

Leonardo plays a major role in COSMO-SkyMed Second Generation and in the scientific mission CHEOPS

- **The first COSMO-SkyMed Second Generation satellite, the Italian programme for Earth observation, successfully launched**
- **Leonardo's Fucino Space Center manages the in orbit phasing and the testing of the COSMO-SkyMed Second Generation satellite**
- **CHEOPS, the mission to study extrasolar planets, was also launched and it will observe space with a telescope made by Leonardo**

Rome, 18 December 2019 - The COSMO-SkyMed Earth observation constellation, by the Italian Space Agency (ASI) and the Ministry of Defense, which recently celebrated its 10th anniversary, welcomes the first second-generation satellite. The satellite was successfully launched this morning at 9:54 am from the European spaceport of Kourou, in French Guiana. At 10.21 am, Leonardo's Fucino Space Center received the first signal from the satellite.

The Soyuz rocket also carried the European Space Agency's satellite (ESA) CHEOPS (Characterising Exoplanet Satellite) for the study of extrasolar planets larger than Earth and smaller than Neptune. Both missions, COSMO-SkyMed (CSG-1) and CHEOPS, integrate key equipment from Leonardo.

Leonardo CEO Alessandro Profumo said: "We are proud to participate in the Italian COSMO-SkyMed Second Generation programme with our competences and technologies. As was the case for the currently operational constellation, the new generation will represent the best of earth observation capabilities at the service of Italian and European institutions and citizens for security and defence needs. True to our heritage of excellence in developing sophisticated instruments for exploration - he added - we are certain that the telescope developed by Leonardo for the CHEOPS mission, will provide unique data and information to the international scientific community."

Leonardo is also responsible for managing the complex in-orbit phasing and testing for the satellite from the LEOP facility (Launch and Early Orbit Phase) at the Fucino Space Center, of its subsidiary Telespazio (67% Leonardo, 33% Thales).

Luigi Pasquali, Coordinator of Leonardo's space activities and CEO of Telespazio said: "The satellite will complete its LEOP phase in a week. The recently renovated LEOP facility, enhanced with new technologies and capabilities, will be a fundamental asset for the effective management of these crucial activities. Telespazio is the only private operator in Europe able to manage the LEOP phase of a satellite mission."

Leonardo also contributed to the CSG-1 satellite by providing the key systems for on-board power: photovoltaic panels (PVA) in carbon fibre (8 per satellite with about 5,000 solar cells) and sophisticated power units to manage, transform and distribute sun derived energy to on-board systems and subsystems. The satellite will also be oriented and maintained in the correct

orbit with the help of Leonardo's star trackers (A-STR). Each satellite has two sensors, which, like a compass, help guide and orient the satellite in space.

The launch of the next COSMO-SkyMed Second Generation satellite will take place in one year.

CHEOPS, the mission developed by ESA in collaboration with Switzerland, is the first mission of the Agency dedicated to the study of over 4,000 exoplanets already discovered. On ASI's contract, Leonardo has designed and built the "eyes" of the satellite that will gravitate 700 km from the Earth. Together with the researchers of INAF Padova and Catania and the contribution of small and medium-sized enterprises, Leonardo oversaw the creation of the telescope's optical system, which will guarantee the possibility of studying the planets of other solar systems in search of their scientific characteristics, for a period of more than three and a half years.

COSMO-SkyMed

Funded by the Italian Space Agency, the Ministry of Defense and the Ministry of Education, University and Research, the COSMO-SkyMed system is the result and expression of the best skills of the Italian space industry, with Leonardo and its joint ventures Thales Alenia Space and Telespazio, assisted by a significant number of Small and Medium Enterprises. In particular, Thales Alenia Space (Thales 67%, Leonardo 33%) is the prime contractor company, responsible for the entire system, while Telespazio (Leonardo 67%, Thales 33%) built the ground segment and hosts the centre of command and control of the constellation. The first generation has four satellites, launched in orbit between 2007 and 2010, and offers radar images to customers around the world. The COSMO-SkyMed constellation is able to acquire up to 1,800 images a day that Leonardo, through e-GEOS (Telespazio / ASI), receives, processes and markets all over the world.