (E) Orbital trace on 26th June 2017



- ❖ In the Real time Orbit 47, two acquisitions are planned. First strip is of 570 Km length & Second strip is 680 Km long.
- ❖ In the Orbits 48 & 49, two recording operations of 100 Km (N-S strips) are planned.

Fig-2: Orbit 47- Real Time

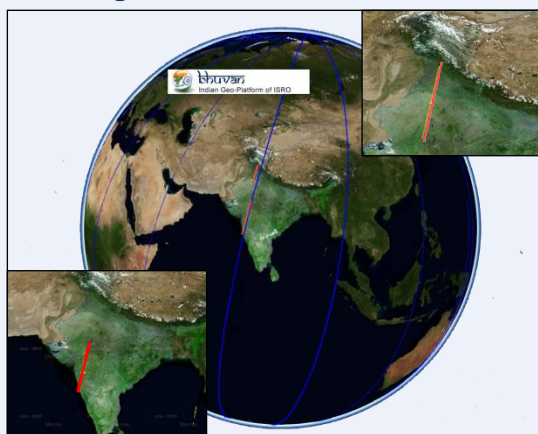


Fig-3: Orbit 48 - Recording



Fig-4: Orbit 49 - Recording



Sensor Parameters

PARAMETERS	PAN	MULTISPECTRAL
Ground Sampling Distance (GSD)	0.65 m	better than 2m
Swath	9.6 Km	9.6 Km
Spectral Bandwidth (µm)	0.45 - 0.9	B1:0.45 - 0.52 B2:0.52 - 0.59 B3:0.62 - 0.68 B4:0.77 - 0.86
Quantisation	11 Bits	11 Bits
Nominal TDI Stages	24	15
No. of Detectors	2	5
SSR Capacity (2Nos)	300 Gb	

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Cartosat-2S(E) carries two additional payloads Event Monitoring Camera-1 (EVM-1) in Panchromatic mode and Event Monitoring Camera-2 (EVM-2) in Multispectral mode. These cameras provide video data.

Cartosat-2S(E) data will meet the increasing user demands for cartographic applications at cadastral level, Precision farming, crop insurance, taxation, disasters at micro level, urban and rural resource management, coastal land use and regulation, utility mapping and GIS applications, with its increased revisit capability.

The following Cartosat-2S(E) data products will be offered.

- ❖ Georeferenced/Orthokit
- ❖ Orthorectified
- ❖ Pan + Mx Bundle/Merged