



THE WORLD'S SPACEPORT

Ideal location

The Guiana Space Center (CSG) offers ideal conditions for launching any payload to any orbit at any time. Located at 5 degrees North latitude, its proximity to the equator provides an extra boost of energy due to the Earth's rotation – a slingshot effect that is greater here than at most other launch sites.

State-of-the-art facilities

The CSG provides modern Payload Preparation Facilities that are recognized for their high quality in the space industry. The facilities are capable of processing several spacecrafts from different customers simultaneously, thanks to vast clean-rooms and commodious infrastructure. Designed to support the rockets' multiple launch capability and high launch tempo, the preparation facilities meet the needs of customers using any of the three vehicles in the Arianespace family and its two next generation launch vehicles.

A new launching complex

The Ariane 6 launch site (ELA-4) is a dedicated area designed for launch vehicle final preparation, the upper composite integration with launch vehicle and the final launch activities. It includes the launch pad (ZL4), the launch vehicle assembly and integration building (BAL) and support buildings. The Ariane 6 launch site is located approximately 10km to the North-Ouest of the CSG Technical Center.

Strict security

The French government, the CSG, and Arianespace follow strict security measures that meet the most rigorous international and national agreements and requirements.

Arianespace activities are characterized as highly security sensitive ones by the French government and consequently very strict and rigorous measures are implemented with the support of national authorities to satisfy both national and international requirements. They apply to the three launch systems: Ariane 5, Soyuz, and Vega, and strictly limit access to spacecraft.

Specifically, the security regime is compliant with requirements governing the export of U.S. manufactured satellites or parts under the ITAR regulation.

Safety mission

The CSG entities apply rigorous Safety Rules during each launch campaign: this includes authorization of equipment use, operator certification, and permanent operation monitoring. Any potentially dangerous activity is to be reported to the CSG responsible, which in turn, makes certain that safety equipment and emergency response teams are poised to deal with any hazard.

Environmental protection

For many years, all CSG actors have been committed to protecting the environment, through strict measures during spacecraft preparation, launch, and flight. The impact of the launch vehicle in flight on the environment and the careful disposal of hazardous waste are thoroughly monitored.

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ARIANE 5

The heavy-lift champion, Ariane 5, is the world reference in terms of reliability and availability.

Today, Arianespace uses only one version of the launcher, the Ariane 5 ECA, which ensures that its production is standard and availability is regular.

The Ariane 5 ECA can launch more than ten tons to geostationary transfer orbit and is the reference for the on-time delivery of satellites.

The Ariane 5 ECA launcher consists of the Main Cryogenic Stage, two Solid Boosters and an Upper Cryogenic Stage. Using a limited number of engines, this architecture is both simple and robust.

With more than 100 launches, the Ariane 5 has become the world's benchmark for heavy lift launch vehicles.



Industrial Prime Contractor: **ArianeGroup**

Performance	GTO	Elliptical L2 Lagrange
Payloads, kg	>10,000	6,600
Inclination (i), deg	6	6
Altitude of perigee (Zp), km	250	300
Altitude of apogee (Za), km	35,943	1 200,000
Argument of perigee (Wp), deg	178	-



Single launch configuration

Dual launch configuration

Large payload carrying capacity

The Ariane 5 fairing at 17-m high and with an external diameter of 5.4 m is exceptionally large for the commercial launch market. This enables Ariane 5 to launch all types of satellites now in service as well as those in development.

Customized to any mission

The Ariane 5 launch vehicle provides standard interfaces that fit most spacecraft buses and satellites, allowing for the easy transfer or switch between any of the Arianespace family's launch vehicles. In addition to its world-reference dual launch system and multiple-separations platforms, various dedicated adapters or dispensers can be provided by Arianespace to address specific customer's needs and requirements.

Back-up capabilities for 3-ton-class satellites

The advent of Soyuz launches at CSG provides additional capacity to adjust the launch offering for geostationary satellites. The Arianespace back-up policy allows the 3-ton class satellites to be launched either on Ariane 5 on a dual launch configuration or on Soyuz as a dedicated launch. Therefore, Arianespace increases the flexibility of its offer and the added value for the customer.

The fastest track to GTO

The typical duration of the GTO mission is between 25 and 35 minutes, depending on the separation phase events.

Standard Ariane 5 mission profile for geostationary transfer orbit

