



## GSAT-20 (GSAT-N2) Aboard SpaceX's Falcon-9

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### Why in News?

The commercial arm of the [Indian Space Research Organisation \(ISRO\)](#), [NewSpace India Limited \(NSIL\)](#) is set to launch **GSAT-20 (GSAT-N2)**, aboard [SpaceX's Falcon-9](#) in 2024.

- Falcon 9 is the world's first orbital class **reusable, two-stage rocket** designed and manufactured by **SpaceX** for the reliable and safe transport of people and payloads into Earth orbit and beyond.

### What is GSAT-20?

- GSAT-20 is a **high throughput Ka-band satellite** that provides **high-speed broadband internet connectivity**, digital video transmission, and audio transmission.
  - It is being launched to address the growing broadband communication needs of India. It is designed to provide comprehensive coverage across India, including remote regions like [Andaman and Nicobar Islands](#) and **Lakshadweep Islands**.
- This satellite offers an impressive **HTS (High Throughput Satellite) capacity** of nearly 48Gbps. Notably, it comprises **32 beams specifically designed to meet the demanding service** needs of underserved areas, aiming to bridge the connectivity gap.

### Note

The Ka-band refers to radio frequencies ranging from **27 to 40 GHz**. It allows high-speed satellite data transfers with wide coverage through focused spot beams.

### What is NewSpace India Limited (NSIL)?

- NSIL, incorporated on 6<sup>th</sup> March **2019 (under the [Companies Act, 2013](#))**, is a wholly owned **Government of India company**, under the administrative control of **Department of Space (DOS)**.
  - Its primary responsibility is **enabling Indian industries to take up high technology space related activities** and is also responsible for promotion and commercial exploitation of the products and services emanating from the Indian space programme.
- **The Major Business Areas of NSIL include:**
  - Production of [Polar Satellite Launch Vehicle \(PSLV\)](#) and [Small Satellite Launch Vehicle \(SSLV\)](#) through industry
  - Production and marketing of **space-based services**, including launch services and space-based applications like transponder leasing, remote sensing and mission support services;
  - Building of **Satellites (both Communication and Earth Observation)** as per user requirements.
  - Transfer of technology developed by ISRO centres/ units and constituent institutions of Dept. of Space;

- Marketing spin off technologies and products/ services emanating out of ISRO activities
- Consultancy services
- In June 2022, **NSIL successfully completed its first demand-driven satellite mission, GSAT-24**, which was fully secured by Tata Play, a satellite television service.
  - Currently, NSIL manages and operates **11 communication satellites in orbit**.

### **UPSC Civil Services Examination, Previous Year Question (PYQ)**

**Q. With reference to India's satellite launch vehicles, consider the following statements: (2018)**

1. PSLVs launch the satellites useful for Earth resources monitoring whereas GSLVs are designed mainly to launch communication satellites.
2. Satellites launched by PSLV appear to remain permanently fixed in the same position in the sky, as viewed from a particular location on Earth.
3. GSLV Mk III is a four-staged launch vehicle with the first and third stages using solid rocket motors, and the second and fourth stages using liquid rocket engines.

**Which of the statements given above is/are correct?**

- (a)** 1 only
- (b)** 2 and 3
- (c)** 1 and 2
- (d)** 3 only

**Ans: (a)**

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