

PSLV-C50 launches CMS-01 successfully

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The Indian Space Research Organisation (Isro)'s PSLV-C50 lifted off from the Sriharikota spaceport near Chennai, and successfully placed India's 42nd communications satellite CMS-01 (formerly GSAT-12R) into orbit 20 minutes after lift-off.

The rocket lifted from the second launch pad at the rocket port in Sriharikota, in Andhra Pradesh. After about 20 minutes into its flight, it ejected CMS-01 into geosynchronous transfer orbit (GTO) and from there, the satellite will be taken up and positioned in the geosynchronous stationary orbit.

Key Highlights

- The 44-metre-high four-staged engine, PSLV-C50, is the 22nd flight of PSLV in 'XL' configuration (with six strap-on motors hugging the first stage). It will be the 52nd mission for India's Polar Satellite Launch Vehicle (PSLV).
- The PSLV in normal configuration is a four-stage expandable rocket powered by solid and liquid fuels alternatively, with six booster motors strapped on to the first stage to give higher thrust during the initial flight moments.
- ISRO has PSLV variants with two and four strap-on motors, larger PSLV-XL and the Core

Alone variant, without any strap-on motors. The choice of rocket to be used for a mission depends on the satellite's weight and the orbit in which it is to be positioned.

- CMS-01 is a communication satellite designed to provide services in the Extended-C Band of the frequency spectrum, which will include the Indian mainland, Andaman and Nicobar and Lakshadweep Islands. It is India's 42nd communication satellite and will have a mission life of seven years.
- The CMS-01 will be a replacement for GSAT-12, which weighed 1,410 kg and was launched on July 11, 2011, with a mission life of eight years.
- K. Sivan said the rocket will be carrying India's first earth observation satellite from a start-up called Pixxel. It will also carry communication satellites built by students part of SpaceKidz team and another satellite built by a consortium of three Indian universities.
- The primary payload for PSLV-C51 rocket will be a Brazilian satellite weighing between 600-700kg. Sivan added that Team Isro has a busy schedule ahead with the launch of Aditya satellite, Gaganyaaan-India's human space mission, realisation of small rocket Small Satellite Launch Vehicle (SSLV).
- Other Indian satellites ready for launch are GISAT and Microsat-2A. The launch of the GISAT-1 satellite slated for March 5 this year was postponed due to technical reasons a day before the launch. The GISAT-1 satellite will be carried by a GSLV rocket.

SOURCE: *Business Standard*