

JUNE 2022
LAUNCH KIT
VA257



www.arianespace.com



www.ariane.group/en/

MISSION DESCRIPTION

Arianespace's second launch of 2022 with the first Ariane 5 of the year will place its satellite passengers into geostationary transfer orbit. The launcher will be carrying a total payload of approximately 10,863kg.

The launch will be performed in Kourou, French Guiana.



DATE AND TIME

Liftoff is planned on **Wednesday, June 22, 2022**, as early as possible within the following launch window:

- Between 05:03 p.m. and 06:43 p.m. Washington, D.C. time,
- Between 06:03 p.m. and 07:43 p.m. Kourou time,
- Between 09:03 p.m. and 10:43 p.m. Universal time (UTC),
- Between 11:03 p.m. and 00:43 a.m, June 23rd Paris time,
- Between 06:03 a.m. and 07:43 a.m, June 23rd Tokyo time.



MISSION DURATION

The nominal duration of the mission (from liftoff to separation of second satellite) is: **40 minutes.**



SATELLITES

- Satellite: MEASAT-3d
- Customer : MEASAT
- Satellite: GSAT-24
- Customer: NSIL for ISRO



TARGETED ORBIT

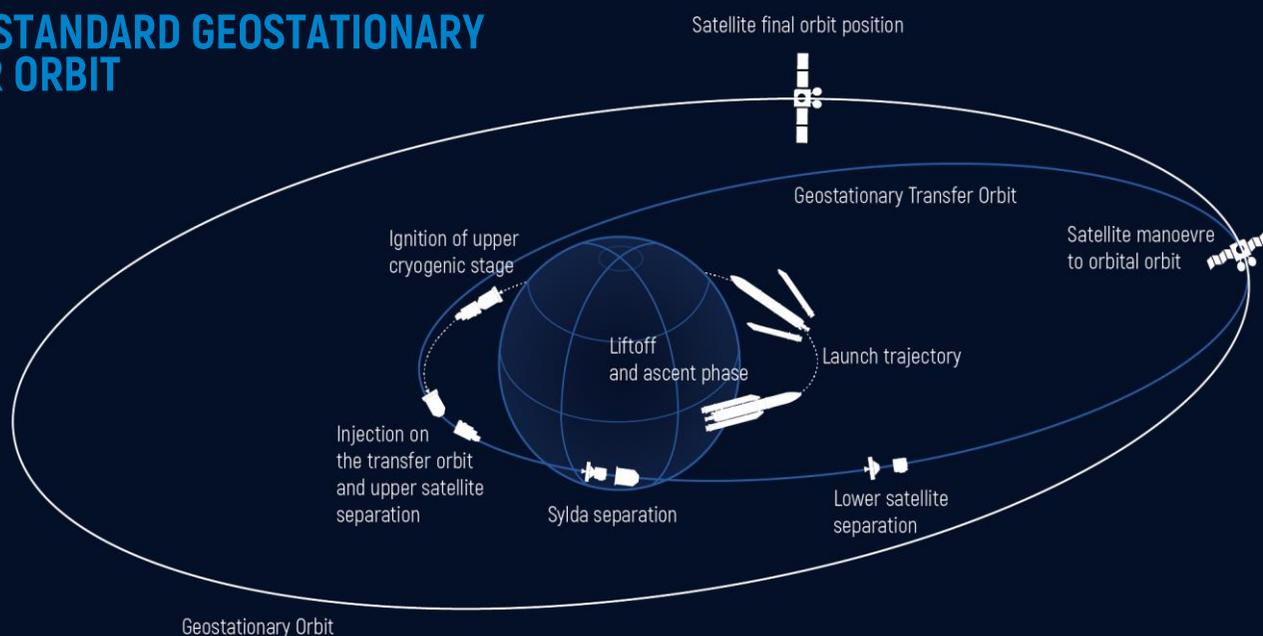
- Perigee altitude: 250 km.
- Apogee altitude: 35 786 km.
- Inclination : 6° degrees



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ARIANE 5 STANDARD GEOSTATIONARY TRANSFER ORBIT



PRESS CONTACTS

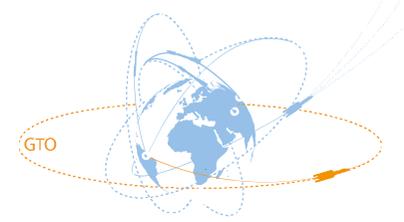
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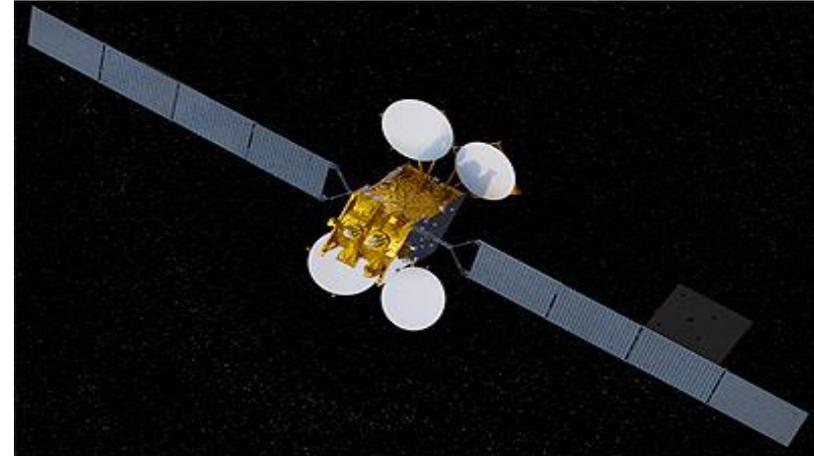
MEASAT-3d

CONNECTING PEOPLE, DIGITALISING THE NATION



DID YOU KNOW?

MEASAT-3d also embarks a very innovative hosted payload for KTSAT. Designed and built by Airbus Defence and Space, it will be used for the Korean Augmentation system which is called KASS and will significantly enhance air traffic management in South Korea.



SATELLITE	MEASAT-3d
OPERATOR	MEASAT
MANUFACTURER	Airbus Defence and Space
MISSION	Telecommunications
MASS AT LAUNCH	5,648 kg.
PLATFORM	Eurostar E3000
COVERAGE AREA	Malaysia
LIFETIME	>18 years

MEASAT-3d is a multi-mission telecommunications satellite built by Airbus Defence and Space for MEASAT, the leading Malaysian satellite operator. This new satellite will significantly enhance broadband speeds of up to 100 Mbps in areas with limited or no terrestrial network throughout Malaysia while continuing to provide redundancy and additional capacity for video distribution in HD, 4K, and ultimately 8K in the Asia-Pacific region.

Planned for more than 18 years of operation, MEASAT-3d is designed to have electrical power of 12 kW. It will carry C- and Ku-band payloads for direct-to-home (DTH) services and a high-throughput Ka-band payload with multiple user spot beams optimised to deliver high speed broadband communications over Malaysia for internet connectivity. Apart from this, the satellite will also host a Q/V band payload, the first of its kind in the Asia-Pacific region, which allows MEASAT to study propagation effects in high rainfall regions like Malaysia, to enable the design of its next generation satellites.

MEASAT-3d will be co-located with MEASAT-3a and MEASAT-3b at the 91.5°E orbital slot.

- MEASAT-3d will be the fourth satellite launched by Arianespace for MEASAT.
- It will be the 137th Airbus Defence and Space satellite to be launched by Arianespace.

GSAT-24

1st "Demand Driven" mission of NewSpace India Limited (NSIL)

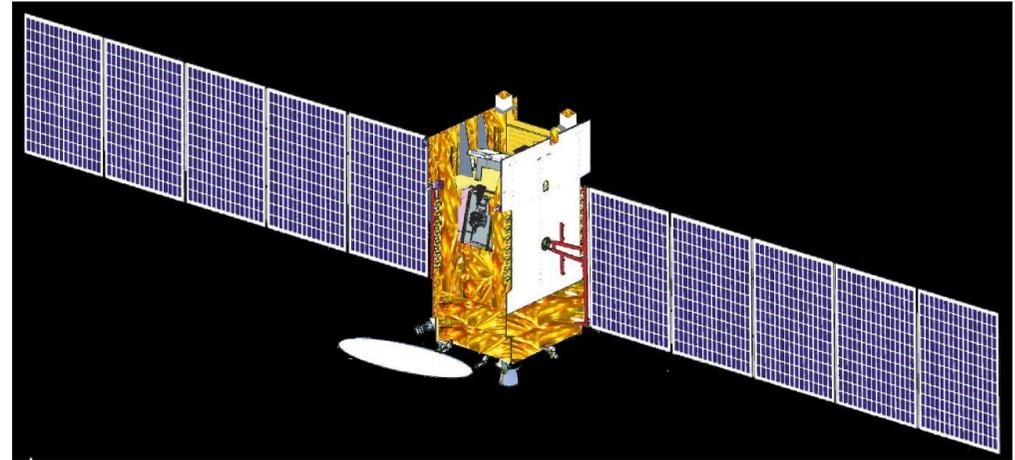


DID YOU KNOW?

NSIL, incorporated during March 2019, is a Central Public Sector Enterprise (CPSE), under Department of Space (DOS) and is the commercial arm of ISRO.

As part of "Space Reforms" announced by Government of India during June 2020, NSIL got mandated to undertake operational satellite missions on a "Demand Driven" model, wherein NSIL has the responsibility to build, launch, own & operate the satellites and provide services to customers.

With the launch of GSAT-24, NSIL will be owning and operating a fleet of 11 Geo-communication satellites in orbit.



SATELLITE	GSAT-24
OWNER/OPERATOR	NewSpace India Limited (NSIL)
MANUFACTURER	Indian Space Research Organisation (ISRO)
MISSION	Capacity Leased to M/s TATA Play for DTH
MASS AT LAUNCH	4,181 kg.
PLATFORM	I-3k Bus
COVERAGE AREA	India
LIFETIME	15 years

GSAT-24 is a Ku-band 4-tonne class communications satellite built for NSIL by ISRO. This satellite will provide high-quality television, telecommunications and broadcasting services and will meet the DTH needs of Indian customers. GSAT-24 is configured on ISRO's proven I-3k Bus with a mission life of 15 years.

Satellite capacity on-board GSAT-24 has been leased by NSIL to M/s Tata Play, a leader in Direct-To-Home (DTH) services. Thanks to this satellite, M/s Tata Play will be able to offer better and reliable services to its customers.

NSIL

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- GSAT-24 will be the twenty-fifth Indian satellite launched by Arianespace and the eleventh of the GSAT series.
- The relationship between ISRO and Arianespace dates back to 1981 with the launch of APPLE satellite on Ariane 1.

ARIANE 5 LAUNCHER



Fairing

(RUAG Schweiz AG)
Height: 17 m.
Mass: 2.4 t.

PA – Payload adaptors (2)

(Airbus Defence and Space - ASE)
(RUAG Space AB)
Mass: 202 kg.

SYLDA – Internal structure

510 kg

ESC-D – Cryotechnic upper stage

Height: 4.71 m.
Mass: 19 t.

HM-7B engine

Thrust: 67 kN. (in vacuum)
995 sec. of propulsion

EPC – Cryogenic main stage

Height: 31 m.
Mass: 190 t.

EAP – Solid rocket boosters

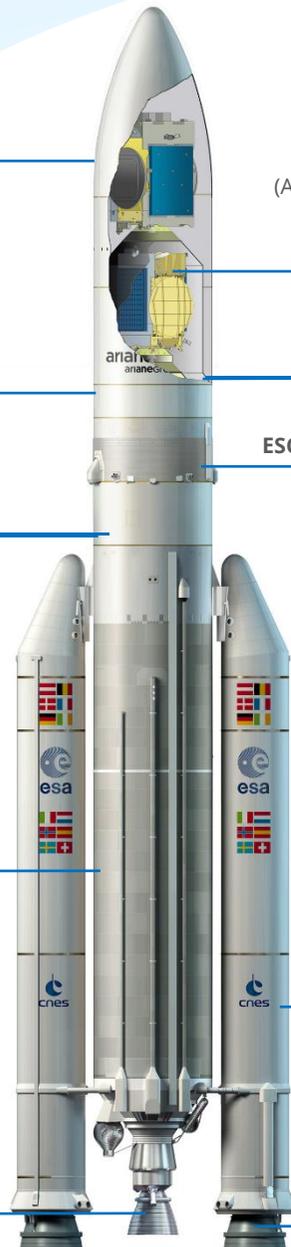
Height: 31.6 m.
Mass: 277 t.

Vulcain 2 engine

Thrust: 1,410 kN. (in vacuum)
520 sec. of propulsion

MPS – Solid rocket motor

Average thrust: 5,060 kN.
Max thrust: 7,080 kN. (in vacuum)
133 sec. of propulsion



13,000 kN. at liftoff (atT+7.3 sec)

DID YOU KNOW?

ArianeGroup, as prime contractor for Ariane 5, leads a number of European companies in launcher production, including management of upgrades and the flight software for each mission. This team effort underpins the success of Ariane 5.

ArianeGroup's responsibilities on Ariane 5 include structures and equipment, propulsion systems, integration of the different stages and integration of the launcher at the Guiana Space Center in French Guiana. It coordinates more than 600 European companies contributing to the launcher, including some 350 small and medium-size enterprises.

We continuously improve the competitiveness of the Ariane 5 system, while also ensuring that it benefits from the production improvements developed on the Ariane 6 program.

BORDEAUX METROPOLE: PARTNER OF THE LAUNCH

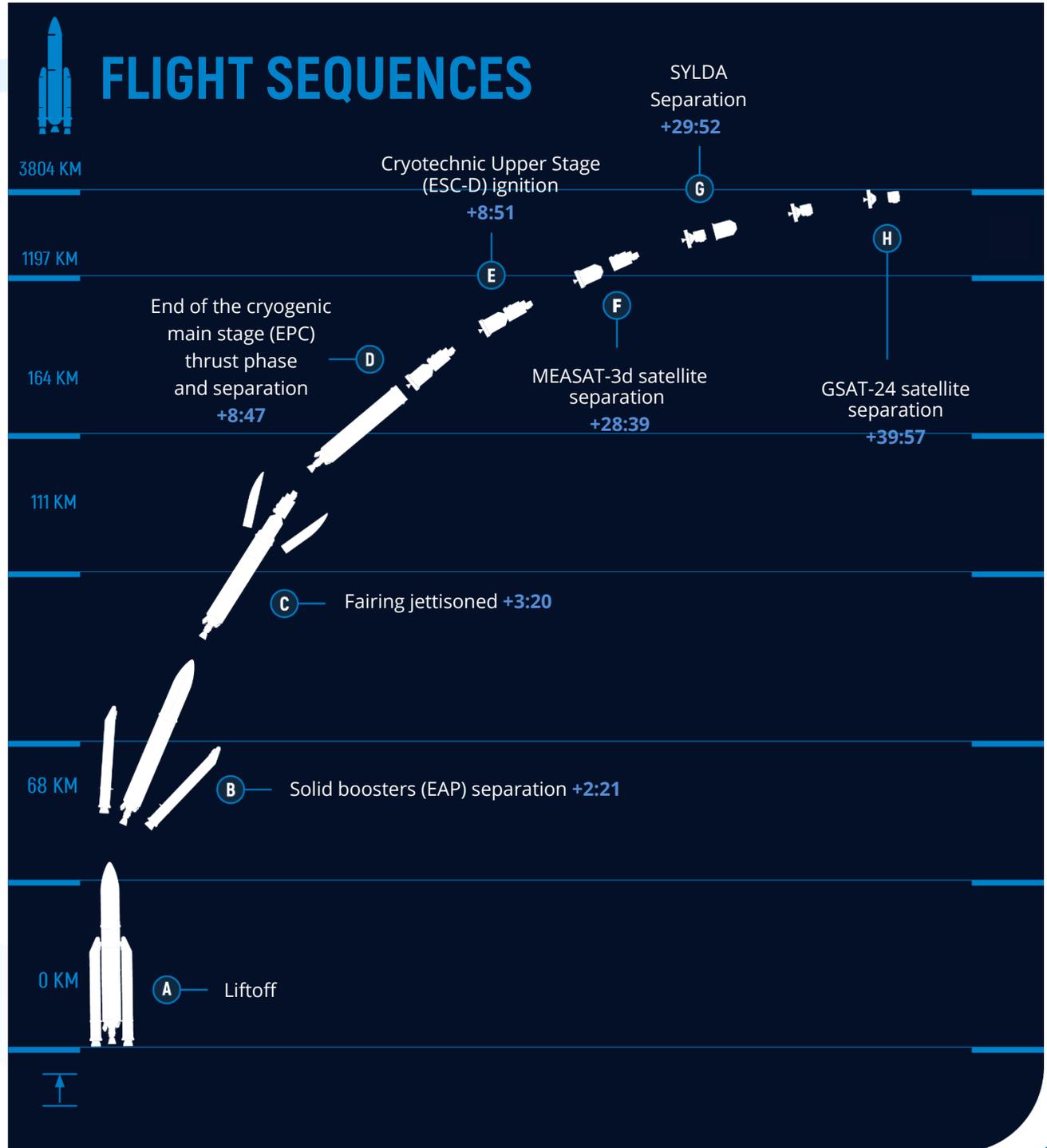
Bordeaux Métropole presided the Communities of Ariane Cities from 2020 to 2021 and is the partner of Flight VA257. As such, the logo of the intercommunal structure will be displayed on the launcher's fairing.

The Bordeaux Métropole, with its Aéroparc dedicated to the aerospace industry that stretches out over 3,400 hectares. It hosts over 300 companies generating more than 20,000 jobs (which represents 42% of the Aéroparc global workforce).

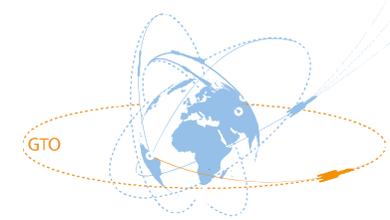


LAUNCH CAMPAIGN

- 06/22/2022  Start of launch countdown, cryogenic main stage (EPC) and cryogenic upper stage (ESC-A) filling with liquid oxygen and liquid hydrogen. **Liftoff.**
 - 06/21/2022  Roll-out from BAF to the launch pad
 - 06/17/2022  Launch readiness review and arming of launch vehicle
 - 06/16/2022  Dress rehearsal
 - 06/14/2022  Composite (MEASAT-3d under fairing) integration on launch vehicle (GSAT-24 under SYLDA)
 - 06/13/2022  GSAT-24 integration on launch vehicle
 - 06/09/2022  Fairing integration on SYLDA
 - 06/08/2022  MEASAT-3d integration on the SYLDA
 - 06/01/2022  GSAT-24 fueling operations
 - 05/30/2022  MEASAT-3d fueling operations
 - 05/19/2022  Arrival of GSAT-24 in French Guiana
 - 05/18/2022  Transfer from BIL (Launcher Integration Building) to BAF (Final Integration Building)
 - 05/13/2022  Arrival of MEASAT-3d in French Guiana
 - 05/13/2022  BIL Campaign start
-  — Launch vehicle operations
 — Satellite operations



STAKEHOLDERS OF A LAUNCH



ARIANESPACE

Arianespace uses space to make life better on Earth by providing launch services for all types of satellites into all orbits. It has orbited over 1,100 satellites since 1980.

Starting in 2022, Arianespace will operate the new-generation Ariane 6 and Vega C launchers, developed by ESA.

Arianespace is headquartered in Evry, near Paris, and has a technical facility at Europe's Spaceport in French Guiana, plus local offices in Washington, D.C., Tokyo and Singapore. Arianespace is a subsidiary of ArianeGroup, which holds 74% of its share capital, with the balance held by 15 other shareholders from the European launcher industry. ESA and CNES are advisory board members.

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ARIANEGROUP

ArianeGroup is the prime contractor for the development and production of Ariane 5 and Ariane 6 launchers. The company coordinates an industrial network of more than 600 companies (including 350 SMEs).

ArianeGroup oversees the entire industrial supply chain, from performance optimization and the corresponding studies associated with Ariane 5 to production, from the supply of mission-specific data and software to the marketing of the launcher through Arianespace. This chain includes equipment and structures, engine manufacturing, integration of the various stages, and launcher integration in French Guiana.

ArianeGroup delivers a flight-ready launcher on the launch pad to its subsidiary Arianespace, which operates the flight from lift-off, on behalf of its customers.

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ESA

The European Space Agency (ESA) is tasked with guiding the development of Europe's space capabilities and making sure that its investments in space benefit the citizens of Europe and worldwide. An international organization with 22 member states, ESA coordinates its members' financial and intellectual resources to conduct programs and activities that largely surpass the scope of action of a single European country. ESA is now coordinating Europe's future launcher programs, Ariane 6 and Vega C. On Ariane 6, ESA supervises the overall launch system procurement and architecture, while European industry builds the launcher, with ArianeGroup as prime contractor and design authority.

ESA also provides the launcher's specifications for institutional missions. Thirteen European countries contribute to funding for the Ariane 6 program, led by France, Germany and Italy, along with Austria, Belgium, Spain, Ireland, Norway, the Netherlands, Romania, Sweden, Switzerland and the Czech Republic.

Press contact: media@esa.int



CNES

French space agency CNES (Centre National d'Etudes Spatiales) defines national space policy and proposes it to public authorities. CNES oversees the application of this policy in five main areas: Ariane, science, observation, telecommunications and defense. ESA chose CNES as prime contractor for the Ariane 6 launch base in French Guiana, including the construction of a new launch pad. CNES also supports ESA, as the contracting authority, and ArianeGroup, as prime contractor for launcher development, and is responsible for applying the French law on space operations. As the owner of the Guiana Space Center (CSG), CNES has a dual mission: maintaining the operational condition of the CSG and modernizing its facilities in anticipation of the arrival of Ariane 6, Vega-C and other future vehicles. At the CSG, CNES manages operations at the launch base, the reception of satellites, launch vehicle monitoring and tracking, range security and environmental protection.

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