



# FUCINO SPACE CENTRE

Telespazio's "**Piero Fanti**" Space Centre in Fucino (L'Aquila) has been active since 1963 and today, with its 170 antennas and 370,000 square metres, it is recognized as the first and most important teleport in the world for civilian use.

The Fucino Space Centre carries out in-orbit satellite control, **space mission management and telecommunications, television and multimedia services**. Operational logistics and field services are active in support to the services provided. It employs 250 workers including engineers, specialist technicians and operational staff.

Fucino hosts the **Control Centre** and the Mission Centre of the **COSMO-SkyMed Earth observation satellite constellation** and one of the two Control Centres that manage **Galileo, the European satellite positioning and navigation system**.

The Italian **Galileo Control Centre (GCC-I)** is an infrastructure of 6,000 square metres that ensures processing and distribution of the navigation signal to satellites and continuous control of the quality of service delivered to end users. This Centre also manages the **Galileo Data Dissemination Network (GDDN)** which includes about fifty ground stations.

## Satellite control services and space mission management

From the Fucino Space Centre, Telespazio performs the satellite in-orbit control activities, carried out by a team of over 80 engineers and specialist technicians, including the **TT&C services** (Telemetry, Tracking and Command) and, in general, all activities related to space missions for the major satellite operators.

From the Fucino Centre Telespazio also provide the **LEOP services** (Launch and Early Orbit Phase), which goes from the time the satellite separates from the rocket until it reaches final orbital position. These services include managing satellite operations, managing the ground station network, and the flight dynamics for all types of civil and military satellite mission and every kind of satellite and orbit (GEO, MEO, LEO).

The Fucino Space Centre also hosts component of the ground segment of important space mission such as **COSMO-SkyMed and Galileo**, managing the operation for the satellite constellation control (as backup for Galileo) and mission planning.



## Telecommunications, television and multimedia services

Through the Fucino Space Centre, Telespazio carries out **ground-satellite integrated connectivity services on a global and regional scale**, both fixed and mobile, for the major satellite operators.

Fucino manages the Telespazio **television services**, including signal carrier and distribution services for the major national and international broadcasters and **direct satellite broadcasting of radio and television signals through digital platform systems**.

The Fucino Centre manages the multimedia **transmission networks** for large public and private customers (such as SNAM, Saipem, ENAV, ASI, ENAV). It also manages **IP platforms for content broadcasting/multicasting** (news agencies), **platforms for broadband Internet services via satellite and IP platforms for multimedia applications** (telemedicine, distance learning, film distribution).

## Hosting services

The need to guarantee very high reliability services has required that, **advanced and sophisticated energy and conditioning systems** have been built at Fucino Space Centre, which, together with the security systems installed at the Centre, have allowed the development of hosting service for customers' systems and equipment, also providing ancillary services (power, air conditioning, fire protection) and on-site support from Telespazio technicians for maintenance and systems management.

## The ship Elettra and the museum

The Fucino Space Centre houses the **stern of the ship Elettra**, on which **Guglielmo Marconi** carried out his shortwave radio propagation experiments in the period between the two World Wars.

In 1937, at the scientist's death, the ship was purchased by the Ministry of Telecommunications and Postal Services which, in 1978, donated the stern section to Telespazio.

The **Fucino Space Centre Museum**, built in 1968, bears witness to Telespazio's role in the world of satellite telecommunications right from the first experiments carried out at Fucino early in the 'Sixties.

The museum houses some equipment used in that pioneering phase of satellite telecommunications. Among these, the mobile stations and the 9-metre diameter antenna with which the first transmissions between the US and Italy were carried out in 1962 using the Relay satellite, and from 1963 for transmission experiments with the Telstar satellite. In 1968, this antenna was transported to Uganda for Pope Paul VI's visit, and it provided the first worldwide television link from Africa.



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