

GSAT 30

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Source: *The Hindu*

Manifest pedagogy: GSAT 30 is a replacement for INSAT 4A. Our communication satellite series- INSAT/GSAT series are very important with respect to their generic purposes and the specific ones.

In news: Isro's GSAT-30 satellite was launched by Arianespace in French Guiana on 17th January, 2020.

Placing it in syllabus: Indian space programme

Static dimensions: INSAT/GSAT series timeline

Current dimensions:

- Specifications
- Replacement of INSAT-4A
- Services Provided by GSAT-30

Content:

INSAT/GSAT series timeline:

- **April 10, 1982 – INSAT-1A launched**
- August 30, 1983 – INSAT-1B launched
- July 21, 1988 – INSAT-1C launched
- June 12, 1990 – INSAT-1D launched
- **July 10, 1992 – INSAT-2A, the first satellite of the indigenously-built second-generation INSAT series was launched**
- July 23, 1993 INSAT-2B launched
- December 7, 1995 – INSAT-2C launched
- April 3, 1999 – INSAT-2E, the last satellite in the multipurpose INSAT-2 series launched
- **March 22, 2000 – INSAT-3B, the first satellite in the**

third generation INSAT series was launched

- April 18, 2001 – first developmental launch of GSLV-D1 with GSAT-1 on board
- January 24, 2002 – INSAT-3C launched
- April 10, 2003 – INSAT-3A launched
- **May 8, 2003 – GSLV-D2 / GSAT-2 launched**
- September 28, 2003 – INSAT-3E launched.
- **September 20, 2004 – GSLV-F01 / EDUSAT(GSAT-3) launched.**
- December 22, 2005 – INSAT-4A launched
- March 12, 2007 – INSAT-4B launched
- May 21, 2011 – GSAT-8 launched
- July 15, 2011 – GSAT-12 launched
- July 26, 2013 – INSAT-3D launched
- January 5, 2014 – GSAT-14 launched
- December 7, 2014 – GSAT-16 launched
- June 5, 2017 – GSAT-19 launched
- **Nov 14, 2018 – GSAT-29 launched**
- Dec 19, 2018 – GSAT-7A launched
- Jan 17, 2020 – GSAT-30 launched

Specifications of GSAT-30:

- GSAT-30, an Indian communication satellite will replace INSAT 4A launched in 2005.
- It has been launched using an **Ariane 5 launch vehicle from the Guiana Space Centre.**
- GSAT-30 **uses two satellite frequencies:** It gives the Indian mainland and islands coverage in the **Ku band**, and extended coverage in a wider area stretching from Australia to Europe in the **lower-frequency C-band** (both ranging from 1 to 40 gigahertz).
- It is equipped with 12 C and 12 Ku band transponders.



- The satellite is **3,357-kgs**, which has been **deployed into geostationary transfer orbit (GTO).**
- It is configured on ISRO's enhanced **I-3K Bus structure**

- to provide communication services.
- It has a mission life of **15 years**.
 - **Along with GSAT-30**, Arianespace orbited **EUTELSAT KONNECT, a telecommunication satellite** for the operator Eutelsat.
 - Since the launch of India's APPLE experimental satellite in 1981, **Arianespace has orbited 24 satellites, including GSAT-30, for ISRO.**

Replacement of INSAT-4A:

- INSAT-4A, **first in INSAT-4 satellites** series provided services in Ku and C-band frequency bands.
- At the time of launch, it was the heaviest satellite India had produced.
- The Ku transponders covered the Indian mainland and C-Band transponders covered an extended area.
- It was also placed by Ariane launch vehicle (ARIANE5-V169).
- The satellite **was placed in the graveyard orbit on 21 October 2019.**
- It **served for almost 14 years.**

Services provided by GSAT-30:

- Provides **high-quality television, telecommunications and broadcasting services.**
- Provides **connectivity to VSATs** [Very Small Aperture Terminals] for ATM, stock exchange, **television uplinking and teleport services**, Digital Satellite News Gathering (DSNG) and **e-governance applications.**
- The satellite will be used for **bulk data transfer** for a host of emerging telecommunication applications.
- The satellite will provide Ku- band coverage to Indian mainland and islands and extended C-band coverage to Gulf countries, a large number of Asian countries and Australia.