

The GSAT 7B and India's other military satellites

By IAS Toppers | 2022-03-26 17:35:00



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Recently, the Defence Ministry has cleared the procurement of a GSAT 7B satellite.



[Ref: Firstpost]

GSAT 7 series satellites:

- **GSAT 7 satellites** are advanced satellites **developed by the Indian Space Research Organisation (ISRO)** to meet the **communication needs of the defence services**.
- It was **launched in August 2013** from an Ariane 5 ECA rocket from Kourou in French Guiana.
 - It was injected into a geosynchronous transfer orbit (GTO).
- The GSAT 7 provides a gamut of services for military communication needs, which includes low bit voice rate to high bit rate data facilities, including multi-band communications.
- **Rukmini, first military satellite developed by ISRO**, improved the maritime communications among the **Indian Navy's warships**.

GSAT 7A satellite:

- It was **launched in 2018** from the Satish Dhawan Space Centre in Sriharikota.
- It has **boosted the connectivity** between the ground radar stations, airbases and the airborne early warning and control aircraft **of the Indian Air Force**.
- It helps in **satellite-controlled operations of unmanned aerial vehicles (UAVs)**.

GSAT 7B satellite:

- The GSAT 7B will primarily **fulfil the communication needs of the Army**.
- It will also help the Army **enhance its surveillance** in border areas.

Other military satellites:

Electromagnetic Intelligence Gathering Satellite (EMISAT):

- It was **developed by ISRO** and launched in April 2020 through a Polar Satellite Launch Vehicle.
- It has an **Electronic Intelligence (ELINT)** package called **Kautilya**, which allows the interception of ground-based radar and also carries out electronic surveillance across India.
- This satellite circles the globe pole-to-pole, and is helpful in **gathering information from radars of countries** that have borders with India.

RISAT 2BR1:

- It is a **synthetic aperture radar imaging satellite**.
- The satellite was launched in December 2019 from Sriharikota.
- It has the capability to **operate in** different modes including **very high-resolution imaging modes**.