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{ SPACE ODYSSEY } NEW COLLABORATION

## SpaceX launches Isro's satellite

Elon Musk-owned SpaceX successfully launched Isro's GSAT-N2 satellite from Florida's Cape Canaveral on Tuesday, in a shot in the arm for India's communication sector

### Breakdown of GSAT-N2

**14yrs**  
Life of mission

**32** Total number of user beams, comprising 8 narrow spot beams over northeast and 24 wide spot beams over rest of India

The payload of GSAT-N2 consists of three parabolic 2.5m deployable reflectors with multiple feeds. They generate 32 spot beams over the country, using a single-feed per beam configuration.

### India's communication infra set for major boost



The second demand-driven satellite of NewSpace India Limited (NSIL), GSAT-N2, also known as GSAT 20, is a Ka-band high throughput communication satellite. It aims to enhance broadband services and in-flight connectivity across the country by providing high-band communication services. Isro has said that the satellite is being specifically designed to meet the demanding service needs of remote and unconnected regions.

"This satellite featuring multiple spot beams and wideband Ka x Ka transponders, aims to support a large subscriber base with small user terminals, boosting system throughput through its multi-beam architecture which allows frequency reuse."  
— NewSpace India Limited (NSIL)

### Why did Isro opt for SpaceX?

**4,700kg**  
Weight of GSAT-N2

**8,300kg**

Weight of payloads Falcon 9 can place in GTO

Weight of payloads Falcon 9 can place in GTO

**4,000kg**

Weight of payload Isro can place in GTO

Falcon 9 is capable of carrying up to 22,800kg to the Low Earth Orbit (LEO) and up to 8,300kg of payload to Geosynchronous Transfer Orbit (GTO).

Isro, which has been launching foreign satellites from its spaceport in Sriharikota, chose SpaceX to launch the 4,700-kg satellite since it lacked the facilities for the heavier payload. Its most powerful rocket, the GSLV-Mk3, is capable of putting four-tonne class payloads in Geosynchronous Transfer Orbit (GTO). SpaceX used Falcon 9, a reusable, two-stage rocket, to successfully place the satellite into orbit.

### Dawn of a new commercial collaboration

Tuesday's launch marked the first commercial collaboration between the Indian space agency and US firm. In January, Isro's commercial arm NSIL announced that it has sealed an agreement with SpaceX for the launch of the satellite. The pact marked a departure from India's traditional arrangement of using the French company ArianeSpace's rockets to take its heavy-weight satellites to space from the European spaceport at Kourou in French Guiana.

